Health at a Glance: Europe 2026

State of Health in the EU Cycle



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Foreword

Europe's debate about security and competitiveness tends to turn first to defence, energy, technology and skills. Health firmly belongs in that debate too: people in good health can stay in work and care for others for longer, while ill health carries costs for families, employers and public budgets. Innovation in healthcare boosts our competitiveness and benefits our patients. Robust and resilient health systems also strengthen our health security and Europe's broader preparedness for crises, yet they face growing pressure from ageing populations and workforce shortages at a time of competing demands on public resources.

Europe has not been short of ambition in health, but the more difficult task is turning its commitments into measurable improvements in care. This edition of *Health at a Glance: Europe* examines that challenge in two areas approaching important milestones: the *European Health Data Space*, whose requirements on access to and reuse of health data take effect from March 2029, and the EU's antimicrobial resistance targets for 2030.

In digital health, countries have built much of the technical capability needed to give people online access to their health records, but these services are still not widely used. In 2024, fewer than three in ten people aged 16-74 had consulted their records online in the previous three months, with uptake particularly low among older people and those with lower levels of education. Digital tools, including artificial intelligence, show promise. However, the success of the *European Health Data Space* will depend not only on making services available, but also on helping patients and professionals use them, evaluating their effects on care and ensuring that the institutions responsible for health data are effective, secure and trusted.

On antimicrobial resistance, the consequences of delayed action are particularly serious, as resistant infections threaten both routine care and modern medicine. Sales of antimicrobials for food-producing animals have fallen substantially, but human antibiotic consumption in 2025 was only 5% below its 2019 level, against a target of a 20% reduction by 2030, and bloodstream infections resistant to last-line antibiotics continued to rise. Effective measures are available, from more prudent prescribing to infection prevention and control, and OECD modelling indicates that a package of such measures would improve health and generate savings exceeding its investment costs in nearly all EU countries. Governments now need to turn national *One Health* action plans into sustained action, backed by adequate resources and accountability for results.

The challenge of translating commitments into results runs through the rest of the report. In 2023, some 655 000 premature deaths in the EU were attributable to causes considered preventable through effective public health measures, yet spending on prevention has fallen back since the pandemic to about 3% of health expenditure. Workforce shortages, meanwhile, constrain both everyday care and preparedness for the next crisis, underscoring the importance of making the best use of available resources.

For ten years, our two organisations have worked together through the *State of Health in the EU*, providing comparative evidence and policy analysis to support national action. No country performs well on everything, and each can learn from others. We urge governments to draw on that shared experience as they put their commitments into practice and evaluate the results; our organisations will continue to support that effort through evidence, analysis and dialogue.



Mark Pearson,
Acting Director for Employment, Labour and Social Affairs,
OECD



Sandra Gallina,
Director-General for Health and Food Safety,
European Commission

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Health at a Glance: Europe 2026 marks the start of the sixth *State of Health in the EU* cycle – an initiative launched by the European Commission, in co-operation with the OECD and the European Observatory on Health Systems and Policies, to assist EU Member States in improving the health of their citizens and the performance of their health systems. While the preparation of this publication was led by the OECD, the European Commission provided guidance and substantive inputs throughout the process, as well as financial support via the *EU4Health* Programme.

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Readers' guide

Health at a Glance: Europe is the first step in the *State of Health in the EU* cycle of knowledge brokering. It is designed to provide a cross-country assessment of national health systems' performance in the European Union. It also provides more in-depth analysis on two selected topics in the thematic chapters upfront.

The publication is divided in two parts. Part I contains the two thematic chapters and focusses mainly on EU Member States. In this edition, Chapter 1 reviews progress in the digitalisation of health systems in Europe, making the case that after more than a decade of sustained investment, the challenge in European digital health is shifting from building the technological infrastructure to realising the value from it. Chapter 2 reviews the health and economic burden of antimicrobial resistance (AMR) in Europe and assesses to what extent EU countries are on track to meet the reduction targets in antibiotic consumption and selected AMR infections by 2030. It also reviews the policy levers that countries are using under the One Health framework to achieve these targets.

Part II includes six chapters that provide an overview of key indicators of health and health systems across EU Member States, candidate countries, European Free Trade Association countries and the United Kingdom. Chapters 3 and 4 describe the health status of the population and some of the main risk factors to health. Chapter 5 reviews the most recent trends in health spending and the mix in public and private financing. The last three chapters are structured around the three objectives set out in the 2014 European Commission Communication on effective, accessible and resilient health systems (https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0215).

The data presented in this publication come mainly from official national statistics and have been collected in many cases through the administration of joint questionnaires by the OECD, Eurostat and WHO. The data have been validated by the three organisations to ensure that they meet high standards of data quality and comparability. Some data also come from European surveys co-ordinated by Eurostat, notably the European Union Statistics on Income and Living Conditions (EU-SILC) survey, as well as from the European Centre for Disease Prevention and Control (ECDC), the World Health Organization (WHO), the European School Survey Project on Alcohol and Other Drugs (ESPAD), the Health Behaviour in School-Aged Children (HBSC) study, and other sources.

Presentation of indicators and calculation of EU averages

With the exception of the first two thematic chapters, all indicators in the rest of the publication are presented in the following way. The text provides a brief commentary highlighting the key findings conveyed by the data, defines the indicator and signals any significant data comparability limitation. This is accompanied by a set of figures that typically show current levels of the indicator and, where possible, trends over time.

The EU averages include only EU Member States and are calculated either as population-weighted averages (to be consistent with the averages that are calculated by Eurostat) or as unweighted averages (when these averages are calculated by the OECD or other organisations). The calculation method is usually mentioned in a footnote under each figure. By definition, a weighted average gives more weight to the most populated countries and can be interpreted as a comparison with the EU as a whole. An unweighted average gives equal weight to all countries regardless of population size and can be interpreted as a measure of comparison with other countries.

Population data

The population data used to calculate rates per capita and population-weighted averages come from the Eurostat demographics database. The data relate to mid-year estimates (calculated as the average between the beginning and the end of the year). Population estimates are subject to revision, so they may differ from the latest population figures released by Eurostat or national statistical offices.

Data limitations

Limitations in data comparability are indicated both in the text (in the box related to “Definition and comparability”) as well as in footnotes underneath the figures.

Data sources

Readers interested in using the data presented in this publication for further analysis and research are encouraged to consult the full documentation of definitions, sources and methods contained in OECD Health Statistics for all OECD Member and accession candidate countries, including 25 EU Member States and five additional countries (Iceland, Norway, Switzerland, Türkiye and the United Kingdom). This information is available on OECD Data Explorer (https://data-explorer.oecd.org/). For the other countries, readers are invited to consult the Eurostat database for more information on sources and methods for each indicator (http://ec.europa.eu/eurostat/data/database) or the data sources mentioned under the figures.

European country ISO codes

Albania	AL	Lithuania	LT
Austria	AT	Luxembourg	LU
Belgium	BE	Malta	MT
Bosnia and Herzegovina	BA	Moldova	MD
Bulgaria	BG	Montenegro	ME
Croatia	HR	Netherlands	NL
Cyprus	CY	North Macedonia	MK
Czechia	CZ	Norway	NO
Denmark	DK	Poland	PL
Estonia	EE	Portugal	PT
Finland	FI	Romania	RO
France	FR	Serbia	RS
Georgia	GE	Slovak Republic	SK
Germany	DE	Slovenia	SI
Greece	EL	Spain	ES
Hungary	HU	Sweden	SE
Iceland	IS	Switzerland	CH
Ireland	IE	Türkiye	TR
Italy	IT	Ukraine	UA
Latvia	LV	United Kingdom	UK

The European Commission launched the *State of Health in the EU* cycle in 2016 to support EU Member States in improving the health of their citizens and the performance of their health systems. *Health at a Glance: Europe*, published every two years, is the first step in the cycle. It provides comparative data and analysis to identify strengths and areas for improvement in health and health systems.

The *Country Health Profiles*, prepared by the OECD and the European Observatory on Health Systems and Policies, form the second step. The next edition, due in 2027, will set out the specific characteristics and challenges of each EU country’s health system. For further information, please consult: https://health.ec.europa.eu/state-health-eu_en.

Executive summary

European health systems face rising demand from ageing populations, persistent workforce shortages, growing health risks and competing demands on public budgets. This edition focusses on two areas of ambitious EU policy commitment: antimicrobial resistance (AMR), midway to its 2030 targets, and digital health, ahead of the European Health Data Space obligations taking effect from March 2029. In both, the challenge is to ensure that policies and investments deliver measurable improvements in health and care.

Life expectancy has recovered, but gains have slowed and major health risks persist

- Life expectancy in the EU has recovered from the pandemic, reaching 81.5 years in 2024, but gains have slowed: it rose by 0.9 years over the past decade, against 2.3 years in the decade before. Preventable and treatable mortality each fell by 12% between 2013 and 2023, yet more than one in five deaths in 2023 were still considered avoidable, nearly two-thirds of them through prevention.
- Preventable risk factors continue to impose a substantial burden. Tobacco smoking has declined, but 17% of adults still smoked daily in 2025 or the latest available year, and past-month e-cigarette use among 15-16 year-olds rose from 14% in 2019 to 23% in 2024. Around half of adults were overweight or obese, more often among people with low education (56%) than among those with tertiary education (45%), and obesity has increased in all but three EU countries since 2017.
- Gaps also persist in preventive care: only three EU countries reached 95% two-dose measles coverage in 2025, and breast screening rates have stagnated or fallen in many countries.

Antimicrobial use has fallen, but most human health targets remain off track

- Antimicrobial resistance (AMR) is a major health and economic threat. Resistant infections cause more than 35 000 deaths a year in the EU/EEA, and infections acquired in healthcare settings account for over 60% of these deaths. As antimicrobial use in humans and animals drives resistance, EU targets cover human antibiotic consumption, veterinary sales and resistant bloodstream infections.
- Reductions in antimicrobial use have been faster in animals than in humans. Human antibiotic consumption fell by around 7% in 2025, to 5% below its 2019 level, but would need to fall more than three times faster to reach the 20% reduction target by 2030. The share of first-line antibiotics (the WHO “Access” group) rose to 62.5%, still below the 65% target. Veterinary antimicrobial sales fell by 24% between 2018 and 2024, close to the trajectory needed for a 50% reduction by 2030.
- Trends in resistant bloodstream infections diverge. Between 2019 and 2025, estimated incidence fell by 19% for methicillin-resistant S. aureus, exceeding its 15% reduction target, but rose by 16% for third-generation cephalosporin-resistant E. coli and by 72% for K. pneumoniae resistant to carbapenems, a last-line class of antibiotics.
- Meeting the targets depends on implementation. In a 2025 global self-assessment survey, almost all of the 28 responding EU/EEA countries reported having national AMR action plans, but only nine reported infection prevention and control programmes fully implemented down to individual facilities. Priority measures include infection prevention and antimicrobial stewardship in hospitals and long-term care, and better prescribing in community care. OECD modelling indicates that a package of such measures would generate savings and productivity gains exceeding its costs in nearly all EU countries.

Digital health capabilities continue to advance strongly, creating a foundation for wider use and better care

- EU Member States’ reported capability for online access to electronic health records reached 87% of the 2030 target in 2025, and use is growing: 28% of people aged 16-74 had accessed their records online in the previous three months in

2024, up from 10% in 2020. Use remains lowest, however, in the groups most likely to have a chronic condition: older people (19% of those aged 65-74, against 31% of those aged 25-64) and people with low education (17%, against 40% with tertiary education).

- A key step in turning this capability into use is ensuring that patients know which digital services are available to them. In the 2023-2024 OECD PaRIS survey, 80% of primary care users aged 45 and over in 13 EU/EEA countries did not report online records access as offered by their practice, while only 6% reported an offer but did not use it. Systematic offers, professional endorsement and assisted access can therefore widen use.
- Digital tools, including artificial intelligence (AI), show promise in improving quality and efficiency in healthcare delivery. In Sweden's randomised MASAI trial, AI-supported breast screening detected 29% more cancers than standard double reading and cut radiologists' readings by 44%. Such rigorous evaluations remain rare, however, and building them into digital and AI programmes would help demonstrate benefits and spread what works.

Workforce shortages constrain access to care and crisis preparedness

- Despite a 25% rise in doctor numbers over 2014-2024, shortages persist, as demand for healthcare is growing faster than workforce supply and composition are adapting. The EU had an estimated shortage of nearly 1.2 million doctors, nurses and midwives in 2024.
- Replacement needs are growing: one third of doctors and one quarter of nurses are aged 55 or over, and nursing graduates rose by only 6% over the past decade, against about one third for medical graduates. Inflows of foreign-trained nurses across 15 EU countries were almost 90% higher in 2024 than in 2019, but can contract quickly. Retention is therefore paramount, yet in five countries surveyed, fewer than half of hospital doctors and nurses considered staffing levels and work pace safe.
- Workforce constraints also weaken crisis preparedness. In 2025 self-assessments, EU countries rated their surveillance and laboratory capacity at 80 or more out of 100 on average, against 65 for human resources. ECDC assessments of 15 EU/EEA countries found that only about half test their emergency plans regularly, and that preparedness functions often rely on project funding.

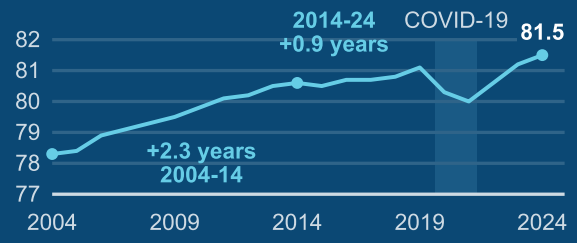
Health spending has recovered, but the share for prevention has fallen back

- Real health spending per person rose by about 5% in 2024, outpacing GDP, and total health spending reached 10.2% of GDP, against 9.8% pre pandemic. Government and compulsory insurance schemes financed 80% of it, and households paid 16% out of pocket. Yet among people reporting a need for care, those at risk of poverty were almost twice as likely as others to report unmet needs.
- Under the 2024 Ageing Report baseline, public healthcare spending is projected to rise from 6.9% to 7.4% of GDP over 2022-2070, and public long-term care spending from 1.7% to 2.6%. Prevention can support healthier ageing and moderate this demand, yet its share of spending was back at about 3% in 2024, from a pandemic peak of 6.3% in 2021.

Infographic 1. Key facts and figures

Gains in life expectancy have slowed over the past decade

Life expectancy at birth, EU, in years

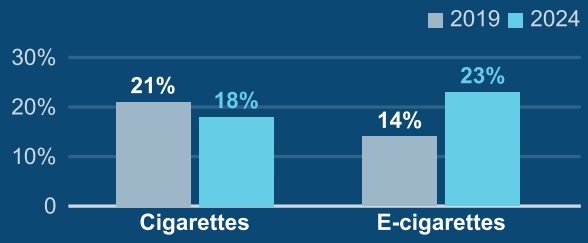


EU life expectancy rose by 0.9 years between 2014 and 2024, compared with 2.3 years over the previous decade.

Source: Eurostat.

Teenage vaping is rising, while cigarette smoking remains common

% of 15-16 year-olds, past-month use, EU average

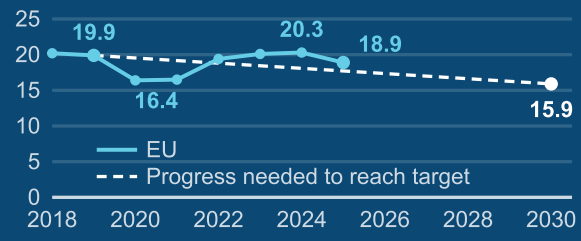


In 2024, almost one in four 15-16 year-olds reported vaping in the past month, while 18% reported smoking.

Source: ESPAD.

Antibiotic use has fallen, but remains off track for the EU's 2030 target

Human antibiotic use, defined daily doses per 1 000 population per day, EU

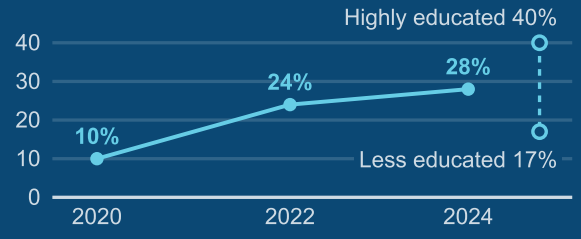


Use fell by 7% in 2025, to 5% below its 2019 level, but must fall over three times faster to reach the target.

Source: ECDC.

More people access health records online, but use remains unequal

% of people aged 16-74 accessing their records online in the past three months, EU

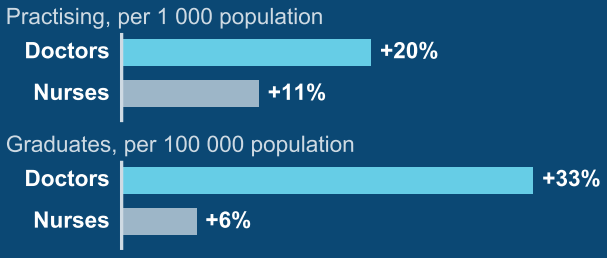


Use nearly tripled since 2020, but the highly educated were more than twice as likely to use it as the less educated.

Source: Eurostat.

Health workforce shortages persist despite rising staff numbers

% change, 2014-24, EU

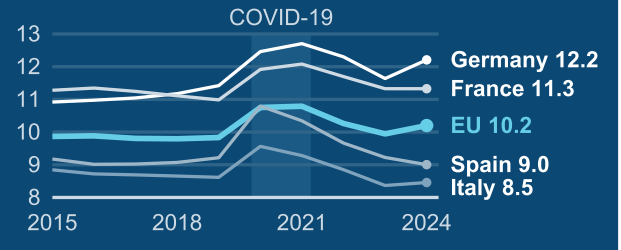


The EU's estimated shortfall was nearly 1.2 million doctors, nurses and midwives in 2024, mostly nurses.

Source: OECD.

Most EU countries spend a larger share of GDP on health than before COVID-19

Health expenditure as a % of GDP, 2015-24



In 2024, the share was above its 2019 level in 22 countries, but below it in Denmark, Ireland, Italy and Spain.

Source: OECD.

Part I Thematic chapters

1 From infrastructure to impact: Closing Europe's digital health implementation gap

After more than a decade of sustained investment, Europe's digital health challenge is shifting from building capability to realising value. This chapter examines whether available digital services are used, whether their use reaches people with the greatest health needs, and whether they demonstrably improve care. It also assesses whether the institutions, cybersecurity capacity, public trust and workforce skills required for implementation at scale are developing quickly enough, particularly before the first major European Health Data Space (EHDS) obligations begin to apply in March 2029. The chapter combines European Commission and Eurostat indicators, national administrative data and the OECD Patient-Reported Indicator Surveys (PaRIS) with new analyses of digital health investment and procurement related to artificial intelligence (AI). It finds that Europe builds digital health infrastructure faster than it converts capability into use, and that evidence on the effects of digital health remains weaker still. It examines the conditions for effective AI adoption and concludes with five policy shifts, along with a measurement agenda for assessing the costs and benefits of digital health implementation.

In Brief

From digital capability to use that improves care

Europe's digital health agenda is moving from construction to delivery. More than a decade of investment, including at least EUR 16 billion in planned EU support, has expanded electronic health records (EHRs), online services and data infrastructure. New EU rules establish common arrangements for health data, cybersecurity and artificial intelligence (AI). The next test is whether these foundations improve care, workforce capacity and value for money for everyone, including people with the greatest health needs, while non-digital routes to care remain. Seven findings guide this assessment:

- **Technical availability has advanced faster than equitable use.** In 2025, the EU eHealth indicator reached 87% of the Digital Decade target for citizen access to EHRs. The indicator measures availability; in 2024, 28% of people aged 16-74 had consulted their records online in the previous three months, and countries with similar capability scores report widely different rates of use. Use is strongly graded by education and age: 17% of people with low educational attainment had accessed their records, compared with 40% of those with tertiary education, and 19% of those aged 65-74 compared with 31% of those aged 25-64. Among primary care users aged 45 and over in 13 EU/EEA countries covered by the OECD Patient-Reported Indicator Surveys (PaRIS), use rises only slightly with the number of chronic conditions, and the education gap widens with it. Population ageing could raise the number of people aged 65 and over who do not access their records online from about 82 million in 2024 to about 91 million or 102 million by 2040 under two illustrative persistence assumptions.
- **Where patients report online records access as offered, most use it; the larger measured gap concerns services that patients do not perceive as offered.** Across the 13 PaRIS countries, 80% of primary care users aged 45 and over did not report online records access as offered through their practice, 6% reported an offer but did not use it, and 13% used it. The 80% combines actual non-availability, lack of awareness and access through portals that patients do not associate with their practice, which the survey cannot separate. About two-thirds of patients who reported an offer used it, although they may be more interested or better supported than others. In the Netherlands, where provider portals are widely available, 55% did not report the service as offered, which points to a gap between availability and visibility. These findings support testing systematic offers, provider endorsement, timely prompts and assisted access: the chapter's targeted review identified no European randomised evaluation of provider endorsement, systematic offers or assisted access to national or regional portals.
- **Default enrolment creates coverage quickly, but does not secure engagement.** Automatic record creation seldom prompts refusal: around 2% of insured people in France and just over 5% in Germany opposed it. Nearly 97% of the French population now has a *Mon espace santé* profile and 70% received at least one document in it in 2025, but by January 2026 around 35% had activated their profile. In Finland, Estonia and Sweden, whose portals deliver test results and other documents, 54-59% of the population logged in at least once in 2025. These measures capture different forms of engagement and are not directly comparable, but each shows that coverage should not be read as use. Engagement appears closely associated with care events, and registration and use remain lower among older people.
- **The European Health Data Space (EHDS) will depend on capable institutions and public trust.** From March 2029, its requirements cover patient summaries, electronic prescriptions and dispensations, and most secondary use of health data. National health data access bodies cannot yet be compared on performance, and designation alone is not enough: Finland's Findata cut its median permit-processing time from 82 to 49 days in 2025, but applications spent on average only a quarter of their elapsed time with Findata and the rest waiting for applicants or data holders. Public acceptance varies sharply with the proposed data user: across 65 studies, mostly in high-income countries, 77% of respondents were willing to share data for secondary use, around 80% where the user is a researcher but 25% for for-profit organisations. Because the EHDS permits specified reuse without project-specific consent, subject to safeguards and an individual opt-out right with limited exceptions, transparent decisions, clear communication and visible oversight are central, and public confidence should be measured directly.
- **Digital resilience requires reliable systems as well as protection against attacks.** In 2024, the health sector reported 289 significant incidents under the first EU Network and Information Security Directive, more than any other sector for the fifth consecutive year. Non-malicious system failures accounted for 68% of incidents with a recorded cause, while ransomware caused the greatest loss of service time. The priorities are therefore complementary: maintenance, safe change management, backups and continuity planning, alongside cybersecurity and recovery capacity. NIS2 and the EU health-sector cybersecurity action plan strengthen the framework, but transposition has lagged and smaller providers will need shared technical and incident-response support. A serious breach could also undermine confidence in health data sharing, making resilience part of the cost of delivering the EHDS.

- **AI can improve care and reduce workload, but purchasers need stronger appraisal capacity.** Sweden's randomised MASAI breast-screening trial detected 29% more cancers and reduced radiologists' readings by 44% compared with standard double reading, although overdiagnosis and value for money still need longer follow-up. The wider evidence base is less mature: of more than 4 600 primary AI studies reviewed in 2026, 88% were preclinical and fewer than 3% were randomised trials. In major EU public procurement, health-sector tenders mentioning AI rose from close to zero in 2017-2020 to 3.2 per 1 000 in 2025, mostly for conventional equipment with an AI feature and mostly initiated by individual hospitals or regional providers. Yet only 2 of 24 EU/EEA countries surveyed reported having AI-specific procurement guidance. Shared evidence assessments, model specifications and contract terms would help local purchasers select effective tools and monitor performance after deployment, and staff need role-specific preparation to interpret outputs and explain AI-supported decisions.
- **Europe measures what has been built more consistently than what digitalisation achieves.** Evaluation should therefore be built into implementation: programmes should specify intended outcomes and fund independent evaluation from the outset, with requirements proportionate to cost and risk. Measurement should connect use with health need and recent care events, extend beyond age 74 and track workforce effects and cost, and comparable indicators should follow the performance of data-access institutions, operational resilience and public trust.

The findings point to five priorities: build record access into routine care; design inclusion around health need; match evaluation requirements to cost and risk; fund data institutions and operational resilience on a recurrent basis; and equip local AI purchasers and health workers. The EU is best placed to provide common measurement, shared evidence assessments and model contracts. Member States are responsible for operational data institutions, shared cybersecurity capacity and measures to increase use, and payers and providers for specifying outcomes, applying procurement safeguards and monitoring tools after deployment.

1.1. Introduction

Digital health has been an EU priority for more than a decade, from the eHealth Action Plan 2012-2020 to the Digital Decade and its 2030 targets (European Union, 2022[1]). Public investment and binding EU frameworks have expanded electronic health records (EHRs), digital services and data infrastructure, although implementation varies across countries. The challenge is increasingly to ensure that these systems are used and improve care. With workforce shortages constraining capacity, digital tools could reduce administrative work and improve clinical processes without a proportionate increase in staffing, depending on how they are implemented and evaluated.

This chapter organises its assessment of European progress around a single concept: the digital health implementation gap. The gap has two dimensions. The first concerns availability, use and benefit: digital services can be technically available without being routinely or equitably used, and use alone does not demonstrate that care has improved. The chapter therefore asks whether available services are widely used, whether their use is equitable relative to health need, and whether they improve care processes, outcomes or system performance. The analysis centres on citizens' use of patient-facing services, meaning the portals and applications through which patients themselves access information and services. Healthcare providers (professionals and organisations) operate the clinical systems that supply these services with information, and they recommend the services and help patients use them. These clinical systems increasingly include artificial intelligence (AI), as Section 1.6 examines.

The second dimension is readiness: whether the institutions, cybersecurity arrangements, workforce skills and public confidence needed to support digital services are keeping pace with their growth. An evaluation deficit runs across both dimensions: Europe measures what it builds in detail, measures use only partially, and rarely establishes whether use improves care. The evidence base is correspondingly strongest on availability and use, developing on equity and limited on benefit.

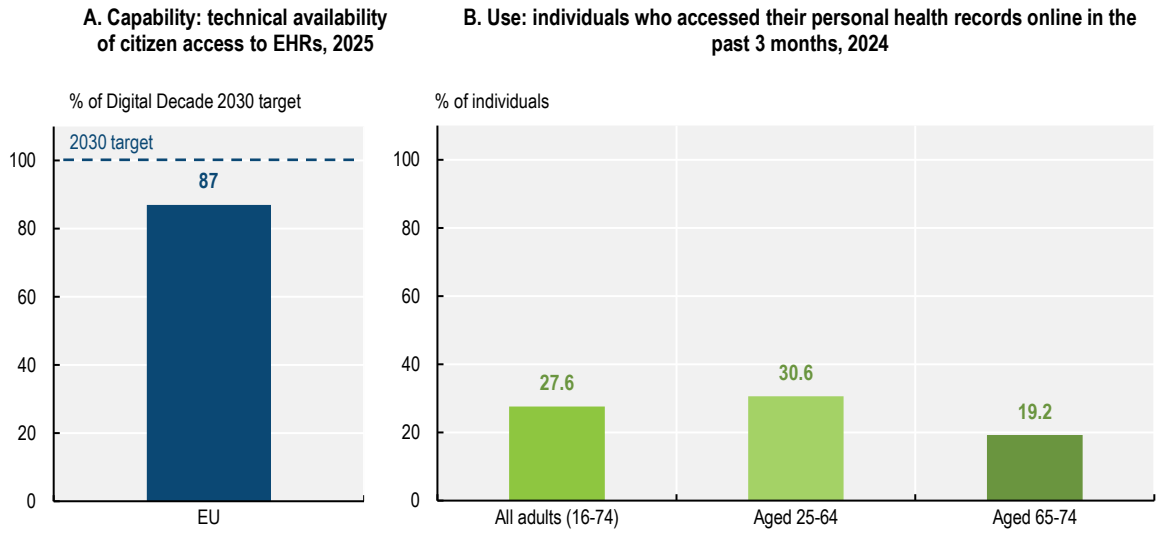
No EU-wide source, for example, observes digital health use and health need in the same individuals. To examine how use relates to need, the chapter combines population-level sources with the OECD Patient-Reported Indicator Surveys (PaRIS), which observe both in the same respondents (Section 1.3). PaRIS asked primary care users aged 45 and over in 13 EU/EEA countries about their health, their care and their use of digital services. The participating countries are Belgium, Czechia, France, Greece, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Romania, Slovenia and Spain. Averages for this group describe the participating countries only and are not estimates for the EU as a whole.

The chapter's scope is limited to EHR-based citizen services, health data governance, cybersecurity and AI. Chapter 8 examines the volume of teleconsultation and telemonitoring activity as part of its assessment of health system resilience (Section 8.3). This chapter considers their reimbursement where it bears on the evidence they generate (Section 1.4). Comparative data are drawn from EU-27 sources, extended to EEA and other European countries where the same instruments cover them, and the EU legal framework provides the reference timetable. The analysis applies most directly to EU Member States, and to other European countries to the extent that their digital health arrangements and data allow.

Headline indicators illustrate the first dimension. The EU eHealth indicator, the Digital Decade composite measure of the technical availability of citizen access to EHRs, stood at 83% of the 2030 target in 2024 and rose to 87% in 2025. Reported use is far lower (Figure 1.1): in 2024, 28% of people aged 16-74 accessed their health records online, according to the Eurostat survey on ICT use in households, referred to below as the ICT survey. The age gradient is marked: 31% of those aged 25-64 had done so,

compared with 19% of those aged 65-74. Other online health activities are more common (see Section 1.2), but EHR access is the service most directly tied to the Digital Decade target and to the European Health Data Space (EHDS), the EU regulation that sets common rules for exchanging health data for care and reusing them for research and policy. It therefore serves throughout the chapter as the reference case for citizen use.

Figure 1.1. EHR access capability is near the 2030 target, but fewer than three in ten adults use it



Note: Panel A measures nationally reported technical capability against the 2030 target (2025); Panel B measures reported use (2024). The indicators differ in concept, source and scale; their gap is not an estimate of unused available services.
Source: Panel A: European Commission (2026[2]). Panel B: Eurostat, https://doi.org/10.2908/ISOC_CI_AC_I (accessed on 15 October 2026).

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The scale of investment and the regulatory timetable make implementation urgent. The European Court of Auditors (2024[3]) identified at least EUR 16 billion in planned support for healthcare digitalisation through Cohesion Policy and the Recovery and Resilience Facility across the 2014-2020 and 2021-2027 programming periods, excluding several other EU programmes.[1] The EHDS applies from March 2027, with key obligations phased in through 2029 and 2031 (European Union, 2025[4]). March 2029 brings the first major obligations for exchanging data for care (primary use) and reusing them for research and policy (secondary use). The period until then is the first delivery window for turning legal frameworks into working institutions and available services into useful care.

Sections 1.2 to 1.4 examine availability, investment, equitable use and measures to increase engagement. Sections 1.5 and 1.6 assess institutional and AI readiness, before Section 1.7 draws policy conclusions and sets out a measurement agenda.

1.2. Technical availability has risen faster than routine use

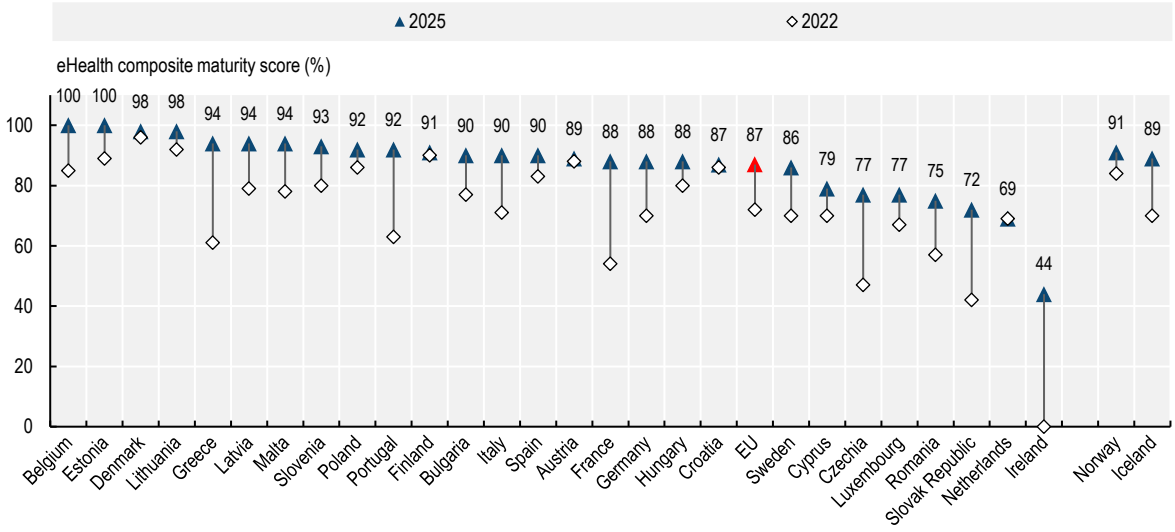
This section compares three distinct elements of digitalisation: the technical capability reported by national systems, investment in digital assets, and use measured through surveys and administrative records. Capability and investment enable use, but neither establishes whether patients use services or benefit from them.

1.2.1. Technical capability has risen and converged across EU Member States

Between 2022 and 2025, technical capability for citizen access to EHRs expanded rapidly across the EU, and differences between Member States narrowed as the eHealth indicator rose from 72% of the 2030 Digital Decade target to 87% (Figure 1.2).

Convergence was driven by countries starting below the EU average, mainly through the launch or extension of national access services and the broadening of the data categories available online (European Commission, 2026[2]). Ireland recorded the largest increase. In 2022 it was the only responding country without an electronic service through which citizens could access their health records, resulting in an assessed score of zero. Its score reached 25% in 2024 and 44% in 2025 alongside the phased rollout of its national patient application, which was trialled from 2024 and launched in February 2025. Every EU country now reports a score of at least 44% of the EU target, and Belgium and Estonia report 100%.

Figure 1.2. EHR access capability has converged as the countries that started lowest improved most



Note: The eHealth indicator combines national authorities' reports of the availability, scope, channels and arrangements for citizen access to EHRs, as a share of the common Digital Decade 2030 target.
Source: European Commission (2023), Digital Decade eHealth Indicator Study; European Commission (2026[2]), *The 2026 Digital Decade eHealth Indicator Study*, https://doi.org/10.2759/1486195.

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The composition of recent gains has also shifted. Between 2024 and 2025, progress came mainly from the data-categories component of the eHealth indicator, which measures the categories of clinical information, such as prescriptions, laboratory results and medical images, that citizens can access online. Most recent progress therefore consists of broadening the range of information available, which is distinct from extending the population coverage of services already offered. Greece (21 percentage points (p.p.)) and France (17 p.p.) recorded the largest gains in this component in 2025. In Greece, the gain accompanied the expansion of citizen access to the national EHR and the MyHealth App.

The eHealth indicator is a useful summary of what systems make available, but its headline score can obscure differences between components. In 2024, the ePrescription sub-indicator, which records whether citizens can see their prescriptions online, stood at 89%, compared with only 26% for medical images. A high headline score can therefore coexist with limited functionality in categories, such as medical images, that matter for specialist follow-up. The disparity is narrowing but has not disappeared: by 2025, the medical-images score had risen to 43%, while ePrescription information remained at 89%, leaving image access well below other categories.

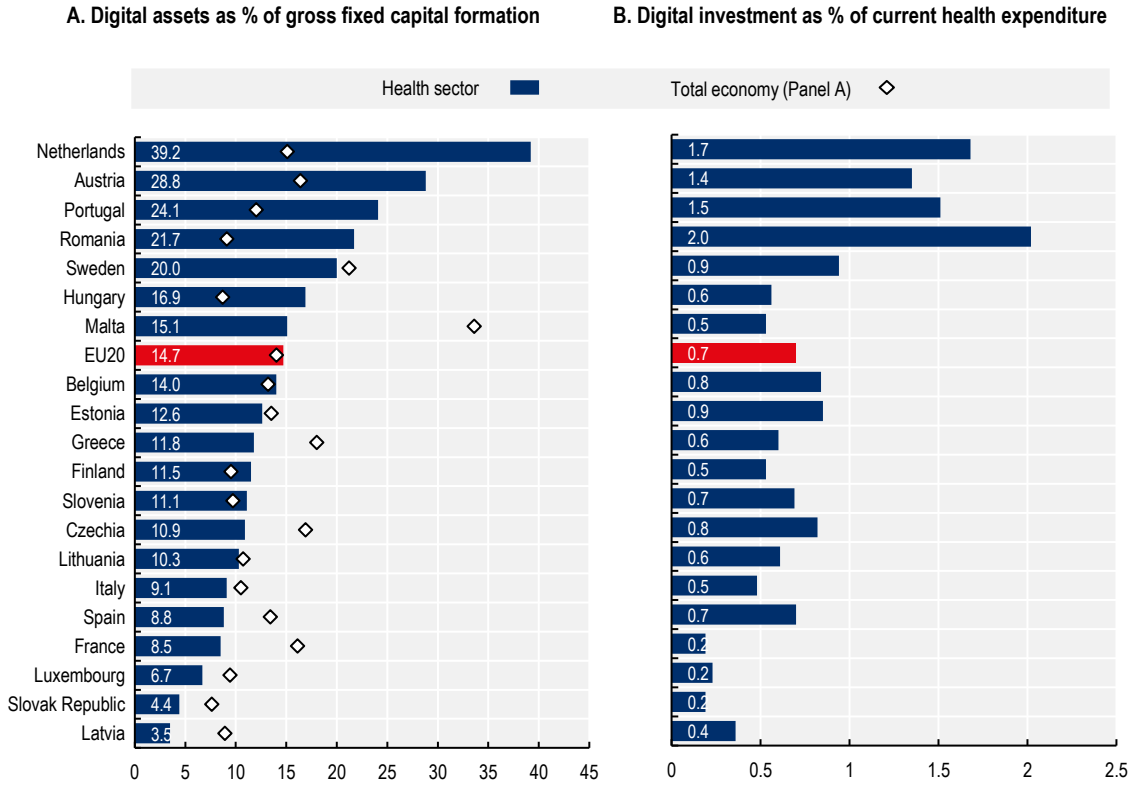
1.2.2. Digital assets account for around 15% of health capital investment, but recurrent implementation costs are not captured

Capital investment measures capture digital assets but omit much of the recurrent spending needed to make services usable, secure and sustainable. In 20 EU Member States with an asset breakdown, ICT equipment, software and databases account for 14.7% of health-sector capital investment, averaged over the three most recent available years. These figures cover providers' assets, rather than nationally operated platforms, and therefore give a partial view of the resources behind digital services; differences in industry boundaries and asset classification also limit comparisons between countries.

Recorded shares vary widely, from 3.5% of all capital investment in health in Latvia to 39.2% in the Netherlands (Figure 1.3). Latvia's low value partly reflects this accounting boundary: its national eHealth system is financed centrally through government bodies and EU funds, so much of the related investment is recorded under public administration rather than in the health sector. In eight of the 20 countries, health devotes a larger share of its investment to digital assets than the economy overall, by wide margins in the Netherlands, Austria, Portugal and Romania. In the other 12, health trails the economy-wide benchmark.

A high digital share could in principle arise because a country invests little in buildings and other equipment, not because it invests much in digital assets. A second measure, digital investment as a share of current health expenditure, which excludes capital investment, gives a broadly similar country ordering. Digital investment ranges from around 0.2% of current health expenditure in France, Luxembourg and the Slovak Republic to 1.7% in the Netherlands and 2.0% in Romania. Countries that devote a high share of their health investment to digital assets also tend to invest more in them relative to spending: the two rankings have a rank correlation of 0.81 across the 20 countries. The similar rankings suggest that the cross-country pattern is not solely an artefact of differences in investment in other assets, although Estonia, Czechia and Spain rank higher on the spending measure than on the capital share, and Hungary and Malta rank lower.

Figure 1.3. Recorded digital investment shares in health vary widely and mostly trail the economy



Note: Digital assets comprise ICT equipment, software and databases. Shares are ratios of sums over the three most recent years available (2021-2023 to 2023-2025); EU20 aggregates the 20 countries shown. Industry coverage varies between healthcare and health and social work; platforms recorded elsewhere are excluded. Austria partly classifies medical devices with embedded computing as ICT. Panel B uses available expenditure years for Finland and Malta.
Source: OECD calculations based on Eurostat, https://doi.org/10.2908/NAMA_10_A64_P5 and https://doi.org/10.2908/HLTH_SHA11_HF (accessed on 14 October 2026).

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In the 12 countries where health trails the economy, the size of the shortfall depends on the economy-wide comparator as much as on the health sector. It is marginal in Sweden, whose health sector nearly matches an economy-wide share that is among the highest in Europe, whereas it reaches about 18 p.p. in Malta, where the comparator is lifted by software-intensive service industries.

Trajectories differ as widely as levels. Countries starting from low shares have raised their digital share rapidly: between 2010-2012 and the most recent three-year window, the digital share doubled in France, more than tripled in Hungary and more than quadrupled in Romania. Several early digitisers moved the other way: Estonia's share fell by about a third from close to 19%, Lithuania's roughly halved, and Malta's fell from close to 30% to about 15%. The pattern is consistent with an investment cycle in which capital formation recedes once core infrastructure is in place and spending shifts towards maintenance and operation, which are recorded as current expenditure. A shift from purchased software and equipment towards software and cloud capacity bought as recurrent services, which national accounts record as intermediate consumption, could also lower the measured digital share; the investment data do not show whether such a shift has occurred.

Capital indicators are therefore incomplete guides both to digital maturity and to the resources required to realise benefits. They omit the complementary organisational investment in training, staff support, maintenance and workflow redesign on which benefits depend, as well as software and cloud services purchased on a recurrent basis. Budgets for the next phase need to sustain these recurrent costs, which determine whether digital assets release staff time or expand capacity.

1.2.3. Foundational provider systems are widely present, but digitalisation beyond them is unmeasured

Comparable indicators exist for the foundational systems of provider-side digitalisation: the EHR, electronic prescribing and imaging systems that hospitals and practices use themselves. In the 13 EU/EEA countries participating in the OECD PaRIS survey, 93-95% of primary care practices report having an EHR. Electronic prescribing is one of the most firmly established digital health services built on this infrastructure. At the end of 2025, citizens could view their ePrescriptions through their EHR access

service in 24 of the 27 Member States, and their dispensed medicines (eDispensation) in 25. The Digital Decade sub-indicator that combines the two data types rose from 88% to 90% between 2024 and 2025, entirely because France began giving citizens access to dispensation data (European Commission, 2026[2]). The ePrescription sub-indicator on its own, however, remained at 89% in both years. Citizen access to EHRs and to ePrescription information is therefore among the most mature digital health capabilities in Europe, although comparable evidence on their routine use remains limited.

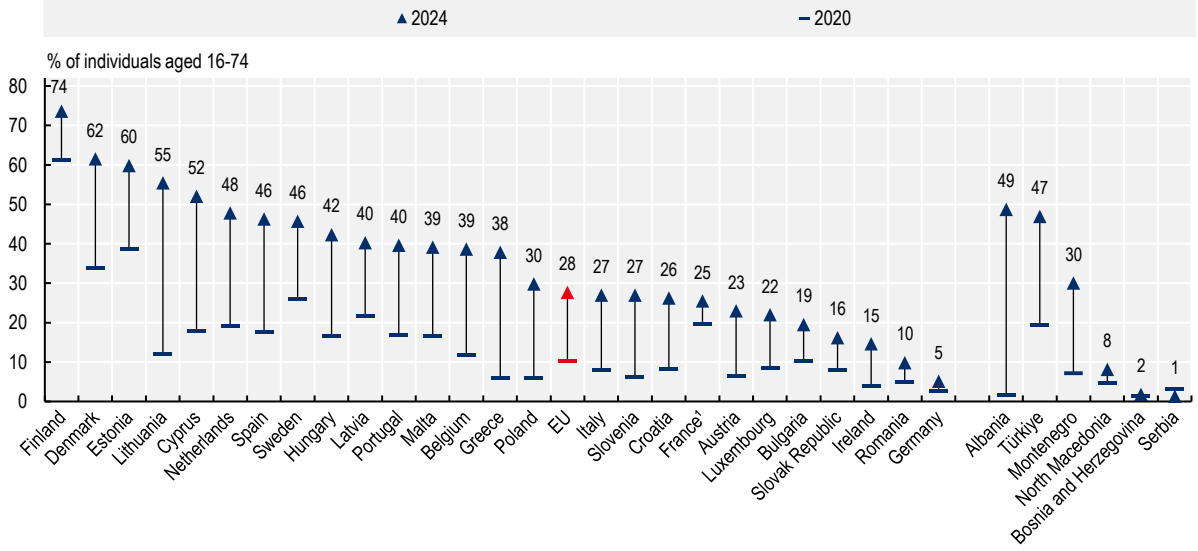
The indicators above describe what citizens can see, but how deeply digital tools are embedded in clinicians' work beyond these foundations remains largely unmeasured. No comparable EU-wide benchmarking survey of provider-side digital health has followed the 2018 survey. There is therefore no consistent cross-country measure of the adoption of clinical decision support (software that prompts clinicians during care), electronic ordering of tests and medicines, discharge summaries with standardised sections and coded clinical data, or interoperable data exchange. Several of these functions correspond to components of the common exchange format that the EHDS will require records to follow. Their adoption matters because a system can be in operation without being integrated throughout clinical work. A practice may use an EHR while discharge summaries remain unstructured, orders are transcribed manually, or information fails to follow patients across care settings.

The gap between operating a system and integrating it into clinical work bears directly on citizen-facing services, because the portals available to patients depend on provider-side data flows. The data-categories component of the eHealth indicator shows which types of information are available to citizens, but EU-level data do not consistently show whether that information is complete, timely, of sufficient quality or usable across settings. The same measurement gap prevents an assessment of whether provider-side digitalisation reduces duplication and administrative burden, expands capacity, or simply redistributes work among professionals, organisations and patients. Portal log-ins are also only one dimension of use: in integrated national systems, much of the value of digital infrastructure is realised through routine transactions such as ePrescription, referrals and document exchange, which a citizen-access indicator does not capture.

1.2.4. Citizen use of digital health services is growing, but remains limited and uneven

Citizen use of digital health services is increasing, but from relatively low levels and at markedly different rates across countries. At the EU level, the share of people aged 16-74 who accessed their personal health records online more than doubled between 2020 and 2022, from 10% to 24%, and rose further to 28% in 2024 (Figure 1.4). The increase to 2022 partly reflected pandemic-era consultation of test results. In 2024, 40% booked a medical appointment online and 58% sought health information online. These three indicators sit at rising thresholds of engagement: information seeking requires no connection to a particular provider, booking requires a working patient-provider link, and records access additionally presupposes clinical information worth consulting.

Figure 1.4. More people access their EHRs online, but uptake varies widely across EU countries



Note: Czechia: no 2022 or 2024 data. 1. 2022 data in place of 2020.
Source: Eurostat, https://doi.org/10.2908/ISOC_CI_AC_I (accessed on 26 September 2026).

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In 2024, 67% of people aged 16-74 used online banking, compared with 28% accessing records and 40% booking a medical appointment online, all over the previous three months. General Internet non-use cannot explain most of the difference, but the activities also serve different needs. Someone without a recent care episode may have little reason to consult a record, but low use is also found among people in recent contact with the health system. Among PaRIS respondents, all primary care users aged 45 and over with a recent contact with their practice, 13% used records access offered through the practice, a figure that understates use where national or regional portals are the main route (Section 1.4).

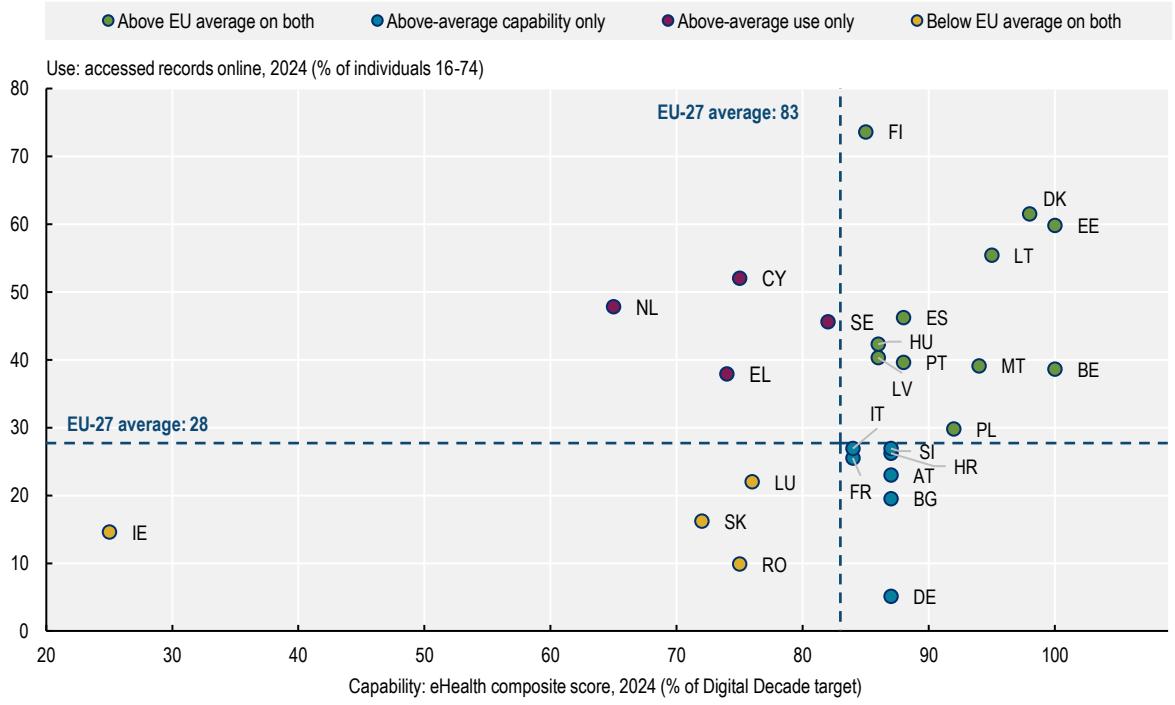
Online records access varies widely across the EU, from 5% of people in Germany to 74% in Finland in 2024, with most Member States recording rates between 20% and 50%. Countries also differ in how fast use is rising. Measured differences may partly reflect different approaches to citizen access: some countries give direct access to the health record, while others rely on national or regional portals that offer subsets of information together with complementary digital services. This affects both what surveys measure and how services are perceived (Section 1.4).

1.2.5. Neither high capability nor high investment guarantees high citizen use

Neither technical capability nor digital investment corresponds closely to citizen use. Countries with similar capability scores report widely different rates of online records access, and a high digital share of health investment can coexist with low uptake. Figure 1.5 plots the first of these relationships.

Denmark, Estonia and Finland combine above-average capability with above-average use. Their national services have operated since 2003, 2008 and 2010 respectively, showing what mature systems can achieve, although their long institutional development says little about how quickly later adopters can catch up. Use also responds to care events. In Denmark, online records access fell from 65.5% in 2022 to 61.5% in 2024 despite 96% awareness of sundhed.dk in 2023, consistent with fewer pandemic-related test results to consult. Lower use need not indicate poorer access, so measuring consultation of records after a test result, discharge or other relevant event would help distinguish unmet opportunities from an absence of need to log in.

Figure 1.5. Similar EHR capability scores coexist with large differences in citizen use



Note: The two indicators measure different concepts on different scales: the eHealth indicator is nationally reported technical capability, as a share of the Digital Decade 2030 target; use is survey-reported. Both refer to 2024. The lines show EU-27 averages. Czechia is not shown because there is no 2024 value for online records access.

Source: European Commission (2025[5]); Eurostat, https://doi.org/10.2908/ISOC_CI_AC_I (accessed on 15 October 2026).

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Lithuania provides a more recent example of rapid uptake. Since 2018, public and private providers have been required to manage specified clinical documentation, test results and prescriptions electronically and submit them to the central eHealth system, which citizens access through a single patient portal. Online records access rose from 12% in 2020 to 55% in 2024, the fourth-highest rate in the EU, while technical capability reached 95%. A broad range of clinical information and a single point of access were already in place when citizen uptake accelerated, although the pandemic-era consultation of test results that lifted use across the EU is also likely to have contributed. Italy is at an earlier point on a similar path, with a second-generation national record (FSE 2.0) and interoperability and telemedicine infrastructure financed under the health component, Mission 6, of its EU-supported Recovery and Resilience Plan. The open questions now concern data completeness, routine use and integration into care pathways.

Outside the EU, Türkiye's e-Nabız combines high use with a pandemic-era peak similar to Denmark's. This national personal health record has operated since 2015 and integrates the information systems of health facilities affiliated to the Ministry of Health (Birinci, 2023[6]). In 2024, 47% of people aged 16-74 in Türkiye accessed their records online, above every EU Member State except Finland, Denmark, Estonia, Lithuania and the Netherlands.

Germany's capability score reached 87% in 2024, while 5% of people reported online records access. The survey figure predates the 2025 opt-out reform; the voluntary record that preceded it had reached fewer than 1% of insured people. Since the reform, activity has been concentrated on the provider side: by April 2026, providers had deposited more than 100 million documents and medication lists were accessed more than 21 million times in an average week, while around 5.1 million insured people had registered for app-based access (gematik, 2026[7]). A citizen-access indicator captures little of this provider-side use; Section 1.4 returns to citizen registration.[2]

The Netherlands presents the reverse pattern: nearly half of people accessed their records online in 2024 despite a capability score of only 65%. Citizens use hospital and general-practice portals through the national DigiD digital identity. *MedMij*, the Dutch framework of standards for exchanging health data between patients and healthcare providers, also allows records from different providers to be combined in certified personal health environments (applications in which citizens collect their records), although uptake of these environments remains modest. The apparent mismatch reflects what the two indicators measure: the survey captures recent citizen behaviour, whereas the eHealth indicator assesses the breadth and timeliness of available data, provider participation and access functionality. Established portals can therefore be used intensively even when gaps remain in the range and integration of the information available through them.

The digital share of health investment does not track citizen use, as expected for a measure that covers providers' assets and excludes national platforms. As shown in Figure 1.3, Romania allocated a comparatively high share of recent health-sector investment to digital assets, at 21.7%, while remaining in the bottom quartile for online records access. Finland combined a lower share of 11.5% with the highest records access in the EU. In Finland's case, part of the explanation is that the national Kanta services, run by the Social Insurance Institution of Finland (Kela), fall outside the measure. Romania's recent investment may also not yet have matured into widely used services. These interpretations are plausible but not established, since the investment data do not follow individual projects through to subsequent use.

Technical capability and investment are enabling conditions for use, but neither measures use itself nor explains who uses the services. A high capability score or a large digital investment programme is therefore not evidence that citizens are using the services built. For governments, progress needs to be tracked in use as well as in availability, and budgets need to cover the recurrent costs of making services visible, usable and maintained. The differences observed across countries direct attention to the human and organisational conditions that translate availability into use: whether citizens know that a service exists, can reach it easily, find useful information when they do, and trust the systems through which sensitive data are provided. National averages also conceal differences in use between population groups within each country, which the next section examines.

1.3. Equity in digital health use

1.3.1. Online records access is strongly graded by age, education and place of residence

The use of digital health services follows a clear social and demographic gradient. In 2024, 16.8% of EU residents aged 16-74 with low educational attainment had accessed their health records online in the previous three months (referred to below as uptake), compared with 39.8% of those with tertiary education. Uptake was also lower in rural areas than in cities (21.9% compared with 32.6%) and markedly lower among people aged 65-74 than among those aged 25-64 (19.2% compared with 30.6%; Figure 1.6, left-hand chart).

The education gradient cannot be explained primarily by differences in Internet use. Restricting the comparison to recent Internet users, those who used the Internet in the three months before the survey, reduces the gap by less than 3 p.p. EHR access among people with low educational attainment remains half that of those with tertiary education, at 20.1% compared with 40.3%. The same pattern holds at older ages. Among people aged 55-74, the oldest age band for which an education breakdown is available, access ranges from 15.2% among those with low educational attainment to 34.9% among those with tertiary education. Among recent Internet users in this age band, the corresponding rates are 21.4% and 36.1%. These data do not identify the causes of the remaining gap, but the pattern is consistent with barriers beyond connectivity, including the ease of use of the EHRs themselves, skills, confidence and the presence or absence of active encouragement (see Section 1.4). The same survey shows basic digital skills to be lower among older, less educated and rural residents, consistent with this reading.

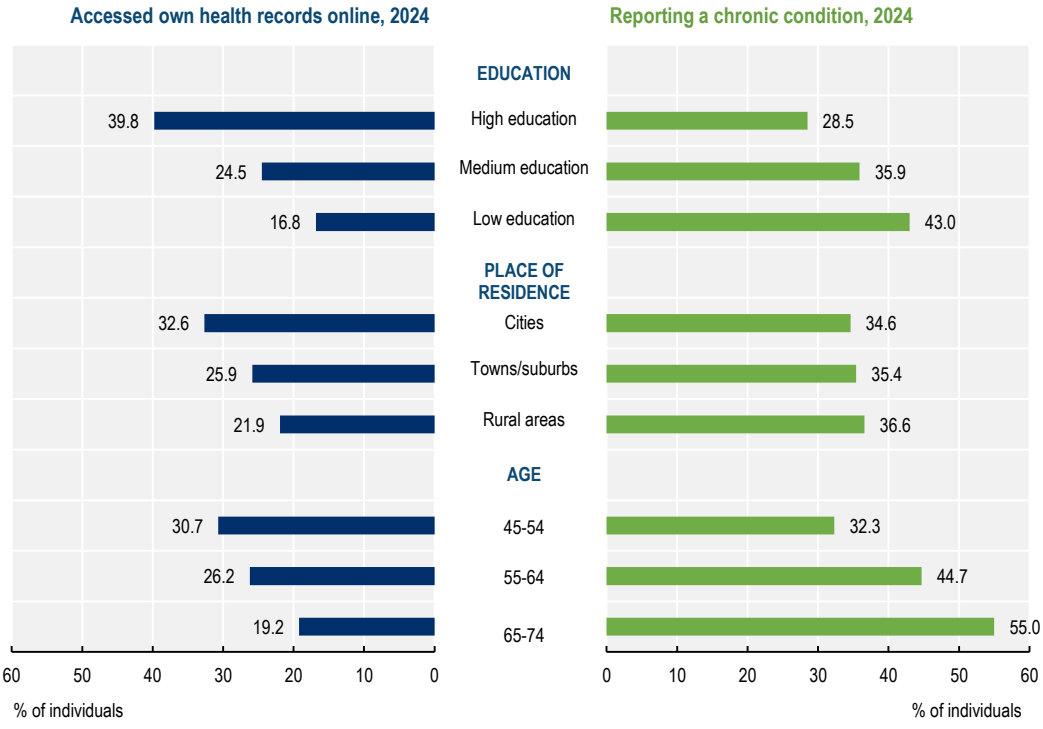
1.3.2. Digital health use is lowest among the groups with the highest measured health needs

The characteristics associated with lower use of digital health services are also associated with greater health need, and the two gradients run in opposite directions (Figure 1.6). In 2024, 43.0% of EU residents aged 16 and over with low education reported a chronic condition, compared with 28.5% of those with tertiary education, the reverse of the education gradient in EHR access.

The age pattern is more pronounced: with each successive age band above 45, EHR access falls as chronic-disease prevalence rises. At ages 45-54, 30.7% accessed their records online and 32.3% reported a chronic condition; at ages 65-74, the figures were 19.2% and 55.0%. The rural pattern is less pronounced, but runs in the same direction: chronic-disease prevalence is slightly higher in rural areas than in cities, at 36.6% compared with 34.6%, while EHR access is markedly lower. Online access to records is therefore used least in rural areas, where remote access could substitute for travel.

The intersection of low use and high need is most visible among older adults with low educational attainment: within the 65-74 age group, 57.8% of those with low educational attainment report a chronic condition, compared with 49.4% of those with tertiary education. Use among people aged 55-74, the closest available breakdown, was 15.2% among those with low educational attainment and 34.9% among those with tertiary education. One of the groups least likely to consult its records online therefore carries one of the highest measured burdens of chronic disease.

Figure 1.6. Population groups with higher average health needs also report lower EHR use



Note: Left: online records access in the previous three months, ages 16-74. Right: long-standing illness or health problem, ages 16 and over. Both refer to 2024. Rates are not age-adjusted, so part of the education gradient reflects the older age profile of lower-education groups. The surveys describe population groups and do not link use and need within individuals.
Source: Eurostat, https://doi.org/10.2908/ISOC_CI_AC_I, https://doi.org/10.2908/HLTH_SILC_05 and https://doi.org/10.2908/HLTH_SILC_19.

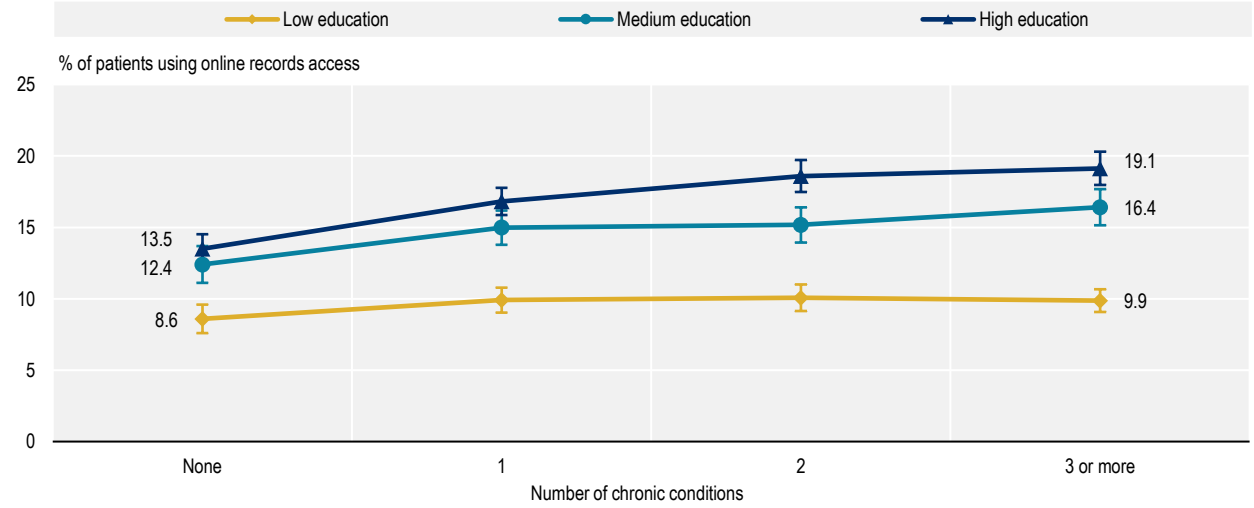
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The OECD PaRIS survey observes digital health use and health need in the same respondents, which allows use to be related to need at the individual level. Among primary care users aged 45 and over in 13 EU/EEA countries, use rises only slightly with need, although neither the number of chronic conditions nor self-rated health fully measures the need to consult records. Patients with several chronic conditions have far more contact with the health system than patients with none, so their records contain more information and they have more occasions to consult them. After adjustment for age, sex, education and area of residence, however, online records use is only around 4 p.p. higher among patients with three or more chronic conditions than among those with none (15.4% compared with 11.5%). Use was no higher among patients who rated their health as poor than among those who rated it as excellent or very good.

The social gradient also widens with need: the difference in use between patients with tertiary education and those with low educational attainment almost doubles, from 5 p.p. among those without chronic conditions to 9 p.p. among those with three or

more, a statistically significant widening (Figure 1.7). Use rises with chronic burden among the better educated, from 14% to 19%, but much less among the less educated, from 9% to 10%.

Figure 1.7. The education gap in online records use widens with the number of chronic conditions



Note: Primary care users aged 45 and over in 13 EU/EEA countries. Low education: below upper secondary (ISCED 0-2); medium: upper secondary or post-secondary non-tertiary (ISCED 3-4); high: tertiary (ISCED 5-8). Predicted use of online records access offered by the patient's practice, from a logistic regression with chronic conditions interacted with education, country fixed effects and adjustment for age group, sex and area of residence; bars show 95% confidence intervals.
Source: OECD calculations based on OECD PaRIS survey microdata.

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Reported availability also varies with health status. After adjustment, 19% of patients in poor health reported online records access as offered through their practice, compared with 23% of those in excellent or very good health. Among those reporting an offer, around 60% used it in both groups. The difference is therefore concentrated in reported availability, which can reflect actual provision, awareness or how patients understand the question; it does not establish that unawareness causes lower use.

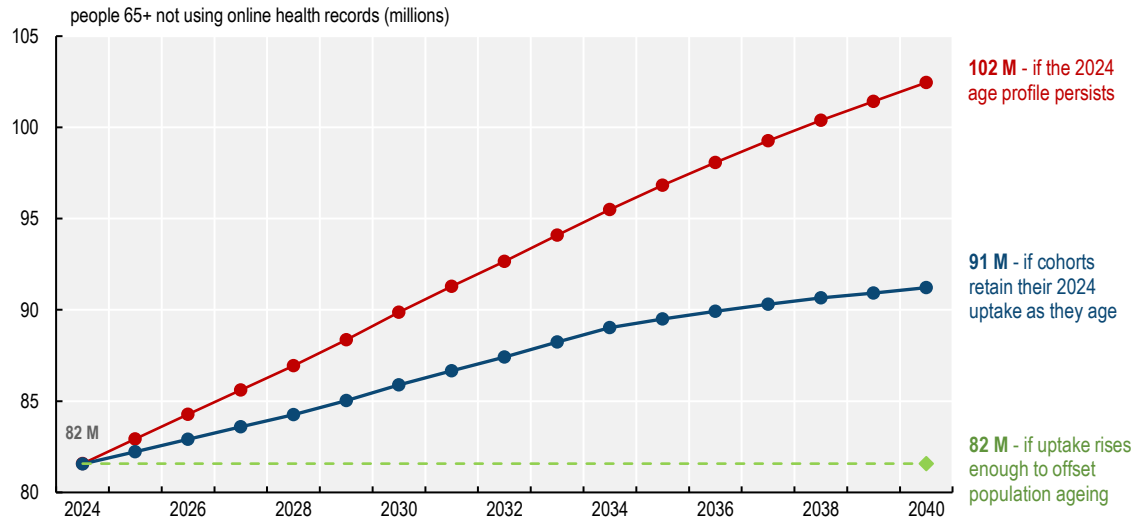
1.3.3. Cohort replacement alone would not prevent a rise in older non-use

People aged 65-74 access their EHRs online less often than younger adults, and the available data suggest still lower uptake after age 75. The standard EU-wide ICT survey does not measure EHR use beyond age 74, so uptake among people aged 75 and over must be modelled (Box 1.1). As more digitally experienced generations grow older, average uptake is likely to rise through cohort replacement, the gradual replacement of today's older people by generations that grew up using online services. Yet even if each cohort keeps its 2024 uptake rate as it ages, the number of older non-users (people aged 65 and over who do not access their records online) will still rise, because this age group is growing. This matters because health needs also rise with age: in 2024, 67.5% of people aged 75 and over reported a chronic condition, the highest share of any age group.

The EU data are repeated cross-sections: a fresh sample is surveyed each year rather than following the same people. They cannot separate age, period and cohort effects, so the age gradient in EHR uptake cannot be attributed either to ageing or to generational differences. Figure 1.8 therefore presents two contrasting persistence benchmarks that hold 2024 uptake rates constant, alongside a calculation of the increase needed to keep the number of older non-users from rising:

- Under the **cohort-based persistence** benchmark (blue line), differences between age groups are treated as generational, so each birth cohort retains its 2024 uptake as it ages and incoming cohorts carry their higher uptake into older age. On this assumption, implied uptake among people aged 65-74 reaches around 29% in 2040, while the number of older non-users rises from approximately 82 million to 91 million.
- Under the **age-based persistence** benchmark (red line), differences are treated as an effect of age itself, so the 2024 uptake rate for each age band continues to apply to people in that age band in future years. The number of older non-users then rises to around 102 million in 2040. This benchmark is a demographic reference showing what population change alone would imply if the current age profile of uptake persisted.
- The **required-uptake** benchmark (green line) shows how far uptake would need to increase to keep the number of older non-users at its 2024 level of 82 million. The rate for people aged 65-74 would need to reach around 40% in 2040, or between roughly 39% and 47% depending on the uptake assumed at ages 75 and over (Box 1.1). The difference between 29% and 40% illustrates the scale of demographic pressure; holding the absolute number of non-users constant is a reference calculation, and non-use does not itself establish unmet need.

Figure 1.8. Population ageing raises the EHR uptake needed to stop older non-use from growing



Note: Counterfactual benchmarks, not forecasts. Blue: each cohort retains its 2024 uptake as it ages. Red: each age group retains its 2024 rate. Green: uptake required to hold older non-users at the 2024 level. Assumptions after age 75 differ; see Box 1.1.
Source: OECD calculations based on Eurostat, https://doi.org/10.2908/ISOC_CI_AC_I and https://doi.org/10.2908/PROJ_23NP.

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Box 1.1. How the ageing benchmarks of EHR use are constructed

Figure 1.8 combines EUROPOP2023 baseline populations by single year of age with 2024 ICT survey rates of online EHR access. For each age from 65 upwards, non-users equal projected population multiplied by one minus assigned uptake; summing gives older non-use. Uptake after age 74 is modelled because the standard survey stops there. These are counterfactual benchmarks, not forecasts or policy targets.

- **Cohort-based persistence.** Each birth cohort retains its 2024 age-band uptake as it ages, including after age 75. People aged 65 in 2040, for example, retain the 2024 rate for ages 45-54. No age-related decline or general increase over time is imposed. Repeated cross-sections cannot separate age, period and cohort effects, so this is a limiting assumption.
- **Age-based persistence.** Each future age group keeps its 2024 rate: 19.2% for ages 65-74, and 0.675 times that rate at ages 75 and over. This isolates demographic change if the current age profile persists.
- **Required uptake.** For each year, the calculation solves for uptake at ages 65-74 that holds older non-users at the 2024 level of 81.6 million, with uptake at ages 75 and over remaining 0.675 times that rate. Required uptake reaches 39.9% in 2040.
- **Modelling ages 75 and over.** The ratio of 0.675 is close to the median of 0.69 across the 13 PaRIS countries, chosen because PaRIS measures use in both age groups within the same survey. The five voluntary ICT reporters (Belgium, Spain, Ireland, Italy and Norway) give ratios of 0.34-0.84, with a median of 0.59, or 0.49 across the four EU countries. Testing ratios of 0.35-0.75 leaves the ordering of the benchmarks unchanged; required uptake ranges from roughly 39% to 47%, with the 2024 baseline recalculated for each ratio.

The ratio applies to all future people aged 75 and over in the age-based and required-uptake calculations. In the cohort calculation it applies only to those already aged 75 and over in 2024; younger cohorts retain their own rate after crossing 75. Neither persistence calculation identifies the causal effect of ageing or birth cohort.

These calculations show the possible scale of older non-use, but they do not explain its causes. PaRIS data indicate one part of the explanation: across the 13 participating EU/EEA countries taken together, 16% of primary care users aged 75 and over report that their practice offers online access to medical records compared with 21% of those aged 65-74. Among those who report the service as offered, 50% of people aged 75 and over use it, compared with 62% of those aged 65-74. Overall, use at ages 75 and over is 60% of the rate at ages 65-74, but 82% of that rate among those who report the service as offered.

The sharp narrowing of this gap once reported availability is taken into account suggests that part of it may reflect services that are unavailable, invisible or not understood. Older people who know that a service is available may also be more digitally confident or better supported, so the pattern does not establish that limited visibility is the main cause of non-use. It is, however, a reason not to read non-use as unwillingness or an immutable lack of skills.

Longitudinal research suggests that both cohort replacement and changes in later life shape digital engagement. Across six waves of the English Longitudinal Study of Ageing, Internet use rose faster among younger cohorts and, after an initial rise, fell among some older ones, with poorer health associated with these declines (Matthews, Nazroo and Marshall, 2018[8]). In Finland, objectively measured impairments in vision, upper-body function and memory among people aged over 70 predicted non-use of online services three years later (Heponiemi et al., 2023[9]). These studies cannot supply an EHR-specific rate of decline for the EU, but they explain why the cohort-based persistence benchmark should be read as a limiting case: it shows what cohort replacement would achieve if uptake within each cohort neither fell with age nor rose through wider changes in services and behaviour. Actual uptake could be lower if declining health makes continued use harder, or higher if services become more available, accessible and useful.

Cohort replacement may therefore raise uptake without preventing the number of older non-users from growing. The policy task is to keep services accessible and useful as health, cognition and physical functioning change, while preserving supported and non-digital access. Monitoring use by age, education and health status would show whether interventions reach groups with greater needs.

1.4. From coverage to active use

1.4.1. Most measured non-use concerns services patients do not report as offered

Across the 13 PaRIS countries, 80% of primary care users aged 45 and over did not report online records access as offered through their practice, 6% reported an offer but did not use it, and 13% used it (Figure 1.9). The largest category combines actual non-availability, lack of awareness and access through national or regional portals that patients may not associate with their practice. PaRIS cannot separate these situations. Its practice-specific question therefore does not measure all records access, particularly where national portals are the main route.

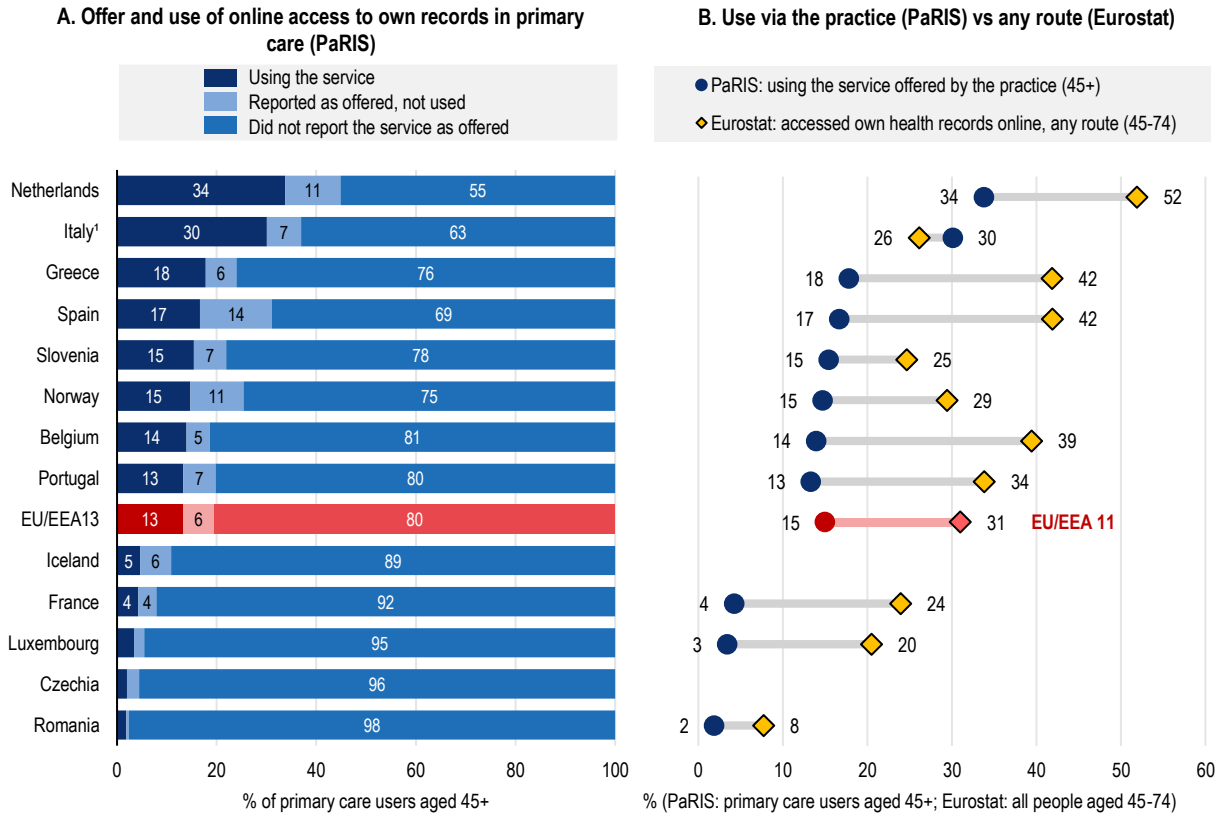
Panel B of Figure 1.9 compares PaRIS with Eurostat's measure of access by any route. Across the 11 countries with both sources, use is 15% in PaRIS and 31% in Eurostat. The relative difference is largest in France and Luxembourg, where PaRIS use is less than one-fifth of the Eurostat rate, and Romania, where it is about one-quarter. These comparisons also differ in population and reference period, so they cannot isolate the effect of access routes. The Netherlands provides a useful complementary case: provider portals are widely available and practice-routed use is highest, at 34%, yet 55% did not report an offer. This suggests that visibility merits attention even where technical access is widespread.

Where the service is reported as offered, it is generally used: among patients who report online records access as offered through their practice, the share who use it ranges from 43% to 81% across the countries surveyed. Cross-country differences in overall use therefore arise mainly from differences in the share of patients who report the service as offered, and much less from differences in use among those who do. The same relationship holds for other digital services: just over 50% of primary care users report that online appointment booking (the service most visible in routine interactions with providers) is offered, and 80% of them use it. Only 6% report video consultations as offered, and around one-third of those use them. EHR access falls between the two: about one in five report it as offered and around two-thirds of those use it.

Booking, records access and video consultation rank in the same order for reported availability and use. This is consistent with differences in actual provision as well as visibility and integration into routine care; it cannot establish which explanation matters most. The same pattern underlies much of the education and age gradients. EHR use rises from 9% among patients with low educational attainment to 17% among those with high attainment, while the share not reporting the service as offered falls from 83% to 74%. Use similarly declines from 15% among those aged 45-54 to 8% among those aged 75 and over, largely because the share reporting the service as offered falls with age. Across both gradients, therefore, the main measured difference lies in whether patients report the service as offered to them, and use among those who do differs less.

These findings support testing clearer offers and prompts at the point of care. Patients who already report a service as offered may be more interested, confident or supported than those newly reached, so their uptake cannot predict the effect of an awareness intervention. Systematic offers should therefore be evaluated alongside useful content, accessible design and assistance. The following subsections examine these levers, beginning with default enrolment, under which a record or account is created unless the person objects.

Figure 1.9. Most primary care users do not report records access as offered by their practice



Note: PaRIS covers primary care users aged 45 and over; Panel A uses survey weights and age-sex standardisation. Panel B compares PaRIS use with Eurostat access by any route at ages 45-74 (previous three months, 2024; age bands population-weighted). The populations differ: PaRIS covers primary care users aged 45 and over, including those aged 75 and over, whereas Eurostat covers all people aged 45-74. Together with differences in questions and periods, this prevents attribution of gaps to access routes. EU/EEA13 and EU/EEA11 are unweighted country averages; EU/EEA11 excludes Czechia and Iceland, which lack 2024 Eurostat data. Not reporting an offer can reflect non-availability, unawareness or another access route. 1. Italy's PaRIS sample covers selected outpatient specialist settings, not general practice.
Source: OECD PaRIS survey (2023-2024); Eurostat, https://doi.org/10.2908/ISOC_CI_AC_I and https://doi.org/10.2908/DEMO_PJANGROUP.

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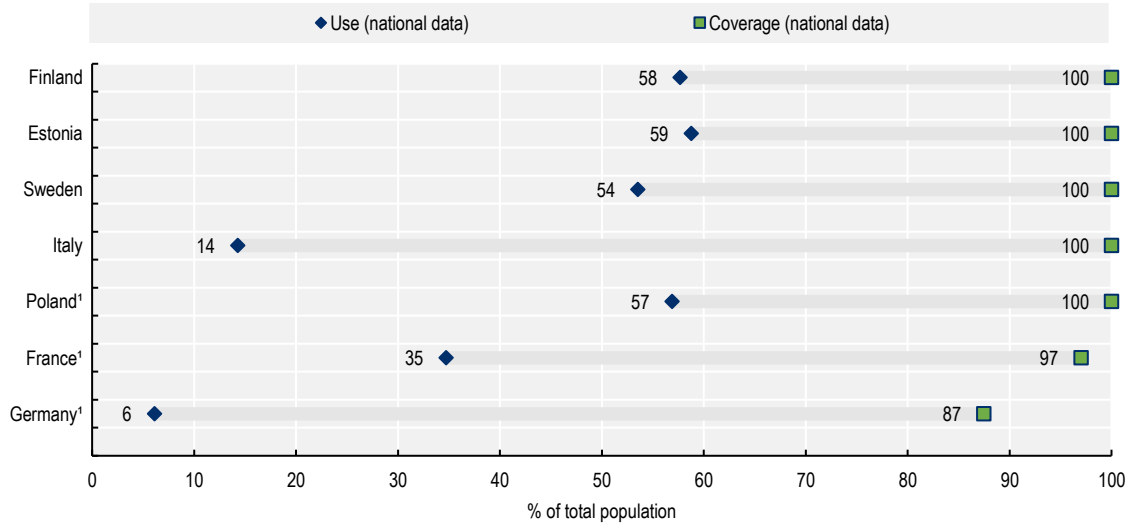
1.4.2. Default enrolment creates coverage, but does not secure engagement

The seven systems in Figure 1.10 show that account creation and engagement are different stages. Coverage ranges from 87% in Germany to universal provision by design in Finland, Estonia, Sweden, Poland and Italy. France and Germany expanded coverage through automatic creation. Engagement is more limited, but its measures differ: recent logins in Finland, Estonia, Sweden and Italy; cumulative activation in Poland and France; and identity registration in Germany. The latter measures do not establish sustained use and are flagged in the figure. Across the cases, creating an account requires less citizen involvement than using it.

In Finland, Estonia and Sweden, whose national services have operated for more than a decade, between 54% and 59% of the population logged in at least once in 2025. Their portals are embedded in routine care, with test results and other clinical documents delivered through them, so care events themselves are likely to create reasons to log in. Italy shows how wide the gap can remain: a record exists for everyone covered by the national health service and has been fed automatically since 2020, yet 14% of the population accessed it in March-May 2026. The different observation periods prevent direct comparison of these use rates.

Administrative data show that automatic record creation seldom prompts active refusal: around 2% of insured people in France opposed profile creation (Assurance Maladie, 2024[10]); in Germany, a little over 5% did so in 2025 (GKV-Spitzenverband, 2025[11]). These rates measure refusal of enrolment, not willingness to use a service or awareness of it, and they indicate that deliberate refusal is a small component of non-engagement. Similarly, PaRIS respondents who report an offer but do not use it may have no current need, face barriers or prefer other routes. None of these measures identifies why patients do not report a service as offered. Visibility, assistance and prompting therefore remain interventions to test, alongside understanding when patients find access useful.

Figure 1.10. High record coverage coexists with lower recent use



Note: National administrative measures, as shares of the total population and defined differently in each system. Coverage is universal by design in Finland, Estonia, Sweden, Poland and Italy; France counts Mon espace santé profiles and Germany records created by statutory health insurers. Use is at least one login in 2025 (Finland, Estonia, Sweden) or at least one access in March-May 2026 (Italy). 1. Cumulative activation since launch (Poland, to May 2026, including children's accounts; France, to January 2026) or digital health identity registrations (Germany, April 2026), a lower bound on access because a health card with a PIN is an alternative route.
Source: Kela (2026[12]), *Use of MyKanta*, https://tietotarjotin.fi/en/statistic/955991/use-of-mykanta; Tervisekassa, *Terviseportaalist* (2026[13]), https://www.terviseportaal.ee/terviseportaalist; Inera (2026[14]), *Statistik för 1177 journal*, https://www.inera.se/tjanster/statistik-for-ineras-tjanster/statistik-for-1177-journal/; Italian Ministry of Health (2026[15]), Monitoraggio FSE 2.0 (indicator IU1.3), https://www.fascicolosanitario.gov.it/it/monitoraggio; Centrum e-Zdrowia (2026[16]), *Internetowe Konto Pacjenta ma już 8 lat*, https://pacjent.gov.pl/internetowe-konto-pacjenta-ma-juz-8-lat; Assurance Maladie (2026[17]), Quatre ans de Mon espace santé, https://www.assurance-maladie.ameli.fr/sites/default/files/2026-01-29-cp-mon-espace-sante-quatre-ans.pdf, gematik (2026[7]), Ein Jahr 'ePA für alle': Mehr als 100 Millionen hinterlegte Dokumente verbessern Behandlung und Versorgung in Deutschland, https://www.gematik.de/newsroom/news-detail/ein-jahr-epa-fuer-alle-mehr-als-100-millionen-hinterlegte-dokumente-verbessern-behandlung-und-versorgung-in-deutschland; Eurostat, https://doi.org/10.2908/DEMO_GIND.

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France provides the clearest evidence of change following the 2022 switch to opt-out enrolment. Before *Mon espace santé* was launched on this basis, its predecessor, the *Dossier Médical Partagé*, required active sign-up and reached only a small fraction of the population despite operating for more than a decade. A *Mon espace santé* profile is opened automatically unless the person objects, and professionals can deposit documents in it before the holder has used it. The holder activates the profile by logging in for the first time with a provisional code sent by post or email. Default enrolment rapidly expanded coverage: nearly 97% of the population now has a profile, professionals and facilities deposited more than 420 million documents in 2025, and 70% of the population received at least one document that year. Activation and use remain far below coverage, however: by January 2026, 24 million profiles had been activated, equivalent to around 35% of the population. An average of 2.5 million people logged in each month, and one-third of website visitors arrived after receiving a notification, principally following the addition of a new document (Assurance Maladie, 2026[17]). Engagement thus appears closely associated with care events, since document deposits and notifications create occasions to use a service that patients would otherwise have to initiate unprompted.

The French and German use patterns share two further features. First, registration and use remain lower among older people, so the demographic pressures documented in Section 1.3 apply to these systems too. Second, because a profile can exist without the patient knowing that it does, automatic creation makes coverage a weaker signal of awareness. Germany illustrates this at an earlier stage: records had been created for around 73 million insured people by April 2026, but only around 5.1 million had registered a digital health identity (GesundheitsID) (gematik, 2026[7]). Because the electronic health card with a PIN is an alternative route, 5.1 million is a lower bound on the number able to view their record; the number who know that a record exists is not measured.

The comparison across the seven systems shows that default enrolment can expand coverage rapidly, while useful content and prompts are plausible mechanisms for converting coverage into use. France's administrative data on document deposits and notifications, Denmark's decline in use as pandemic-era test results receded (Section 1.2) and the embedded portals of Estonia, Finland and Sweden are all consistent with this interpretation. None of them isolates the effect of clinically meaningful content and prompts on engagement, which therefore needs to be tested.

1.4.3. Records access varies mainly between countries; other online services also vary between practices

A multilevel variance decomposition of PaRIS separates variation in reported offers and use into differences between countries, between practices within countries, and between individuals. This decomposition locates variation without identifying its causes or the effects of interventions. Four patterns emerge:

- **Records access varies more between countries than between practices.** Country differences account for around a quarter of variation in both reported offers and use, compared with less than a tenth for practices within countries. National portal arrangements and communication may contribute, alongside differences in how patients interpret a practice-specific question.[3]
- **Online booking varies substantially between practices.** Practice differences are as large as country differences for both reported offers and use. Observed patient characteristics explain little of this variation, although unmeasured population and local factors may matter. Websites, front-desk signposting and consultation prompts are therefore plausible practice-level interventions to test.
- **Digital confidence shows little between-practice variation.** Confidence in using online information to make health decisions varies between individuals and countries, but hardly between practices. This does not establish that practices cannot improve confidence: limited variation may reflect similar current provision. Both wider skills policies and support within care settings remain relevant.
- **Conditional use varies less than reported offers.** Among patients who report a service as offered, use varies less between countries and practices than reported availability itself. This supports investigating the offer and visibility of services, while allowing for selection into the group that reports an offer.

1.4.4. Evidence is strongest for changing how access is offered in the care encounter

The evidence on raising EHR use is mostly observational. It is most consistent for measures that change how access is offered and prompted at the point of care, and weakest for standalone digital literacy training, which trials have tested mainly against measured skills, not actual use. Table 1.1 reviews five levers, from system-level to individual-level measures, and summarises the evidence on their effect on EHR use. Trials concentrate on individual-level measures, where effects are easier to isolate, while evidence on system-level measures comes mainly from observational and administrative data (Grossman et al., 2019[18]).

Table 1.1. Five levers to convert EHR coverage into use have different evidence bases

Lever	How it works	Evidence base	Evidence assessment
Universal offer at every encounter	Every patient is informed and offered access at the point of care, so the offer does not depend on staff discretion or assumptions about likely use	Observational and implementation studies from the United States and Europe	Moderate: observational associations; no randomised evaluation identified in the chapter review
Default enrolment	A record or account is created automatically; remaining unenrolled requires active refusal, while use still requires action	National administrative data from France and Germany	Strong for coverage; defaults alone do not generate active use
Provider prompts and endorsement	A health professional explains or recommends the service during a consultation, adding visibility and salience	US survey analyses; contextual evidence from PaRIS	Moderate: consistent observational associations; no European causal evaluation identified in the chapter review
Assisted access	Staff, family members or carers help patients gain access and use services on site or remotely	European programme statistics; US trials of individually delivered support	Limited: operationally developed in parts of Europe; comparative evidence remains sparse
Standalone digital literacy training	Training develops the skills and confidence needed to use digital services	Trials and pre-post studies, mainly among older adults	Limited for EHR use: improves measured skills; little evidence of effects on actual use

Note: Levers are ordered from system-level to individual-level measures. Evidence is assessed as limited, moderate or strong.
Source: OECD synthesis based on the literature.

Provider prompts and endorsement have the largest observational evidence base among encounter-level interventions. Analyses of US surveys consistently find that patients whose clinicians encourage them to use an online record are more likely to do so across several portal functions (Crotty et al., 2019[19]; Shimoga and Lu, 2019[20]). Endorsement is therefore a plausible lever, although its causal effect has not been established. No European country was identified as having implemented it systematically and evaluated it rigorously as a national digital inclusion policy.

The same US literature shows that encouragement is not distributed evenly. Better-educated and higher-income patients are more likely to report receiving it (Sisk et al., 2023[21]), and whether clinicians offer it depends partly on their own confidence in the tool. Provider endorsement could therefore narrow or widen inequalities in EHR use, depending on how it is implemented. Left to individual discretion, it may reach patients who already use digital services before it reaches others; embedded as a systematic offer at every appropriate encounter, it is more likely to reach patients for whom the service is currently invisible. Indirect European

evidence supports testing this approach: the PaRIS finding that use of practice-run services such as online booking varies as much between practices as between countries (see above) is consistent with the care setting affecting whether services become visible.

Evidence on what access achieves once patients have it is less encouraging. A 2025 systematic review of randomised and quasi-experimental studies found that providing a personal health record did not generally increase patient activation, meaning the knowledge, skills and confidence needed to manage one's health. Seven of the eight studies found no statistically significant effect (Osovskaya, Blandford and Potts, 2025[22]). Providing access therefore cannot be assumed to increase patients' capacity to act on the information they find.

Assisted access is established in practice in some parts of Europe, but remains under-evaluated. Portugal operates one of the larger assisted-access programmes. Since the first points opened in December 2020, trained staff at around 460 locations run by *freguesias* (civil parishes) and citizen-service centres have helped people use SNS24, the digital services of the national health service. The SNS24 portal and application now serve as the main digital entry point, combining teleconsultation, ePrescription, vaccination records and chronic-condition monitoring, so the assisted-access points support a single integrated service. Activity is monitored, but effects on initial uptake, sustained use and equity have not been evaluated against a comparison group.

Central access channels are also being extended to services beyond records, and can be tied to how providers are paid. Poland's central e-registration system, in force since January 2026, requires providers to synchronise their appointment schedules with a national system. From July 2026, the National Health Fund, the public payer, pays for an appointment only if it has been registered through that system. Patients book the services covered by the system through the national patient account and its mobile application. The design combines a single national entry point with a financial obligation on providers. It is not one of the five levers in Table 1.1, and its effects on access and on use of the patient account have not yet been evaluated.

Across the five levers, Europe has several plausible ways to convert coverage into use but currently lacks the controlled evaluations needed to compare their effects. Payment systems offer a further, indirect route by shaping which digital applications enter publicly funded care in the first place and what evidence is generated along the way.

1.4.5. Reimbursement as a source of evidence on digital applications

Reimbursement provides another way to build evaluation into implementation, extending the discussion from EHRs to therapeutic apps and remote-monitoring devices. Germany and Belgium operate forms of conditional reimbursement, under which payers fund a technology provisionally while evidence is generated, and France an early-access route. Together they illustrate three design questions: whether to pay for a product or a care activity, what evidence to require and when, and what happens if that evidence does not arrive.

Germany's Digital Health Applications pathway (DiGA) allows class I and IIa devices to enter reimbursement provisionally while demonstrating benefit over 12 months, extendable by up to 12 more; higher-risk class IIb applications must demonstrate benefit at entry. Listings, prescriptions and spending have grown quickly and evidence more slowly. By the end of 2025, 74 applications had been listed, 60 of them provisionally; of these 60, 34 were later listed permanently, one in five of them with a narrower scope than originally sought, ten were still in their provisional period and 16 had been removed for failing to demonstrate a positive care effect. Cumulative statutory spending reached roughly EUR 400 million, and according to the national payer report 19% of listed applications had demonstrated benefit at entry (German National Association of Statutory Health Insurance Funds, 2026[23]). An independent systematic review rated all 23 studies available by March 2024 that had been used to demonstrate a positive care effect as being at high risk of bias (Sippli et al., 2025[24]). Manufacturers set the price during the first year of listing, which for provisionally listed applications is also the period of weakest evidence; a price negotiated with the statutory health insurance funds, on average less than half as high, then applies. From 2026, the negotiated price must include an outcome-based component of at least 20%, informed by outcome measures that all listed applications must record. Provisional payment can support evidence generation only if the final threshold is enforced.

Belgium initially required proof of clinical and socio-economic value before payment; only one application qualified in the first 18 months. Requiring evidence before any reimbursement can limit developers' ability to finance the studies needed to qualify; interoperability requirements and the size of the Belgian market may also have deterred applications. Since October 2023, reimbursement has instead covered applications within defined care pathways, with temporary access available on preliminary evidence and a plan to resolve uncertainty (INAMI/RIZIV, 2026[25]). In early 2025, seven tools gained permanent reimbursement within a chronic heart-failure monitoring pathway. Hospitals are paid for monitoring, clinical follow-up and treatment adjustment using the tools (INAMI/RIZIV, 2025[26]). This shifts assessment towards the value of the care process in which an application is used.

France's *Prise en charge anticipée numérique* (PECAN) provides a single non-renewable year of early coverage for therapeutic digital devices and remote-monitoring devices, with separate tariffs and deadlines for applications for permanent reimbursement. Uptake has been limited: 13 assessments of PECAN applications had been issued by the end of 2025. Alongside this route, routine reimbursement of telemonitoring pays for a care team's monitoring activity using a registered device, linking payment to the service delivered.

Neither permissive nor restrictive entry conditions generate reliable evidence by themselves. Outcomes, deadlines and consequences need to be specified and enforced, preferably with assessment independent of developers. Reporting across these pathways remains stronger on listings, prescriptions and expenditure than on sustained use, equitable uptake and care outcomes.

A further issue remains unresolved at European level. Developers seeking access to several national markets face different eligibility rules, evidence standards and submission processes, and the resulting assessment costs can make smaller markets unattractive to enter. Greater European alignment on evidence standards and reporting templates could reduce duplicated requirements and allow evidence generated in one market to be reused elsewhere, while leaving reimbursement and pricing decisions at national level. This matters both for payers and for the competitiveness of Europe's digital health sector, since fragmented requirements raise the fixed cost of scaling across the single market, particularly for smaller developers.

1.4.6. The evaluation deficit

Evidence gaps concern both how to increase use and what use achieves (Table 1.2). For uptake interventions, the chapter's targeted review, closed in August 2026, identified no European randomised evaluation of provider endorsement, systematic offers or assisted access to national or regional portals. This is a finding within that review's scope, not proof that no such study exists. England's Di-Facto study identifies staff endorsement as an influential factor, but its own evidence comes from surveys and ethnography without a controlled comparison (Abel et al., 2024[27]). For benefit, European experimental evidence remains sparse. A Leeds pilot randomised 102 adults with cystic fibrosis to mobile record access or no mobile record access, with 91 completing six months. It found no significant differences in anxiety, patient activation or most quality-of-life domains, although users valued access (Chadwick et al., 2025[28]). Its size and single-clinic setting limit generalisation.

Trials in adjacent programmes show that experimental evaluation is feasible within European health systems. In England, a factorial trial within the NHS Health Check preventive check-up programme tested several components separately and in combination. It found that an invitation letter combined with SMS reminders raised uptake from 18% to 30%, while a letter sent in advance of the invitation added nothing detectable (Sallis et al., 2019[29]). Observational data could not have isolated the effect of each component in this way. In Denmark, a randomised trial embedded in the colorectal cancer screening programme found that advance notification and an additional reminder increased participation from 66.9% to 69.8%, including a 4 p.p. gain at ages 50-59 (Larsen et al., 2022[30]). Screening invitations differ from portal use in several respects, but the trials demonstrate that the content, timing and frequency of routine communications can be evaluated experimentally, at population scale, within ordinary administration. That approach has not yet been applied systematically to citizen-facing digital health services.

Table 1.2. Europe measures capability more consistently than use, equity or benefit

Stage	Regular measurement	Evidence of effects	Main gap
Availability	Digital Decade eHealth indicator and national dashboards	Describes capability and coverage; does not establish effects	Completeness and interoperability in routine practice
Use	Eurostat ICT survey and national portal administrative statistics	Uptake measures rely mainly on observational and implementation evidence	Comparable sustained use and use following relevant care events
Equity	Population-group surveys; PaRIS links use and need at the individual level	Adjusted associations: effects of uptake measures on inequalities uncertain	EU-wide linked data on need and use, including people aged 75+
Benefit	Selected clinical studies; no harmonised EU series linking record use to outcomes	Sparse European experiments	Effects on care, workforce capacity and costs in routine care settings

Note: Selective synthesis of Sections 1.2-1.4. The search for European randomised evaluations of measures to increase use closed in August 2026. Studies of the effects of records access address a separate question (Chadwick et al., 2025[28]). PaRIS covers 13 EU/EEA countries.
Source: OECD synthesis based on the sources cited in Sections 1.2 to 1.4.

PaRIS illustrates the limits of observational comparisons of benefit: among respondents with a chronic condition, records users were slightly more likely to report repeating information to clinicians, a marker of poor continuity. Patients with complex needs or fragmented care may have stronger reasons both to consult records and to encounter missing information. This association therefore establishes neither harm nor a continuity benefit from records access; identifying the effect requires a design that addresses selection into use. Financial monitoring has related limitations: the European Court of Auditors (2024[3]) found that neither the Commission nor most Member States had a consolidated overview of EU digital-health funding. This concerns financial traceability, not impact evaluation. Project-specific indicators also do not provide a harmonised account of whether investment improves use and outcomes. Future funding could incorporate proportionate evidence requirements from the outset.

Evaluation methods are available: prompts and notifications can be randomised within routine administration. Where feasible, phased rollouts can use a randomised stepped-wedge design, in which sites receive an intervention in a randomly assigned sequence, allowing comparisons with sites awaiting implementation while accounting for time trends. Registries and clinical audits can support continuing monitoring, as the AI examples in Section 1.6 illustrate. Each approach requires advance planning, resources and appropriate data governance.

From 2029, the EHDS rules on secondary use should make it easier to link data on digital engagement, care processes and outcomes across countries. The legal framework alone will not, however, provide the data quality, operational capacity or analytical expertise that such evaluations require (Section 1.5).

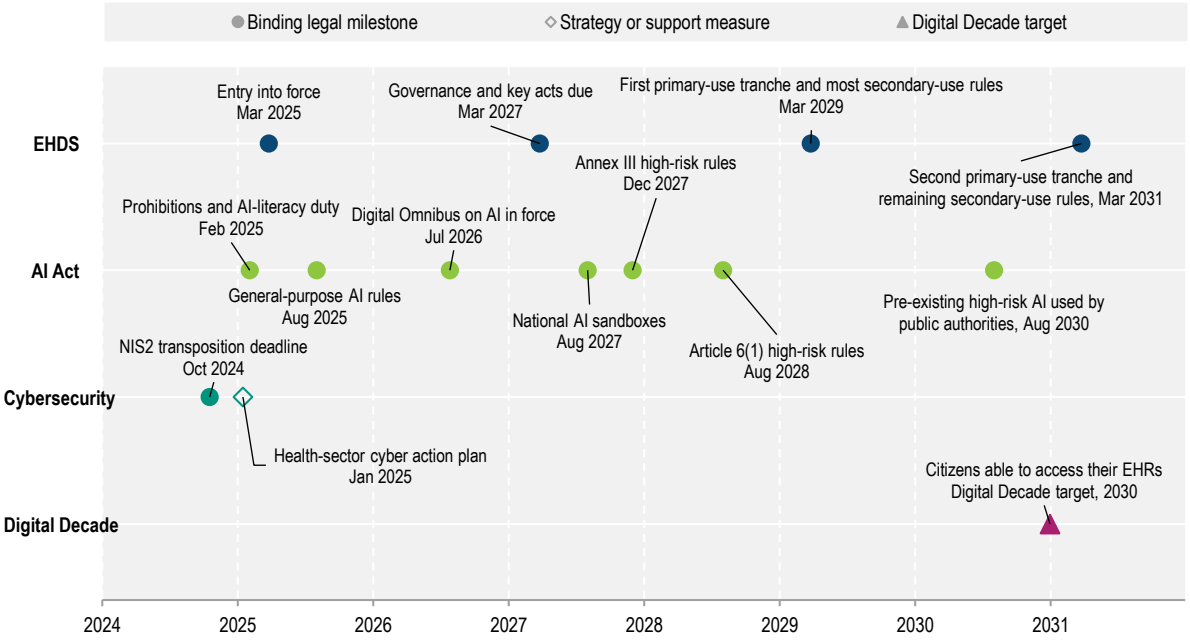
Governments can test systematic offers at the point of care, plan useful content and prompts alongside default enrolment, and embed evaluation in rollouts. The objective is to learn which combinations increase useful access, for whom and at what cost.

1.5. Institutional readiness: Data governance, cybersecurity and public trust

The common readiness test for this section and the AI analysis that follows is whether institutions, operational systems and professional capacity can support services already being deployed. For health data, this requires lawful and timely access, reliable and secure infrastructure, and confidence in those responsible. The EHDS sets milestones for data governance and exchange; NIS2 establishes resilience obligations; and the AI Act follows a separate timetable for AI. These dates provide checkpoints, but readiness must also be judged through operational performance. This section examines access bottlenecks, service disruption and public acceptance as evidence of the capacity that legal frameworks require.

Figure 1.11 brings these timetables together. The period before the first major EHDS obligations in March 2029 is an initial delivery window, while cybersecurity duties already apply and AI obligations follow their own phased schedule.

Figure 1.11. EU obligations apply in stages to 2031, with the largest EHDS tranche in 2029



Note: Application dates. EHDS: governance and key implementing acts in March 2027; patient summaries, ePrescriptions, eDispensations and most secondary-use categories in March 2029; medical imaging, laboratory results, discharge reports and remaining secondary-use categories in March 2031. See Section 1.5 and Box 1.5.
Source: OECD based on the European Health Data Space Regulation (Regulation (EU) 2025/327), the AI Act as amended by the Digital Omnibus on AI, and the Digital Decade Policy Programme; NIS2 Directive and the European Commission's Action Plan on the cybersecurity of hospitals and healthcare providers.

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1.5.1. EHDS implementation: From legal designation to operational capacity

The EHDS Regulation entered into force in March 2025, but its obligations start to apply only from March 2027, with key obligations phased in through 2029 and 2031 (European Union, 2025[4]). Alongside harmonised requirements for EHR systems themselves, it organises two data-use tracks:

- **For primary use**, Member States must designate digital health authorities and a national contact point for digital health, and notify the Commission of both by March 2027. The contact point is the organisational and technical gateway through which health data are exchanged with other Member States. The obligations for the first group of data categories (patient summaries, electronic prescriptions and electronic dispensations) apply from March 2029. From that date, healthcare providers must register these data electronically in an EHR system, the data must be issued in the European electronic health record exchange format, and patients and the health professionals treating them must be able to access them, including across borders. The same obligations extend to imaging studies, medical test results and discharge reports from March 2031. The cross-border dimension of this track builds on *MyHealth@EU*, through which national contact points have exchanged ePrescriptions and patient summaries on a voluntary basis since 2019; 15 Member States had an operational contact point by mid-2025. The EHDS makes participation mandatory, and the Commission adopted the implementing rules for the infrastructure in September 2026, taking effect from March 2027. Within each country, primary use rests on national infrastructures whose maturity varies considerably. It also depends on all countries applying the same semantic standards, which govern how data are coded, and the same technical standards, which govern how data are transmitted. That in turn requires ways of checking that systems conform to those standards, clear responsibility for the quality and management of the data, and procurement practices that avoid closed data formats and vendor lock-in.

- **For secondary use**, Member States must designate health data access bodies (HDABs) to assess applications for access to data, issue permits and provide the data through secure processing environments, where approved users can analyse the data but can download only non-personal data, such as anonymised statistical outputs. Most of this regime applies from March 2029; genetic and genomic data, clinical-trial data and data from cohorts and surveys follow from March 2031. The remainder of this subsection focusses on this track because it is where most institution-building remains to be done. Primary use extends infrastructure that already operates, whereas secondary use will require many Member States to create new institutions or substantially adapt existing ones.

The secondary-use obligations do not start from a common institutional baseline. By 2025, a small number of Member States had formally designated a health data access body, and most were developing one or adapting an existing data institution. Some, including Italy, had yet to designate a body for the role (OECD, 2025[31]). The Regulation requires each Member State to designate at least one such body by March 2027, ahead of the application of the secondary-use rules in March 2029. Several Member States already operate bodies that perform specific functions of the future EHDS model. In 2020, Finland centralised permit decisions for data held by several registries in a single body, Findata. France's Health Data Hub, created in 2019, facilitates access to the national database of health insurance claims and care records. Germany's Health Data Lab (Forschungsdatenzentrum Gesundheit), hosted by the Federal Institute for Drugs and Medical Devices (BfArM), opened in October 2025, initially holding statutory health insurance claims data. Belgium has established a Health Data Agency with a co-ordination mandate, and Denmark is developing its designated access body on the basis of long-standing research-data services. Each illustrates one part of the institutional task, but none yet performs every task the Regulation assigns to the body.

Designation alone does not demonstrate operational readiness. As Findata's experience (Box 1.2) shows, end-to-end performance depends on the full access chain, not on the access body alone. Findata's median permit-processing time fell from 82 to 49 days in 2025, an improvement that it attributes to changes in its own processes. Even so, applications spent on average only a quarter of their elapsed time with Findata. For the remaining three-quarters they were waiting for applicants or for the organisations holding the data (the data holders), stages that the access body cannot directly control. If that pattern holds elsewhere, the main limit on access times will often lie with applicants and data holders. Applicant support, preparation by data holders and response deadlines would therefore deserve the same attention as the design of the access body itself.

Box 1.2. Finland's *Findata* shows that access times depend on applicants and data holders as much as on the access body

Findata's annual reports show how a centralised model for permits to reuse health data performs under sustained demand. Finland was among the first EU countries to establish a dedicated authority for the secondary use of health and social data. Created under the 2019 Secondary Use Act and operational since 2020, Findata centralised permit decisions involving data held by several registries (the data holders), replacing separate negotiations with each of them.

Throughput and workload: In 2024, Findata received 316 applications and issued 340 decisions; in 2025, it received 370 applications and issued 367 decisions. Most applications in both years concerned amendments to existing permits, so the totals measure administrative workload, not demand for new projects alone. The median processing time for data permits approached the statutory three-month limit in 2024, at 82 days, before falling to 49 days in 2025. In that year, 85% of permits were processed within the statutory limit. Findata attributes the improvement to process development and to introductory meetings that helped applicants specify their requests before assessment (Findata, 2026[32]).

Where time is actually spent: In 2025, data permit applications spent, on average, one-quarter of their total elapsed processing time with Findata. For the remainder, they were waiting for applicants or for the data holders, for example while registries extracted and corrected the requested datasets, steps that add delay and cost beyond the access body's control.

Cost as a barrier: A voluntary survey of 430 Finnish clinician-researchers found that 64% reported higher research costs following the Secondary Use Act. In the same survey, 42% reported not having initiated a project because of the fee structure and 38% because of the cost of the secure processing environment (Reito et al., 2022[33]). The survey is self-selected, but it shows that cost as well as processing time can deter researchers from using the data. Amendments to the Act that entered into force in 2026 introduced more flexible arrangements for permit procedures, dataset compilation and secure processing (Findata, 2026[34]).

For Member States preparing health data access bodies for 2029, Findata's experience indicates that legal authority is necessary but not sufficient. Effective access depends on the full pathway from application to usable data, including applicant support, timely responses from data holders, predictable costs, reliable extraction and sufficient secure-environment capacity.

Whether national implementation is progressing at the pace that 2029 requires cannot yet be assessed systematically. Comparable information is not yet available across Member States on legal mandate, staffing, stage-by-stage processing capacity, co-ordination with data holders, secure-processing capacity and readiness to connect to *HealthData@EU*, the planned EU-level infrastructure linking national access bodies for cross-border secondary use. EU-supported preparation is nevertheless under way through the Joint Action Towards the European Health Data Space (TEHDAS2), an EU-co-funded programme of work among national authorities involving 29 European countries through December 2026. It is developing common guidelines and technical specifications for catalogues describing which datasets exist, for access procedures and for secure processing environments.

From March 2029, Article 59 of the Regulation will require HDABs to publish biennial activity reports in a common format agreed by the EHDS Board. Reports are due within six months of the end of each two-year period, so the first would not fall due until around 2031. Article 102(4) requires the Commission to report annually to the Council on Member States' readiness until all of the Regulation's provisions apply, with the main obligations phased in by 2031. For these instruments to locate bottlenecks, processing times would need to be reported by stage, covering assessment, clarification, extraction and preparation, and the setting up of the secure processing environment for the user, in addition to the end-to-end average that Article 59 requires. Options for Member States to report on these dimensions voluntarily before 2029 are discussed in the measurement agenda in Section 1.7.

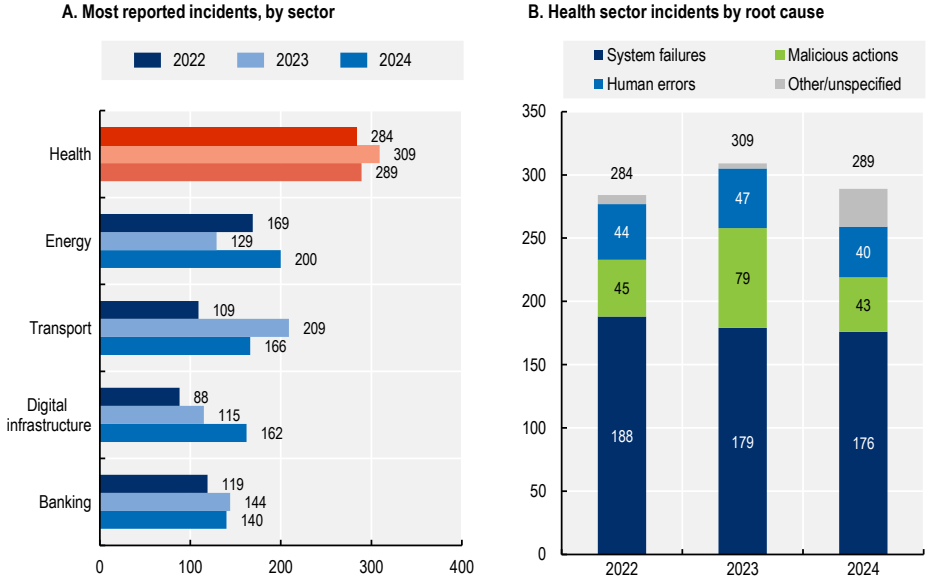
1.5.2. Cybersecurity and operational resilience in digital health

Digitalised care depends on the continuous availability of network and information systems. When these systems fail, appointments, prescribing, diagnostics, referrals and access to clinical information can all be disrupted, whether the initial cause is malicious, technical or human.

The final annual reporting round under the first NIS Directive[4] shows the scale and the composition of this risk. In 2024, health accounted for 289 significant incidents (those meeting the Directive's threshold for mandatory notification), more than any other sector for the fifth consecutive year (Figure 1.12, Panel A). This was fewer than the 309 incidents reported in 2023, but the decline should not be read as an improvement, because reporting coverage and notification thresholds differed between the two rounds.

The composition of incidents provides a more reliable finding. In 2024, non-malicious system failures accounted for 68% of health-sector incidents with a recorded root cause, well above the 51% average across all sectors. Malicious attacks accounted for 17%, less than half the cross-sector average of 37% (Figure 1.12, Panel B). These shares describe frequency rather than impact: within the same reporting round, ransomware, a form of malicious attack, was identified as the largest single cause of service time lost in health, measured in user-hours (NIS Cooperation Group, 2025[35]). The incident types that occur less often can therefore produce the largest disruption.

Figure 1.12. Health reports more significant digital service disruptions than any other key sector



Note: Significant incidents notified by operators of essential services. Panel A: all incidents; Panel B: root causes. Sector size, reporting coverage and thresholds affect counts. System failures are non-malicious technical faults; malicious actions are deliberate attacks; human errors are unintentional mistakes.
Source: ENISA Cybersecurity Incident Reporting and Analysis System (CIRAS) data, accessed 7 July 2026; NIS Cooperation Group (2025[35]).

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Both malicious attacks and technical failures can make clinical systems unavailable, but preventing and recovering from them requires different capabilities. The resilience agenda therefore has two related components. The first is operational reliability: maintenance, controlled procedures for making changes and for reversing a faulty update, redundancy, backups and arrangements for maintaining care when systems are partly unavailable. Reliability also depends on open standards and portability, so that a supplier can be changed or replaced without losing access to data, audit trails or critical functions. The second is cybersecurity: network segmentation (dividing networks into compartments so that an intrusion cannot spread), access controls, threat detection, incident response and secure recovery. Both components depend on staff training and a security culture in which suspicious messages, errors and incidents are reported promptly. Clear responsibilities and regular exercises help staff apply these routines in clinical work. A framework focussed only on hostile threats would overlook the technical failures responsible for most incidents with a recorded cause, while one guided only by incident frequency would understate the potentially severe effects of malicious attacks (Sutherland et al., 2023[36]).

Malicious incidents also create harms beyond service interruption, including theft of data, extortion, the costs of investigating the breach and notifying those affected, and loss of public confidence. Two estimates, different in scale and construction, illustrate the potential financial consequences. A survey by the EU Agency for Cybersecurity (ENISA), conducted before NIS2, estimated the median cost of a major IT security incident reported by health organisations at around EUR 300 000 (ENISA, 2023[37]). The exceptional 2021 ransomware attack on Ireland's Health Service Executive cost approximately EUR 102 million by April 2025, including legal costs (Box 1.3).

Box 1.3. The 2021 attack on Ireland's Health Service Executive: What a single incident can cost

The 2021 ransomware attack on Ireland's Health Service Executive (HSE) shows how a malicious incident can translate into national service disruption, financial cost and patient-safety risk. After detecting ransomware on its systems in May 2021, the HSE shut down national IT systems to contain the attack. Clinicians lost access to patient information, laboratory systems and other clinical systems, and services across the country reverted to paper-based processes.

On the morning of the attack, 31 of Ireland's 54 acute hospitals announced cancellations affecting outpatient clinics, diagnostic imaging, radiotherapy and elective surgery. Recovery took more than four months: by 21 September 2021 all servers had been decrypted and 99% of applications had been restored. The HSE reports a total cost of the attack of about EUR 102 million by April 2025, including legal costs (HSE, 2025[38]). This is expenditure on response, recovery, replacement of legacy technology and security monitoring, not a valuation of disrupted care, patient-safety risk or the exposure of personal data. It also excludes the multi-year programme to implement the independent review's recommendations, which the HSE estimated in 2022 at almost EUR 657 million over seven years (C&AG, 2022[39]).

The independent post-incident review identified weak cybersecurity capability, limited network segmentation and no advance prioritisation of systems for recovery. It also found that the HSE had neither a chief information security officer nor a security operations centre, a team that monitors systems continuously for attacks. More generally, the scale of disruption caused by an attack depends on the architecture it encounters, the organisation's capacity to detect and contain it, and whether clinical continuity and recovery priorities have been established in advance.

Since 2021, the HSE has invested in cyber resilience with dedicated funding to protect critical digital health assets and has appointed a chief information security officer supported by a dedicated cybersecurity team.

The policy response starts from capacity that is uneven and incompletely measured. Computer emergency response teams (CERTs), also called computer security incident response teams (CSIRTs), help organisations prevent, detect and manage cyber incidents and restore services, but teams dedicated to the health sector have historically been uncommon. The most recent EU-wide mapping, published in 2021, found only three EU countries (France, Luxembourg and the Netherlands) operating a health-sectoral CSIRT.

Capacity has expanded since then: Poland established CSIRT CeZ, its sectoral incident response team for health, in December 2023, and Denmark consolidated SundCERT as its national health-sector cybersecurity centre in 2025. These join longer-established services such as the Netherlands' Z-CERT and France's CERT Santé. No comparable inventory has been conducted since 2021, so current coverage cannot be quantified.

Evidence from healthcare organisations shows the extent of the remaining gaps. In survey results reported in ENISA's 2023 Health Threat Landscape report (ENISA, 2023[37]), only 27% of responding organisations reported having a dedicated ransomware defence programme, and 40% had no security-awareness programme for staff outside IT functions. ENISA's NIS360 assessment, which rates each NIS2 sector on cybersecurity maturity and criticality, placed health in its "risk zone" in the first edition. The 2026 edition moved health to the moderate-maturity band but still judged its cybersecurity capability low relative to the sector's criticality. It cited legacy systems, resource constraints and weaknesses in basic protective routines and incident preparedness as persistent challenges (ENISA, 2026[40]).

Member States were required to transpose NIS2 into national law by October 2024. The Directive raises the regulatory floor by broadening and harmonising the range of health organisations covered and by strengthening obligations on governance, risk management, supply-chain security, business continuity and incident reporting. As a general rule, its direct scope covers medium-sized and large entities, together with smaller organisations that national authorities designate because of their critical role (European Parliament and Council of the European Union, 2022[41]). Many small providers therefore remain outside its direct reach. Transposition has lagged: most Member States missed the October 2024 deadline, the Commission opened infringement proceedings against 23 of them in November 2024 (European Commission, 2024[42]), and by July 2026 it had referred four to the Court of Justice and asked it to impose financial penalties (European Commission, 2026[43]).

The Commission's January 2025 Action Plan on the cybersecurity of hospitals and healthcare providers adds sector-specific support, including a European support centre at ENISA, guidance, exercises and proposed cybersecurity vouchers (European Commission, 2025[44]). Implementation remained at an early stage in June 2026. Although work had begun on a co-ordinated security-risk assessment for medical devices and on some national action plans, the support centre was still being established and no vouchers had been distributed. The Commission itself assessed progress as limited (European Commission, 2026[45]). In July 2026, the Commission and ENISA concluded a EUR 6 million, three-year funding agreement to establish the European Cybersecurity Support Centre for the health sector. ENISA also published updated cybersecurity procurement guidelines for hospitals and healthcare providers (ENISA, 2026[46]). These are initial implementation steps whose effects will depend on how quickly services reach providers.

The implementation challenge runs in parallel with the building of the EHDS institutions through 2029. Capacity constraints are likely to be most acute among smaller hospitals, primary care providers, long-term care facilities, mental health facilities and rural providers. Limited resources are only part of the problem: providers below the NIS2 size thresholds have no direct obligations unless designated as critical. They nevertheless remain connected to regulated organisations and shared infrastructure, so a weakness in one of them can become a route into regulated systems. Targeted grants, shared security-operations centres and incident-response services, pooled procurement and sector-wide exercises could help these providers meet basic resilience requirements while reducing the risks that such weaknesses create for interconnected care networks.

1.5.3. Public confidence in secondary use depends on who uses health data and how access is governed

Public confidence will shape the legitimacy and sustainability of the institutions governing access to health data beyond direct care, including for research, quality improvement, system monitoring and, under specified conditions, commercial projects. Secondary use differs from primary use because the EHDS does not ask each person for consent each time their data are reused. For the purposes it permits, the Regulation itself provides the legal basis that data-protection law requires for processing without consent. Access will generally be authorised by health data access bodies through permits for defined purposes, subject to the Regulation's safeguards. Individuals may opt out, subject to limited exceptions that Member States may provide for in national law for public bodies and public-interest purposes. Because individuals do not decide on each use of their data, their confidence has to rest on the institutions that grant access, the rules they apply and the safeguards they enforce. No regular EU-wide instrument measures confidence in those arrangements.

In the Commission's 2026 Special Eurobarometer survey on the Digital Decade, 55% of EU respondents identified digital health technologies as among those likely to have the most positive impact on their daily lives over the next ten years, the highest share for any of the technologies listed (European Commission, 2026[47]). That survey does not distinguish attitudes to secondary use by user, purpose or safeguards, so the assessment below draws on several partial sources.

These sources point to a consistent pattern: willingness to share health data is high in aggregate but depends strongly on the proposed user and the safeguards in place. A 2025 meta-analysis of 65 studies covering around 141 000 respondents, mostly in high-income countries, estimated willingness to share data for secondary use at 77% across the studies combined. Willingness was around 80% where the user is a researcher, but 25% for for-profit organisations (Olsen et al., 2025[48]). A survey experiment in 12 European countries, which varied the user, the purpose and the safeguards of data-sharing scenarios, found the same ordering. National authorities and academic researchers were the most acceptable users, while commercial and technology organisations were the least acceptable. Respondents also placed particular value on being informed and asked for consent, and visible oversight increased acceptance (Biasiotto et al., 2023[49]). A survey by the European Consumer Organisation (BEUC) in eight EU countries found an even wider gradient: 88% were willing to share with their general practitioner, against 8% for insurance or wellness-application companies and 5% for technology companies (BEUC, 2023[50]). Recent OECD work similarly identifies public perceptions, together with the need to align governance and access procedures across countries, as central challenges for the secondary use of health data (OECD, 2025[51]).

This variation matters for the EHDS because the Regulation differentiates access mainly by purpose, not by who the user is. Researchers, regulators, health technology assessment bodies and companies alike may obtain permits for the purposes the Regulation allows. Yet the public trusts these users to widely different degrees. That difference in trust therefore has to be addressed through the rules and institutions that govern access.

Legal authorisation does not by itself produce public confidence, and the preference evidence identifies conditions associated with greater acceptance: transparent rules, clear communication and visible oversight. A serious data breach, wherever it occurred in the system, could weaken that confidence during the early years of implementation and reduce willingness to share data more widely. Spending on cybersecurity, examined in the previous subsection, therefore protects the data-sharing arrangements themselves and should be counted as part of their cost.

A second body of evidence concerns trust in relation to observed use of digital services, which is a different behaviour from stated willingness to share data. The PaRIS survey distinguishes trust in the health system from trust in the patient's own provider. Among primary care users in the 13 EU/EEA countries participating in the survey, both kinds of trust are associated with greater use of online services, each independently of the other. Patients who agreed that the healthcare system can be trusted had about 19% higher odds of using at least one online service offered by their practice than those who did not, and patients who definitely trusted the professional they had seen had about 11% higher odds than those with less trust. The results are consistent with trust having an institutional dimension distinct from confidence in the treating clinician, and it is on this broader dimension that the EHDS will depend.

German evidence illustrates why default enrolment cannot substitute for measuring trust directly. In a representative survey conducted while legislation for the opt-out electronic record was being developed, 43% of respondents said they were willing to share health data through the record, while around one-third were undecided. In the same survey, 45% were critical of using an opt-out model for data sharing, and trust was the strongest predictor of willingness to share (Wilke, 2025[52]). Yet when automatic record creation took effect, only around 5% of insured people opposed it (see Section 1.4). The two figures measure different decisions, creating a record and sharing data through it, so low opposition shows that defaults create coverage but does not demonstrate endorsement of subsequent data use.

Willingness to share is also socially graded: across the available evidence, it tends to rise with income, education and digital literacy, so the groups least willing to share overlap with those least likely to use digital health services (Section 1.3). Public

information and health-data literacy are plausible elements of trust-building, particularly when designed for populations currently less engaged, but evidence on their effects remains sparse. A repeatable EU-wide baseline on trust in health data governance would reveal whether overall confidence changes during implementation and whether trust gaps widen or narrow.

Three practical tasks for governments before 2029 follow from this section. The first is to designate and resource the bodies that will handle data access, and to attend to the applicant support and data-holder response times on which access speed depends. The second is to treat operational reliability and cybersecurity as a single resilience agenda, with shared support for the providers least able to sustain it alone. The third is to measure public confidence directly.

Artificial intelligence raises these governance demands in specific ways: many AI applications depend on large and representative datasets, some may change after deployment, and their responsible use requires health professionals and the public to understand how automated outputs inform care. The next section assesses whether health systems are developing the governance, evaluation and workforce capacity needed to manage these demands.

1.6. Artificial intelligence: Matching adoption with evidence

Artificial intelligence (AI) is now used across EU health systems (OECD, 2026[53]). In the WHO Regional Office for Europe's 2024-2025 AI readiness survey (2026[54]), most EU Member States reported at least some use of AI tools in clinical settings.[5] Diagnostic imaging was the most commonly reported application, by nearly 75% of EU countries, followed by AI-assisted triage, patient-facing chatbots and administrative automation. Imaging and screening are also among the areas where some of the clearest evidence of clinical and operational benefit is emerging. The task for health systems is to capture these benefits while ensuring that AI tools are safe, work well for the patients and settings in which they are used, and are supported by appropriate skills and oversight.

National preparation has not kept pace with reported use: in the OECD's 2026 survey of 24 EU/EEA countries, five reported a national AI strategy specific to health and six more reported partial arrangements. The WHO/Europe survey, which covers all EU Member States, found fewer countries with a health-specific strategy, and most countries address health within broader cross-sectoral national AI strategies.[6] The two surveys classify countries differently, and neither shows how extensively AI is used in individual hospitals or by individual clinicians. Taken together, they nevertheless indicate that reported clinical use is widespread while dedicated national frameworks remain few.

The sequence resembles the one described in Section 1.2 for EHRs, where infrastructure was built before evidence about use and effects had developed, but it is unfolding over a much shorter period. Both delay and premature deployment carry costs: delaying effective tools forgoes demonstrated benefits, while deploying them without adequate evaluation lets them shape decisions at the point of care before their performance is understood. Readiness therefore means moving quickly enough to capture benefits, but not faster than health systems can evaluate and govern adoption.

Building on the data and infrastructure requirements examined earlier, this section focusses on appraisal, procurement, evaluation and human capacity. Box 1.4 summarises the readiness dimensions, and the analysis then follows the decisions health systems face as they purchase, implement and monitor AI.

Box 1.4. AI readiness: Legal frameworks are further advanced than the capacity to apply them

Readiness combines four capabilities, each with a different evidence gap:

1. **Data foundations.** The existence of EHR access services does not establish that underlying data are complete, standardised, representative or accessible for AI development and validation. Comparable EU-wide measures of these properties remain unavailable (Section 1.2).
2. **Reliable infrastructure.** AI depends on the maintenance, cybersecurity and recovery arrangements examined in Section 1.5. Legacy systems, resource constraints and third-party dependencies can limit deployment and monitoring.
3. **Appraisal and governance.** Among 24 EU/EEA countries surveyed, five reported a dedicated health-AI strategy, seven a national approach to adapting health technology assessment, two AI-specific procurement guidance and five an approach to a health-AI regulatory sandbox, a supervised testing environment (OECD, 2026[55]).
4. **Workforce capacity.** Seven of these countries reported a national approach to AI awareness or competence and ten partial steps. Comparable assessments of competence by occupation and care setting remain lacking.

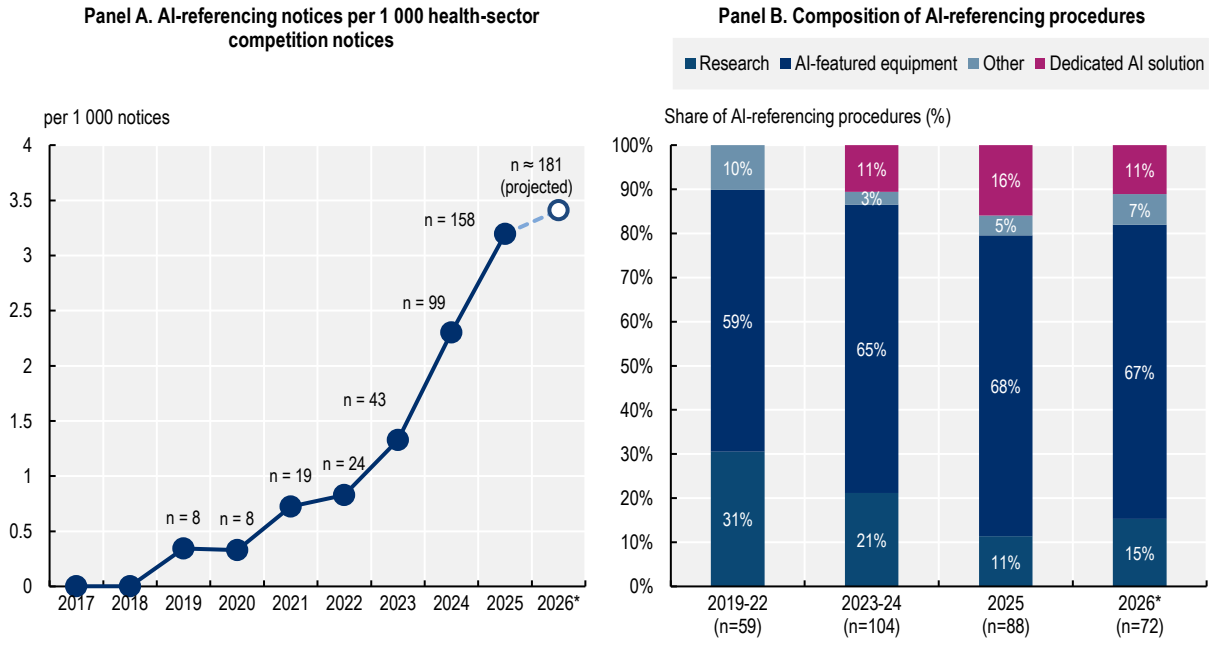
Across the four dimensions, EU legal frameworks are further advanced than the national appraisal, evaluation and workforce capacity they presuppose. Public and professional trust depends on all four dimensions, including transparent decisions and meaningful oversight. The Expert-Led Madrid Action Plan, developed at the OECD-Spain conference in May 2026, addresses trust, institutional and technical foundations, economic and financial models, and measurement and co-ordination (OECD, 2026[56]).

Sources: OECD (2026[55]), *Scaling Artificial Intelligence in Health*, https://doi.org/10.1787/a436e12d-en; European Commission (2025[5]), *2025 Digital Decade eHealth Indicator Study*, https://doi.org/10.2759/2737039; WHO Regional Office for Europe (2026[54]), *Artificial intelligence is reshaping health systems: state of readiness across the European Union*, https://iris.who.int/handle/10665/385097; ENISA (2024[57]) *2024 Report on the State of Cybersecurity in the Union* and (2026[40]), ENISA NIS360 - Latest insights in the cybersecurity maturity and criticality of NIS sectors of high criticality, https://www.enisa.europa.eu/enisa-nis360-2026.

1.6.1. AI enters health procurement mainly as a feature of conventional equipment

Procurement notices show where health systems initiate purchasing against a defined specification, which may differ from what surveys report. On this measure, AI has moved from near absence to a small but growing presence. In the EU's Tenders Electronic Daily (TED) database, health-sector competition notices (calls for tender) that mention artificial intelligence were close to zero between 2017 and 2020, before reaching 3.19 per 1 000 health-sector competition notices in 2025, equivalent to 158 notices (Figure 1.13, Panel A). Between 1 January and 15 October 2026, the rate was 3.41 per 1 000 notices, while AI-referencing procedures numbered 2.49 per 1 000 health-sector procurement procedures, compared with 2.50 in 2025. The rate measures how visible AI has become in major procurement (contracts large enough to require EU-wide publication), not how widely AI is adopted, and it is conservative because it counts only notices that name artificial intelligence explicitly. The procurement procedures behind these notices are referred to here as "AI-referencing procedures".

Figure 1.13. AI mentions in health procurement have risen since 2020, mostly in equipment tenders



Note: Panel A: above-threshold health-sector competition notices in TED that mention artificial intelligence in any official EU language, per 1 000 health-sector notices (CPV division 33 and group 851; EU contracting authorities); n = AI-referencing notices. Panel B counts each underlying procedure once, in its first year, by AI's role in the purchase. * 2026 covers 1 January-15 October. Its rate is observed; the annual count of 181 is projected from 141 notices, divided by the 2023-2025 average share published by 15 October (0.778).
Source: OECD analysis of TED API data, https://ted.europa.eu/en/, accessed on 15 October 2026.

StatLink https://stat.link/fnxade

The form in which AI is purchased affects how it is appraised. Across the period analysed, around two-thirds of AI-referencing procedures concerned conventional medical equipment, principally imaging and endoscopy systems, in which AI appeared as one component of the specification. Dedicated AI products and services emerged as a distinct category only recently, accounting for 11% of procedures in 2023-2024 and 16% in 2025 (Figure 1.13, Panel B). Where appraisal occurs, it is consequently more likely to assess AI as a device feature than as a clinical intervention with its own evidence requirements.

This route of entry creates an oversight challenge that conventional equipment procurement does not routinely cover: the performance of clinical AI can vary across patient populations and clinical workflows, and it can drift after purchase as case mix, clinical practice or the software itself changes. Among the 24 EU/EEA countries covered in OECD (2026[55]), only two have adapted procurement guidance specifically for AI. In its absence, local buyers must translate regulatory requirements and clinical evidence into technical specifications, contractual safeguards and monitoring arrangements themselves.

The composition of buyers shows where this capacity is needed. Of the 251 procedures identified up to 2025, 70% were initiated by individual hospitals or regional providers, 20% by research institutions and 8% by central purchasing bodies. Where a clinical domain could be identified, imaging predominated, consistent with AI entering mainly through equipment purchase. This decentralised pattern means that the same technologies may be appraised repeatedly by different purchasers, duplicating appraisal costs. Reusable evidence assessment can reduce that duplication. Reviews of a tool's clinical performance, safety and regulatory status, templates

setting out what evidence to require, model specifications, model contract terms (covering data access, software updates, auditability and post-deployment monitoring) and reference assessments of tools already reviewed can be developed nationally or at European level. Purchasers would still need to assess applicability to their own context, including the software version, patient population, workflows and information systems, a context-specific appraisal that central bodies can also support.

Appraisal of this kind presupposes capacity that many organisations lack. A 2026 systematic review of health-AI governance frameworks found that most assume organisational resources that smaller organisations rarely command, with distinct requirements at each stage from product selection through local validation and workflow integration to continuing monitoring (Hussein et al., 2026[58]). Shared appraisal resources may therefore matter most for smaller providers with limited procurement, clinical-evaluation and data-science capacity, including those identified in Section 1.5 as least able to sustain specialist support alone.

1.6.2. AI evidence remains focussed on technical performance rather than value in routine care

Evidence on clinical AI is expanding rapidly, but remains concentrated in model development and retrospective validation, meaning testing on previously collected data. A 2026 scoping review covering more than 4 600 primary AI studies found that 88% were preclinical (development and validation studies in which AI outputs did not guide real-time patient management) and fewer than 3% were randomised controlled trials. The trials that existed were mostly single-centre, reported favourable findings with few exceptions, and more often measured process indicators or diagnostic yield (the number of cases detected) than outcomes directly relevant to patients (Wang et al., 2026[59]; Han et al., 2024[60]). The evidence base therefore describes technical performance far more fully than effects across institutions, patient populations and routine clinical processes.

Even technical benchmark evidence can overstate what a system has learned. A 2026 study deliberately stress-tested leading general-purpose AI models that process both text and images (the type underlying consumer chatbots) on standard sets of medical examination questions. The models often produced the correct answer even after the diagnostic image had been removed, which is consistent with reliance on memorised associations rather than interpretation of the case. They also became unstable when answer options were reordered or images were substituted, and generated fluent justifications citing visual findings that were not present (Gu et al., 2026[61]). Reported accuracy on such benchmarks is not, by itself, evidence that a model interprets clinical cases.

Economic evidence is similarly limited. A 2026 systematic review of 98 economic evaluations of medical AI classified 36% as showing an unambiguous economic preference for AI and a further 41% as potentially cost-effective, depending on the willingness-to-pay threshold. Four in five were modelling studies rather than trial-based, three in ten assessed no cost for the AI itself, and only one measured an outcome for health professionals, although 89% of the tools evaluated were designed for their use. The review identified no economic evaluation of generative AI or of administrative applications such as clinical documentation. Its authors conclude that the evidence shows potential for cost-effectiveness but cannot yet support the large aggregate savings often claimed for AI (Schmidt et al., 2026[62]).

Evidence of translation into routine care is rarer still. A systematic review of more than 1 200 studies of AI in adult intensive care found that 24% had reached external validation, meaning testing on data from a different hospital or population from the one used to build the model. Progression to some form of clinical integration was reported for 2% of studies, and none met the review's definition of full implementation in routine practice (Berkhout et al., 2025[63]). The finding applies to intensive care, but it illustrates the distance between developing a model and integrating it into routine care.

This distance matters for purchasing because evidence of clinical performance may have limited external validity: results obtained in one setting may not transfer across populations, institutions and workflows. Accuracy established in the development setting, or a favourable modelled cost-effectiveness result, does not establish that a tool will generate value locally. Health systems also tend to capture the outcomes most readily recorded by existing information systems, such as documentation time and throughput. Task-level savings of this kind do not by themselves measure realised productivity gains, which depend on whether the time released is used for additional services or better-quality care, or is reflected in lower expenditure. By comparison, patient benefit, workforce sustainability and value for money are harder to measure and remain less visible. Addressing this imbalance requires patients and clinicians to help define meaningful outcomes, and those outcomes to be incorporated into procurement specifications, implementation studies and post-deployment monitoring (Van Kessel, 2026[64]).

1.6.3. AI evaluation can be built into deployment

Rigorous evaluation of AI applications in healthcare remains rare, but two large European studies show that it is feasible when designed into deployment and can generate evidence that standard procurement metrics would miss:

- Sweden's MASAI trial embedded randomisation within the population-based breast-screening programme in southern Sweden. Among approximately 105 900 women, AI-supported screening detected 29% more cancers and reduced the number of readings radiologists had to perform by 44%, compared with double reading, the standard practice of two radiologists reading each mammogram (Hernström et al., 2025[65]). Interval cancers (those diagnosed between screening rounds, the usual check that a screening method is not missing disease) were no more frequent than under double reading (Gommers et al., 2026[66]).[7] The higher detection rate has prompted debate about how much of the additional detection represents overdiagnosis (the detection of cancers that would never have caused harm). Longer follow-up, repeated screening rounds and economic evaluation will be needed to resolve that question, which can be examined only because the randomised design produced comparable groups to follow.

- The United Kingdom's TRICORDER trial, conducted outside the EU but relevant for its design, tested the opposite scenario, in which a well-performing tool is made available without being embedded in routine workflows. Across 205 primary care practices covering more than 1.5 million patients, regulator-approved AI-enabled stethoscopes were provided for routine cardiac examinations, with training but with use left to clinical discretion and results not integrated into electronic records. After 12 months, the intention-to-treat analysis found no significant increase in detection of heart failure, atrial fibrillation or valvular heart disease. Detection was higher among patients actually examined with the device, but this per-protocol comparison is not randomised and is vulnerable to selection bias, since clinicians may have chosen to examine the patients who already seemed more likely to have heart disease. Use was concentrated in a minority of practices and declined over time: four in ten practices had stopped using the device by month 12. Clinicians ranked integration into electronic records above financial incentives as the change most likely to sustain use (Kelshiker et al., 2026[67]).

The trials differ in disease, setting and design, so their contrast does not isolate the effect of workflow integration. Both tools had regulatory approval and strong reported technical performance, and the contrast between MASAI's routine pathway and TRICORDER's discretionary additional step suggests that integration into routine workflow shaped how far each reached patients. A US trial provides complementary evidence: AI-supported detection of low ejection fraction increased diagnosis when results were embedded in routine electrocardiogram reports with automated alerts (Yao et al., 2021[68]). The parallel with patient portals (Section 1.4) is direct: in both cases, population-level benefit depends on whether a capability becomes part of routine use, so evaluation needs to examine the whole care process, including interoperability and actual use, as well as technical performance.

Evaluation must also continue after implementation, because some effects emerge only with sustained use. In four Polish endoscopy centres participating in a randomised AI trial, endoscopists' detection rates when working without AI fell after AI assistance became routine. The share of unaided colonoscopies in which at least one precancerous lesion was found fell from 28.4% to 22.4% within three months (Budzyń et al., 2025[69]). The study cannot establish that exposure to AI caused the decline, or that the decline was clinically important, but it identifies deterioration in unaided performance as a potential unintended effect that post-deployment monitoring would otherwise miss.

1.6.4. AI-specific health workforce preparation remains limited in most EU countries

For many clinical AI systems, effects on care depend on the professionals who use them: staff must be able to interpret outputs, recognise limitations, know when human judgement should prevail and explain AI-supported decisions to patients. Structured national preparation nevertheless remains incomplete. Among 24 EU/EEA countries covered by the OECD survey (2026[55]), seven (29%) reported a national approach to health workforce AI competency and a further ten (42%) reported only partial steps.[8]

Some Member States are incorporating AI into education and training, with EU technical assistance and funding. France made digital health training, including AI, compulsory in the first (undergraduate) cycle of health studies from 2025, supported by EUR 119 million to train 500 000 medical, paramedical and social-care professionals over five years (Comité interministériel de l'Intelligence artificielle, 2025[70]). Germany's publicly supported KI-Campus platform offers free certified AI courses, including health-specific programmes, although participation is voluntary and available data do not show how far they reach practising professionals (DFKI, 2025[71]). Greece has completed a training programme for primary healthcare staff that reached more than 6 000 professionals and included modules on digital transformation in health. These initiatives signal growing policy attention, but do not yet establish whether training improves workforce readiness.

Available workforce-wide indicators do not close this evidence gap. In 2025, 72.4% of health and social care workers in the EU had at least basic digital skills,[9] compared with 68.7% of all employed persons and 60.4% of the population aged 16-74. Basic digital skills, however, are a weak proxy for the ability to appraise a clinical algorithm, detect automation bias (the tendency to accept an automated suggestion without checking it), interpret uncertainty or explain an AI-supported decision to a patient.

Broader evidence on access to digital training also points to unequal institutional capacity. A 2026 study of 2 048 professionals found that 81% of respondents in Northern Europe had access to structured digital training, compared with 49% in Southern Europe, where respondents also reported shortages of training, time and resources more often (Esperança, Ferreira and Martins, 2026[72]). The study covered general digital training, not AI-specific competence, so it indicates differences in training capacity, not in AI readiness itself.

Direct evidence on AI-specific preparedness comes from small local studies that rely largely on self-reports and are not representative of national or EU workforces. They consistently report unmet training needs alongside openness to AI. In surveys of nurses and other health professionals in Greece and Belgium, fewer than one respondent in seven rated their prior AI training as adequate, while 80-85% of the Belgian respondents wanted introductory courses or to develop AI skills. In a German nursing sample, one-quarter were classified as having AI expertise while two-thirds viewed AI as an opportunity (Kontodimopoulos et al., 2026[73]; Chatzichristos et al., 2025[74]; Sommer, Schmidbauer and Wahl, 2024[75]).

Meeting this demand for training may be difficult amid staff shortages and competing demands on clinical time. Preparedness also appears to vary across occupations: physicians generally report greater familiarity with AI, while nurses, despite growing exposure to AI-enabled triage, documentation and monitoring tools, report lower familiarity and less institutional support (Chatzichristos et al., 2025[74]). The evidence therefore cautions against treating the health workforce as a single group with uniform training needs.

The evidence has two policy implications:

- **AI literacy must be role-specific.** Under the AI Act, providers are those who develop or supply AI systems, and deployers are the organisations that use them, such as hospitals. Article 4 of the AI Act, as amended in 2026 by the Digital Omnibus on AI, requires both to support the development of AI literacy among staff and others operating AI systems on their behalf. In doing so, they must take account of existing knowledge and training, the context of use and the people affected[10] (European Parliament and Council of the European Union, 2026[76]). The provision does not prescribe a uniform level of competence. A radiologist using AI as a second reader of images, a nurse responding to AI-enabled monitoring, a procurement specialist assessing an AI-enabled device and a clinician explaining an AI-supported decision require different knowledge and skills. These are shaped by the task performed as much as by the profession: no comparable EU-wide assessment shows how prepared these occupational groups are, or how readiness varies across care settings.
- **Workforce and patient readiness must be addressed together.** Digital skills in the general population remain strongly graded by education. AI-supported services delivered through patient-facing channels may reproduce the inequalities documented in Section 1.3 if professionals cannot explain how AI informs care or if the services remain difficult to use. Role-specific workforce training should therefore be accompanied by accessible patient information, assisted routes into digital services and continued access through non-digital channels.

1.6.5. Patient exposure to and experience of AI are not measured consistently

The readiness examined so far concerns AI deployed within health systems, but patients also encounter AI independently of those systems. General-purpose conversational AI tools are increasingly used to seek information about symptoms, interpret test results and explore treatment options, and neither health-system procurement nor medical-device assessment governs that use. Consumer tools offering quasi-therapeutic interaction outside regulated care, including self-help and companion applications used by children, may need particular attention.

The clearest characterisation of this activity to date comes from a peer-reviewed analysis of more than 500 000 health-related conversations on Microsoft Copilot. Nearly one in five conversations involved assessment of the user's own symptoms or discussion of their own condition. Roughly one in seven queries about symptoms or conditions was made on behalf of someone else, such as a child or an ageing parent. Personal health queries were concentrated in the evening and at night, when conventional services are least accessible (Costa-Gomes et al., 2026[77]). The study covers a single platform and was conducted by its developer, but it indicates that people already use conversational AI for decisions about their own or others' care, as well as for general information. Estimates of scale exist only as industry self-reports: OpenAI states that more than 230 million people worldwide ask health-related questions on ChatGPT each week (OpenAI, 2026[78]). At EU level, the 2026 Special Eurobarometer on the Digital Decade found that 59% of respondents used generative AI in their personal lives (European Commission, 2026[47]). This measure does not cover health specifically: no identified instrument measures the scale of health-related AI use in the EU or its effects on subsequent care decisions.

Within clinical care, the measurement gap begins with whether patients know that AI has been involved. In a 2025 survey of 874 patients recruited through European patient organisations, 22% were unsure whether AI had ever been used in their care (European Patients' Forum, 2026[79]). Respondents expressed clear expectations of transparency: 93% wanted AI use disclosed at the start of a visit or treatment, and more than half would trust AI only if health professionals could understand and explain its reasoning. Asked what they would do if AI and their doctor disagreed, 3% said they would trust the AI. The sample is not representative of EU-wide opinion, and the direction of any difference from patients generally is unknown.

EHR portals offer a partial parallel: in both cases, the technology needs to be visible and intelligible to patients. Patients do not typically choose the AI systems used in their care, however, so disclosure and explanation serve transparency and informed involvement in decisions, not uptake. The AI Act and medical device law set information and transparency requirements for particular systems and context (Box 1.5), but the case for patients understanding AI's role in their care extends beyond them. Health professionals are the main channel through which patients learn what AI has contributed, so patient understanding depends directly on the workforce preparation examined above.

Measurement of patients' experience of AI is similarly limited, with available European evidence scattered across general-use surveys, one-off consultations and hypothetical scenarios. No repeatable EU-wide instrument tracks whether patients encounter AI in care, whether its use is disclosed, how patients understand its role or how it affects their experience and participation in decisions. Building these dimensions into deployment evaluations, disaggregated by age, education and health status, would show whether the social gradients documented in Section 1.3 are being reproduced in AI-supported care.

1.6.6. Managing the transition to the AI Act's high-risk regime

Clinical AI is already regulated in two ways: AI that qualifies as a medical device or in vitro diagnostic must comply throughout with the Medical Device Regulation (MDR) and the In Vitro Diagnostic Medical Devices Regulation (IVDR). Compliance includes conformity assessment, the procedure for demonstrating that a product meets safety and performance requirements, and CE marking. In addition, parts of the AI Act already apply. The AI Act's high-risk rules distinguish product-related systems under Article 6(1), including qualifying medical-device and in vitro diagnostic software whether supplied independently or within equipment, from the uses listed in Annex III, such as emergency patient triage. Following the Digital Omnibus on AI, the main obligations apply from 2 December 2027 to Annex III systems and from 2 August 2028 to Article 6(1) systems; the transitional provisions and the separate deadline for systems intended for public authorities are set out in Box 1.5.

Much of the AI procurement identified in this chapter concerns conventional clinical equipment with long replacement cycles. Contracts signed during the regulatory transition may therefore fix terms on data access, audit rights, software updates and monitoring for much of the equipment's operating life. This creates an immediate procurement risk: health systems need appraisal and contractual safeguards before purchase, regardless of when additional high-risk obligations apply or whether an existing system later meets the transitional conditions.

The Apply AI Strategy's flagship healthcare initiatives (Box 1.5) can demonstrate approaches to adoption, but they cannot determine the conditions governing routine procurement across Europe. As the analysis underlying Figure 1.13 shows, much purchasing is initiated by individual hospitals and regional providers. Tools acquired outside EU-supported initiatives remain subject to national arrangements for health technology assessment, contracting and post-deployment monitoring.

Those arrangements are not yet consistently in place. Among the 24 EU/EEA countries covered in OECD (2026[55]), around half had at least begun adapting health technology assessment to AI, but fewer than one-third (seven) had established a national approach.[11] Five reported a national approach to a regulatory sandbox for AI in health (Box 1.4). Neither EU joint clinical assessment nor sandboxes fully address the purchasing gap: joint clinical assessment applies selectively and does not determine a technology's overall value within a particular health system, while sandboxes support development and testing but do not replace comparative appraisal or procurement rules. Conformity assessment and CE marking, supplemented by the AI Act for high-risk systems, provide necessary safeguards for safety, transparency and accountability. They do not establish whether a tool improves outcomes relative to alternatives, fits local workflows or represents good value against competing uses of health-system resources.

Comparative evaluation should therefore be built into deployment: the MASAI and TRICORDER trials show that randomised evaluation can be embedded in established clinical programmes and data systems. By examining performance under the conditions in which tools are used, it can complement regulatory assessment. Public health institutes are well placed to conduct such evaluations independently of developers and to monitor safety, equity and unintended effects after deployment. From 2029, the EHDS secondary-use regime should reduce some of the barriers to accessing data for evaluation (Section 1.5). It will not, however, provide the study designs, outcome selection or contractual access to performance data that monitoring requires.

Box 1.5. EU rules set the floor for clinical AI use, but health systems still need evaluation

Several bodies of EU law and policy bear on clinical AI. They apply at different dates and answer different questions:

The AI Act sets cross-sector obligations. The original prohibitions and the Article 4 AI-literacy obligation have applied since February 2025, rules on general-purpose AI since August 2025, and the main transparency obligations for AI-generated content and interaction with AI since August 2026. Following the Digital Omnibus on AI, in force since 27 July 2026, the main high-risk obligations apply from December 2027 to the uses listed in Annex III of the Act. From August 2028 they apply to the product-related systems under Article 6(1): AI that is, or is a safety component of, a product covered by the EU product legislation listed in Annex I and subject to third-party conformity assessment, including qualifying AI-enabled medical devices and in vitro diagnostics, whether supplied as software or embedded in equipment. For pre-existing high-risk systems covered by Article 111(2), the transitional rule generally makes application conditional on a subsequent significant change in design. Providers and deployers of high-risk systems intended for use by public authorities must in any event take the necessary steps to comply by 2 August 2030, and EU countries must establish national AI regulatory sandboxes (see Box 1.4) by August 2027.

Medical device law remains the market-access regime for AI that qualifies as a medical device or in vitro diagnostic. The Medical Device Regulation (MDR) and In Vitro Diagnostic Medical Devices Regulation (IVDR) require conformity assessment and CE marking, with evidence of safety, performance and clinical evaluation. For high-risk AI systems, the AI Act adds requirements concerning data governance, human oversight, accuracy and robustness once its high-risk regime applies. A Commission proposal of December 2025 for a targeted revision of the MDR and IVDR would further align AI-specific requirements with the medical-device framework (European Commission, 2025[80]).

Joint clinical assessment under the EU Health Technology Assessment (HTA) Regulation is a common EU-level assessment of a technology's relative clinical effectiveness. For devices, it applies only to selected class IIb and III medical devices and class D in vitro diagnostics (the higher-risk classes). Eligible devices must also have been through the consultation of an EU expert panel that the device rules require for certain higher-risk devices. Incorporation of AI or machine learning is one selection criterion. The assessment examines relative clinical effects and uncertainty but draws no conclusion on overall added value; economic assessment and decisions on pricing, reimbursement and procurement remain national responsibilities.

Adoption support and data infrastructure follow separate timetables. The European Commission's Apply AI Strategy supports a network of AI-powered advanced screening centres: healthcare organisations that deploy, pilot and evaluate AI tools for prevention, early detection and diagnosis, initially focussing on cancer and cardiovascular disease. The network supports real-world clinical validation and assessment of local performance. The strategy also envisages a European Network of Expertise to develop deployment guidance. Both initiatives are intended to build on the EHDS data access and reuse mechanisms, most of which apply from March 2029.

None of these instruments determines whether buying a particular tool represents good use of resources in a specific health system, a judgement that falls to national HTA, procurement requirements and post-deployment evaluation.

1.7. Conclusions

Europe's digital health agenda now depends on delivery: enabling useful and equitable access, establishing whether digital tools improve care, and sustaining the institutions, resilience and skills required to support them. The evidence is strongest on availability and use, and weaker on benefits and operational readiness. The first major EHDS obligations in March 2029 provide a checkpoint for progress, while AI and cybersecurity require action on their own timetables.

The evidence indicates an implementation gap with two dimensions. On equitable use and benefit, technical availability has advanced faster than use, some groups with greater health needs use services less, and European evidence on whether use improves care remains limited. On institutional readiness, the EHDS institutions, operational resilience and public confidence are still being built, and AI raises the demands on appraisal, procurement and workforce competence further. An evaluation deficit runs across both: Europe measures deployment in detail, use partially, equity less and effects least, and it does not yet track the operational performance of the new data institutions or public confidence in the arrangements for secondary use.

For patient-facing services, PaRIS data point to the importance of how an offer is perceived, while leaving actual non-availability, unawareness and national-portal use partly unresolved. About two-thirds of patients reporting an offer use the service, but this selected group cannot predict uptake among newly reached patients. Default enrolment likewise expands coverage without ensuring sustained use. These findings support testing clearer offers, useful content and timely prompts rather than assuming their effects.

Five priorities follow from the analysis. The first two address equitable use, the third the evaluation deficit, and the last two institutional readiness:

1. Make useful access part of routine care. Pair national communication with systematic offers, professional endorsement, timely notifications and assisted access. PaRIS shows larger country than practice differences in records access, while online booking varies substantially at both levels. These patterns help identify settings for intervention, but effects must be tested. Measure use following relevant care events as well as across the whole population.
2. Design inclusion around health need. Education differences persist among Internet users and widen with chronic burden in PaRIS. Services should be accessible as health and functioning change, with assistance available and uptake monitored by age, education and health status. Preserve non-digital routes so that access to care does not depend on digital participation.
3. Match evaluation requirements to cost and risk. Funding, reimbursement and procurement should specify outcomes and evidence requirements at entry, with continued support informed by findings. Randomised prompts can test uptake measures; more consequential technologies require comparative assessment and continuing monitoring. Evaluate patient outcomes, distribution of benefits, costs and workforce consequences, including whether time saved on individual tasks becomes usable capacity. The MASAI and TRICORDER trials show that evaluation can be embedded in clinical implementation.
4. Finance institutional capacity and resilience recurrently. Access bodies need resources for the whole pathway from application to usable data, including support for applicants and co-ordination with data holders, since Findata's experience shows that much delay lies outside the permit authority itself. Providers also need maintenance, incident response and continuity arrangements, with shared support where specialist capacity is limited. These recurrent costs persist after deployment funding ends, a pressing issue as the Recovery and Resilience Facility, which financed much of the recent deployment, comes to an end. Transparent decisions, communication and oversight should support public confidence, which must be measured directly.
5. Support local AI purchasers and the workforce. Hospitals and regional providers initiated around 70% of the AI-referencing procurement procedures identified up to 2025. Common evidence assessments, specifications and model contract terms can reduce duplicated work and strengthen requirements for data access, software updates, auditability and monitoring for performance drift. Role-specific training should prepare staff to interpret outputs, recognise limitations and explain decisions. Building this capacity can help effective tools scale across providers while enabling withdrawal of those that underperform.

Responsibility for these shifts is divided between the EU, Member States, and payers and providers. The EU is best placed to support common measurement, shared evidence assessments that local purchasers can rely on, and model contracts. Member States are responsible for operational data institutions, measures to increase use of digital services, and shared cybersecurity capacity. Payers and providers must specify outcomes, apply procurement safeguards, monitor deployment and preserve non-digital access routes.

1.7.1. A measurement agenda for accountability

Five measurement priorities build on existing Eurostat, Commission, OECD and EHDS instruments. Each requires methodological development, resources and agreement with participating countries:

- **A digital health module in the European Health Interview Survey (EHIS):** this module should cover older age groups and observe digital use, health need and outcomes in the same people. Because the next EHIS wave is feasible around 2030-2031, after the first EHDS obligations apply, a harmonised baseline is needed before 2029. It could be built in

2027-2028 from a Eurobarometer wave, national administrative data and the next OECD PaRIS wave, planned for 2028, updating the evidence in Section 1.3.

- **An actual-use companion to the eHealth indicator:** this would measure records access and other major services on a harmonised basis across population groups, including those aged 75 and over. It requires lifting the ICT survey's upper age limit, as five countries already do voluntarily, and allowing proxy responses where necessary. Use should also be measured after care events such as a test result or a discharge, to compare use across countries among people with a recent reason to consult their records.
- **A successor to the 2018 provider-side benchmarking survey:** it should cover how digital tools are used in clinical work, including transactions such as ePrescription and referrals; the completeness of the underlying data, their semantic interoperability (shared coding and meaning across systems) and their fitness for intended secondary uses; and AI adoption and workforce preparedness. For AI, a repeatable baseline should cover adoption, safety, equity, workforce effects and performance after deployment. The measurement and co-ordination action of the Expert-Led Madrid Action Plan (Box 1.4) could carry this work.
- **Common operational indicators for digital health authorities and health data access bodies:** these should cover legal mandate, staffing, processing times by stage, co-ordination with data holders, secure-environment capacity and readiness to connect to HealthData@EU. Before 2029, emerging access bodies could voluntarily pilot the common activity-report format that Article 59 of the EHDS Regulation requires from that year, subject to agreement by the Commission and Member States.
- **A repeatable EU baseline on public trust in health data governance:** established before secondary use expands under the EHDS in 2029, it should distinguish between data users, purposes and governance arrangements. The Digital Decade Eurobarometer could provide it.

Before March 2029, progress should be judged through credible baselines, operational milestones and evidence on changes in access and care. Over time, those measures should establish whether digitalisation improves outcomes, releases usable workforce capacity and narrows inequalities at an acceptable cost.

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Notes

[1] Targeted Digital Europe calls opened in April 2026 included EUR 9 million for AI-powered image screening and EUR 24.4 million for digital health services and systems.

[2] Administrative counts of documents, medication-list accesses and health identity registrations are not comparable with Eurostat's measure of individuals accessing records in the previous three months.

[3] Multilevel logistic models include country fixed effects and practice random intercepts (68 743 patients, 1 230 practices). The country share is the variance of the 13 estimated country effects; all shares are relative to total latent variance, including the individual component ($\pi^2/3$). Adjusting for patient characteristics barely changes the practice shares.

[4] The first Network and Information Security (NIS) Directive required operators of essential services to report significant incidents. NIS2 replaced it from October 2024 and broadened the scope of reporting.

[5] The survey records whether a country reports any use, not the scale, frequency or routineness of deployment across hospitals and clinicians.

[6] The WHO/Europe survey (June 2024-March 2025) identified three countries with a health-specific AI strategy (Finland, the Slovak Republic and Sweden); Sweden later clarified that its strategy is cross-sectoral, and Ireland published its health strategy after the survey. The OECD survey (2026[55]) reports five of 24 EU/EEA countries with a national approach (Finland, France, Ireland, Norway and Spain) and six with partial arrangements. Different instruments, periods and classifications prevent direct comparison; this section uses the OECD policy-readiness indicators.

[7] Interval cancers were 1.55 per 1 000 women with AI support and 1.76 with standard double reading, meeting the prespecified non-inferiority criterion without establishing superiority. Sensitivity was 80.5% compared with 73.8%, and specificity 98.5% in both groups.

[8] These indicators describe national policy arrangements; they do not measure the proficiency of individual professionals, or the availability of training within particular organisations.

[9] NACE Rev. 2.1 section R covers all workers in human health and social work activities, not health professionals alone; figures refer to people aged 16-74 in 2025. The Digital Skills Indicator uses reported activities and does not assess clinical or AI-specific competence.

[10] The original Article 4 required providers and deployers to ensure "to their best extent" a sufficient level of AI literacy. Since 27 July 2026, Regulation (EU) 2026/1744 requires them instead to "take measures to support the development of AI literacy" of their staff, without guaranteeing any specific level for any individual.

[11] Regulatory sandboxes are supervised environments in which authorities allow new AI systems to be developed and tested under defined conditions and regulatory oversight.

2 Antimicrobial resistance in the EU: Uneven progress towards key 2030 targets

Antimicrobial resistance (AMR) is a major health and economic threat. The European Centre for Disease Prevention and Control estimates that infections with antibiotic-resistant bacteria cause more than 35 000 deaths each year in the EU/EEA. Prolonged illness from these infections causes suffering, raises healthcare expenditure and reduces productivity. Midway through the period covered by the EU's 2030 AMR targets, progress is uneven. At the EU level, human antibiotic consumption in 2025 was slightly lower than in 2019, and the share of WHO AWaRe Access group antibiotics slightly higher. While the EU had already met its 2030 target for bloodstream infections with methicillin-resistant *Staphylococcus aureus* (MRSA) by 2025, the estimated incidence of bloodstream infections with third-generation cephalosporin-resistant *Escherichia coli* and carbapenem-resistant *Klebsiella pneumoniae* was higher than in 2019. In the animal sector, veterinary antimicrobial sales fell by 24% between 2018 and 2024, keeping the 50% reduction target broadly within reach. Almost all EU countries report having national action plans and multisectoral co-ordination mechanisms, but implementation remains uneven, with important gaps in financing, integrated surveillance and evaluation. Faster progress towards the 2030 EU AMR targets will depend on sustained, co-ordinated One Health action across human health, animal health and the environment. Reducing resistant bloodstream infections will depend in particular on stronger infection prevention and control and antimicrobial stewardship in hospitals. OECD modelling indicates that co-ordinated policy packages including stewardship programmes, improved hand hygiene, delayed antibiotic prescribing, mass-media campaigns and improved food-handling practices can save lives while generating health-expenditure savings and productivity gains that exceed their implementation costs.

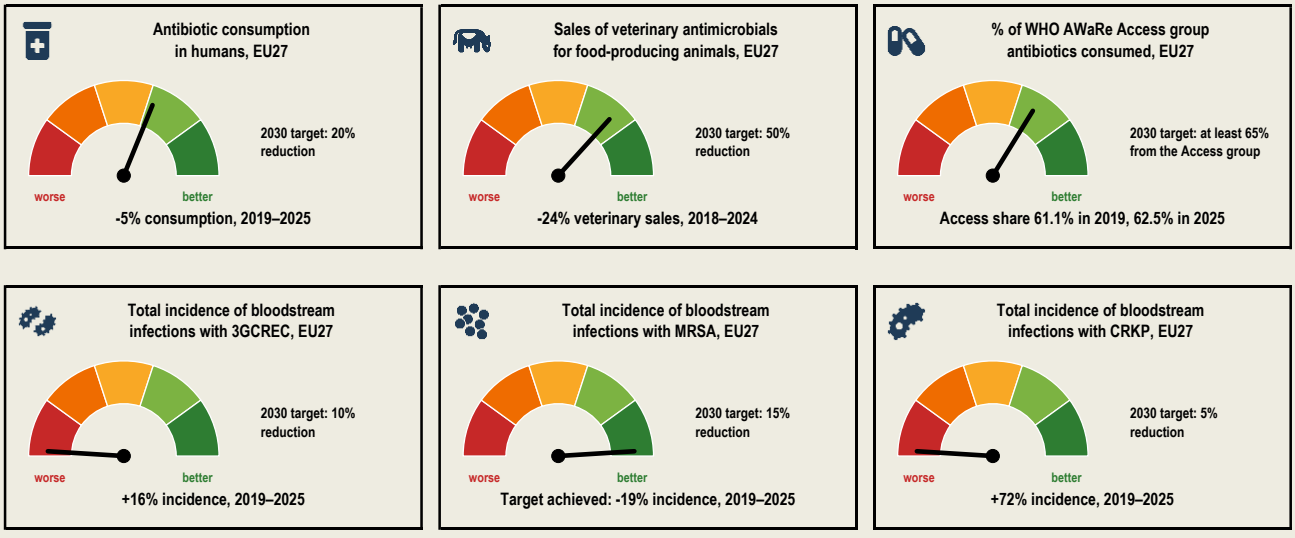
In Brief

Uneven progress across targets, countries and sectors at the 2030 midpoint

Antimicrobial resistance (AMR), which arises when bacteria and other microorganisms no longer respond to the medicines used to treat them, remains a major public health and economic challenge in Europe. Based on 2016-2020 data, ECDC estimates that infections with antibiotic-resistant bacteria cause more than 35 000 deaths each year in the EU/EEA. Many more people experience prolonged illness and longer hospital stays, which increase healthcare expenditure. AMR also reduces economic output through premature mortality, reduced participation in the workforce and lower productivity. OECD modelling puts these combined costs at an average of EUR PPP 11.7 billion a year across the EU over the period to 2050.

To address AMR, the EU has set targets in both the human health and veterinary sectors. The 2023 EU Council Recommendation established EU-level targets and recommended national targets to reduce human antibiotic consumption and selected resistant bloodstream infections between 2019 and 2030, which complement the earlier EU-level target for veterinary antimicrobial sales. The Recommendation also reinforced a One Health approach that co-ordinates action across human and animal health, agri-food systems and the environment. In 2025, roughly midway between the 2019 baseline and the 2030 target year, one of the EU's six AMR targets had already been achieved (total incidence of bloodstream infections with methicillin-resistant *Staphylococcus aureus*, MRSA), and there had been good progress towards the target on sales of veterinary antimicrobials. Progress on the share of Access group antibiotics in total antibiotic consumption was more limited, and the EU was not yet on track to reach the 65% target. There had been slight progress on total antibiotic consumption in humans, but not enough to put the EU on track for a 20% reduction by 2030. The two remaining targets, on the incidence of bloodstream infections with third-generation cephalosporin-resistant *Escherichia coli* (3GCREC) and carbapenem-resistant *Klebsiella pneumoniae* (CRKP), were far off track, with incidence 16% and 72% higher respectively in 2025 than in 2019 (Figure 2.1).

Figure 2.1. Progress in reducing antibiotic consumption and AMR towards the 2030 EU targets is uneven



Note: Needle position = share of the change required by 2030 achieved since the baseline. Needles pointing to the far left ("worse") indicate movement away from the target since the baseline.
Source: ECDC ESAC-Net annual epidemiological report for 2025; ECDC EARS-Net annual epidemiological report for 2025; EMA/ESUAvet.

StatLink https://stat.link/m3ks71

- **Human antibiotic consumption fell by 5% at the EU level between 2019 and 2025.** The net change conceals large pandemic-related swings: consumption fell sharply in 2020, had returned to above its 2019 level by 2024 and fell again in 2025. In about three-quarters of EU countries, consumption was lower in 2025 than in 2019, while differences across countries remained substantial. In 2025, consumption was highest in Greece and lowest in the Netherlands, with approximately threefold variation between countries. Two countries, Austria and Finland, had already met their national 2030 consumption targets. However, the EU as a whole would need to reduce consumption by a further 16% from its 2025 level to reach its 2030 target, compared with a net reduction of 5% over the previous six years. Improving prescribing in community settings, where most antibiotics are consumed, is critical to meeting overall consumption targets. Preventing and managing antibiotic-resistant infections matters in all settings, but infections acquired in healthcare settings account for a disproportionate share of the resulting deaths, which makes infection prevention and control, timely diagnosis and stewardship there essential.
- **The share of Access group antibiotics has increased slightly since 2019.** Access antibiotics are the WHO group that includes recommended first- and second-choice treatments for many common infections and has a lower potential to drive resistance than Watch and Reserve antibiotics. Their share of total consumption rose by 1.4 percentage points (p.p.) between 2019 and 2025, from 61.1% to 62.5%. In 2025, nine EU countries had reached the target of at least 65%.
- **Veterinary antimicrobial sales fell by 24% between 2018 and 2024.** This represents substantial progress towards achieving the EU target of halving overall EU sales of antimicrobials for farmed animals and in aquaculture by 2030, although slightly faster reductions will be required during the remainder of the target period. While the aggregate sales data do not isolate the contribution of individual policies from other drivers, this trend shows that large sector-wide reductions are possible. The implementation of the Regulation on veterinary medicinal products, which lays down rules on the use of antimicrobials in animals, remains the main tool for achieving the target.
- **Progress towards the resistance targets differs markedly across pathogens and EU countries.** At the EU level, more progress has been made in reducing MRSA bloodstream infections than the other two resistant bloodstream infections covered by the 2030 targets, although MRSA incidence has risen slightly in each of the last two years. By contrast, the estimated incidence of bloodstream infections caused by 3GCREC and CRKP was substantially higher in 2025 than in 2019. By 2025, 14 EU countries had met their recommended national MRSA target, but only three had met the 3GCREC target and five the CRKP target. Because CRKP spreads mainly through transmission in hospitals, reversing its rise depends above all on infection prevention and control and antimicrobial stewardship in healthcare settings.
- **Reaching the AMR 2030 targets will depend on converting national commitments into sustained implementation.** The 2025 Tracking AMR Country Self-Assessment Survey (TrACSS) shows that many countries still report gaps in surveillance, monitoring and evaluation, infection prevention and control, stewardship, professional training and environmental action, even though they have adopted national AMR action plans. Of the 27 EU/EEA countries reporting a plan in place, 14 reported that it was fully implemented with the necessary financing, and only nine of these also evaluated it periodically. Half of the responding countries had not yet begun implementing AMR surveillance integrated across at least two sectors.
- **Co-ordinated implementation of AMR policies can produce substantial return on investment.** OECD modelling indicates that a package of interventions combining antimicrobial stewardship, improved hand hygiene, delayed prescribing, public awareness and safer food-handling practices can generate health and economic benefits that exceed its implementation costs.

2.1. Introduction

Antimicrobial resistance (AMR), the ability of bacteria and other microorganisms to resist the medicines used to treat them, is a persistent public health challenge in the EU. By reducing the effectiveness of antibiotics and other antimicrobial treatments,[1] AMR makes common infections harder to treat, causing preventable deaths, worsening patient outcomes and adding avoidable pressure on health systems. Beyond the treatment of infections, AMR undermines the safety of surgery, cancer treatment and intensive care, which depend on effective antibiotics to prevent and treat infections.

In recent years, global action on AMR has accelerated. The United Nations General Assembly passed the Political Declaration on AMR in 2024, which included a target to reduce global deaths associated with AMR by 10% by 2030 (UN, 2024[1]). Prior to that, the 2023 EU Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach set EU-level targets for 2030 (Box 2.1) (Council of the European Union, 2023[2]). It also recommended country-specific national targets, set according to each country's baseline. The Recommendation's targets cover two interrelated dimensions: curbing antibiotic consumption and shifting prescribing towards Access antibiotics, to slow the emergence and spread of resistant organisms; and lowering the incidence of antibiotic-resistant bloodstream infections, to limit the harm of resistance that is already present.

A central tenet of the 2023 Recommendation is a renewed commitment to a co-ordinated One Health approach to addressing AMR. This approach promotes action across human health, animal health, agri-food systems and the environment and is designed to tackle AMR across all the sectors where it occurs. Taken together, these global and EU-level efforts set the legal and policy framework for responding to AMR.

Following this introduction, Section 2.2 assesses the burden of AMR on both populations and the economy using the OECD's SPHeP-AMR model. Section 2.3 discusses the One Health approach to combating AMR. Section 2.4 examines the progress towards the 2030 antibiotic use targets in the human and animal sectors. Section 2.5 assesses the progress towards reducing antibiotic-resistant bloodstream infections. Section 2.6 reviews national action plans and other measures reported by countries, and Section 2.7 examines whether research and development are keeping pace with the need for new antibiotics. Finally, Section 2.8 draws conclusions, including the modelled returns on a co-ordinated package of One Health action.

Box 2.1. An overview of EU 2030 targets

Taken together, the EU's animal-sector target and human-health targets provide a framework for action across human, animal and environmental health. In 2020, an EU aspirational target was set for reducing overall EU sales of antimicrobials for farmed animals and in aquaculture by 2030. In human health, the 2023 Council Recommendation establishes EU-level targets for 2030 and recommends national targets that reflect countries' baseline levels and circumstances. Recommended national reductions in human antibiotic consumption and antibiotic-resistant bloodstream infections therefore differ across Member States, with more ambitious target reductions for those countries that are starting with higher levels of consumption and resistance

The 2030 EU-level targets for human health, relative to the 2019 baseline

- Reduce by 20% (relative to 2019 baseline) the total consumption of antibiotics in humans (defined daily dose per 1 000 population per day) in all settings;
- Ensure that at least 65% of the total consumption of antibiotics in humans by 2030 belongs to the "Access" group of antibiotics as defined in the AWaRe classification of WHO;
- Reduce by 15% (relative to 2019 baseline) the total incidence of bloodstream infections with methicillin-resistant *Staphylococcus aureus (MRSA);*
- Reduce by 10% (relative to 2019 baseline) the total incidence of bloodstream infections with third-generation cephalosporin-resistant *Escherichia coli (3GCREC);*
- Reduce by 5% (relative to 2019 baseline) the total incidence of bloodstream infections with carbapenem-resistant *Klebsiella pneumoniae (CRKP);*

The 2030 EU-level targets for veterinary antimicrobial sales, relative to the 2018 baseline

- Reduce by 50% (relative to 2018 baseline) the overall EU sales of antimicrobials for farmed animals and in aquaculture.

Note: The Defined Daily Dose (DDD) is a standard measure for medicines, calculated as the assumed average maintenance dose per day for a medicine used in its main indication in adults. It is often presented as DDD per 1 000 population per day.
Source: Targets on antimicrobial consumption and AMR in human health for the EU are based on the *Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach* (Council of the European Union, 2023[2]). The veterinary-sales target is based on the Farm to Fork Strategy for a fair, healthy and environmentally friendly food system (European Commission, 2020[3]).

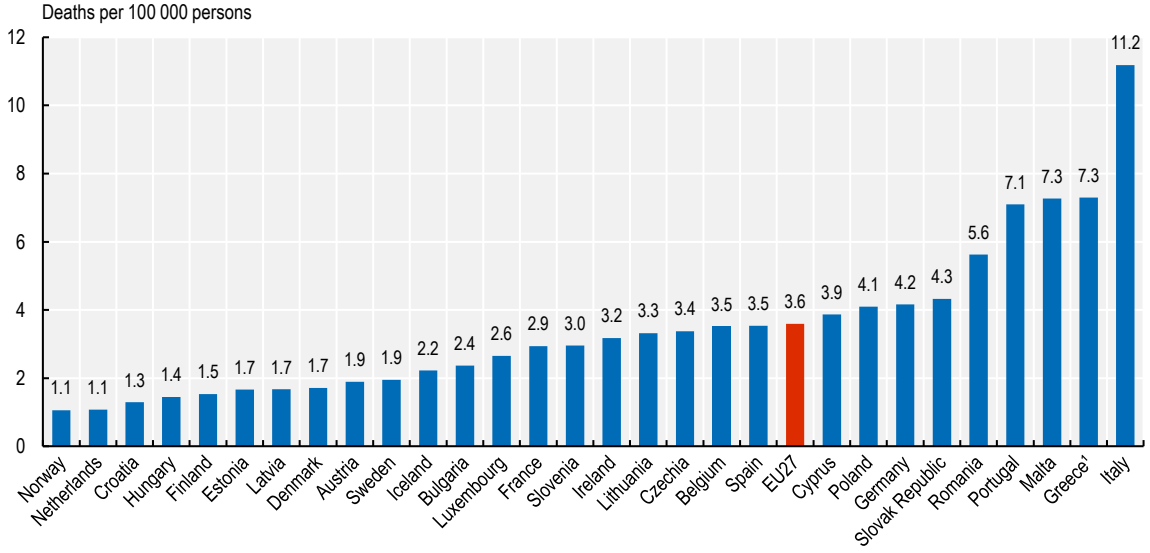
2.2. AMR imposes a large burden on population health and the wider economy

ECDC estimates that more than 35 000 people die each year in the EU/EEA as a direct consequence of infections with antibiotic-resistant bacteria. The most recent estimates cover 2016-2020, a period whose final year was affected by the COVID-19 pandemic. The annual toll rose over this period, reaching around 38 700 deaths in 2019. Around 71% of these infections were healthcare-associated (ECDC, 2022[4]). In 2019, death rates attributed to AMR varied more than tenfold, from 1.8 per 100 000 in the Netherlands to 19.1 in Italy (ECDC, 2022[4]).

For the EU, OECD projections using the SPHeP-AMR model (Box 2.2) suggest that the high burden of AMR will persist without further action. If AMR continues to grow in line with current trends, antibiotic-resistant infections are projected to cause an average of 3.6 deaths per 100 000 population per year across EU countries over the period to 2050 (unweighted average), with rates varying more than tenfold across countries[2] (Figure 2.2). The cross-country differences in the mortality burden reflect the variation in country-specific infection incidence, antimicrobial resistance patterns, antibiotic consumption and healthcare use.

Figure 2.2. Mortality attributable to antibiotic-resistant infections is projected to vary more than tenfold across Europe

Annual mortality rate due to AMR up to 2050



Note: The EU average is unweighted. Estimates are produced using the elimination scenario, which compares a business-as-usual projection with a counterfactual in which all resistant infections are eliminated while the incidence of susceptible infections remains unchanged. 1. Results for Greece use a different data source and methodology due to the unavailability of *S. pneumoniae* data and are not directly comparable with those for other countries.
Source: OECD analysis based on the OECD SPHeP-AMR model.

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Box 2.2. Assessing the impact of AMR through the OECD Strategic Public Health Planning for Antimicrobial Resistance framework (SPHeP-AMR)

The OECD Strategic Public Health Planning for Antimicrobial Resistance (SPHeP-AMR) framework is a microsimulation model designed to assess the medium- and long-term health and economic consequences of AMR across countries. It simulates how antibiotic-resistant infections affect population health, health expenditure, and labour market outcomes up to 2050, drawing on national surveillance data, ECDC estimates, national official statistics and evidence from the literature. The model covers 28 priority antibiotic-bacterium combinations, including 6 healthcare-associated infections and 7 community-acquired infections (acquired outside healthcare settings), and allows cross-country comparisons of the burden of AMR under two different scenarios.

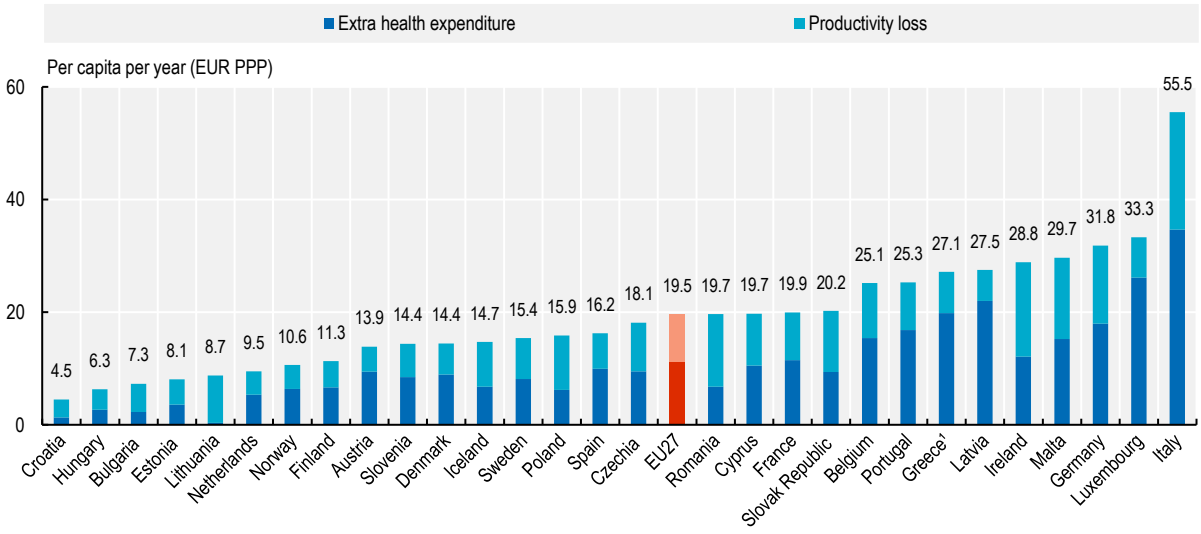
This chapter uses the model's elimination scenario, which compares projected outcomes under current policies with a hypothetical situation in which antibiotic-resistant infections do not occur at all, while infections that remain susceptible to antibiotics continue at their projected levels. The difference between the two represents the deaths, additional healthcare expenditure and productivity losses associated with antibiotic-resistant infections, and therefore the maximum burden that could in principle be avoided. The model's alternative replacement scenario, in which antibiotic-resistant infections are replaced by susceptible ones rather than removed, isolates the additional harm caused by resistance itself and yields substantially lower estimates. Neither scenario reflects the expected effect of a specific policy or a forecast that AMR will disappear.

Source: OECD (2023[5]), *Embracing a One Health Framework to Fight Antimicrobial Resistance*, https://doi.org/10.1787/ce44c755-en.

Antibiotic-resistant infections are more costly to treat than susceptible infections. They are more likely to require intensive medical procedures, additional diagnostic investigations, prolonged hospital stays that tie up scarce bed capacity, and more expensive second-line treatments or combinations of antimicrobials (OECD, 2023[5]). They also reduce economic output by lowering labour-market participation, increasing absence from work due to ill health (absenteeism), and reducing productivity among people who continue working while unwell (presenteeism). Across the EU, OECD modelling puts the average annual economic cost of AMR over the projection period at EUR PPP 11.7 billion, including healthcare expenditure and productivity losses. This corresponds to around EUR PPP 26 per person per year for the EU as a whole, or EUR PPP 20 as an unweighted average of country values (Figure 2.3). More than half of this burden arises from additional healthcare expenditure attributable to antibiotic-resistant infections, while the rest relates to productivity losses. The healthcare component alone is equivalent to approximately 0.7% of total EU health expenditure. Cross-country differences in additional healthcare expenditure reflect variation in the incidence and severity of antibiotic-resistant infections and treatment costs.

Figure 2.3. AMR imposes a sizeable cost on health systems and economies in every EU country

Average annual healthcare and labour-market costs attributable to AMR per person up to 2050, EUR PPP



Note: The EU average is unweighted. Estimates are produced using the elimination scenario, which compares a business-as-usual projection with a counterfactual in which all resistant infections are eliminated while the incidence of susceptible infections remains unchanged. 1. Results for Greece use a different data source and methodology due to the unavailability of *S. pneumoniae* data and are not directly comparable with those for other countries.
Source: OECD analysis based on the OECD SPHeP-AMR model.

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2.3. A One Health approach is central to containing AMR

AMR is shaped by interactions across human and animal health, food production, agriculture and the environment. Resistant organisms and resistance genes can circulate between humans, animals, and the environment through direct contact, food, water and soil, although the contribution of animal and environmental pathways to resistance in humans varies by pathogen and remains difficult to quantify (ECDC, EFSA and EMA, 2024[6]). Higher antibiotic consumption is associated with higher resistance in both humans and animals. Curbing AMR therefore requires a "One Health" approach: co-ordinated action across sectors, including prudent antimicrobial use in humans, animals and plants, as well as infection prevention and surveillance measures. Vaccination also contributes: vaccines against bacterial infections reduce the need for antibiotic treatment, and vaccines against viral infections such as influenza, COVID-19 and respiratory syncytial virus reduce secondary bacterial infections and the antibiotics prescribed, often unnecessarily, for viral illness (WHO, 2024[7]). EU co-operation is comparatively mature for human and animal health surveillance, while harmonised environmental monitoring and verified evidence on implementation remain less developed.

At a global level, the Global Action Plan on AMR 2015 and the 2024 UN General Assembly Political Declaration on AMR both adopted a One Health approach. This approach was carried forward into the updated Global Action Plan on AMR 2026-2036, prepared by the Quadripartite organisations (FAO, UNEP, WHO and WOAH) and adopted by the World Organisation for Animal Health and the World Health Assembly in May 2026. The EU has applied a One Health approach to tackling AMR for around two decades, and the approach was formally reflected in the first EU Action Plan against AMR adopted in 2011 (Box 2.3).

Box 2.3. The EU's One Health approach to AMR

The One Health approach recognises that human, animal, plant and environmental health are interdependent, so containing AMR requires co-ordinated action across sectors and levels of governance. The EU's response combines global co-ordination, integrated surveillance, policy and dedicated research investment.

- The strategic **policy framework** rests on multiple instruments. The 2017 European One Health Action Plan against AMR set the strategic direction across three pillars: i) making the EU a best-practice region, ii) boosting research and innovation and iii) shaping the global agenda. The 2023 Council Recommendation on stepping up EU actions to combat AMR in a One Health approach added the measurable 2030 consumption and resistance targets. Implementation is co-ordinated through the Joint Action on Antimicrobial Resistance and Healthcare-Associated Infections (EU-JAMRAI 2) and the AMR One Health Network, which convenes government experts from the human-health, animal-health and environment sectors alongside EU agencies and stakeholder organisations to share evidence and best practice. The main instrument in the veterinary sector is the Regulation on veterinary medicinal products.
- Within the EU, **integrated surveillance and analysis** are delivered jointly by three agencies: the European Centre for Disease Prevention and Control (ECDC), the European Food Safety Authority (EFSA) and the European Medicines Agency (EMA), which combine human, animal and food-chain data into cross-sectoral assessments. In particular, the recurring Joint Inter-agency Antimicrobial Consumption and Resistance Analysis (JIACRA) reports link antimicrobial consumption and resistance across the human and animal sectors. These build on the sector-specific networks: the European Antimicrobial Resistance Surveillance Network (EARS-Net) and the European Surveillance of Antimicrobial Consumption Network (ESAC-Net) for humans (mandatory reporting), and the European Sales and Use of Antimicrobials for Veterinary Medicine (ESUAvet) Working Group supporting the EMA for animals (mandatory reporting). Environmental surveillance is also transitioning to a mandatory framework: the revised Urban Wastewater Treatment Directive, in force since January 2025, mandates AMR monitoring in urban wastewater for agglomerations of 100 000 population equivalent and above. A minimum sampling frequency and a harmonised methodology are to be established at EU level; comparable EU-wide results are therefore not yet available.
- On **research and investment**, the European Partnership on One Health AMR (EUP OHAMR), launched in 2025 and co-ordinated by the Swedish Research Council, brings together 53 organisations from 30 countries to align One Health AMR research and innovation. It has approximately EUR 253 million in pooled funding over 2025-2035, including EUR 75 million in EU co-funding from Horizon Europe, and builds on the Joint Programming Initiative on AMR (JPIAMR), which has co-ordinated national research funding since 2011 and invested over EUR 180 million.

2.4. Progress on the antibiotic consumption targets is uneven across the human and animal sectors

This section and Section 2.5 compare the latest available data with the baseline year set for each EU target: 2019 for the human-health targets and 2018 for veterinary sales.[3]

2.4.1. Human antibiotic use fell by 5% between 2019 and 2025

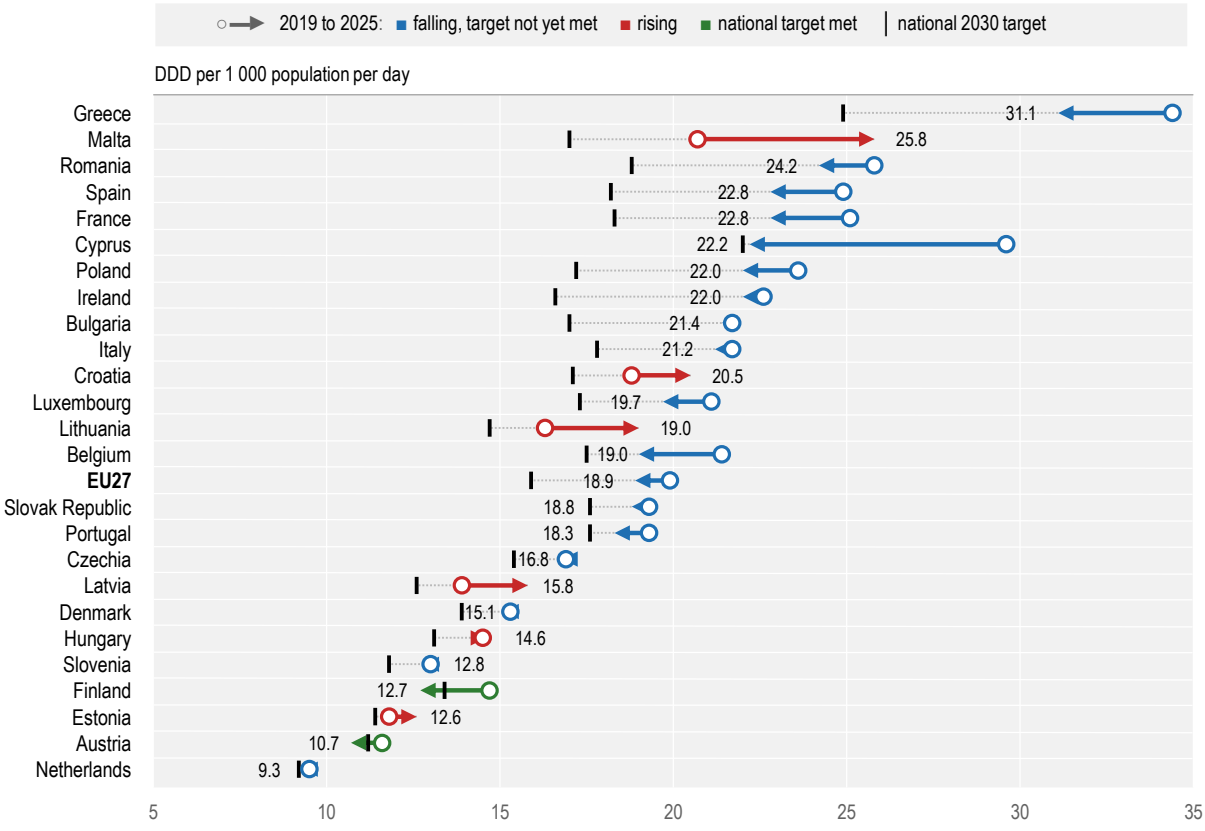
Antibiotic use is one of the principal modifiable drivers of AMR: every use of an antibiotic favours the survival and spread of resistant bacteria in humans, animals and the environment, and unnecessary or poorly targeted use adds to this selection pressure without any clinical benefit. Appropriate antibiotic use in humans and animals is therefore central to the EU's strategy, even if it is not the only lever. The EU has set a target to reduce overall antibiotic consumption in humans by 20% between 2019 and 2030. The most recent data available from ECDC ESAC-Net show that overall antibiotic consumption fell by 5% between 2019 and 2025, from 19.9 DDD per 1 000 population per day in 2019 to 18.9 in 2025 (ECDC, 2026[8]).[4] [5] Consumption is therefore moving in the right direction, but it would need to fall faster in the coming years for the EU target to be reached by 2030.

The net change over 2019-2025 conceals large fluctuations associated with the COVID-19 pandemic. EU consumption fell from 19.9 DDD per 1 000 population per day in 2019 to 16.4 in 2020, as access to primary care was disrupted and non-pharmaceutical control measures reduced the circulation of respiratory pathogens. It then rebounded during a period of unusually intense circulation of respiratory pathogens after these measures were lifted: community consumption rose by about 20% between 2021 and 2022 alone, exceeding its 2019 level in 13 countries (Vermeulen et al., 2024[9]). Total EU consumption reached 20.3 in 2024, above the 2019 baseline. The 2025 value of 18.9 therefore reflects a 7% fall in a single year, as community consumption returned to approximately pre-pandemic levels. Because the series fits linear trend models poorly, ECDC did not perform a trend analysis for this indicator (ECDC, 2026[8]). Whether the 2025 decline marks the start of a sustained reduction will only become clear in subsequent years, and comparisons of 2025 with the 2019 baseline should be read with this in mind.

Reported human antibiotic consumption varied widely across EU countries in 2025, with a threefold difference between the countries with the highest (Greece) and lowest (the Netherlands) reported levels (Figure 2.4).

Figure 2.4. Most EU countries are using fewer antibiotics than in 2019, but few are on course to meet their national 2030 targets

Total human antibiotic consumption, 2019 and 2025, and recommended national 2030 targets



Note: Consumption of antibacterials for systemic use (ATC J01) in the community and hospital sectors combined, expressed in defined daily doses (DDD) per 1 000 population per day. National targets are the reductions recommended in the 2023 Council Recommendation (3%, 9%, 18% or 27% from the 2019 baseline, depending on baseline consumption); the EU27 target is a 20% reduction to 15.9 DDD. The EU27 value is the ECDC population-weighted mean, including ECDC imputations for Cyprus (2023), Germany and Sweden. Czechia, Greece and Luxembourg changed their data collection process during the period. Germany (no data before 2023) and Sweden (no data for 2023-2025) are not shown.
Source: ECDC (2026[8]), Antimicrobial consumption in the EU/EEA (ESAC-Net data) – Annual Epidemiological Report for 2025, https://www.ecdc.europa.eu/en/publications-data/antimicrobial-consumption-eueea-esac-net-annual-epidemiological-report-2025.

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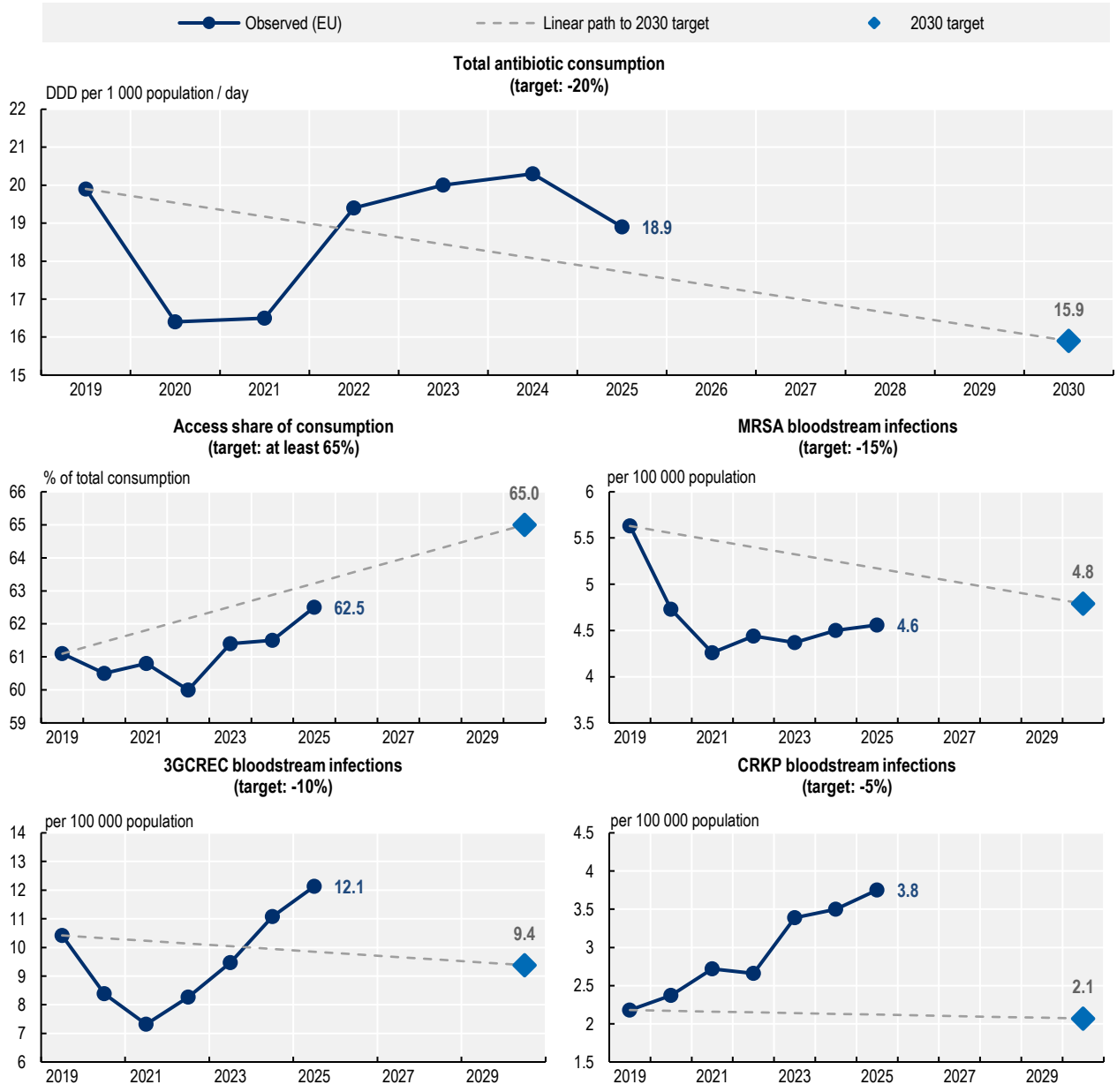
Between 2019 and 2025, human antibiotic consumption declined in about three-quarters of EU countries (ECDC, 2026[8]) (Figure 2.4). The largest decreases were observed in Cyprus (-25%), Finland (-13%), Belgium (-11%) and Greece (-10%), although consumption levels in both Greece and Cyprus remained above the EU average in 2025. Changes for Czechia, Greece and Luxembourg should be read with care, as these countries changed their data collection process during the period.

Recommended national targets translate the EU-level ambition into country-specific reductions, with higher-consuming countries assigned larger cuts. For example, the recommended reduction is 27% for Greece and France but only 3% for the Netherlands, Sweden and Austria. As of 2025, only Austria and Finland had already reduced total antibiotic consumption below their recommended national 2030 target. The Netherlands and Cyprus remained only 0.1 and 0.2 DDD per 1 000 population per day above their respective targets, and no data were available for Sweden after 2022 (Figure 2.4). Some countries still have to make considerable reductions if they are to meet their national 2030 target, notably Bulgaria, France, Greece, Ireland, Lithuania, Malta, Poland, Romania and Spain, each of which remained more than 4 DDD per 1 000 population per day above its target in 2025.

At EU level, consumption in 2025 was 1.2 DDD per 1 000 population per day above a straight-line path from the 2019 baseline to the 2030 target. Only one of the five human-health indicators with an EU target, the incidence of MRSA bloodstream infections, was ahead of such a path (Figure 2.5). Extending each country's average annual change over 2019-2025, as an illustration rather than a forecast, gives a similar picture at national level. Among countries that had not already met their targets, only four (Belgium, Cyprus, the Netherlands and Portugal) would reach their recommended national target within the next five years. Six others (Bulgaria, Czechia, Denmark, Ireland, Italy and Slovenia) would need 30 years or more, and in six (Croatia, Estonia, Hungary, Latvia, Lithuania and Malta) consumption was higher in 2025 than in 2019, so that the gap to the target is widening. Independent

forecasts based on data to 2023 reach a similar conclusion, projecting that most European countries will miss their 2030 consumption targets on current trends (Bindel and Seifert, 2025[10]). At the same time, differences between countries narrowed slightly: countries with higher baseline consumption recorded larger proportional reductions on average, and the ratio between the highest- and lowest-consuming EU countries fell from 3.6 in 2019 to 3.3 in 2025. The ranking of countries was nevertheless almost unchanged (OECD analysis of ECDC ESAC-Net data). This pattern is consistent with the graded national targets of the Council Recommendation, but it also shows that convergence towards lower consumption is slow.

Figure 2.5. Only one of five human-health indicators was ahead of a linear path to its 2030 target in 2025



Note: Total consumption is the EU population-weighted mean for the 27 EU countries and the Access share is the EU population-weighted mean percentage of WHO AWaRe Access group consumption for 26 EU countries (excluding Germany), as reported by ECDC (ESAC-Net), including ECDC imputations for missing data. The linear path joins the 2019 baseline to the 2030 target value. MRSA = methicillin-resistant *Staphylococcus aureus*; 3GCREC = third-generation cephalosporin-resistant *Escherichia coli*; CRKP = carbapenem-resistant *Klebsiella pneumoniae*; incidence is the estimated EU incidence of bloodstream infections per 100 000 population. Targets as set out in the 2023 Council Recommendation on stepping up EU actions to combat AMR (2019 baseline).
Source: ECDC ESAC-Net and EARS-Net Annual Epidemiological Reports for 2025; OECD calculations for the linear path.

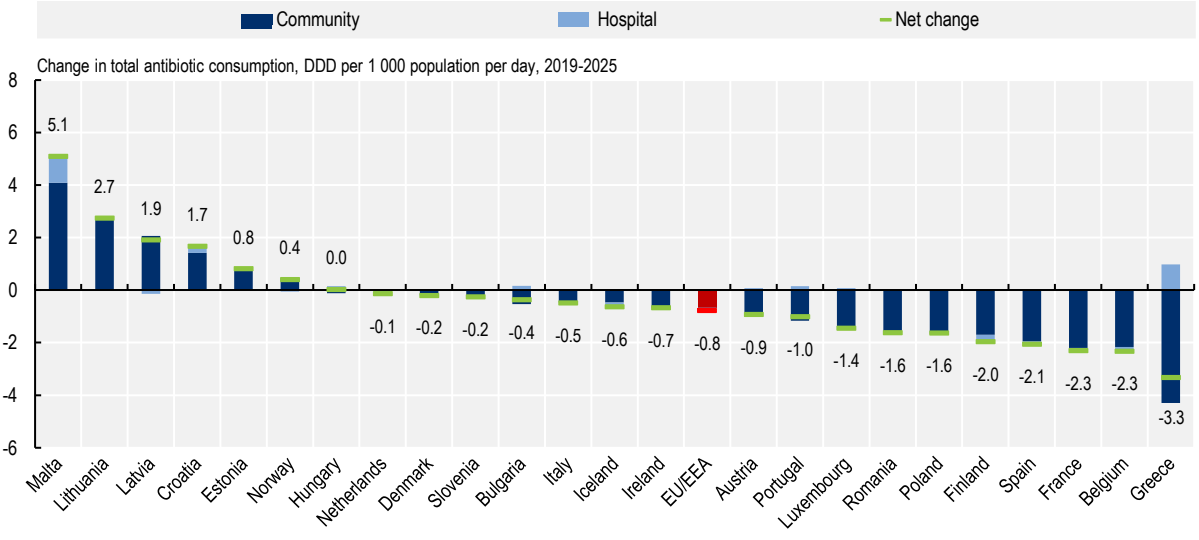
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2.4.2. Different care settings present distinct challenges that call for different policy responses

In 2025, the community sector accounted for over 90% of antibiotic consumption in the EU/EEA and hospitals for the remainder (ECDC, 2026[11]). Hospitals, however, treat patients with more severe infections and are settings in which resistant organisms can spread among vulnerable patients; they therefore make greater use of broad-spectrum and last-resort antibiotics.

Changes in combined community and hospital antibiotic consumption between 2019 and 2025 were driven overwhelmingly by community use. Community settings accounted for around 85% of the EU/EEA decline in combined consumption (Figure 2.6). This aggregate pattern is not uniform: community and hospital consumption both fell in 10 of the 25 EU/EEA countries with data for both sectors, but in nine others community consumption fell while hospital consumption rose. Hospital use is therefore increasing in around a third of countries even where overall consumption is declining. In Lithuania, hospital consumption remained stable but total antibiotic consumption rose, driven by rising community consumption. Community antibiotic consumption accounted for around 80% of the increase in total consumption between 2019 and 2025 in Malta, 84% in Croatia, and, conversely, for 96% of the decrease in France (ECDC, 2026[11]). Antibiotic use in long-term care facilities presents a related measurement gap, as it is not consistently identifiable as a separate sector and may be reported under community or hospital consumption (Box 2.4). What is counted under each sector therefore varies between countries, which limits the comparability of the sectoral split.

Figure 2.6. Changes in community consumption drive national changes in total antibiotic use



Note: The EU/EEA average is the difference between the population-weighted means reported by ECDC for 2019 and 2025, which cover all reporting countries in each year. Cyprus, Czechia, Germany and Sweden are excluded because community and hospital data are not available for both 2019 and 2025. The EU/EEA decline of 0.78 DDD per 1 000 population per day comprises 0.67 in the community and 0.11 in hospitals; the sector means cover a slightly different set of countries from the total-consumption indicator.

Source: ECDC Antimicrobial Consumption dashboard (ESAC-Net) (2026[11]), https://qap.ecdc.europa.eu/public/extensions/AMC2_Dashboard/AMC2_Dashboard.html.

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Box 2.4. Long-term care facilities: High infection risks and gaps in antibiotic-use data

Long-term care facilities face particularly high risks of infection and inappropriate antibiotic use. Residents are often older, frail and living with multiple chronic conditions, while communal living and limited infection prevention and control resources facilitate the transmission of healthcare-associated infections (HAIs) (Eze, Cecchini and Oliveira Hashiguchi, 2022[12]; Ricchizzi et al., 2025[13]). ESAC-Net reports national antimicrobial consumption for community and hospital settings but does not report long-term care as a separate sector, even where countries record this consumption and flag it in their submissions. Antibiotic use in long-term care facilities may be included in reported community or hospital consumption, but this depends heavily on national dispensing and reporting arrangements. As a result, the infection burden in long-term care facilities is documented but cannot be matched with sector-specific consumption data, which limits cross-country comparison.

A 12-month prospective study across 65 long-term care facilities in nine EU/EEA countries in 2022-2023, co-ordinated by ECDC, found that more than half of residents (57%) experienced at least one HAI over the year. The incidence of roughly 124 infections per 100 residents shows that some residents experienced repeated infections. The most common infections were respiratory and urinary tract infections, the two conditions that account for most antibiotic prescribing in these settings. Over 20% of deaths (142 of 664) had an HAI as a main or contributory cause and fewer than half of facilities (43%, 28 of 65) had an HAI surveillance system.

The 2023-2024 ECDC point prevalence survey of long-term care facilities in 18 EU/EEA countries points to uneven capacity to prevent infections and support appropriate antibiotic use. Although 78% of surveyed facilities had at least one staff member trained in infection prevention and control, 39% reported none of the ten antimicrobial stewardship elements assessed. On the day of the survey, 4.1% of residents were receiving at least one antimicrobial, and nearly one-third of prescriptions were for prophylaxis rather than treatment. These findings suggest that basic organisational capacity to support AMR reduction remains incomplete in many long-term care facilities.

Source: Ricchizzi et al. (2025[13]), "Incidence of health-care-associated infections in long-term care facilities in nine European countries: a 12-month, prospective, longitudinal cohort study", https://doi.org/10.1016/s1473-3099(25)00217-8; ECDC (2025[14]), Point prevalence survey of healthcare-associated infections and antimicrobial use in European long-term care facilities, https://www.ecdc.europa.eu/en/publications-data/point-prevalence-survey-healthcare-associated-infections-and-antimicrobial-use-6.

2.4.3. The share of Access antibiotics has increased slightly since 2019 but remains below the 2030 target in most EU countries

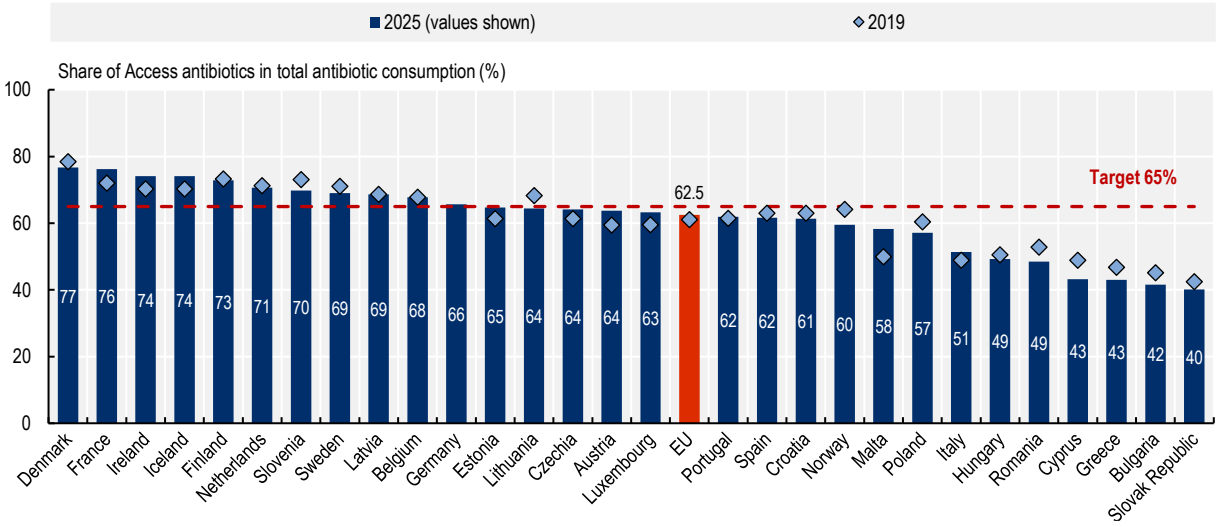
Antimicrobial stewardship refers to co-ordinated efforts to ensure that antibiotics are used only when needed, with the right choice of medicine, dose and duration. To support stewardship and to make patterns of antibiotic use easier to interpret, WHO classifies antibiotics into three categories under its AWaRe classification: *Access*, *Watch* and *Reserve* (WHO, 2025[15]). The classification reflects each group's stewardship priority and resistance potential:

- **Access** antibiotics generally have activity against commonly encountered susceptible pathogens and a lower potential to drive resistance than Watch or Reserve antibiotics; selected agents are recommended as first- or second-choice treatments for common infections;
- **Watch** antibiotics have higher potential to drive resistance and should be used more selectively;
- **Reserve** antibiotics are last-resort options for highly selected patients with confirmed or suspected infections caused by multidrug-resistant bacteria, when no suitable alternatives remain because of resistance.

The classification provides a system-level benchmark for monitoring the composition of antibiotic consumption, though it cannot establish the appropriateness of individual treatment decisions. The 2023 Council Recommendation sets a target for EU Member States to ensure that at least 65% of total human antibiotic consumption comes from the Access group by 2030.

In 2025, the EU population-weighted mean share of Access antibiotics was 62.5%, 1.4 p.p. above the 2019 baseline of 61.1% but still 2.5 p.p. below the 65% target set for 2030 (Figure 2.7). ECDC detected no statistically significant trend over 2019-2025, although the share has risen in each of the last three years, from 60.0% in 2022 to 62.5% in 2025. Nine of the 26 EU countries reporting 2025 data (Belgium, Denmark, Finland, France, Germany, Ireland, Latvia, the Netherlands and Slovenia) had reached the 65% target in 2025, leaving about two-thirds of countries below the target consumption share. Based on ECDC data, the Slovak Republic, Bulgaria, Greece and Cyprus recorded the lowest shares of Access-group antibiotics in 2025, all below 45%. Denmark, Finland, France, Ireland and the Netherlands recorded shares of 70% or higher. Progress on one consumption target has not necessarily been matched by progress on the other. Countries with higher total consumption tend to have lower Access shares (ECDC, 2026[8]), but those that reduced total consumption most between 2019 and 2025 were not systematically those whose Access share rose most, and the association between the two changes is weak. Reducing volume does not by itself improve the mix of antibiotics used, and the two targets therefore call for distinct policy levers.

Figure 2.7. Access antibiotics remain below the 65% consumption target in most EU countries



Note: The 2030 target is to achieve at least 65% of human antibiotic consumption from the WHO AWaRe Access group. It applies only to EU Member States (not to Iceland and Norway). The most recent data for Sweden refer to 2022. Data collection for Germany began in 2023.
Source: ECDC (2026[8]), Antimicrobial consumption in the EU/EEA (ESAC-Net data) – Annual Epidemiological Report for 2025, https://www.ecdc.europa.eu/en/publications-data/antimicrobial-consumption-eueea-esac-net-annual-epidemiological-report-2025.

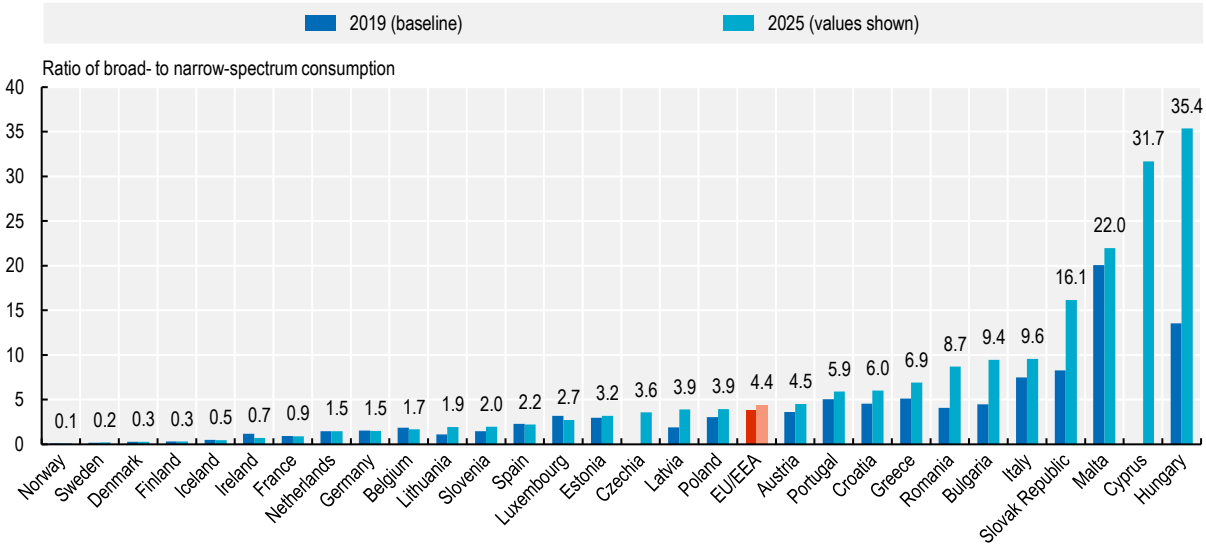
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2.4.4. The community broad-to-narrow spectrum antibiotic ratio was higher in many countries in 2025 than in 2019

Knowing which antibiotics are consumed complements information on overall consumption volumes. Broad-spectrum antibiotics act against a wider range of bacteria than narrow-spectrum antibiotics and therefore tend to select for resistance more widely. The community broad-to-narrow ratio, proposed as an indicator jointly by ECDC, EFSA and EMA and reported through ECDC ESAC-Net, compares community consumption of selected broad-spectrum antibiotics with that of selected narrow-spectrum antibiotics (listed in the note to Figure 2.8) (ECDC, EFSA Panel on Biological Hazards (BIOHAZ)/EMA Committee for Medicinal Products for Veterinary Use (CVMP), 2017[16]). A higher ratio indicates prescribing tilted towards broader-spectrum agents, which is generally less desirable from a stewardship perspective. The ratio describes the balance between antibiotic groups rather than the total volume of all antibiotics consumed. This indicator complements, but is not interchangeable with, the WHO AWaRe classification.

Across the EU/EEA, the community broad-to-narrow ratio for these selected groups stood at 4.4 in 2025, compared with 3.8 in 2021, with a peak in 2023 and no statistically significant trend over 2021-2025 (ECDC, 2026[8]). Between 2019 and 2025, 17 of the 24 EU countries with comparable data recorded an increase in this ratio (Figure 2.8), with values above 20 in Hungary, Cyprus and Malta. These changes indicate a shift in the balance between the selected groups, but not necessarily an increase in absolute broad-spectrum consumption: the ratio can also rise when narrow-spectrum consumption falls, particularly from an already low level. A high or rising ratio should therefore be treated as a signal for further assessment rather than direct evidence of inappropriate prescribing. Differences may reflect local resistance patterns and clinical needs, the availability of narrow-spectrum antibiotics, treatment guidelines and adherence to them, and diagnostic and prescribing practices. Distinguishing between these explanations requires broad- and narrow-spectrum consumption to be examined separately, alongside data on the conditions being treated, resistance and the supply of medicines (OECD, 2023[5]).

Figure 2.8. The community broad-to-narrow antibiotic ratio increased in most EU countries



Note: The EU/EEA average is the population-weighted mean reported by ECDC for a constant set of countries over 2021-2025; ECDC does not report it for 2019, so the earlier EU/EEA value refers to 2021. Data for Sweden refer to 2021 (latest available). Community data for Czechia start in 2021 and data collection in Cyprus began in 2024, so no 2019 value is shown for these countries. Broad-spectrum antibiotics include: broad-spectrum penicillins, broad-spectrum cephalosporins, macrolides (except erythromycin) and fluoroquinolones. Narrow-spectrum antibiotics include: narrow-spectrum penicillins, narrow-spectrum cephalosporins and erythromycin.
Source: ECDC (2026[8]), Antimicrobial consumption in the EU/EEA (ESAC-Net data) – Annual Epidemiological Report for 2025, https://www.ecdc.europa.eu/en/publications-data/antimicrobial-consumption-eueea-esac-net-annual-epidemiological-report-2025, for the EU/EEA average; ECDC Antimicrobial Consumption dashboard (ESAC-Net) (2026[11]) for country data, Antimicrobial consumption dashboard (ESAC-Net), https://qap.ecdc.europa.eu/public/extensions/AMC2_Dashboard/AMC2_Dashboard.html.

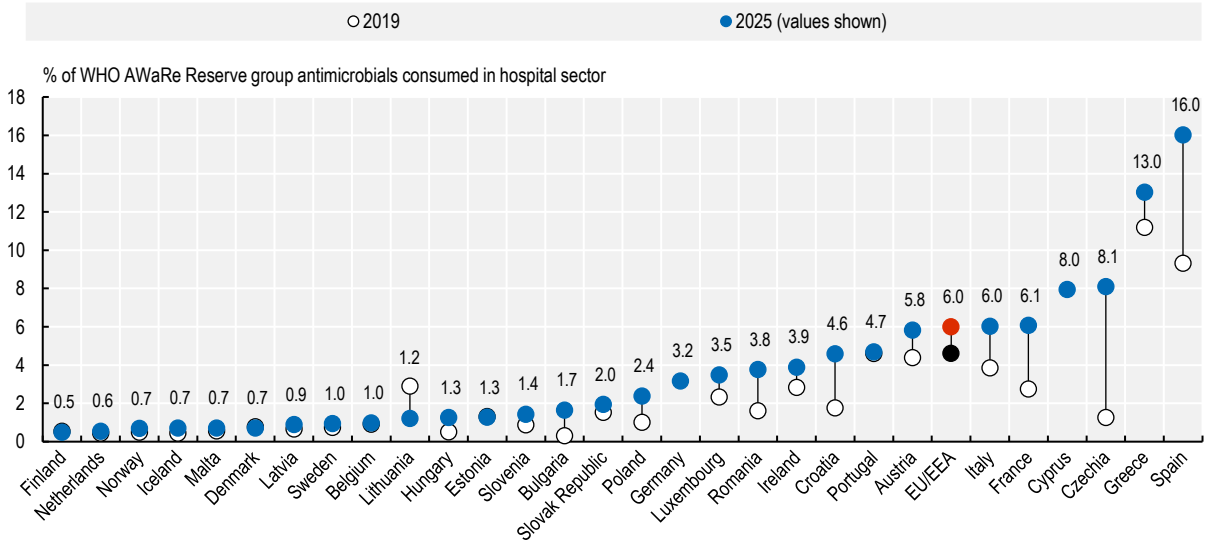
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Policy responses may consequently need to combine reliable access to narrow-spectrum agents, indication-specific guidance, audit and feedback, and diagnostic support embedded in wider antimicrobial stewardship programmes. Recent evidence indicates that point-of-care testing does not reliably change prescribing when introduced alone, while audit and feedback can reduce broad-spectrum selection, although effects vary considerably across settings (Xu et al., 2024[17]; Plate and Senn, 2026[18]).

2.4.5. Reserve antibiotics account for a growing share of hospital antibiotic use

Given their role in treating severe multidrug-resistant infections, it is also useful to monitor Reserve antibiotics as a share of hospital-sector AWaRe consumption. At EU/EEA level, the population-weighted average Reserve share rose from 4.6% in 2021 to 6.0% in 2025 (Figure 2.9). ECDC reports this EU/EEA mean only from 2021, so no comparable value is available for the 2019 baseline year. The share was higher in 2025 than in 2019 in 21 of the 25 countries with data for both years, with particularly large increases in Spain, from 9.3% to 16.0%, and France, from 2.8% to 6.1%. ECDC also detected a statistically significant upward trend for the EU/EEA overall and for five countries (Bulgaria, France, Ireland, Poland and Spain) over 2021-2025 (ECDC, 2026[8]).

Figure 2.9. The hospital-sector share of Reserve antibiotics increased in most EU countries



Note: The EU/EEA average is the population-weighted mean reported by ECDC for the 26 EU/EEA countries reporting hospital data for all years in 2021-2025; ECDC does not report it for 2019, so the earlier EU/EEA value refers to 2021. 2019 data for Czechia refer to 2021 and 2025 data for Sweden refer to 2021 (latest available). Czechia changed its data collection process during the period, which affects comparability over time. Data collection for Germany began in 2023 and for Cyprus in 2024.
Source: ECDC ESAC-Net, AMC dashboard, (accessed November 2026).

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Decomposing the ESAC-Net data shows that estimated Reserve consumption itself increased in most countries. Spain is the clearest case: total hospital antibiotic consumption fell between 2019 and 2025, yet Reserve consumption rose by around 60%. National data show that colistin, daptomycin and linezolid together accounted for roughly 85% of the increase between 2019 and 2024 (AEMPS, 2026[19]). France shows that the pattern was not uniform, with the increase concentrated in daptomycin and linezolid, while injectable colistin use stayed low (Santé publique France, 2026[20]).

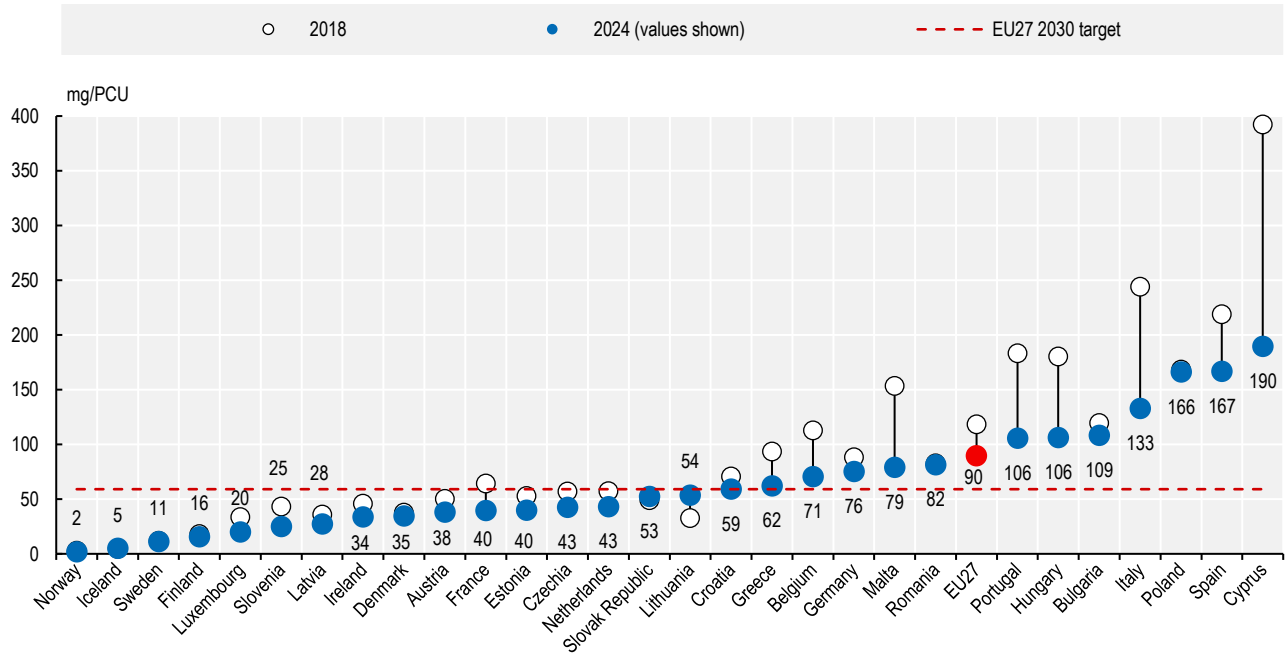
Greater treatment need, due to the growing burden of antimicrobial resistance, is one plausible contributor (ECDC, 2026[8]). The estimated EU incidence of bloodstream infections caused by carbapenem-resistant *Klebsiella pneumoniae* (CRKP) was 72% higher in 2025 than in 2019 (ECDC, 2026[21]). Across countries, a higher hospital Reserve share in 2025 went together with a higher incidence of CRKP bloodstream infections, a moderate association consistent with greater treatment need where carbapenem resistance is more common. However, the countries in which the Reserve share rose most between 2019 and 2025 were not those in which CRKP incidence rose most: the two changes are essentially unrelated (OECD analysis of ECDC data). Changes in CRKP bloodstream-infection incidence therefore do not, on their own, explain changes in Reserve use, which also reflect the burden of other multidrug-resistant infections, hospital case mix, therapeutic choices, access to alternative agents and dosing practices. Nor is a low or stable Reserve share necessarily reassuring; where carbapenem resistance is common, it may also indicate limited access to newer agents. A rising Reserve share is therefore best read alongside absolute consumption and the mix of agents involved, with patient-level data on indication and microbiology still needed to judge appropriateness.

2.4.6. The animal sector has made substantial progress towards the 2030 target

In 2020, the European Commission set an aspirational target to reduce overall EU sales of antimicrobials for farmed animals and in aquaculture by 50% between 2018 and 2030. The implementation of the Regulation on veterinary medicinal products remains the main tool for achieving that target. The Regulation lays down a wide array of complementary measures ensuring prudent use of antimicrobials in animals, including banning the use of antimicrobials for growth promotion, restricting preventive use and reserving certain antimicrobials for human use only. It also obliges Member States to collect and report quality data on the volume of sales and on the use of antimicrobials per animal species. The sales data are used to monitor progress towards the target.

The 2018 reference value was 118.3 mg per population correction unit (PCU[6]), setting the 2030 target at 59.2 mg per PCU. In 2024, sales of veterinary antimicrobials for food-producing animals in the EU were 24% lower than in 2018, leaving the EU close to the path needed to reach the 2030 target (Figure 2.10). Sales increased slightly in 2023 and 2024, although antimicrobials recommended as first-line treatments for food-producing animals account for a growing share of the total, consistent with more prudent use. The European Medicines Agency notes that fluctuations could stem from countries changing data providers or detecting underreporting in previous years, disease outbreaks, or availability of medicines (leading to stockpiling) (EMA, 2025[22]).

Figure 2.10. Veterinary antimicrobial sales fell between 2018 and 2024, but further reductions are needed to meet the EU 2030 target



Note: The EU average is weighted. The dashed line shows the EU 2030 target of 59.2 mg/PCU (50% below the 2018 EU27 value of 118.3 mg/PCU); the target applies to aggregate EU27 sales, and there are no national targets. The figure presents aggregate annual sales of antimicrobials for food-producing animals (including cattle, pigs, poultry, horses, sheep, goats, rabbits and farmed fish), expressed in milligrams per population correction unit (mg/PCU). A PCU is a standard measure that accounts for the number and size of food-producing animals, allowing antimicrobial sales to be compared over time. Several countries changed data providers or coverage in 2023, which may affect comparisons with 2018 (see EMA, 2025, Annex 6).
Source: EMA/ESUAvet (2025), Annual surveillance report for 2024, Table A9.

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The biomass-adjusted sales indicator used to monitor the target (sales in milligrams per PCU) provides a broad proxy for antimicrobial exposure, and therefore for selection pressure, in food-producing animals. This overall mg/PCU figure measures the volume placed on the market rather than actual use on farms and does not fully capture differences in the potency and dosage of agents or in patterns of use across species and production systems. While lower sales should reduce overall selection pressure, confirming that resistance itself is declining requires complementary monitoring of microbial isolates in animals and in the environment (EFSA and ECDC, 2026[23]).

Sustaining progress towards the 2030 target will depend not only on implementing the Regulation but also on biosecurity and other measures to prevent infections in animals. In the 2025 Global Database for *Tracking AMR Country Self-Assessment Survey* (TrACSS), 13 of the 28 responding EU/EEA countries reported that vaccination strategies targeting priority animal diseases were either fully implemented or being developed or implemented. In addition, 20 countries reported having implemented or piloted antimicrobial stewardship programmes in the animal health sector, which suggests broad adoption of measures to promote more responsible use. These data are self-reported and largely describe measures in place by 2025. They therefore provide evidence of policy adoption, but do not establish whether these measures contributed to the decline in antimicrobial sales between 2018 and 2024 (FAO, UNEP, WHO and WOAH, 2025[24]).

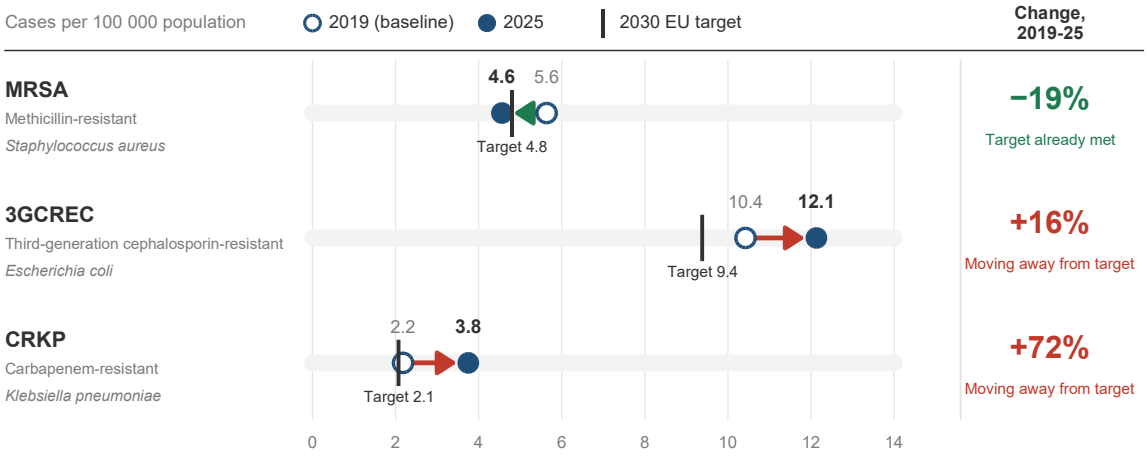
2.5. Progress on the resistance targets differs across bacterial species-antimicrobial group combinations

The AMR reduction targets in the Council Recommendation cover specific resistant strains in three bacterial species: methicillin-resistant *Staphylococcus aureus* (MRSA), third-generation cephalosporin-resistant *Escherichia coli* (3GCREC) and carbapenem-resistant *Klebsiella pneumoniae* (CRKP). Antibiotic-resistant infections caused by these three species collectively account for nearly three in four deaths attributable to antibiotic-resistant infections in the countries covered by OECD modelling (OECD, 2023[5]). The resistance covered by these three AMR reduction targets narrows treatment options in different ways: 3GCREC infections may require the use of broader-spectrum antibiotics; CRKP is resistant to an important last-resort class of antibiotics, leaving fewer and potentially more toxic or less effective options; and MRSA is resistant to most beta-lactam antibiotics.

As mentioned in Box 2.1, the EU Council Recommendation sets EU-level targets to reduce the estimated incidence of bloodstream infections between 2019 and 2030 by 15% for MRSA, 10% for 3GCREC and 5% for CRKP. It also assigns each Member State a recommended contribution towards these targets, taking its baseline estimated incidence into account. Between 2019 and 2025, the estimated EU incidence of MRSA bloodstream infections decreased from 5.6 to 4.6 cases per 100 000 population, a reduction of 19% (Figure 2.11). By contrast, the estimated EU incidence of 3GCREC bloodstream infections increased from 10.4 cases per 100 000 population to 12.1 (+16%), while the estimated EU incidence of CRKP bloodstream infections rose from 2.2 to 3.8 (+72%) (ECDC, 2026[21]). ECDC detected a statistically significant decreasing trend for MRSA over 2019-2025, although estimated incidence rose in both 2024 and 2025, and a statistically significant increasing trend for CRKP. For 3GCREC, no statistically significant trend was detected, but incidence in 2024 and 2025 was well above its 2019 level. The 3GCREC series also shows a pandemic-period trough, falling to 7.3 cases per 100 000 population in 2021 before rising in each subsequent year, so that the 2019-2025 comparison understates the recent pace of increase. CRKP incidence, by contrast, rose almost continuously over the period.

Because the estimated incidence of resistant bloodstream infections reflects the overall number of infections caused by each pathogen, the share of those infections that are resistant and surveillance coverage, its trends do not reflect changes in resistance alone. ECDC notes, however, that several of the increases, including for CRKP and several *E. coli*-antimicrobial combinations, were accompanied by rising resistance percentages, so they are not explained by more bloodstream infections alone (ECDC, 2026[21]). Antibiotic selection pressure, infection prevention and control, healthcare transmission and outbreaks, cross-border patient transfers (ECDC, 2025[25]), changes in the population at risk and surveillance practices may all influence the observed patterns. For CRKP, ECDC attributes the rise largely to continued transmission of high-risk carbapenem-resistant strains in hospitals. It has also documented the spread in healthcare settings of a highly virulent strain of *K. pneumoniae* (sequence type 23) carrying genes that confer carbapenem resistance, which ten EU/EEA countries had reported by early 2024, compared with four in 2021 (ECDC, 2025[25]; ECDC, 2024[26]). Preliminary results from ECDC's 2025 survey of carbapenem-resistant Enterobacterales point to a further shift: half of the carbapenem-resistant *K. pneumoniae* isolates analysed carried NDM carbapenemase genes, compared with one-fifth in 2019. Several recently introduced antibiotics are not active against bacteria producing this enzyme (ECDC, 2026[27]).

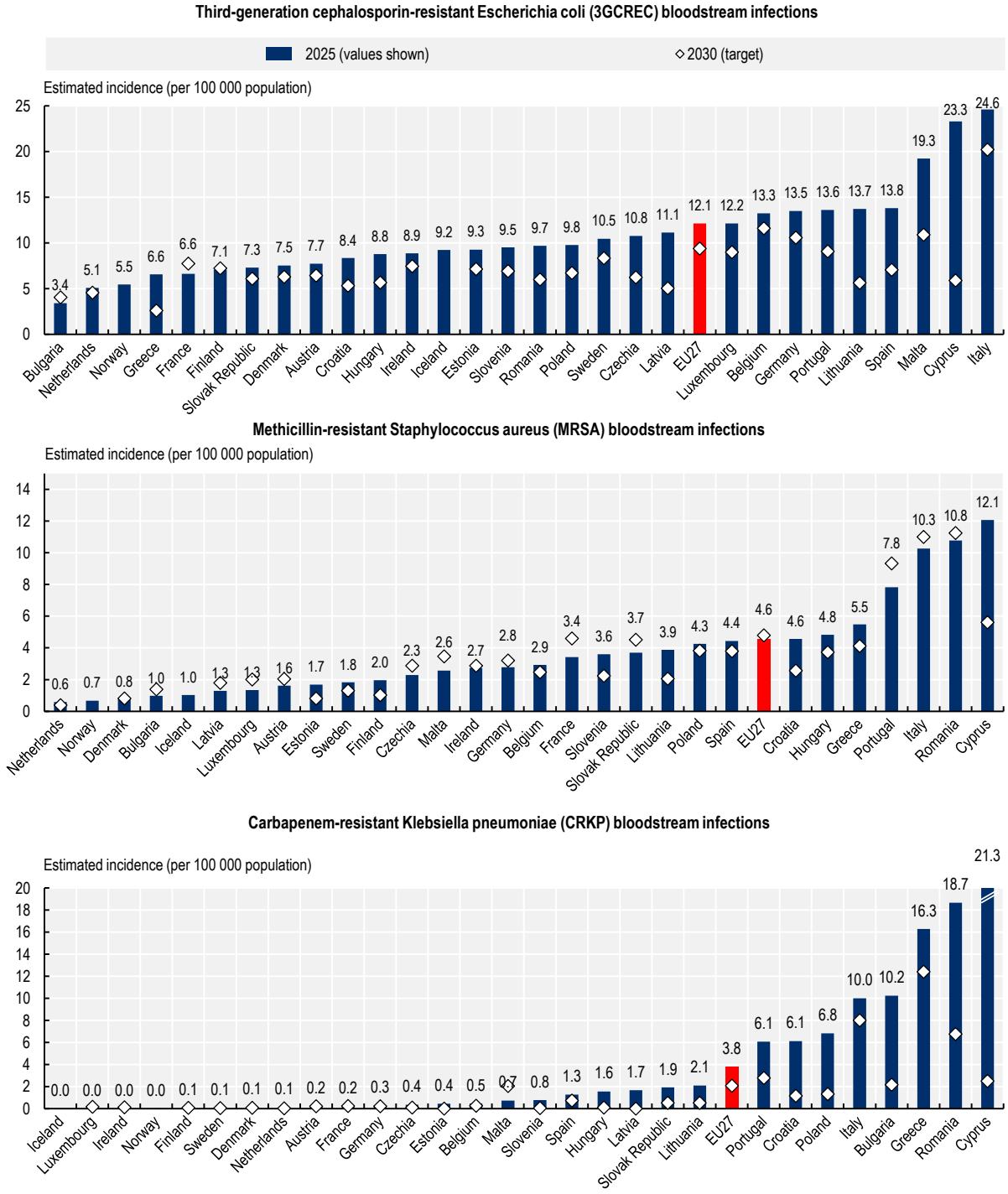
Figure 2.11. The estimated EU incidence of MRSA bloodstream infections has decreased compared with 2019, but for the other two EU targets the estimated EU incidence has increased



Source: ECDC (2026[21]), *Antimicrobial resistance in the EU/EEA (EARS-Net) – Annual Epidemiological Report for 2025*, https://www.ecdc.europa.eu/en/publications-data/antimicrobial-resistance-eueea-ears-net-annual-epidemiological-report-2025.

Progress towards recommended national targets varies considerably across EU countries and pathogens (Figure 2.12). In 2025, the estimated 3GCREC bloodstream infection incidence ranged from 3.4 cases per 100 000 population in Bulgaria and 5.1 cases in the Netherlands, to more than 19 cases per 100 000 population in Malta, Cyprus and Italy. The estimated MRSA bloodstream infection incidence ranged from 0.6 in the Netherlands to 12.1 in Cyprus, while CRKP showed the widest variation, ranging from 0.00 cases per 100 000 in Luxembourg and 0.02 in Ireland to 21.3 in Cyprus. The rise in infections with resistant Gram-negative bacteria (the group that includes *E. coli* and *K. pneumoniae*, as distinct from Gram-positive bacteria such as *S. aureus*) is broad-based: the estimated incidence of both 3GCREC and CRKP bloodstream infections was higher in 2025 than in 2019 in 20 of the 27 EU countries. In ten EU countries MRSA incidence fell while CRKP incidence rose, which shows that success against MRSA does not automatically translate into progress against resistant Gram-negative bacteria, which spread through different reservoirs and respond to different control measures. Countries with higher total antibiotic consumption in 2025 also tended to record higher 3GCREC incidence (OECD analysis of ECDC data), in line with the associations between consumption and resistance documented in the joint inter-agency JIACRA reports (ECDC, EFSA and EMA, 2024[6]). Cross-country comparisons must be read with care, because surveillance coverage and blood-culture testing rates differ substantially between countries. For example, lower rates in some countries may partly reflect limited surveillance representativeness and blood-culture testing rather than a genuinely low burden, whereas countries with more comprehensive testing may record higher rates.

Figure 2.12. Progress towards the recommended national 2030 AMR targets varies considerably across countries and bacterial species-antimicrobial group combinations



Note: Cross-country comparisons should be interpreted with care because surveillance coverage and blood-culture testing rates differ between countries. EEA countries do not have assigned targets but some EEA countries are included in the figure for comparison.
Source: ECDC (2026[21]), *Antimicrobial resistance in the EU/EEA (EARS-Net) – Annual Epidemiological Report for 2025*, https://www.ecdc.europa.eu/en/publications-data/antimicrobial-resistance-eueea-ears-net-annual-epidemiological-report-2025.

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2.6. TrACSS responses show variation in reported AMR policies and measures across Europe

Because the drivers and transmission pathways of AMR span human, animal and plant health, food systems and the environment (Section 2.3), national action plans are the main instrument through which countries translate global and EU commitments on AMR into co-ordinated domestic policy. The 2023 EU Council Recommendation encourages Member States to have One Health national action plans on AMR in place, update and implement them regularly, and support them with intersectoral co-ordination, monitoring arrangements and adequate human and financial resources (Council of the European Union, 2023[2]).

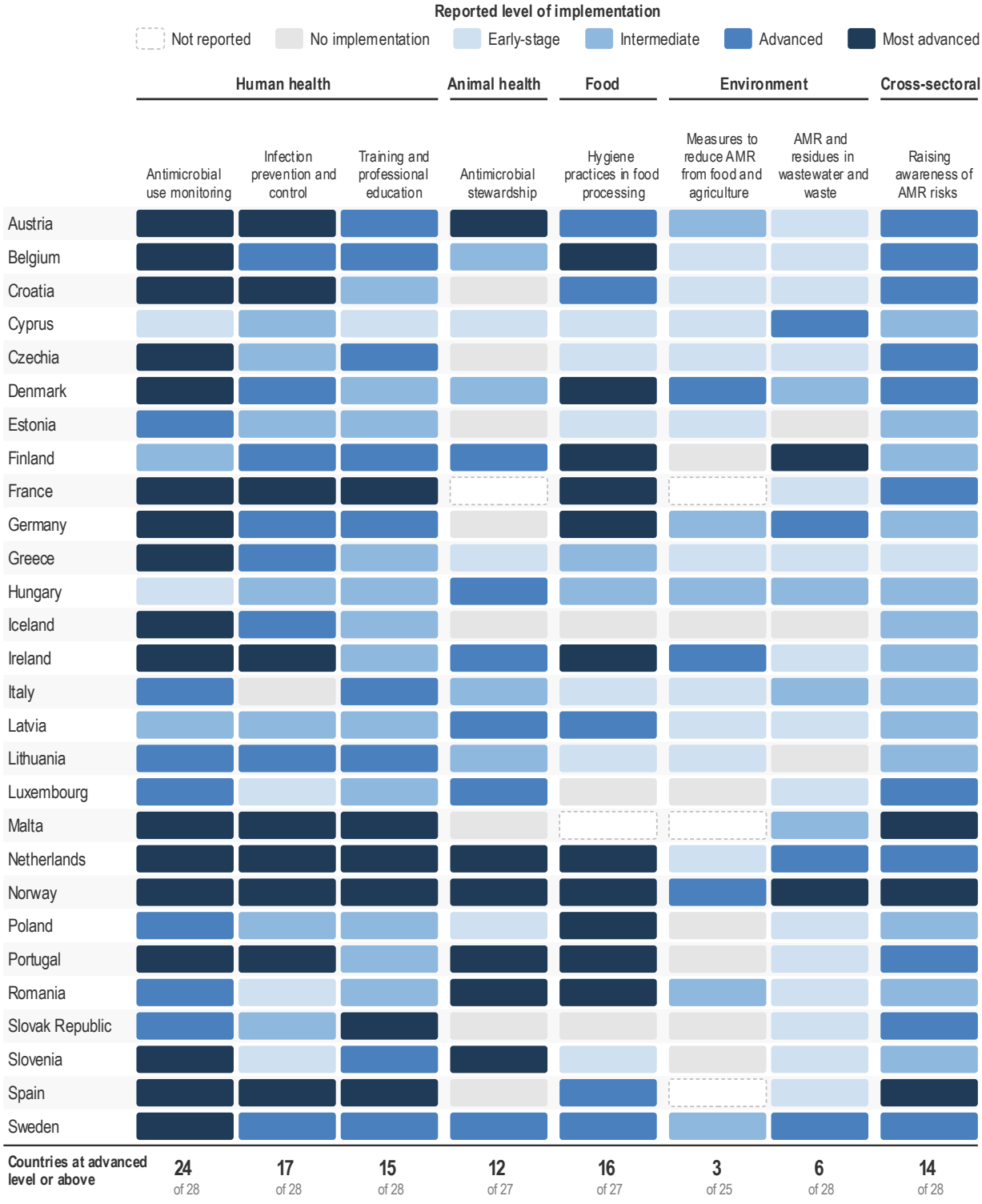
The TrACSS survey monitors reported progress from a One Health perspective, asking each country to submit one consolidated response co-ordinated by its national AMR focal point. Most indicators describe successive stages of implementation, with each stage expected to meet the requirements of the stages below it. Because the responses are self-assessed and not independently verified, they should be interpreted as countries' reported implementation status, not as an external assessment of performance. This section draws on the 2025 TrACSS responses and presents a selected set of implementation indicators (Figure 2.13).

Box 2.5. Tracking Antimicrobial Resistance Country Self-Assessment Survey (TrACSS) – methodology and limitations

The Tracking Antimicrobial Resistance Country Self-Assessment Survey (TrACSS) is conducted jointly by the World Health Organization, the United Nations Environment Programme, the Food and Agriculture Organization of the United Nations, and the World Organisation for Animal Health. While this survey provides a valuable insight into the reported behaviour of countries, it has several limitations that can hinder cross-country comparisons. First, the data are self-reported by participating countries. Countries may interpret and respond to questions differently, so that countries with similar programmes may classify themselves differently. The survey is also retrospective, capturing only a snapshot of what was occurring in the country at the time of the survey. As a result, it may miss important updates that have occurred since. It is national in scope and therefore may not capture obligations or actions undertaken by countries at the sub-national level, does not show variation within countries if implementation differs between regions, and may be less effective at capturing the policy picture in countries with decentralised health systems. Finally, the survey is principally intended to serve as a measure of self-reported policies, stated intentions, and desired outcomes. It does not objectively or verifiably measure policy implementation.

The reported implementation profile was strongest in established human-health functions. Of the 28 responding EU/EEA countries, 24 reported advanced or most advanced implementation of national antimicrobial-use monitoring in human health, while 17 reported these levels for infection prevention and control in healthcare. Implementation was reported to be less well developed at the country level in animal health and the environmental dimensions of AMR. Only 12 of the 27 countries with available data reported nationwide animal-health stewardship programmes covering all relevant animals, supported by national guidance or periodic monitoring. However, as EU legislation already establishes binding requirements on antimicrobial use and AMR surveillance in food-producing animals, countries may not have established separate national stewardship programmes or may not report their implementation as such. For wastewater and waste, only 6 of 28 countries reported a co-ordinated national structure or comprehensive implementation of initiatives to limit the spread of AMR and antimicrobial residues from key sectors, while 18 reported either no initiatives or only ad hoc initiatives in a limited number of sectors. Similarly, only 3 of the 25 countries with available data (Denmark, Ireland and Norway) reported implementing policies to monitor and reduce releases of resistant bacteria, resistance genes and antimicrobial residues from food and agriculture; 17 reported that such measures were absent or still under development.

Figure 2.13. Self-reported implementation of One Health AMR approaches at the national level varies across EU/EEA countries in 2025



Note: The table presents eight selected TrACSS indicators as reported in the 2025 TrACSS survey. Colours show countries' self-reported level of implementation. Because the descriptions of the response levels differ between indicators, responses have been mapped to the common scale shown above. The indicator on environmental measures to reduce AMR from food and agricultural activities has four response levels, meaning that the "most advanced implementation" category is not applicable. Bulgaria did not submit a response.

Source: Tracking AMR Country Self-Assessment Survey (TrACSS) (2025[24]), *Global Database for Tracking Antimicrobial Resistance (AMR) Country Self-Assessment Survey (TrACSS), 2025 results*, https://www.amrcountryprogress.org/.

2.6.1. National action plans and co-ordination are widespread, but implementation and coverage remain uneven

All but one of the responding EU/EEA countries reported that a national AMR action plan existed, although the TrACSS definition includes plans that have expired or are being revised. Further, all 28 responding countries reported a government-led multisectoral co-ordination mechanism, but the breadth of these mechanisms varied. Nearly half of countries (13) included all seven sectors listed in TrACSS: human health, terrestrial and aquatic animal health, plant health, food production, food safety and the environment (Figure 2.14). Human health and terrestrial animal health were included by all responding countries, while plant health was included by 15, food production by 19 and aquatic animal health by 21.

Figure 2.14. All responding EU/EEA countries reported national multisectoral co-ordination to address AMR, but fewer than half included all seven sectors

● Sector included ○ Not included

	Human health	Animal health		Food		Plant health	Environment
		Terrestrial	Aquatic	Production	Safety		
Austria	●	●	●	●	●	●	●
Belgium	●	●	●	○	○	○	●
Croatia	●	●	○	●	●	○	○
Cyprus	●	●	●	●	●	●	●
Czechia	●	●	●	●	●	●	●
Denmark	●	●	●	●	●	●	●
Estonia	●	●	●	●	●	●	●
Finland	●	●	●	●	●	●	●
France	●	●	●	●	●	○	●
Germany	●	●	●	○	●	●	●
Greece	●	●	●	●	●	●	●
Hungary	●	●	○	●	●	○	●
Iceland	●	●	●	●	●	○	●
Ireland	●	●	●	●	●	●	●
Italy	●	●	○	●	●	○	●
Latvia	●	●	●	○	●	○	●
Lithuania	●	●	●	●	●	●	●
Luxembourg	●	●	○	○	●	○	●
Malta	●	●	○	○	●	○	○
Netherlands	●	●	○	●	●	●	●
Norway	●	●	●	●	●	●	●
Poland	●	●	●	●	●	●	●
Portugal	●	●	●	●	●	●	●
Romania	●	●	○	○	●	○	●
Slovak Republic	●	●	●	○	●	○	○
Slovenia	●	●	●	○	●	○	●
Spain	●	●	●	○	●	○	●
Sweden	●	●	●	●	●	●	●

Note: "All sectors" comprises human health, terrestrial animal health, aquatic animal health, plant health, food production, food safety and the environment. Bulgaria did not submit a response.

Source: Tracking AMR Country Self-Assessment Survey (TrACSS) (2025[24]), *Global Database for Tracking Antimicrobial Resistance (AMR) Country Self-Assessment Survey (TrACSS), 2025 results*, https://www.amrcountryprogress.org/.

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Implementation status of national AMR plans varied across countries. According to TrACSS, 14 of the 27 countries with plans in place reported that their plans were fully implemented with the necessary financing. In 9 of these countries, the plans were also evaluated periodically, with lessons learned informing policymaking. Formal status does not always capture implementation: in Estonia, for example, the national AMR strategy has been endorsed by the national AMR Steering Group but not formally by the government, and its objectives are being implemented through sector-specific action plans.

Gaps remained in the integration of surveillance across sectors. Half of responding countries reported that they had not established or begun implementing an integrated AMR surveillance system covering at least two sectors. More than half reported that they lacked adequate technical capacity, resources or mechanisms to collect data across all relevant sectors. While countries may have well-established surveillance and monitoring systems within individual sectors, limited integration can constrain their ability to analyse AMR and antimicrobial use across sectors, identify potential interconnections, and generate a more comprehensive One Health picture to inform policy.

Awareness-raising was more widespread. All 28 responding countries reported at least some activity, and 27 reported government-supported activities targeting priority stakeholders or a nationwide campaign. Half reported nationwide campaigns, including 3 that also routinely monitored outcomes and impact. Such activities may support changes in antimicrobial use and infection-prevention behaviour, although TrACSS principally records their reported existence and reach rather than whether they have changed behaviour. Taken together, the findings suggest that the key policy challenge lies in translating strategic national plans into fully resourced operational measures across sectors. In the EU, much of this multisectoral implementation is delivered and financed through mandatory sectoral legislation in public health, animal health, food safety and environmental protection.

Because Figure 2.13 and Figure 2.14 rely on TrACSS self-reporting, the responses also depend on how countries interpreted the questions. For example, Italy's dedicated National IPC Plan is still under development, but infection prevention and control measures are already implemented across the country within an established framework, with arrangements that vary between regions.

2.6.2. Reported implementation of infection prevention and control (IPC) remains uneven across the human and agri-food sectors

Infection prevention and control prevents avoidable infections and the illness and deaths they cause. It also limits the spread of resistant organisms in healthcare settings and reduces the infections that generate antibiotic use, making it a core component of patient safety as well as one of the most direct levers against AMR. Almost all EU/EEA countries responding to the 2025 TrACSS (27 of 28) reported having some form of national infection prevention and control framework for human health. Nearly two-thirds (17 of 28) reported full implementation of a national programme, while a further 10 had national guidelines but reported only sporadic implementation. Among the 17 countries reporting full national implementation, just over half (9) also reported that programmes were implemented at the level of individual health facilities. This suggests that the translation of national frameworks into systematic facility-level practice remains incomplete, particularly in long-term care (Box 2.4), although facility-level practice may also exist where the national-level indicator does not capture it. To address these gaps, the ongoing Joint Action EU-JAMRAI 2 is supporting Member States with targeted guidance, training, and practical implementation tools to strengthen IPC programmes across both healthcare facilities and long-term care settings. ECDC's proposed EU guidance on establishing and implementing IPC programmes in healthcare and *hyFive*, its digital tool for monitoring hand hygiene compliance, both released in May 2026, offer further operational support (ECDC, 2026[28]; ECDC, 2026[29]).

TrACSS responses suggest differences in how countries report national initiatives on good manufacturing and hygiene practices in the agri-food sector. Eleven of 27 countries reported implementation at national level, while a further seven reported having published guidelines or incorporated such practices but not yet reaching the level defined by TrACSS as implementation. These results should, however, be interpreted with caution in the EU/EEA context. EU food hygiene legislation establishes mandatory hygiene requirements for food business operators, including procedures based on hazard analysis and critical control points (HACCP), with additional specific hygiene requirements for food of animal origin, and compliance is subject to official controls. Differences in TrACSS responses may partly reflect how countries interpret and report the survey categories and should not be read as indicating that food hygiene requirements are absent or not implemented.

2.6.3. Antimicrobial stewardship: Reported use of data to support policy and practice remains limited

Antimicrobial stewardship programmes across sectors are key to limiting the development of AMR. Among the 28 countries responding to TrACSS, 24 reported collecting data on antimicrobial use in humans in 2025, but only 17 reported using their data to design or target interventions to improve antimicrobial use. Reporting of dedicated national antimicrobial stewardship programmes in the animal sector was similarly uneven. Nearly one-third of responding countries reported no separate nationwide programme in 2025. Among those reporting country-level plans, Cyprus, Greece and Poland reported pilot projects, whereas Austria, Romania and Norway reported more comprehensive programmes covering relevant terrestrial and aquatic animals and incorporating periodic monitoring. These findings describe the national programmes that countries reported rather than the measures in place: in the EU, binding requirements on prudent antimicrobial use in animals apply whether or not a country operates a dedicated national programme.

2.7. AMR R&D funding is concentrated in a few countries, while the antibacterial candidate pipeline offers limited innovation

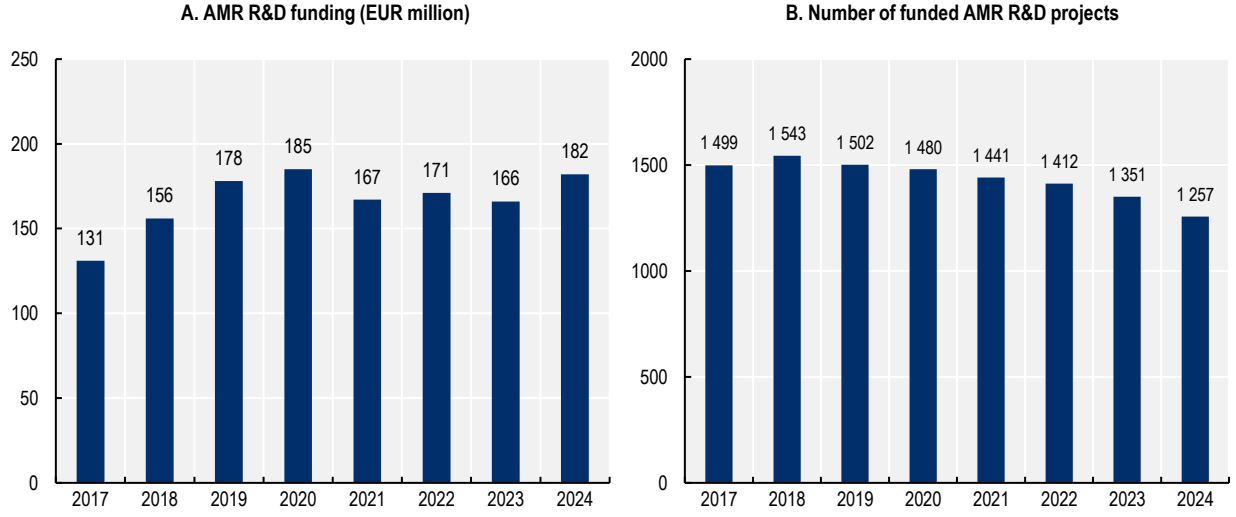
Containing AMR requires both preserving the effectiveness of existing antimicrobials and developing new tools. Vaccines can prevent infections and reduce the need for antimicrobial treatment, while rapid diagnostics can support more timely and targeted prescribing. New antibiotics and antibacterial agents such as bacteriophages are also needed as resistance erodes the effectiveness of existing treatments (Toussaint, Munoz Pineiro and Pirnay, 2024[30]). Yet the antibacterial pipeline remains insufficient in both scale and novelty, with few candidates acting through genuinely new mechanisms or targeting the pathogens of greatest concern.

Bringing a new antibiotic to market is a costly, lengthy and scientifically uncertain process, while expected commercial returns are comparatively low. Unlike most medicines, the public health value of a new antibiotic depends partly on ensuring access while preserving its effectiveness through appropriate and often restricted use. This characteristic limits the sales volumes on which conventional returns depend and has contributed to private-sector withdrawal from antibiotic development.

To revitalise the pipeline, policy responses increasingly combine "push" incentives, such as research grants and public-private partnerships that reduce the costs and risks of development, with "pull" incentives that reward the successful development and availability of priority products. Pull mechanisms include market-entry rewards and subscription models, such as the one introduced in the United Kingdom, that provide predictable payments based on the value and availability of an antibiotic rather than the volume sold. The EU's new pharmaceutical legislation, adopted by the Council at first reading in September 2026, was awaiting approval by the European Parliament at the time of writing. Once adopted, most of its provisions are expected to apply by the end of 2028. It includes a novel pull incentive in the form of a transferable exclusivity voucher for "priority antimicrobials", as well as a voluntary guaranteed revenue scheme to help developers finance the research and development (R&D) of antimicrobials, including "game-changing" new antimicrobials addressing multidrug-resistant pathogens.

Data recorded by the Global AMR R&D Hub (2025[31]) show that public and philanthropic funders located in EU Member States, Iceland and Norway accounted for approximately EUR 182 million in annualised AMR R&D funding in 2024, distributed across 1 257 active projects (Figure 2.15). Recorded funding rebounded by about 10% from 2023 and was close to its nominal 2020 peak of EUR 185 million, while the number of active projects was 16% lower than in 2017. The portfolio captured by the Hub therefore comprises fewer active projects than in earlier years, although this does not necessarily indicate an equivalent contraction in underlying R&D activity. Project budgets are annualised over their duration, and changes may also reflect the size and length of programmes, the timing of awards, or database coverage. The figures are consequently best interpreted as trends in the funding portfolio recorded by the Hub rather than as direct measures of annual research expenditure.

Figure 2.15. Recorded AMR R&D funding rebounded in 2024, while the number of active projects continued to decline

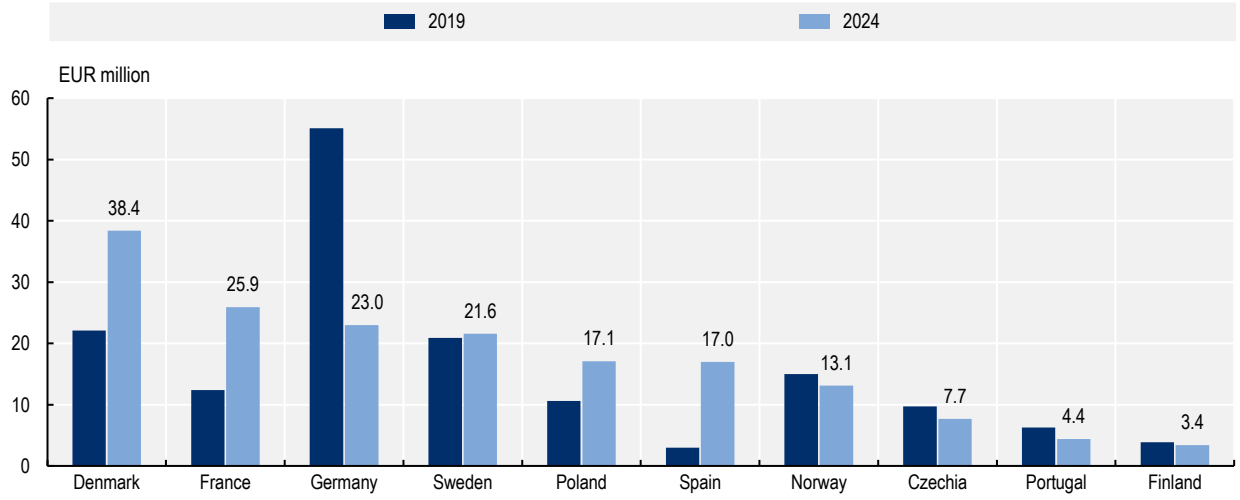


Note: Funding is the sum of funding allocated to domestic and international research organisations, in current (nominal) euros. The number of projects is the total number of AMR R&D projects funded in each year. Data cover the 27 EU Member States, Iceland and Norway. Project budgets are annualised evenly over the duration of each project. Funding (Panel A) is based on project data extracted on 01 October 2026; the number of projects (Panel B) comes from an earlier extraction.
Source: OECD calculations based on Global AMR R&D Hub (2025) project data (accessed 1 October 2026).

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In absolute terms, recorded funding was concentrated among funders located in a small number of countries. Funders based in the ten countries with the highest recorded totals accounted for 94% of funding in 2024. Those based in Denmark, France and Germany together accounted for 48%, and funders based in these three countries and in Sweden each recorded more than EUR 20 million (Figure 2.16).

Figure 2.16. AMR R&D funding is concentrated among a small number of EU/EEA countries



Note: The ten EU/EEA countries with the highest recorded AMR R&D funding in 2024, ranked by 2024 funding; together they accounted for 94% of recorded funding in 2024. Funding is the sum of funding allocated to domestic and international research organisations by funders based in each country, converted into euros at exchange rates at project start and not adjusted for inflation. The lower amount recorded for Germany in 2024 reflects fewer active projects funded by the federal research ministry and the end of several large projects financed by the Federal Joint Committee's Innovation Fund; data for recent years may be incomplete.
Source: OECD calculations based on Global AMR R&D Hub (2025) project data, (accessed 1 October 2026).

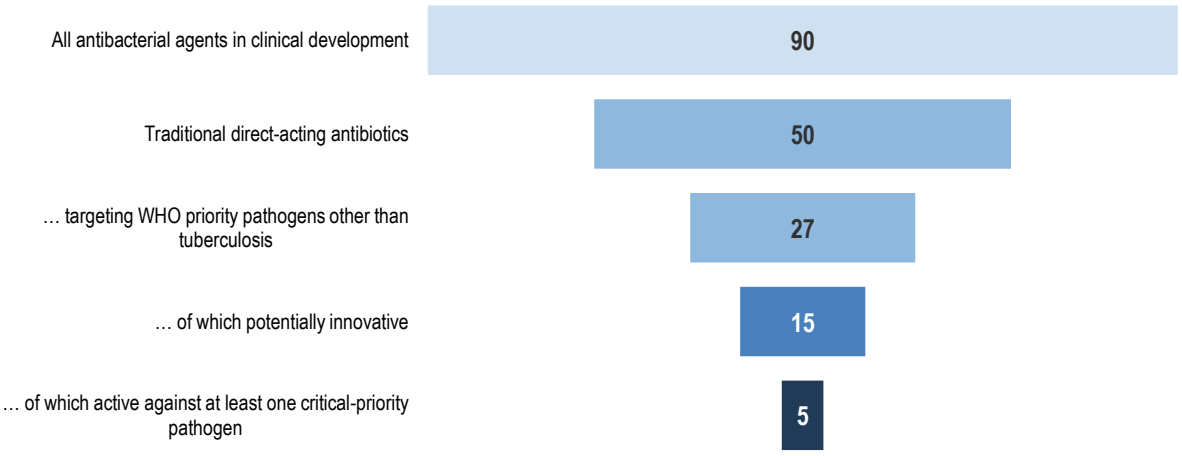
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EU-level programmes provide a substantial additional source of financial support. Between 2014 and 2025, Horizon 2020 and Horizon Europe provided EUR 1.18 billion to 416 AMR projects. The European Partnership on One Health Antimicrobial Resistance (EUP OHAMR), which builds on the Joint Programming Initiative on Antimicrobial Resistance that operated from 2011 to May 2025, brings together 53 organisations from 30 countries. The ten-year partnership has a total budget of approximately EUR 253 million, including EUR 75 million from Horizon Europe, and co-ordinates joint research and innovation activities covering therapeutics, diagnostics, surveillance, prevention and other One Health interventions (European Commission, 2025[32]). In April 2026, the European Commission announced a further EUR 30 million investment through EU4Health to support CARB-X and GARDP. CARB-X supports early-stage antibacterial research, while GARDP advances late-stage clinical development and access to treatments for antibiotic-resistant infections. Together, they aim to help promising products progress from discovery towards patient use (European Commission, 2026[33]).

Funding volumes alone cannot show whether investment is producing the tools most needed to keep pace with resistance; moreover, the funding and pipeline data measure different things. The funding data encompass a wide range of activities, from surveillance and diagnostics to prevention and logistics. The global pipeline is better assessed by the novelty of its candidates and whether they target the pathogens of greatest concern than by its overall size alone. WHO's 2025 assessment (WHO, 2025[34]) applies these tests in sequence, and the field narrows sharply at each step. On scale, WHO counted 90 antibacterial agents in clinical development in 2025, down from 97 in 2023: 50 traditional direct-acting antibiotics and 40 non-traditional approaches such as bacteriophages, antibodies and microbiome-modulating agents. Part of that fall reflects agents leaving the pipeline through authorisation, not only through discontinuation, so the total is best read alongside the pipeline's composition.

Of the 50 traditional agents, 27 target priority pathogens other than tuberculosis, and WHO assesses innovation within this subset. WHO considers 15 of the 27 potentially innovative. Only 5 of these showed no known cross-resistance with existing antibiotics. The other 10 qualify because they belong to a new chemical class or act on a new target or through a new mode of action, but available data are insufficient to confirm that resistance to existing antibiotics would not also reduce their effectiveness. On the strictest test, only 5 of the 15 were active against at least one WHO critical-priority pathogen, including the carbapenem-resistant and third-generation cephalosporin-resistant Gram-negative bacteria, such as CRKP and 3GCREC (Figure 2.17). Over a longer horizon, of the 17 new agents against priority pathogens authorised since July 2017, only 2 belonged to a new chemical class (WHO, 2025[34]).

Figure 2.17. Few agents in the global antibacterial pipeline are innovative and active against critical-priority pathogens



Note: Number of antibacterial agents in clinical development in 2025. Each bar is a subset of the bar above it. "Potentially innovative" agents show no known cross-resistance (5) or meet at least one other WHO innovation criterion (a new chemical class, target or mode of action) without data confirming the absence of cross-resistance (10). Critical-priority pathogens include carbapenem-resistant and third-generation cephalosporin-resistant Gram-negative bacteria.
Source: WHO (2025[34]), *Analysis of antibacterial agents in clinical and preclinical development: overview and analysis 2025*, https://iris.who.int/handle/10665/382578.

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2.8. Conclusions: Reaching the 2030 targets will require faster progress

Roughly midway between the baseline and target years, progress towards the EU's antibiotic and AMR reduction targets remains uneven across targets and countries. EU sales of antimicrobials for farmed animals and aquaculture fell by 24% between 2018 and 2024, placing the EU close to the trajectory towards the 50% reduction target. However, sales increased slightly in both 2023 and 2024 after reaching their lowest level so far in 2022, which suggests that the required pace of reduction is not assured (EMA, 2025[22]).

Progress in the human health sector has been mixed. Total human antibiotic consumption was 5% lower in 2025 than at the 2019 baseline. Consumption would need to fall by a further 3.0 DDD per 1 000 population per day, or around 16%, from its 2025 level to meet the EU 2030 target (ECDC, 2026[8]). Of the 25 EU countries with data for both years, 19 reduced antibiotic consumption between 2019 and 2025, but only two (Austria and Finland) had already met their national 2030 consumption targets. For the EU to meet its 2030 target, the average annual reduction over 2025-2030 would need to be more than three times the average annual net reduction recorded over 2019-2025. At their own pace since 2019, most Member States would not reach their national targets before 2030; independent forecasts and the EU agencies themselves reach the same conclusion (Bindel and Seifert, 2025[10]; Cooke and Rendi-Wagner, 2025[35]). The share of Access antibiotics rose by 1.4 p.p. to 62.5% in 2025, although ECDC detected no statistically significant trend, and around two-thirds of EU countries had not reached the target of at least 65%. At the same time, the hospital-sector share of Reserve antibiotics increased in most countries, rising in 21 of the 25 countries that had data for both 2019 and 2025, and ECDC detected a statistically significant increasing trend at EU/EEA level over 2021-2025. Although this is not itself one of the 2030 targets and does not establish whether prescribing was appropriate, it shows the value of monitoring the composition of antibiotic consumption alongside its overall volume.

The policy implications also differ across countries and care settings. Most human antibiotic consumption occurs in community care, making community prescribing central to the overall consumption target, although hospital consumption is rising in around a third of countries even where total consumption is falling. OECD modelling covers a wider range of community-acquired infections than the ECDC estimates cited in Section 2.2. In this modelling, healthcare-associated antibiotic-resistant infections account for around one-third of antibiotic-resistant infections but more than 60% of associated deaths, making infection prevention and control, timely diagnosis and stewardship essential across healthcare settings (OECD, 2023[5]). Better-linked patient-level data on prescribing indications, microbiological findings, treatment and outcomes are needed to distinguish necessary treatment from avoidable exposure and to direct interventions more effectively.

Progress on resistant bloodstream infections varies by pathogen. By 2025, the estimated EU incidence of MRSA bloodstream infections was 19% below its 2019 level, meaning that the 15% reduction target had already been exceeded, although incidence rose slightly in both 2024 and 2025. By contrast, the estimated EU incidence of bloodstream infections caused by third-generation cephalosporin-resistant *E. coli* was 16% higher, against a target of a 10% reduction. The estimated EU incidence of bloodstream infections caused by carbapenem-resistant *K. pneumoniae* was 72% higher, moving sharply away from the targeted 5% reduction (ECDC, 2026[21]).

These divergent trajectories show that progress is possible while reinforcing the need to assess antimicrobial consumption, prescribing quality and pathogen-specific resistance as distinct but related dimensions of performance.

2.8.1. National action plans need sustained implementation

Almost all EU/EEA countries report having national AMR action plans, but TrACSS survey data show that implementation arrangements remain uneven across surveillance, infection prevention and control, stewardship, professional training and environmental action. Even where the EU has made progress, as in veterinary antimicrobial sales, country-level planning and implementation remain essential to carry that progress forward. The two sectors also operate under different regimes: human health measures rely primarily on non-binding recommendations and national policies, whereas veterinary antimicrobial use is governed by legally binding EU legislation (Regulations (EU) 2019/6 and 2016/429), enforced through official controls and European Commission audits. In human health, the central challenge is now to translate plans into costed and financed programmes implemented at national and facility level and at sufficient scale. Accelerating progress towards 2030 in human health and avoiding backsliding in the animal sector will require clear responsibilities across sectors, adequate human resources, sustained financing, integrated surveillance and monitoring systems, and regular evaluation capable of prompting policy adjustment.

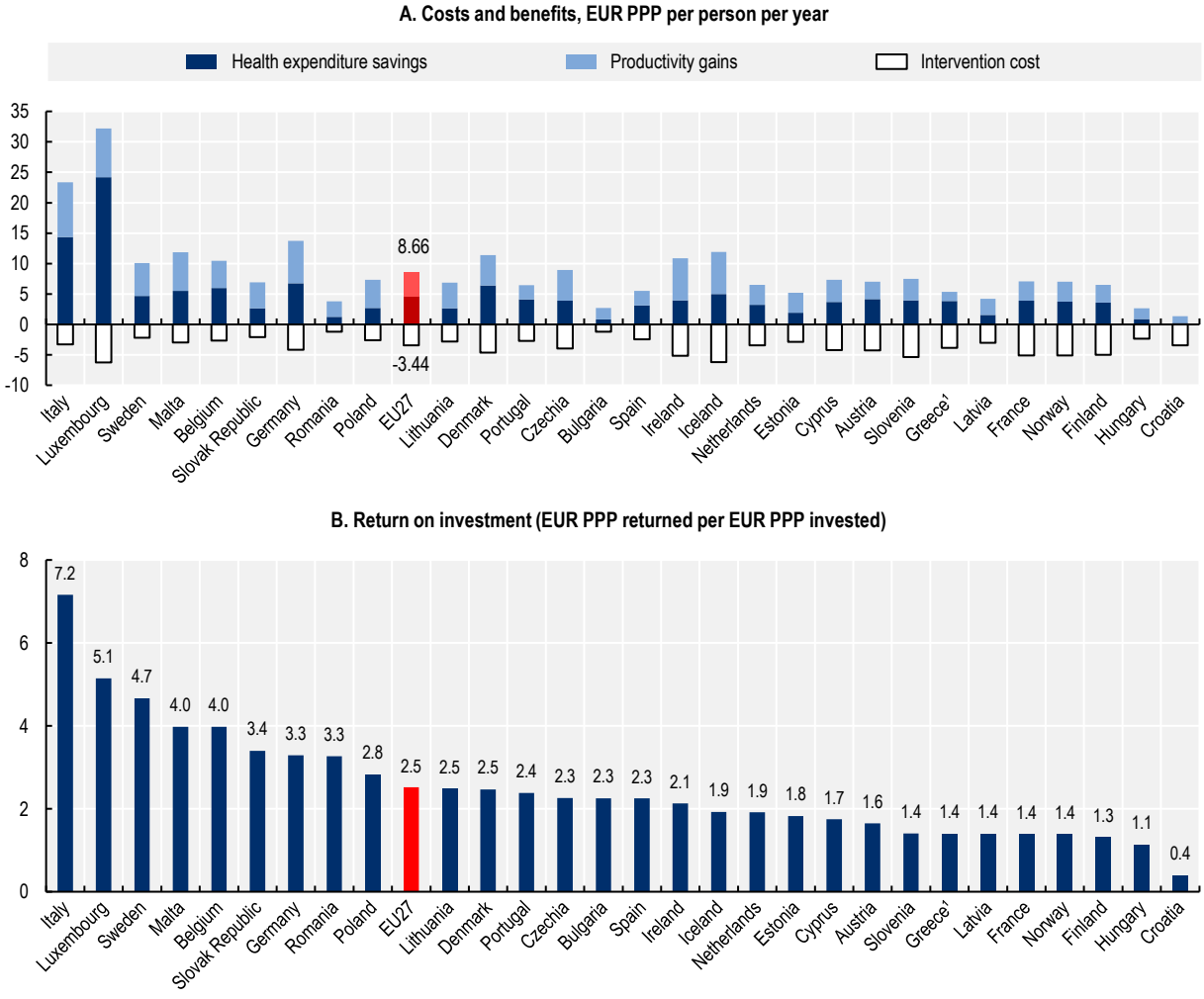
2.8.2. Stronger incentives are needed to improve the antibacterial R&D pipeline

The global clinical pipeline to address AMR remains limited in both scale and novelty, including against WHO critical-priority pathogens relevant to some of Europe's least favourable resistance trends. Public and philanthropic push funding remains essential, but it cannot by itself correct a market in which clinically valuable antibiotics should be used sparingly. Pull incentives are also needed to reward the availability and therapeutic value of genuinely important products without making returns depend primarily on sales volumes. Their design should incorporate conditions supporting equitable access and stewardship. As AMR is a global challenge, such incentives should be co-ordinated internationally, so that each jurisdiction contributes its "fair share" to financing new antimicrobial development. At the same time, vaccines, rapid diagnostics and infection prevention can reduce the need for antibiotics and help preserve the effectiveness of both existing and new treatments.

2.8.3. Co-ordinated One Health action can deliver economic returns across EU countries while addressing the harms of AMR

The uneven trajectories towards the 2030 targets reflect differences in countries' starting points and AMR challenges, which call for policy packages tailored to national circumstances. Such packages can combine interventions addressing relevant drivers of AMR across hospitals, communities and sectors beyond human health. OECD modelling shows that they can reduce infections and deaths while generating savings in health expenditure and gains in workforce participation and productivity (OECD, 2023[5]). The OECD SPHeP-AMR model assessed three policy packages addressing important gaps in AMR control. Of these, the mixed package combines antimicrobial stewardship programmes, improved hand hygiene in healthcare, delayed antibiotic prescribing, mass-media campaigns and improved food-handling practices. Implementing this package across the EU/EEA would require average annual investment of EUR PPP 3.4 per person (Figure 2.18). The model estimates that it would avert around 613 000 infections and more than 10 000 deaths annually, while generating more than EUR PPP 2.5 billion in health expenditure savings and around EUR PPP 2.3 billion in productivity gains. Across EU countries, these benefits average EUR PPP 8.7 per person per year, about 2.5 times the cost of the package. Returns vary across countries, exceeding five euros for every euro invested in Italy and Luxembourg, partly reflecting their relatively high modelled AMR burden and associated scope for health expenditure savings.

Figure 2.18. The modelled benefits of an AMR policy package exceed its costs in nearly all EU/EEA countries



Note: Modelled annual average intervention costs, health expenditure savings and productivity gains per person, in EUR PPP, for a package combining antimicrobial stewardship, improved hand hygiene, delayed prescribing, mass-media campaigns and improved food-handling practices. Panel A shows costs below zero and benefits above zero. Panel B shows the benefit-cost ratio, (health expenditure savings + productivity gains) / intervention cost: a value of 2.5 means EUR PPP 2.5 of benefits for every EUR PPP 1 invested. Countries are ranked by this ratio in both panels; values below 1 mean that modelled benefits are smaller than costs. The EU27 average is unweighted. 1. Results for Greece use a different data source and methodology due to the unavailability of *S. pneumoniae* data and are not directly comparable with those for other countries.
Source: OECD analysis based on the OECD SPHeP-AMR model.

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The OECD analysis makes a strong economic case for scaling up One Health action, but it does not assess whether any package would achieve the EU's 2030 targets. The most appropriate policy package for supporting countries' progress towards their 2030 AMR targets will depend on each country's demographic and epidemiological profile, patterns of antibiotic use across sectors, distribution of infections across care settings, implementation capacity, and intervention costs.

2.8.4. A substantial EU policy toolkit is available, but implementation will determine its impact

The 2023 Council Recommendation provides a common framework for national action and identifies the areas in which implementation must improve. The ongoing Joint Action EU-JAMRAI 2 helps EU/EEA countries translate European policy commitments and national action plans into operational measures on surveillance, stewardship and infection prevention and control. ECDC's proposed EU guidance on infection prevention and control programmes in healthcare provides a more operational basis for action at national and facility levels (ECDC, 2026[28]), complemented by practical tools such as its hyFive hand hygiene monitoring application. The animal health, food safety and veterinary medicines legal framework and revised Urban Wastewater Treatment Directive extend action across the animal and environmental dimensions of AMR (European Union, 2024[36]). Directive

(EU) 2026/805 on pollutants in surface water and groundwater provides for indicators of AMR to be added to the EU water watch lists (European Union, 2026[37]). EU4Health, which runs until 2027, supports implementation and surveillance. The European Partnership on One Health AMR (EUP OHAMR), a ten-year partnership co-funded under Horizon Europe, supports research and innovation, although the framework programme that will succeed Horizon Europe after 2027 has not yet been agreed (European Commission, 2025[32]). The EU Partnership on Animal Health and Welfare includes co-ordination of research to control infectious animal diseases and prudent use of antimicrobials (European Partnership on Animal Health and Welfare, 2024[38]). Together, these instruments support implementation, surveillance, stewardship, infection prevention and control, and research and innovation; their existence, however, does not guarantee delivery at scale.

The immediate priority is to turn existing commitments into sustained action in the countries, care settings and pathogens furthest from the targets. This requires financed programmes, clear responsibility for delivery, and monitoring based on comparable One Health data that can show where implementation is falling short. The progress made against MRSA and in reducing veterinary antimicrobial sales shows that substantial change is possible, but the increases recorded for both indicators in the past two years show that such gains must be actively sustained.

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Notes

[1] In this chapter, "antibiotics" refers to antibacterial agents for systemic use (ATC group J01), which is the scope of the ESAC-Net data and of the EU human-health targets. "Antimicrobials" is a broader term that also covers antivirals, antifungals and antiparasitics; it is used where the source uses it, notably for veterinary sales data and the TrACSS survey.

[2] These projections cover a different set of infections and use different methods and reference periods from the ECDC estimates above, so the two sets of figures are not directly comparable.

[3] Progress towards the EU targets is measured as the change between the 2019 baseline year and 2025, as the targets themselves are defined, using the percentage changes reported by ECDC (computed on unrounded values) and ECDC's statistical trend tests where available. For indicators without a 2030 target (the community broad-to-narrow spectrum ratio and the hospital-sector Reserve share), ECDC presents EU/EEA means and trend tests for 2021-2025 only, to keep the set of reporting countries constant; the chapter follows this convention and shows 2019-2025 comparisons for these indicators at country level only. EU population-weighted means include ECDC imputations for missing national data (Cyprus in 2023, Sweden in 2023-2025 and, for total consumption only, German hospital consumption before 2023); the EU mean for the Access share excludes Germany, whose series starts in 2023 (ECDC, 2026[8]).

[4] DDDs per 1 000 population per day are useful for measuring consumption but cannot demonstrate whether an antibiotic was appropriately prescribed, nor necessarily capture exposure at patient level. Aggregate antibiotic consumption is a proxy for antimicrobial selection pressure rather than a direct measure of inappropriate use.

[5] Throughout this chapter, figures cover EU/EEA countries where data allow, whereas the EU targets apply to EU Member States only. Iceland and Norway, where shown, are included for comparison only and are not covered by the targets.

[6] The population correction unit (PCU) is a standardised proxy for the size of the animal population potentially treated with antimicrobials in a given year. It is a technical unit of biomass, expressed in kilograms: for each animal category, the number of animals (or, for slaughtered animals, the number produced) is multiplied by a standard weight assumed to apply at the likely moment of treatment.

Part II Overview of health indicators

3 Health status

This chapter describes the health status of Europeans, including trends in life expectancy, healthy life expectancy, main causes of death, the prevalence of chronic diseases and disabilities, and mental health issues. By 2024, life expectancy in EU countries had recovered from the unprecedented but temporary reductions during the COVID-19 pandemic, but there are signs of slowdown in life expectancy gains over the past decade compared to previous decades, particularly in those countries that had already achieved high life expectancies. While women in the EU continue to live more than five years longer than men, the gender gap has narrowed over the past few decades as the gains in life expectancy among men have exceeded those among women. The gap in healthy life years is also much smaller – less than one year on average – as women live a greater proportion of their lives with some health issues and disabilities. The main causes of death are cardiovascular diseases and cancers, which together accounted for 57% of all deaths in the EU in 2023. More than one-third of adults (37%) in the EU reported living with at least one chronic condition in 2025, and this proportion increases to over 60% among people aged 65 and over. When looking at the health of younger people, over 40% of 15-16 year-olds in the EU are not considered to be in a state of good mental well-being. Promoting good physical and mental health in childhood and adolescence can reduce both the immediate and longer-term burden of physical and mental health issues.

Trends in life expectancy

Life expectancy at birth in the EU reached 81.5 years in 2024, 0.3 years higher than in 2023 and 1.5 years higher than in the midst of the pandemic in 2021. Spain had the highest life expectancy among EU countries in 2024 at 84.0 years, followed by Sweden, Italy, Cyprus, Luxembourg and Ireland, with all these countries having a life expectancy exceeding 83 years. Outside the EU, Switzerland had the highest life expectancy in Europe at 84.2 years. Life expectancy in the EU in 2024 was the lowest in Bulgaria at less than 76 years. Latvia, Romania and Hungary also had a relatively low life expectancy (below 77 years). The gap between the lowest and highest life expectancy in the EU was more than eight years (Figure 3.1).

Women continue to live longer than men in all EU countries, living on average 5.2 years longer in 2024 (Eurostat, 2026[1]). However, the gender gap in longevity has progressively narrowed over the last two decades (down from 6.5 years in 2004) as the life expectancy of men increased more rapidly than women. In 2024, there remained large variations in the gender gap in life expectancy across EU countries, ranging from less than four years in Denmark, Ireland, Malta, the Netherlands and Sweden, to over eight years in the three Baltic countries and over seven years in Bulgaria, Poland and Romania. Going beyond mortality, it is also important to bear in mind that the gender gap in healthy life expectancy is generally much smaller, and in some countries in fact favouring men, as women tend to spend a greater proportion of their lives with some health issues and disabilities (see indicator “Healthy life expectancy at birth and at age 65”).

Large inequalities in life expectancy persist not only by sex but also by socio-economic status, no matter how it is measured – whether by education level, income or occupational group. For example, in Estonia, the gap in life expectancy at age 30 between men with a university degree and those who had not completed secondary education was 10.9 years in 2024, while this education gap was 8.2 years among women (Statistics Estonia, 2026[2]). These education gaps in life expectancy are less pronounced in Sweden but nonetheless significant: the gap between the most and least educated Swedish men at age 30 was 6.3 years in 2024, and 6.5 years among Swedish women (Statistics Sweden, 2026[3]).

Looking at trends over time, life expectancy gains in nearly all EU countries have slowed down over the past decade (2014-2024) compared to the previous decade (2004-2014), with Lithuania and Sweden being the only exceptions. On average across EU countries, life expectancy at birth increased by 2.3 years between 2004 and 2014, but by only 0.9 years between 2014 and 2024 (Figure 3.2). In Germany and the Netherlands, life expectancy gains between 2014 and 2024 were minimal.

This trend is consistent with the theory that high-income countries, which have already achieved significant progress in reducing mortality at young and middle ages over the past few decades, might experience slower gains in life expectancy as they approach biological limits of human life (Olshansky et al., 2024[4]). While further advances and breakthroughs in medicine might open up new possibilities to target the underlying causes of ageing, further gains in life expectancy in these countries could still be achieved by reducing inequalities by gender and socio-economic status, notably through effective and well-targeted public health interventions to reduce premature and preventable mortality (see indicator “Avoidable mortality” in Chapter 6).

Definition and comparability

Life expectancy at birth measures the average number of years that a newborn child can expect to live based on current mortality rates (age-specific death rates). However, the actual age-specific death rates of any particular birth cohort cannot be known in advance. If age-specific mortality rates decline in the future, actual life spans will, on average, be higher than the life expectancy calculated using current death rates.

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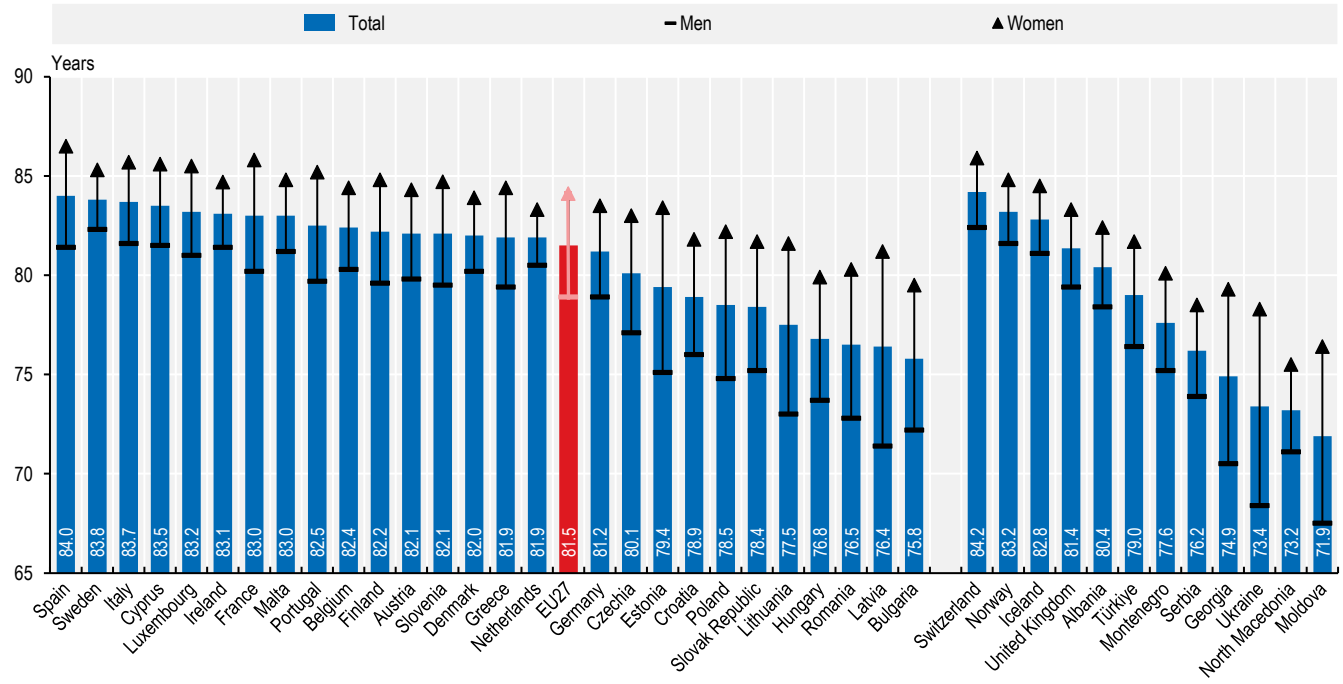
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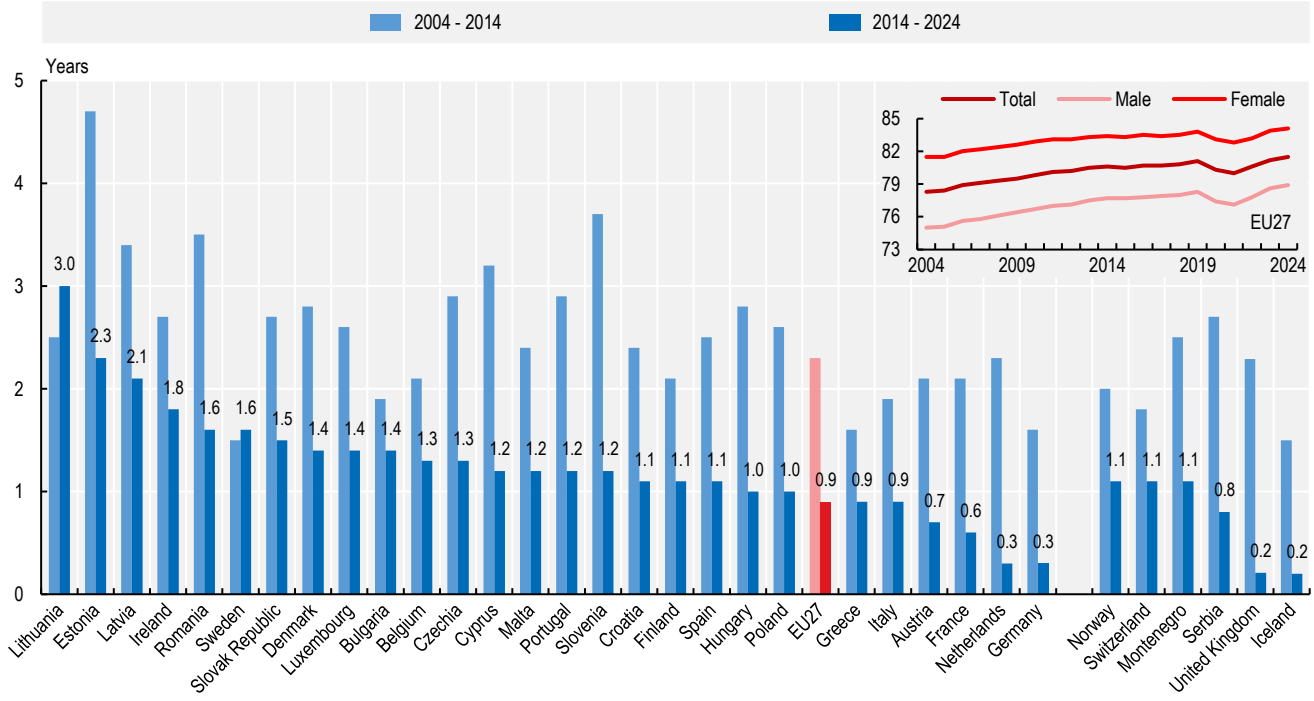
Figure 3.1. Life expectancy at birth, by gender, 2024 (or nearest year)



Note: The EU average is weighted. Data refer to 2023 for Moldova, to 2021 for North Macedonia and to 2019 for Ukraine.
Source: Eurostat, https://doi.org/10.2908/DEMO_MLEXPEC (accessed on 15 July 2026), complemented with ONS for the United Kingdom.

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Figure 3.2. Changes in life expectancy at birth, 2004-2014 and 2014-2024 (or nearest year)



Note: The EU average is weighted.
Source: Eurostat, https://doi.org/10.2908/DEMO_MLEXPEC (accessed on 15 July 2026), complemented with ONS for the United Kingdom.

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Healthy life expectancy at birth and at age 65

Healthy life expectancy is an important indicator of population health, as it signals whether years of life are lived in good health or with some health issues and disabilities (activity limitations). A greater healthy life expectancy generally means a healthier workforce, fewer early retirements due to health problems, and lower or postponed health and long-term care needs. The main indicator of healthy life expectancy in the EU is the indicator called "healthy life years", which is defined and measured as disability-free life expectancy. However, the comparability of the data on healthy life years across countries and over time is limited because of variations in the survey questions used to measure disability prevalence in the EU-SILC survey. Responses to these survey questions are also affected by cultural and social factors.

Bearing these limitations in mind, in 2024, the number of healthy life years at birth in the EU as a whole was 65.5 years for women and 64.8 years for men (Figure 3.3). This small gender gap in healthy life years (0.7 years) contrasts with the much larger gap in life expectancy (5.2 years). This is because women live a greater proportion of their lives with some health issues and disabilities (22% of women's lives on average in the EU are lived with some disabilities compared to 18% for men).

The gender gap in healthy life years in favour of women is more than three years in countries such as Bulgaria, Estonia and Lithuania. This is driven mainly by a much higher life expectancy of women in these countries, not so much by a greater proportion of their life lived without disabilities. By contrast, there is a large gap in healthy life years in favour of men in the Netherlands, Norway, Sweden and Switzerland (over 2.5 years in favour of men). Part of the explanation for the men's advantage in healthy life years in these countries is that the gender gap in overall life expectancy is substantially smaller than in other countries (see indicator "Trends in life expectancy"), although in some of these countries, the men's advantage is also partly explained by the fact that they live a lower share of their lives with some disabilities. Among EU countries, Italy recorded the highest number of healthy life years at birth among both women and men in 2024, while Latvia had the lowest number of healthy life years.

As people get older, the proportion of remaining years of life that they can expect to live free of disability decreases. This is particularly the case among women. While women in the EU could expect to live another 21.8 years when they reached age 65 in 2024, less than half of these years was free of disability. For men, the remaining life expectancy at age 65 (18.4 years) was 3.4 years shorter than women, but they could expect to live more than half of these years free of disability (Figure 3.4).

There are inequalities in life expectancy and healthy life expectancy not only by gender but also by socio-economic status. A study of ten EU countries using data from the Survey of Health, Ageing and Retirement in Europe (SHARE) from 2004 to 2019 found that disability-free life expectancy among adults aged 50 and over with lower education (i.e. those who have not completed secondary education) was 3 to 10 years shorter compared to those with higher education (i.e. those with a university or another tertiary education). While these educational gaps were observed in all ten countries, the size of the inequalities varied (Stonkute, Lorenti and Spijker, 2023[1]). The lower life expectancy and disability-free life expectancy of less educated women and men reflect interconnected factors closely linked to education, such as lower income, poorer working and living conditions, lower health literacy and more limited access to healthcare. A range of policies can contribute to increasing healthy life expectancy and reducing inequalities, including greater efforts to prevent health problems throughout the life course, more equitable access to care at all ages and better management of chronic diseases (see Chapter 2 of *Health at a Glance: Europe 2024* (OECD/European Commission, 2024[2])).

Definition and comparability

The indicator of healthy life years is defined as the number of years spent free of activity limitation (i.e. disability-free life expectancy). It is calculated by Eurostat based on life table data and age-specific prevalence data on long-term activity limitations from the EU-SILC survey. Most countries measure long-term activity limitations through the following two questions: 1) Are you limited because of a health problem in activities people usually do? Would you say you are 1. Severely limited, 2. Limited but not severely, or 3. Not limited at all? and if the response to this first question is 1 or 2, the second question asks: 2) Have you been limited for at least the past six months? Yes or No (Eurostat, 2025[3]). However, some countries (e.g. Belgium, Bulgaria, France, Malta) continued using the original single question in the EU-SILC survey in 2024: For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do? Would you say you have been 1. Severely limited, 2. Limited but not severely, or 3. Not limited at all? The use of this original single question results in higher disability rates and lower healthy life years compared to those countries that have moved to using the two questions. The comparability of data on healthy life years is also limited by the fact that the self-reported information can be affected by people's subjective assessment of their activity limitations and by social and cultural factors.

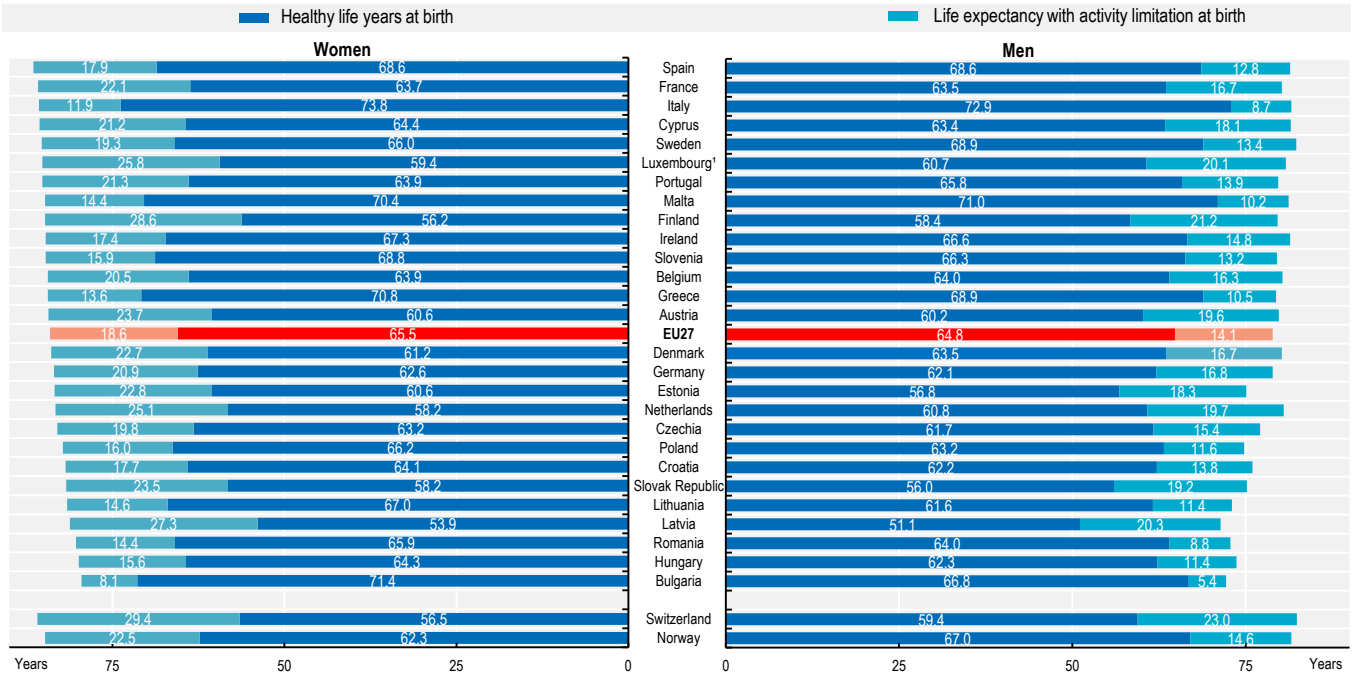
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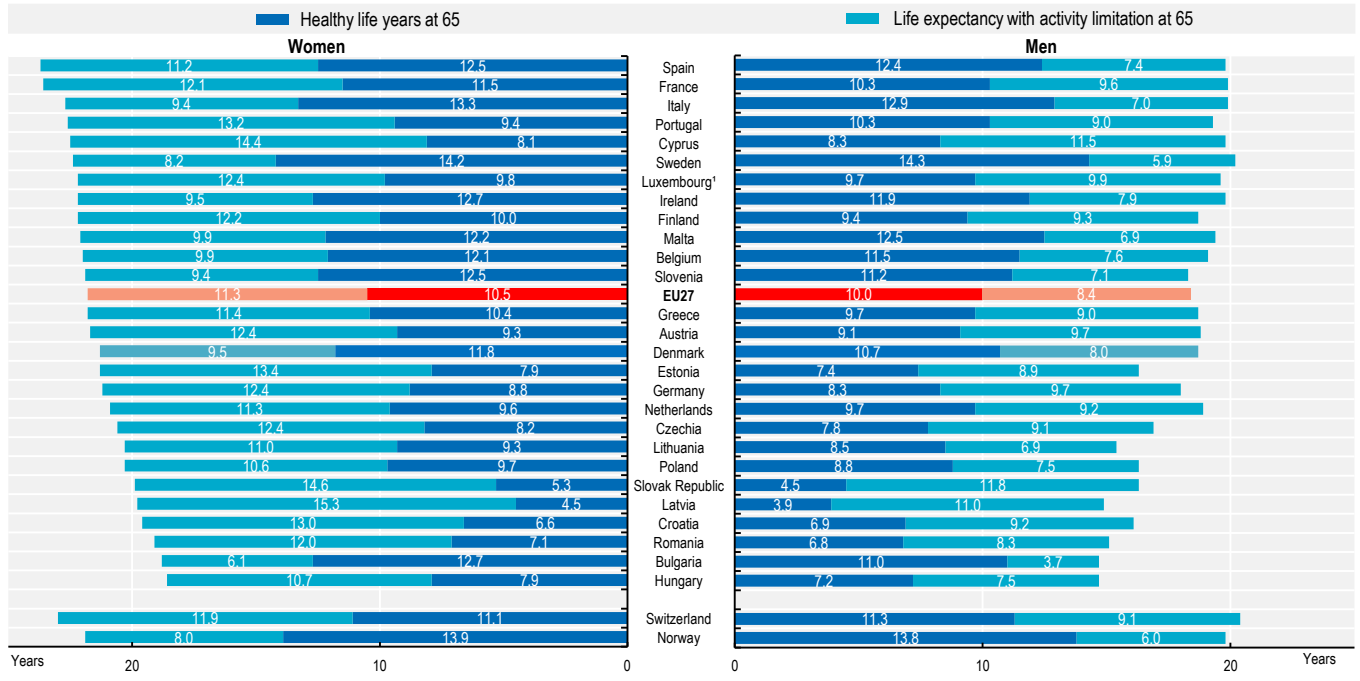
Figure 3.3. Life expectancy and healthy life years at birth, by gender, 2024



Note: The EU average is weighted. Cross-country comparability is impacted by differences in the formulation of the survey questions in EU-SILC to measure the "activity limitation" part of the indicator. 1. Data refer to 2022.
Source: Eurostat, https://doi.org/10.2908/HLTH_HLYE (accessed on 15 July 2026).

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Figure 3.4. Life expectancy and healthy life years at 65, by gender, 2024



Note: The EU average is weighted. Cross-country comparability is impacted by differences in the formulation of the survey questions in EU-SILC to measure the "activity limitation" part of the indicator. 1. Data refer to 2022.
Source: Eurostat, https://doi.org/10.2908/HLTH_HLYE (accessed on 15 July 2026).

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Main causes of mortality

In 2023, around 4.85 million people died across EU countries (Figure 3.5), down from over 5 million deaths per year between 2020 and 2022 due to the COVID-19 pandemic. Among these, 4.13 million deaths (85% of the total) occurred among people aged 65 and over while the remaining 720 000 deaths were among people under 65 (Eurostat, 2026[1]).

Cardiovascular diseases and cancer remained the two leading causes of mortality in the EU in 2023, with cardiovascular diseases accounting for 32.8% of all deaths (1.59 million deaths) and cancer for 23.9% (1.16 million deaths). Among cardiovascular diseases, the main causes of mortality relate to ischaemic heart diseases (i.e. diseases that involve reduced blood flow to the heart, notably acute myocardial infarctions also commonly called heart attacks) and cerebrovascular diseases (strokes), which together accounted for over half of all deaths from cardiovascular diseases (see indicator "Mortality from cardiovascular diseases"). The main causes of cancer-related mortality are lung cancer, colorectal cancer, pancreatic cancer, breast cancer (that affects almost exclusively women) and prostate cancer (that affects only men). About 230 000 people died from lung cancer in 2023 (see indicator "Cancer mortality"). The main risk factor for lung cancer is tobacco smoking (see indicator "Tobacco smoking and e-cigarette use among adults" in Chapter 4).

Respiratory diseases were the third leading cause of death in the EU in 2023, accounting for 7.8% of all deaths (about 380 000 deaths). Chronic obstructive pulmonary disease (COPD) and pneumonia are the two main causes of death from respiratory diseases. As is the case with lung cancer, tobacco smoking is the main risk factor for COPD.

Alzheimer's disease and other dementias were the fourth main cause of mortality, accounting for 5.4% of all deaths in the EU in 2023 (about 260 000 deaths). The number of deaths from Alzheimer's and other dementias has increased greatly over the past decade, by over 40% between 2013 and 2023, although some of this increase is due to changes in how causes of death are registered and to improvements in the diagnosis.

External causes of death, including accidents, suicides and homicides, were responsible for 5.0% of all deaths in the EU in 2023 (about 240 000 deaths). The most important external causes of death are accidents (about 173 000 deaths), of which 69 000 were related to falls (mainly among older people) and 23 000 to transport accidents, which are a particularly important cause of death among young people aged 18-25. About 49 000 deaths of people across all ages were due to suicide.

In 2023, three years after the pandemic started, COVID-19 deaths had decreased substantially in EU countries, accounting for only 2.1% of all deaths (about 100 000 deaths). However, long COVID, a post-acute infection syndrome characterised by a persistent cognitive dysfunction and fatigue, continues to affect millions of people worldwide with direct medical and indirect economic costs (OECD, 2026[2]).

As shown in Figure 3.6, overall mortality rates (age-standardised to take into account differences in population structure) were 15% lower than the EU average in Spain, France and Luxembourg in 2023, while they were at least 40% higher than the EU average in Bulgaria, Hungary, Latvia and Romania. The main contributor to the much higher mortality rates in this latter group of countries was higher mortality rates from cardiovascular diseases. This reflects a combination of factors, including higher prevalence of cardiovascular risk factors (e.g. smoking, harmful alcohol consumption, and overweight and obesity), and differences in early disease detection, treatment and management of the conditions as reflected in variation in mortality-to-incidence ratios (Cecchini, Vuik and Everard, 2026[3]).

Definition and comparability

Deaths from all causes are classified according to ICD-10 codes A00-Y89, excluding S00-T98. The grouping Alzheimer's disease and other dementias includes G30 (Alzheimer) and F01-F03 (dementias). Chronic obstructive pulmonary disease (COPD) is defined as all chronic lower respiratory diseases (J40-J47), excluding asthma (J45-J46). Mortality rates are based on the number of deaths among residents of an EU country, whether they died in their country of residence or abroad. Mortality rates are age-standardised to the European standard population adopted by Eurostat in 2013 to remove variations arising from differences in age structures across countries and over time. For the United Kingdom, the data on mortality for 2023 come from the WHO Mortality Database (https://www.who.int/data/data-collection-tools/who-mortality-database) and have been age-standardised to the European standard population.

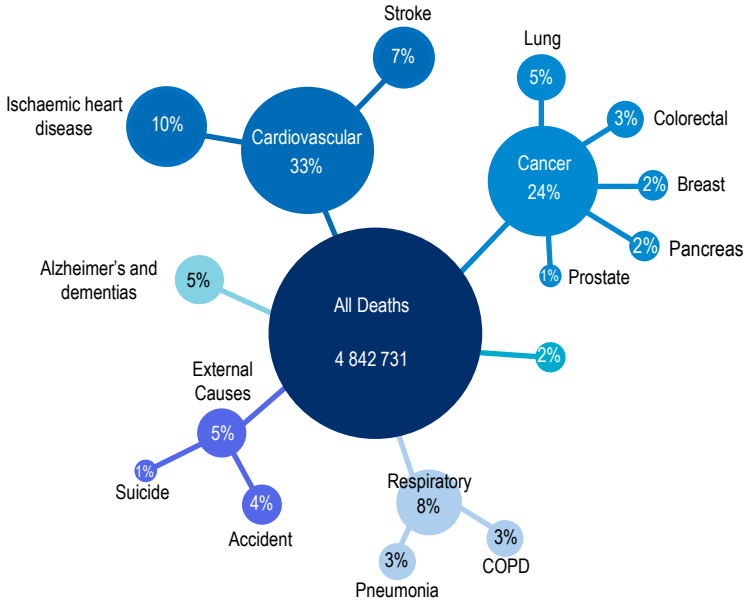
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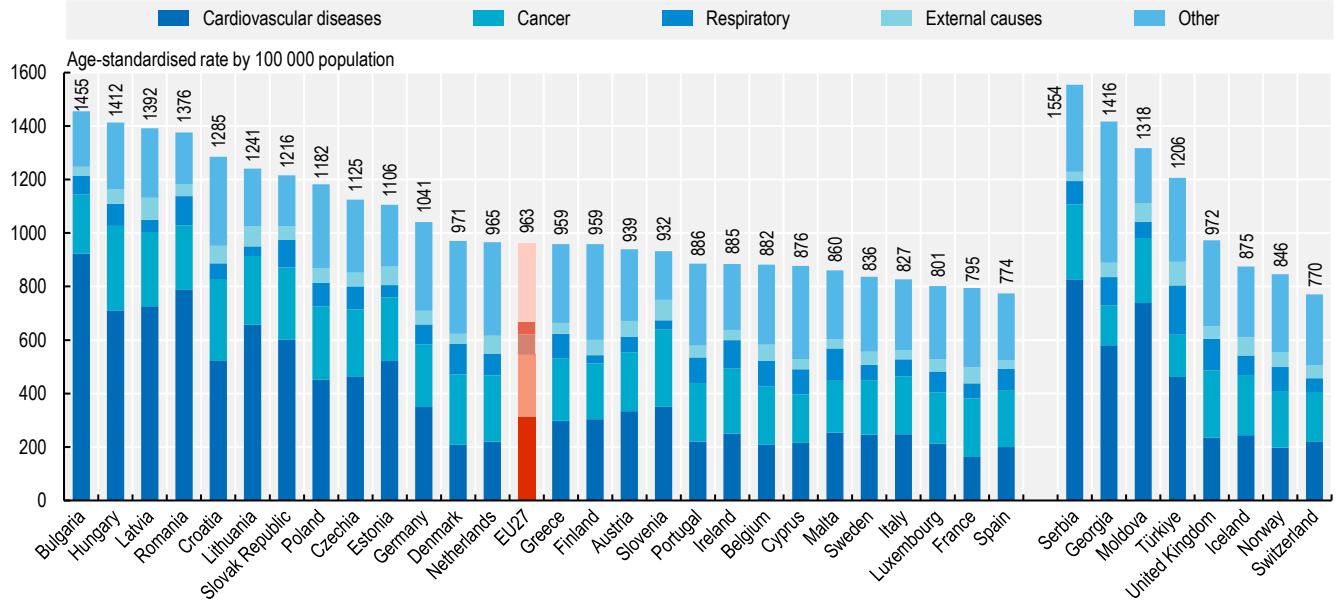
Figure 3.5. Main causes of mortality in EU countries, 2023



Note: The other causes of death not shown in this figure represent 23% of all deaths. COPD = chronic obstructive pulmonary disease.
Source: Eurostat, https://doi.org/10.2908/HLTH_CD_ARO (accessed on 15 July 2026).

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Figure 3.6. Main causes of mortality by country, 2023



Note: The EU average is weighted.
Source: Eurostat, https://doi.org/10.2908/HLTH_CD_ASDR2 (accessed on 15 July 2026) and WHO Mortality Database for the United Kingdom.

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Mortality from cardiovascular diseases

Cardiovascular diseases are the leading cause of death and a major cause of disability across the EU, accounting for one-third of all deaths in 2023 (1.59 million deaths) and affecting over 60 million people. The human toll is compounded by significant direct and indirect economic costs, estimated at EUR 282 billion annually across the EU, making cardiovascular diseases a major public health and economic challenge (OECD, 2025[1]). The EU's first ever cardiovascular health plan (the Safe Hearts Plan) was launched in December 2025 to support Member States in reducing the burden of cardiovascular diseases by enhancing prevention, strengthening early detection and screening, and supporting treatment and care (European Commission, 2025[2]).

Cardiovascular disease mortality rates vary widely across EU countries, with countries in Central and Eastern Europe and the Baltic countries experiencing substantially higher rates compared to Western European and Nordic countries. Age-standardised mortality rates from cardiovascular diseases are four to five times higher in Bulgaria and Romania than in France and Spain (Figure 3.7). These gaps reflect differences in the prevalence of risk factors such as smoking, obesity and harmful alcohol consumption (see related indicators in Chapter 4 on "Risk factors"), as well as differences in access and quality of care (see indicators "Mortality following acute myocardial infarction" and "Mortality following stroke" in Chapter 6).

Looking at trends over time, mortality rates from cardiovascular diseases decreased by over 20% between 2013 and 2023 on average in the EU. All EU countries experienced a significant drop in cardiovascular mortality rates of at least 15% over this 10-year period except Hungary which experienced a more modest reduction of 4% (Figure 3.8).

Among cardiovascular diseases, the leading cause of death is ischaemic heart diseases (i.e. diseases involving reduced blood flow to the heart, including acute myocardial infarctions), responsible for nearly a third of all cardiovascular disease deaths in the EU in 2023 (510 000 deaths). The second leading cause was cerebrovascular diseases (strokes), accounting for one-fifth of all cardiovascular disease deaths (326 000 deaths). Together, ischaemic heart disease and stroke were responsible for 17% of all deaths in the EU in 2023 (over one in six deaths).

Although age-standardised cardiovascular mortality rates were higher in men than in women in all EU countries in 2023, cardiovascular diseases claimed a larger number of lives in females than in males (about 846 000 female deaths compared to 743 000 male deaths). This is because of women's longer life expectancy.

Cardiovascular disease mortality rates are higher among people from lower socio-economic status. For example, registry data from Nordic countries show that cardiovascular mortality risks are between 1.6 and 2.1 times higher among people with a low education level compared to the more highly educated (Højstrup, Thomsen and Prescott, 2023[3]). Higher exposure to risk factors among lower socio-economic groups is a major driver of higher cardiovascular mortality. Lower socio-economic groups also often have poorer access to healthcare, reducing the likelihood of early diagnosis and proper management of cardiovascular risks.

Around three-quarters of cardiovascular deaths in the EU can be attributed to modifiable risk factors, mainly metabolic factors including hypertension, diabetes and high cholesterol, alongside behavioural and environmental risks. Population-level interventions, such as tobacco taxation and limits on trans fats in food, can improve cardiovascular outcomes. A greater focus on prevention in primary care can also reduce both the incidence and mortality from cardiovascular diseases. Counselling by primary care providers on the risks of tobacco smoking and on smoking cessation methods has been found to be effective in reducing tobacco use (OECD, 2025[1]). However, clinical recommendations to support lifestyle changes are not always followed in practice. According to the OECD PaRIS survey, only about half of primary care users aged 45 and over who smoke reported that a primary care professional had talked to them about the health risks of smoking and ways to quit (OECD, 2025[4]).

Definition and comparability

Deaths from all cardiovascular diseases relate to ICD-10 codes I00-I99, while those from ischaemic heart diseases relate more specifically to ICD-10 codes I20-I25 and those from cerebrovascular diseases (strokes) to ICD-10 codes I60-I69. Mortality rates are age-standardised to the European standard population adopted by Eurostat in 2013. For the United Kingdom, 2023 mortality data come from the WHO Mortality Database and are age-standardised to the European standard population.

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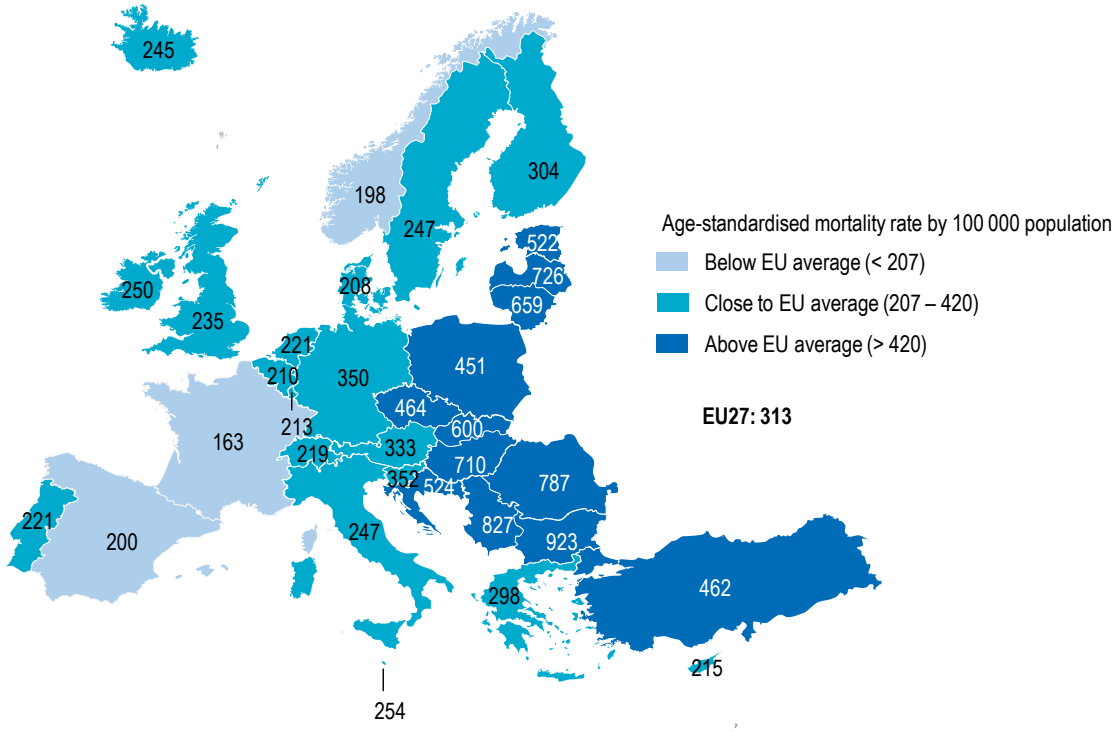
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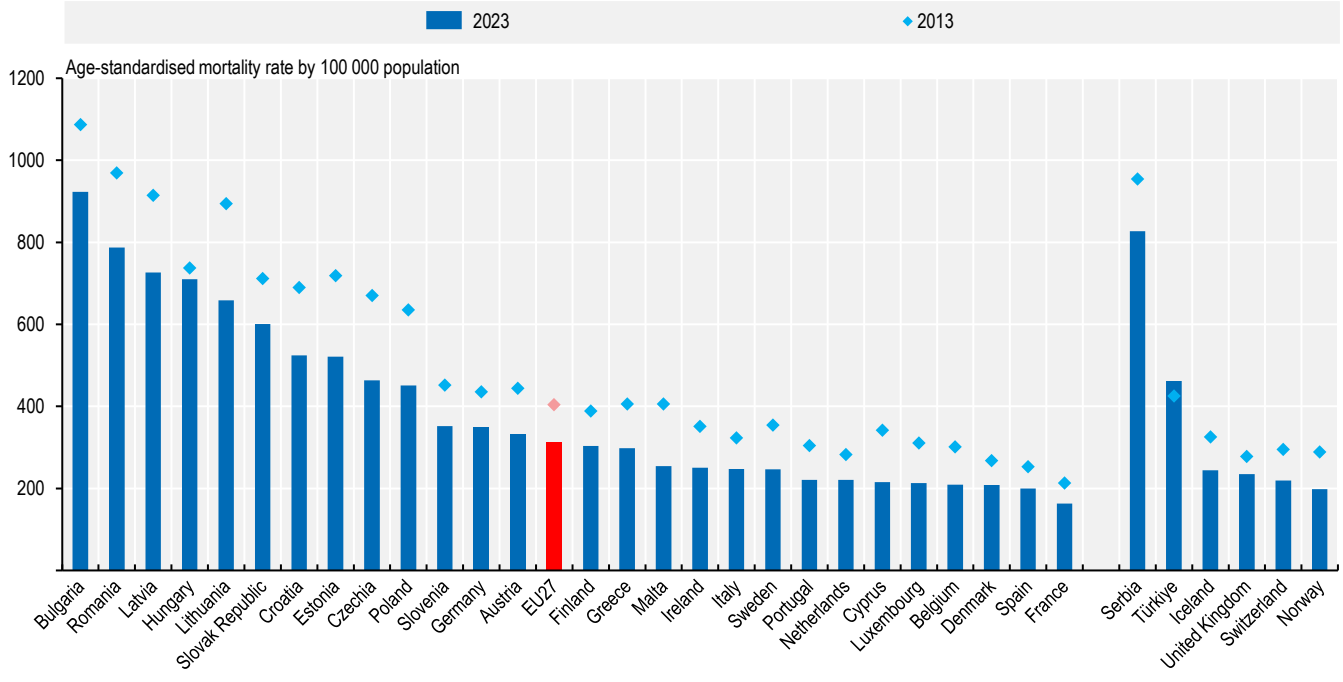
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Figure 3.7. Cardiovascular diseases mortality, 2023



Note: The EU average is weighted. The classification of countries as below, close to or above EU average is based on half standard deviation from the average.
Source: Eurostat, https://doi.org/10.2908/HLTH_CD_ASDR2 (accessed on 15 July 2026) and WHO Mortality Database for the United Kingdom (the age-standardised rate has been calculated by the OECD).

Figure 3.8. Cardiovascular diseases mortality, 2013 and 2023



Note: The EU average is weighted. Data for the United Kingdom have been calculated by the OECD.
Source: Eurostat, https://doi.org/10.2908/HLTH_CD_ASDR2 (accessed on 15 July 2026) and WHO Mortality Database for the United Kingdom.

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Cancer mortality

In 2023, cancer was the second leading cause of death across EU countries after cardiovascular diseases, accounting for about 1 160 000 deaths, or 24% of all deaths. Cancer mortality rates reflect both the number of people who develop cancer and the likelihood of surviving after diagnosis, which in turn depends on factors such as cancer type, stage at diagnosis, timeliness and quality of care.

Age-standardised cancer mortality in the EU stood at 233 deaths per 100 000 population in 2023, but varied substantially across countries, ranging from 181 deaths per 100 000 in Cyprus to 316 in Hungary. Besides Cyprus, the lowest mortality rates in EU countries were observed in Luxembourg, Malta, Sweden and Finland, while the highest rates were recorded in Central and Eastern European countries, including Hungary, Croatia, Slovenia, Latvia, Poland and the Slovak Republic (Figure 3.9).

Similar to cancer incidence, cancer mortality rates remain substantially higher among men than women. Across EU countries, the age-standardised mortality rate in 2023 was 303 deaths per 100 000 men, 65% higher than the rate of 184 deaths per 100 000 women. The largest gender gaps in cancer mortality were observed in Latvia, Lithuania and Croatia. These differences reflect variations in both the incidence and distribution of cancer types, as well as gender differences in participation in screening programmes (see indicator on “Cancer care quality” in Chapter 6), timely diagnosis, and survival outcomes (see indicator on “Cancer survival” in Chapter 6).

There are also substantial socio-economic inequalities in cancer mortality within countries. In Sweden for example, men living in the most deprived socio-economic areas experienced cancer mortality rates that were 43% higher than those in the highest socio-economic areas in 2023, while the corresponding gap for women was 23% (OECD/European Commission, 2026[1]). In Italy, data from the National Institute of Statistics show that in 2022, men with low education experienced cancer mortality rates around 50% higher than men with high education. Among women, the corresponding difference was around 20%.

Five cancer types – lung, colorectal, breast, pancreatic, and prostate cancer – accounted for 52% of all age-standardised cancer deaths in the EU in 2023. Lung cancer was the leading cause of cancer death among men, responsible for 22% of all cancer deaths and nearly twice as many deaths as colorectal cancer. Among women, lung cancer was also the leading cause of cancer death, accounting for 17% of deaths, followed closely by breast cancer at 16% and then colorectal cancer at 11% (Figure 3.10). Pancreatic cancer was the fourth leading cause of cancer mortality among both men and women. Although less common than other major cancers, it accounts for a substantial mortality burden because of its poor prognosis. Pancreatic cancer is often diagnosed at an advanced stage and continues to have considerably lower survival rates than most other common cancers.

Between 2013 and 2023, age-standardised cancer mortality declined by 11% across the EU, reflecting changes in the incidence of some cancers as well as improvements in early diagnosis and treatment that have increased survival rates. Among the main cancer sites for men, mortality rates fell most rapidly for stomach cancer (from 18 to 13 per 100 000, or 28%), followed by lung cancer (23%), colorectal cancer (17%) and prostate cancer (10%). Among women, the largest decline was also observed for stomach cancer (27%), followed by colorectal cancer (15%), and breast cancer (9%). In contrast to men, lung cancer mortality among women increased by 9% during the past decade, reflecting the later peak in smoking prevalence among women than among men. For pancreatic cancer, neither men nor women have seen decreases in mortality rates (Figure 3.10).

Sustaining progress in reducing cancer mortality requires action across the full cancer control pathway as outlined in Europe’s Beating Cancer Plan, beginning with prevention through healthier lifestyles and environments alongside improved health literacy. In particular, the Council Recommendation of June 2024 on vaccine-preventable cancers supports EU Member States in their efforts to prevent cancer through vaccination against human papillomavirus (HPV) and hepatitis B virus (HBV), while also strengthening the monitoring of vaccination coverage rates. Earlier diagnosis also plays a critical role: the 2022 Council Recommendation reaffirms the importance of organised breast, cervical and colorectal cancer screening programmes and recommends that countries assess the feasibility and effectiveness of screening strategies for lung, prostate and gastric cancer (European Commission, 2026[2]). Further reductions in cancer mortality depend on timely diagnosis, co-ordinated care pathways, effective treatment, and equitable access to high-quality services across population groups and regions.

Definition and comparability

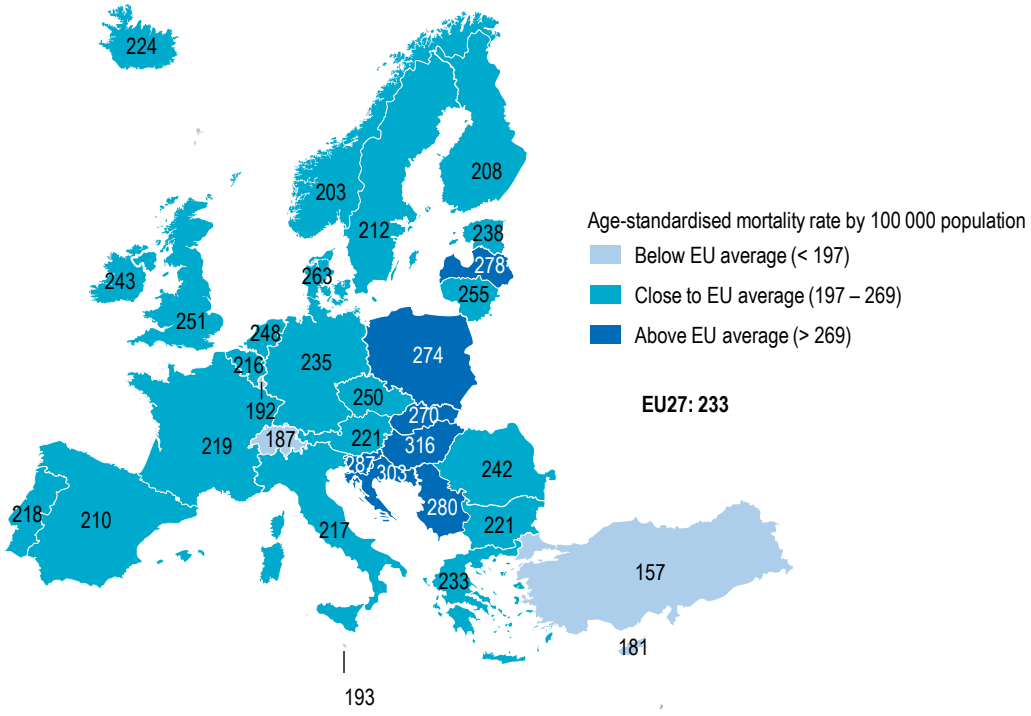
Mortality from all malignant cancers relate to ICD-10 codes C00-C97. The rates have been age-standardised to the European standard population adopted by Eurostat in 2013. For the United Kingdom, the data on mortality for 2023 come from the WHO Mortality Database and have been age-standardised to the European standard population.

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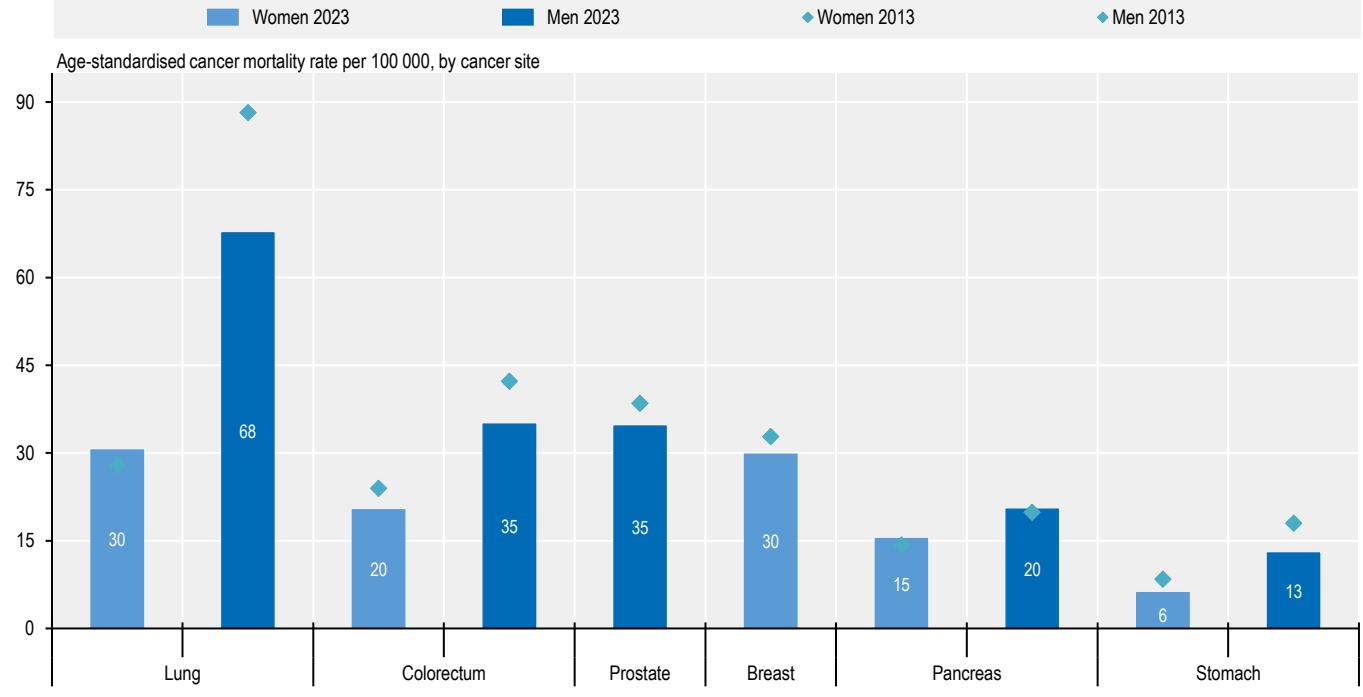
OECD/European Commission (2026), *Delivering High Value Cancer Care: European Cancer Inequalities Registry Analytical Report*, OECD Publishing, Paris, https://doi.org/10.1787/060869fe-en. [1]

Figure 3.9. Cancer mortality, 2023



Note: The EU average is weighted. The classification of countries as below, close to or above EU average is based on one standard deviation from the average.
Source: Eurostat, https://doi.org/10.2908/HLTH_CD_ASDR2 (accessed on 15 July 2026) and WHO Mortality Database for the United Kingdom (the age-standardised rate has been calculated by the OECD).

Figure 3.10. Changes in age-standardised cancer mortality rate by gender, EU average, 2013 and 2023



Note: The EU average is weighted.
Source: Eurostat, https://doi.org/10.2908/HLTH_CD_ASDR2 (accessed on 15 July 2026).

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Cancer incidence

In 2024, 2 689 095 new cancer cases were estimated to occur in the EU, equivalent to around five new cases every minute. Among women, breast cancer was by far the largest contributor to the cancer burden in 2024, accounting for 30% of all age-adjusted incidence, followed by colorectal cancer (12%) and lung cancer (9%) (Figure 3.11). Among men, prostate cancer was the most common cancer, representing 22% of age-adjusted incidence rates, followed by lung cancer (14%) and colorectal cancer (13%).

Age-standardised cancer incidence rates are 38% higher among men than women. This gender gap is driven by higher incidence rates among men for several cancers affecting both sexes, including lung, colorectal, pancreatic, kidney and bladder cancers, partly reflecting the higher prevalence of risk factors such as smoking, alcohol consumption and overweight among men (see various indicators in Chapter 4 on “Risk factors”).

Cancer incidence is influenced by a combination of behavioural, environmental and genetic factors. In some countries, higher or growing incidence may also reflect more extensive early detection and, in some cases, overdiagnosis, particularly for cancers where screening or diagnostic imaging plays an important role. Differences in reported incidence between countries may additionally reflect variation in the coverage, completeness and accuracy of national or regional cancer registration systems.

For 2024, Denmark was estimated to have the highest cancer incidence rate in the EU, at 668 cases per 100 000 population, followed by Croatia, the Netherlands, Belgium and Hungary. Among non-EU countries, Norway and the United Kingdom also reported relatively high rates, more than 10% above the EU average (Figure 3.12). The lowest estimated incidence rates in the EU were in Bulgaria, Luxembourg, Austria and Romania, more than 10% below the EU average.

Between 2000 and 2022, cancer incidence rose by 29% in women and 31% in men, mostly due to population ageing (OECD/European Commission, 2026[1]). However, even after adjusting for age, incidence rates increased by 10% among women, from 431 to 474 cases per 100 000 between 2000 and 2022 (with the increase driven by breast, lung, skin melanoma and thyroid cancer, offsetting declines in stomach and colorectal cancers, see Figure 3.13). Among men, age-standardised incidence increased more modestly, by 2% (from 661 to 674 cases per 100 000), led by increases in prostate cancer and skin melanoma.

Advancing age is the leading cancer risk factor, with 90% of cancer cases in the EU in 2024 estimated to occur among people aged 50 and over. Yet, cancers diagnosed among people aged 15-49 years (early-onset cancer) are concerning, affecting people during their prime years of life, creating the need for survivorship programmes and social reintegration. Unlike overall cancer incidence, early-onset cancer rates were substantially higher among women than men. Notably, the incidence of early-onset cancers increased by 16% among young women between 2000 and 2022 due to increases in thyroid cancer, breast cancer and skin melanoma, while the rates among young men remained broadly stable (OECD/European Commission, 2026[1]).

A recent WHO/IARC global analysis estimated that four in ten cancer cases are attributable to preventable risk factors (many of which are also common to cardiovascular disease), including tobacco use, alcohol consumption, high body mass index, physical inactivity, air pollution, ultraviolet radiation, and cancer-causing infections such as human papillomavirus (HPV) (WHO, 2026[2]). The fifth edition of the European Code Against Cancer broadens the prevention agenda, giving greater attention to e-cigarettes and novel nicotine products, ultra-processed foods and sugar-sweetened drinks, air pollution, cancer-causing infections, and organised lung cancer screening for people at increased risk (IARC, 2026[3]).

Definition and comparability

The 2024 cancer incidence estimates come from the European Cancer Information System (ECIS), as an outcome of a collaborative exercise between the European Commission’s Joint Research Centre (JRC) with the International Agency for Research on Cancer (IARC), in collaboration with the International Association of Cancer Registries (IACR).

Rates have been age-standardised to the European standard population adopted by Eurostat in 2013. The estimates for 2024 may differ from national estimates due to methodology differences. Incidence for all cancers refers to ICD-10 codes C00-C97, excluding non-melanoma skin cancer (C44).

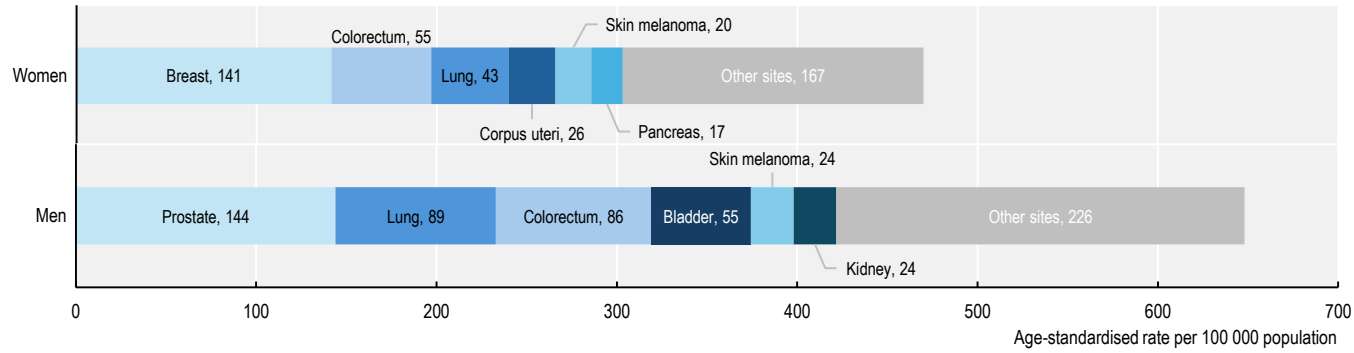
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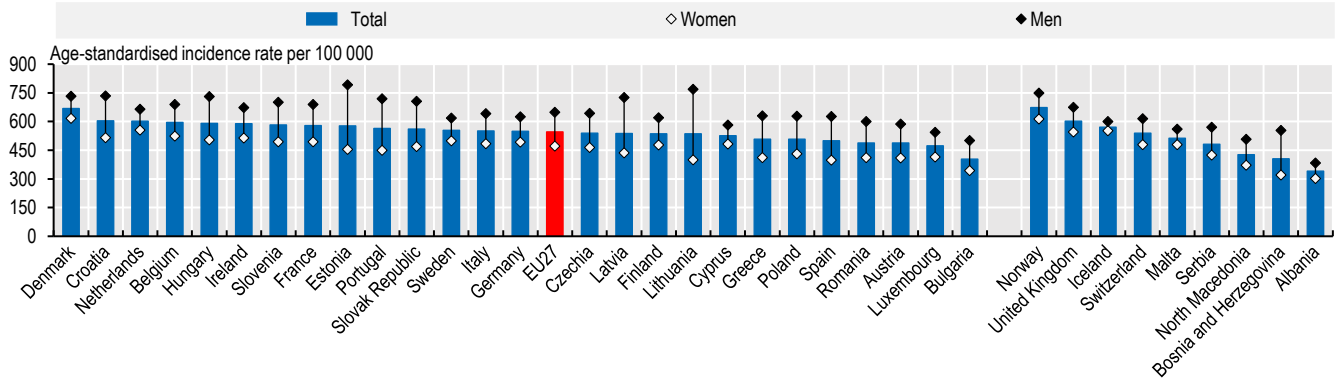
Figure 3.11. Estimated age-standardised cancer incidence in the EU by gender and cancer type, 2024



Note: The EU average is weighted. Data are estimated based on incidence trends from previous years. The definition of overall cancer incidence includes all cancer sites except non-melanoma skin cancer.
Source: European Cancer Information System (ECIS), https://ecis.jrc.ec.europa.eu.

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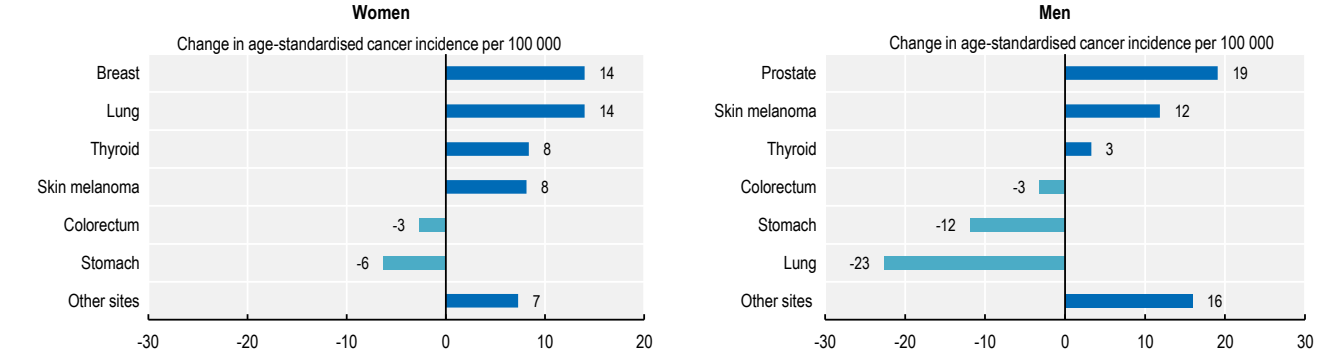
Figure 3.12. Estimated cancer incidence by gender, 2024



Note: The EU average is weighted. Data are estimated incidence based on incidence trends from previous years and may differ from national estimates. Data include all cancer sites except non-melanoma skin cancer.
Source: European Cancer Information System (ECIS), https://ecis.jrc.ec.europa.eu.

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Figure 3.13. Changes in cancer incidence by gender and cancer type, EU average, 2000-2022



Note: The EU averages are unweighted. Data include all cancer sites except non-melanoma skin cancer. Cancer sites shown are those with the largest increases or decreases in incidence rates among women or men.
Source: OECD/European Commission (2026[1]), *Delivering High Value Cancer Care: European Cancer Inequalities Registry Analytical Report*, https://doi.org/10.1787/060869fe-en.

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Self-rated health among adults

How individuals assess their own health provides an overview of both physical and mental health. Despite its subjective nature, self-rated health is strongly related to morbidity and a good predictor of future healthcare needs and mortality (Palladino et al., 2016[1]).

Over two-thirds of adults (68%) in the EU reported to be in good or very good health in 2025, while 23% reported their health to be fair and the remaining 9% reported to be in bad or very bad health (Figure 3.14). Men are more likely than women to report being in good or very good health (70.5% of men compared to 65.5% of women in the EU). This is consistent with the fact that men are also less likely to report having some chronic diseases or disabilities than women (see indicator on "Chronic conditions and disabilities among adults"). The gender gap in self-rated health is particularly large in Latvia, Lithuania and Romania where the share of men reporting to be in good or very good health is 8 to 10 p.p. greater than the share of women.

On average across EU countries, the share of adults reporting to be in good or very good health has remained constant over the past decade. While the share reporting to be in good or very good health has increased in some countries (e.g. Croatia, Czechia, Estonia and Greece), it has decreased in other countries (e.g. Denmark, Finland, the Netherlands and Sweden) and remained stable in many others.

Cross-country comparisons of self-rated health are affected by cultural factors that may influence responses to the survey question as well as demographic factors. Since older people generally report poorer health than younger people, countries that have a larger proportion of people aged over 65 or 80 are likely to have a lower proportion of people reporting to be in good or very good health. With these limitations in mind, the proportion of adults in 2025 considering themselves to be in good or very good health ranged from nearly 80% in Ireland, Malta and Greece to less than 50% in Lithuania and Latvia and just over 50% in Portugal. In these latter three countries, a large proportion of adults (over one-third) report their health to be fair (i.e. not bad but not good), see Figure 3.14.

People on higher incomes rate their health more positively than those on lower incomes in all EU countries (Figure 3.15). Nearly 80% of adults in the highest income quintile across EU countries reported to be in good or very good health in 2025, compared to less than 60% of those in the lowest income quintile. These socio-economic disparities are particularly marked in Lithuania, Latvia and Croatia, with an income gap of over 40 p.p. These gaps can be explained partly by the fact that people in better health have higher employment rates and higher incomes than people in bad health (i.e. reverse causality), but people with higher incomes also enjoy better living and housing conditions and are less exposed to various risk factors to health.

Good self-rated health tends to decline with age. In many countries, there is a particularly marked decline in how people rate their health when they reach their mid-40s, with a further decline after reaching retirement age. Among people aged over 65 in the EU as a whole, only 40.3% reported to be in good or very good health in 2025, while 18% reported being in bad or very bad health and the remaining 41.7% reported to be in fair health. The gender gap persists as people age: only 38.5% of women aged over 65 reported to be in good or very good health compared to 42.6% of men (Eurostat, 2026[2]).

Definition and comparability

Self-rated health reflects people's overall perception of their health. The data from EU-SILC are based on the question: "How is your health in general? Very good, good, fair, bad, very bad". Caution is required in making cross-country comparisons of self-rated health because responses to this question are subjective and may be affected by socio-cultural differences in how people rate their health. In addition, estimates are not age-standardised and cross-country differences could partly reflect variations in population age structures.

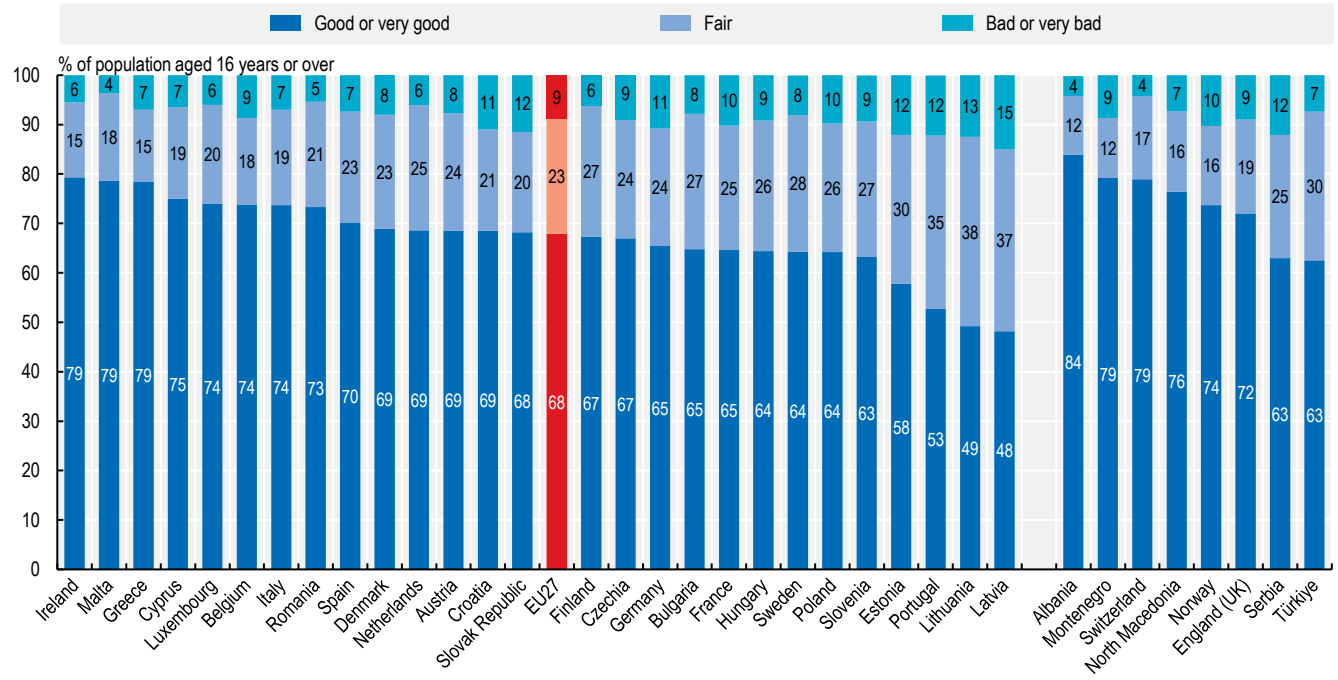
Self-rated health by income level is reported for the first quintile (the 20% of the population with the lowest income) and the fifth quintile (the 20% with the highest income).

References

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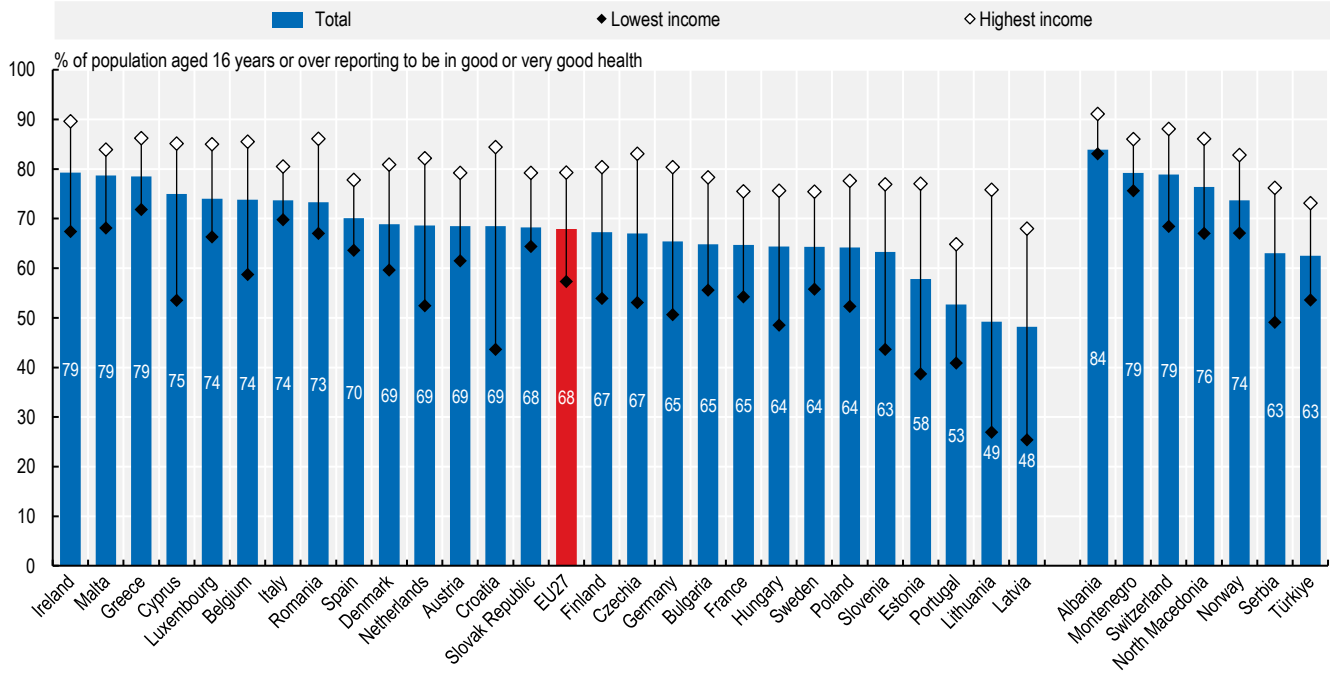
Figure 3.14. Self-rated health among adults, 2025 (or latest year)



Note: The EU average is weighted. Data refer to 2024 for England (UK), North Macedonia and Switzerland, and 2023 for Albania and Montenegro.
Source: Eurostat based on EU-SILC, https://doi.org/10.2908/HLTH_SILC_10 (accessed on 15 July 2026) and Health Survey for England (UK).

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Figure 3.15. Adults rating their health as good or very good, by income quintile, 2025 (or latest year)



Note: The EU average is weighted. Data refer to 2024 for North Macedonia and Switzerland, and 2023 for Albania and Montenegro.
Source: Eurostat based on EU-SILC, https://doi.org/10.2908/HLTH_SILC_10 (accessed on 15 July 2026).

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Chronic conditions and disabilities among adults

Chronic conditions (referred also as long-standing illnesses) are not only the leading causes of death across EU countries, but also reduce the quality of life of those affected and contribute substantially to activity limitations (disabilities), especially when they are not properly managed. Many chronic conditions are preventable through disease prevention initiatives, promotion of healthier lifestyles and improved awareness of modifiable risk factors such as smoking, alcohol use, physical inactivity, unhealthy dietary patterns and obesity.

More than one-third of adults in the EU (37%) reported living with a chronic condition in 2025 (Figure 3.16). The proportion of women reporting a long-standing illness is greater than men in all EU countries except in Cyprus where there is no significant gender gap. In the EU as a whole, 39% of women reported having a chronic condition in 2025 compared to 34% of men.

Cross-country comparisons of self-reported chronic conditions can be affected by a different understanding and interpretation of the question in the EU-SILC survey as well as demographic factors. Since older people generally are more likely to report one or more chronic conditions than younger people, countries that have a larger proportion of people aged over 65 or 80 are likely to have a greater proportion of people reporting having chronic conditions. With these limitations in mind, the proportion of adults reporting having a chronic condition ranges from over 55% in Finland to 20-25% in Italy, Romania, Greece and Bulgaria.

As expected, the proportion of people reporting having at least one chronic condition increases with age: 62% of people 65 and over in the EU reported that they had at least one chronic condition in 2025 (63% of women and 61% of men). As population ages, the proportion of people living with multiple chronic conditions also rises, placing a growing burden on people and healthcare systems. Data from the OECD Patient-Reported Indicator Survey (PaRIS) show that about 50% of primary care users aged 45 and over reported two chronic conditions or more in 2023-2024 on average across participating EU countries. This calls for more co-ordinated care and better collaboration between patients and healthcare professionals such as general practitioners, pharmacists, nurses and other care providers, to effectively manage multiple chronic conditions (OECD, 2025[1]).

Socio-economic disparities in the prevalence of chronic conditions are large. Based on the EU-SILC survey, adults in the lowest income quintile are 50% more likely to report a long-standing illness or health problem compared to those in the highest income quintile. Health systems must be able to provide equal access to high-quality chronic care to meet the needs of all people, regardless of their income and age.

Living with chronic diseases does not necessarily hinder people from carrying on with their usual activities if the diseases are well-managed. Nonetheless, 24% of adults in the EU reported in 2025 having some long-standing activity limitations (disabilities) due to health problems (Figure 3.17). As is the case for chronic conditions, women are more likely than men to report having some long-standing disabilities (27% compared to 22% on average in the EU).

The proportion of people reporting a long-standing disability increases greatly with age. Nearly half (48%) of people aged over 65 in the EU reported such a disability in 2025 (50% of women and 45% of men). This proportion increases to 72% among people aged over 85 (75% of women and 68% of men).

There are also large disparities in disability by income level. In the EU as a whole, 34% of adults of all ages in the lowest income quintile reported a long-standing disability in 2025, a rate over two-times higher than among those in the highest income quintile (15%). The links between income, health status and disability can go both ways. People with lower income are more likely to be in poorer health and have disability. Conversely, people with poorer health and disability are less likely to be employed and more likely to have lower income.

Definition and comparability

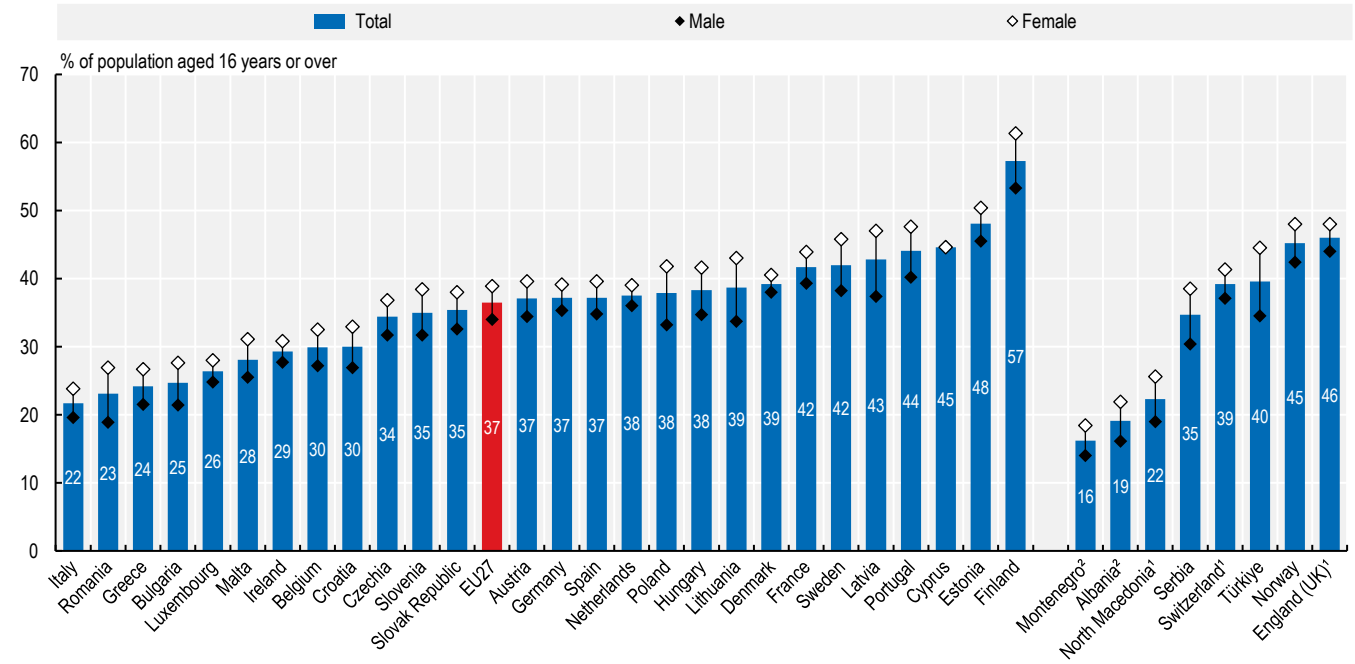
The data on chronic conditions and long-term activity limitations (disabilities) are based on responses to the EU Statistics on Income and Living Conditions (EU-SILC) survey. Most countries measure long-term activity limitations through the following two questions: “1) Are you limited because of a health problem in activities people usually do? Would you say you are...1. Severely limited, 2. Limited but not severely, or 3. Not limited at all?” and if the response to this first question is 1 or 2, the second question asks: “2) Have you been limited for at least the past six months? Yes or No” (Eurostat, 2025[2]). However, some countries (e.g. Belgium, Bulgaria, France, Malta) continued using the original single question in the EU-SILC survey 2025: “For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do? Would you say you have been 1. Severely limited, 2. Limited but not severely, or 3. Not limited at all?”. The use of this original single question generally results in higher disability rates compared to countries that have moved to using the set of two questions. The comparability of data is also limited by a different understanding of the questions on chronic conditions and activity limitations across countries and people’s subjective assessment of their conditions and activity limitations.

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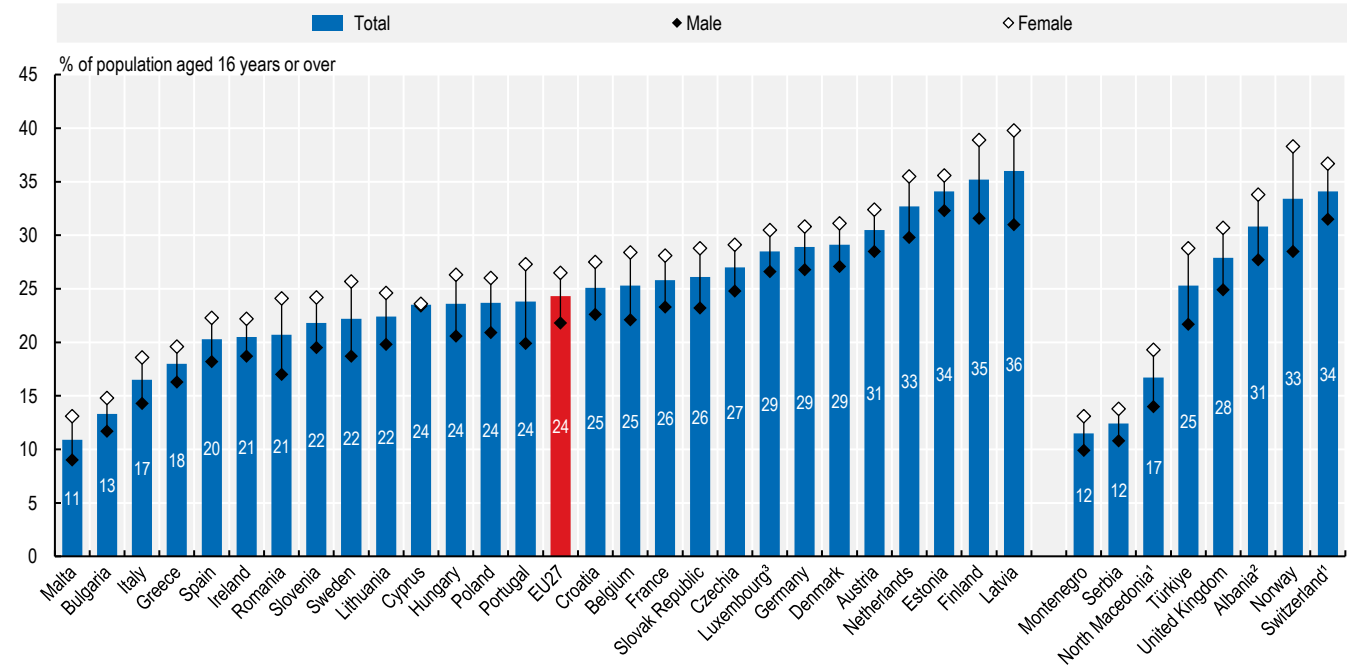
Figure 3.16. Adults reporting a long-standing illness or health problem, by gender, 2025



Note: The EU average is weighted. 1. Data refer to 2024. 2. Data refer to 2023.
Source: Eurostat based on EU-SILC, https://doi.org/10.2908/HLTH_SILC_04 (accessed on 15 July 2026) and Health Survey for England (United Kingdom).

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Figure 3.17. Adults reporting a long-standing disability, by gender, 2025



Note: The EU average is weighted. Data refer to adults reporting some long-standing activity limitations due to a health problem. 1. Data refer to 2024. 2. Data refer to 2023. 3. Data refer to 2022.
Source: Eurostat based on EU-SILC, https://doi.org/10.2908/HLTH_SILC_06 (accessed on 15 July 2026) and Family Resources Survey (United Kingdom).

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Children's health

Good physical and mental health is important for children's well-being and essential for healthy development through adolescence and adulthood. A range of factors contribute positively to children's health, including safe living and housing conditions, healthy nutrition, regular physical activity, and respect for sleep patterns and nap times.

Results from the 2024 EU-SILC survey show that 96% of all children under age 16 in the EU were considered by their parents to be in good or very good health. This high proportion has remained stable since 2017. However, in many EU countries, there are persisting disparities in children's health status by household income. Children living in households at risk of poverty or social exclusion are slightly less likely to be in good or very good health than those living in other households (93.3% on average compared to 96.4%). The largest disparities are in Portugal, Ireland, Czechia, Poland and Estonia (Figure 3.18).

When it comes to disability, 4.6% of children under age 16 in the EU were reported by their parents as having a disability in 2024. Of these, 3.5% had a moderate disability and 1.1% had a severe disability (Figure 3.19). Parents in Nordic countries were more likely to report having children with disability, with the proportion exceeding 12% of children in Denmark and Finland, as well as in Iceland. By contrast, less than 2% of children in Greece, Romania, Bulgaria, Italy and Cyprus were reported as having a disability. Some of these cross-country variations may reflect differences in disability identification and reporting, including diagnostic practices and clinical thresholds, as well as the greater availability of support services and social benefits for children with disabilities in Nordic countries compared with Southern European countries. For example, Denmark has implemented systematic screening and monitoring mechanisms to identify students with learning difficulties and also provides support measures for children and young people with disabilities under the Social Services Act (EASPD, 2024[21]).

Childhood and adolescence are stages of life during which several mental health conditions have their onset. While conduct disorder, attention deficit hyperactivity disorder and autism spectrum disorder are typically identified during childhood, eating, anxiety and depressive disorders tend to become more prevalent in adolescence. Available national data point to increases in mental health conditions among children and adolescents in recent years in some countries. For example, the Mental Health of Children and Young People in England Survey reports a strong increase in the prevalence of children and adolescents with a "probable mental disorder" between 2017 and 2023, rising from 13.3% to 17.7% among children aged 8-10 and from 12.3% to 22.3% among those aged 11-16 (NHS England, 2023[22]). The increase in prevalence may reflect not only a rise in underlying conditions but also improved recognition and awareness of mental health conditions, as well as changes in diagnostic practices and greater access to services and programmes.

Children who are living with overweight or obesity face a higher risk of poor health, and obesity in children is also often associated with psychosocial issues such as low self-esteem and bullying. Overweight and obesity are rising among children, with more than one in four primary school children aged 6-9 across EU countries being overweight or obese (see indicator "Overweight and obesity among children" in Chapter 4).

Access to healthcare for children remains unequal across EU countries, either because of financial constraints for parents or because of limited service availability. In 2024, 3.2% of all children in the EU had unmet medical needs for a medical examination or treatment as reported by their parents. Such unmet medical needs fall disproportionately on children living in households at risk of poverty and social exclusion, reaching nearly 5% of children in these households, a rate over 50% higher than in all households (Eurostat, 2025[23]). Barriers to accessing healthcare can limit children's ability to reach their full potential, reduce their quality of life during childhood and impact on their educational attainment and long-term health during adulthood.

Definition and comparability

Questions on children's general health and disability were included in the EU Statistics on Income and Living Conditions (EU-SILC) survey in 2024, with the information reported by parents or guardians. The question on general health was based on a five-point scale ranging from "very good", "good", "fair", "bad" and "very bad". The questions on disability referred to limitations in activities most children of the same age usually do due to a health problem lasting at least six months, including three possible responses: "severely limited", "limited but not severely" or "not limited at all". Caution is required in making cross-country comparisons of these survey results because responses to these questions are subjective and may be affected by socio-cultural differences or the availability of social programmes. Furthermore, parental reporting may not be directly comparable with national administrative data on disability or with data on disability-related benefits and services.

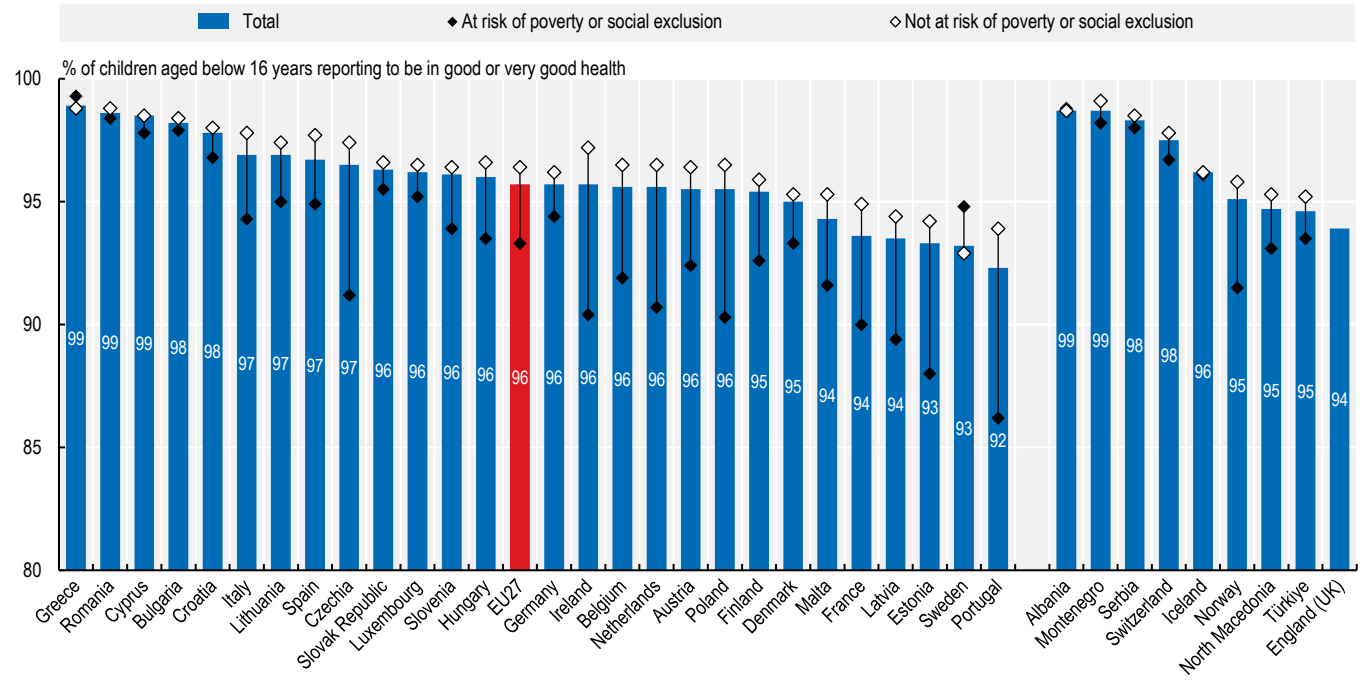
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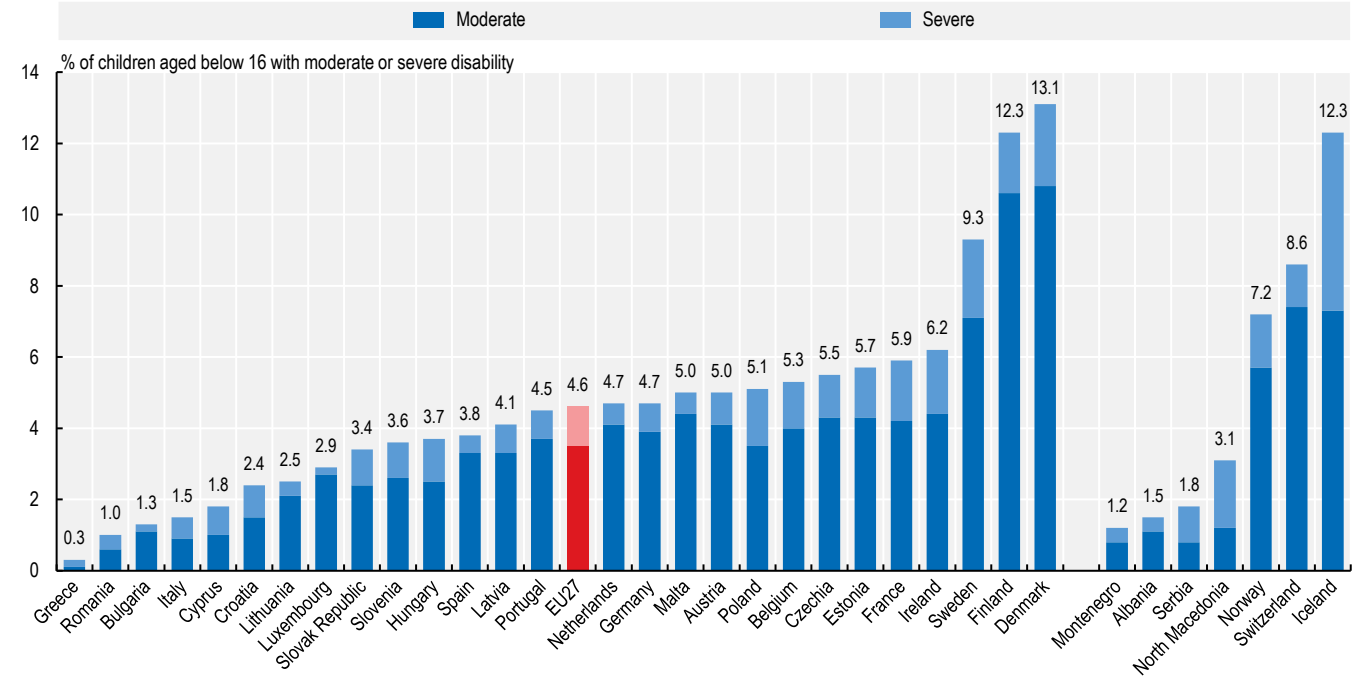
Figure 3.18. Children in good or very good health, 2024



Note: The EU average is weighted. Data for Iceland and Montenegro refer to 2021. For England (United Kingdom), only the total estimate is shown, as data disaggregated by risk of poverty or social exclusion were not available.
Source: Eurostat based on EU-SILC, https://doi.org/10.2908/ILC_HCH12A (accessed on 15 July 2026) and Health Survey for England (United Kingdom).

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Figure 3.19. Children with disability, 2024



Note: The EU average is weighted. Data for Luxembourg, Iceland and Montenegro refer to 2021.
Source: Eurostat based on EU-SILC, https://doi.org/10.2908/ILC_HCH13 (accessed on 15 July 2026).

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Adolescent mental health and well-being

Adolescence is a phase in life when many mental health issues often appear for the first time, and mental health disorders that develop in this period tend to persist into adulthood. Promoting good mental health and addressing early symptoms can improve quality of life and reduce the long-term burden of mental ill-health (OECD, 2025[1]). Following the pandemic, surveys of adolescents in Europe, such as the European School Survey Project on Alcohol and Other Drugs (ESPAD), have strengthened their focus on monitoring adolescents' mental well-being. For the first time in 2024, the ESPAD survey included the WHO-5 Well-Being Index to measure subjective psychological well-being (see the box below). On average across EU countries, only 57% of 15-to-16-year-old students were considered to be in a state of good mental well-being in 2024, and this proportion was less than half in Czechia, Hungary, Poland and Cyprus (Figure 3.20). Outside the EU, only 43% of adolescents in Ukraine were considered to be in good mental well-being in the context of the war and limited access to mental health support (ESPAD Group, 2025[2]).

Mental well-being is higher among boys than girls in all EU countries. While over two-thirds of 15-to-16-year-old boys (68%) were considered to be in good mental well-being on average across EU countries in 2024, this was the case for less than half of girls (46%). Beyond biological and developmental changes associated with puberty, girls tend to be more affected than boys by academic stress, peer relationships and body image concerns, contributing to lower levels of mental well-being (OECD, 2026[3]).

Available data from national surveys in France, the Netherlands and the United Kingdom point to a deterioration in young people's mental well-being over the past decade (OECD, 2026[3]). Environmental concerns, geopolitical conflicts and excessive social media use have been associated with poorer mental health (OECD, 2025[1]). While online platforms can create opportunities for education and social interaction, problematic internet use and excessive screen time are linked to lower physical activity, poorer sleep quality and exposure to cyberbullying, all of which contribute to poor well-being among adolescents. A spring 2026 Eurobarometer survey found that, on average across EU countries, adolescents aged 13-18 years spent 4.5 hours on screens on a typical school day and 6.1 hours on a typical weekend day (see indicator "Physical activity and screen time among children and adolescents" in Chapter 4). When asked about the impact of this screen time on mental well-being, adolescents were much more positive than their parents: 40% of adolescents thought it had a positive impact on people of their age, while 29% thought it had a negative impact. By contrast, only 17% of parents thought that the use of screens had a positive impact on adolescents' well-being, while 51% thought it had a negative impact. When it comes to social media use, Figure 3.21 shows that 48% of adolescents on average across EU countries thought it had a positive impact on their mental well-being, but the views of their parents on this question were also much more negative: only 21% thought that social media use had a positive impact on the mental well-being of their adolescents while 36% thought it had a negative impact (Figure 3.22).

Protecting minors online and supporting their mental health are important priorities for the European Commission. In September 2026, the Commission proposed a new EU KIDS Act to maintain a coherent regulatory framework and enforcement structure for the protection of minors online. The proposal recognises the risks that minors face on certain online social networking services and video-sharing platforms and therefore aims to limit autonomous account creation on those specific platforms and systems by children below the age of 15 years (European Commission, 2026[4]).

Definition and comparability

The indicator on mental well-being from the ESPAD survey is based on the 5-item WHO Well-Being Index (WHO-5). The WHO-5 assesses mental well-being by asking five positively phrased items related to positive mood and vitality that respondents have to rate from 5 (all the time) to 0 (none of the time). Raw scores are converted into a scale ranging from 0 to 100, with higher scores indicating higher well-being. A score of 50 or higher is considered indicative of good mental well-being.

The data on the impact of screens and social media use on the mental well-being of adolescents come from a Eurobarometer survey that was carried out in March/April 2026 among 13-to-18-year-old adolescents and their parents. They are based on responses from adolescents and their parents to the following questions: "Overall, do you think screens have a positive or negative impact on the lives of young people your age [or of your child's age]? Overall, would you say social media have a positive or negative impact on your mental well-being [or your child's mental well-being]?"

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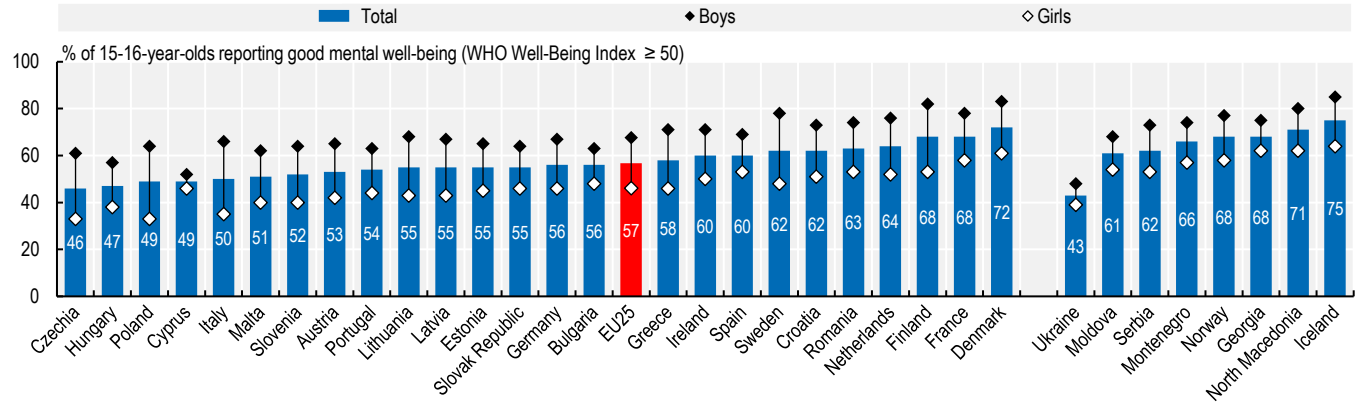
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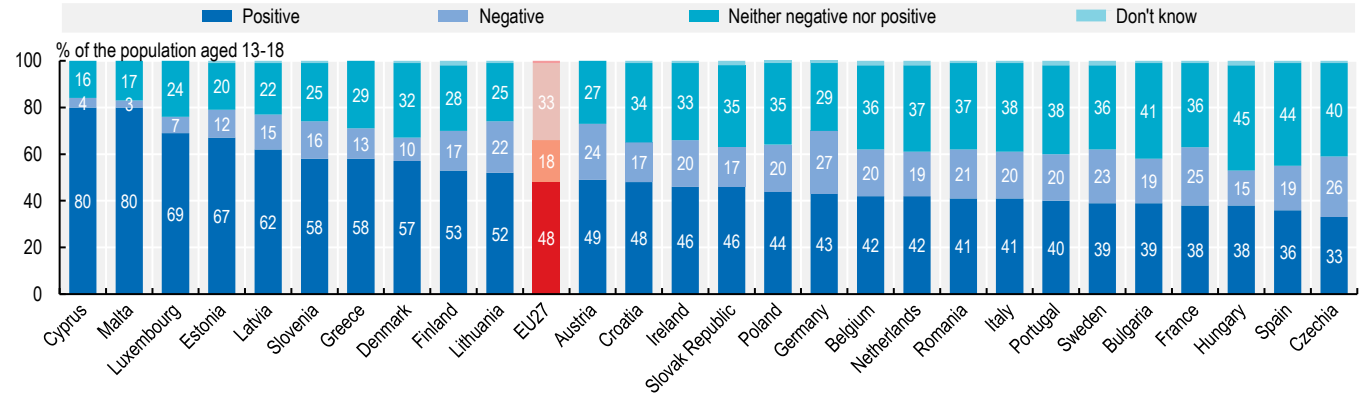
Figure 3.20. Percentage of 15-to-16-year-old students reporting good mental well-being, by gender, 2024



Note: The EU average is unweighted.
Source: ESPAD Survey (2024).

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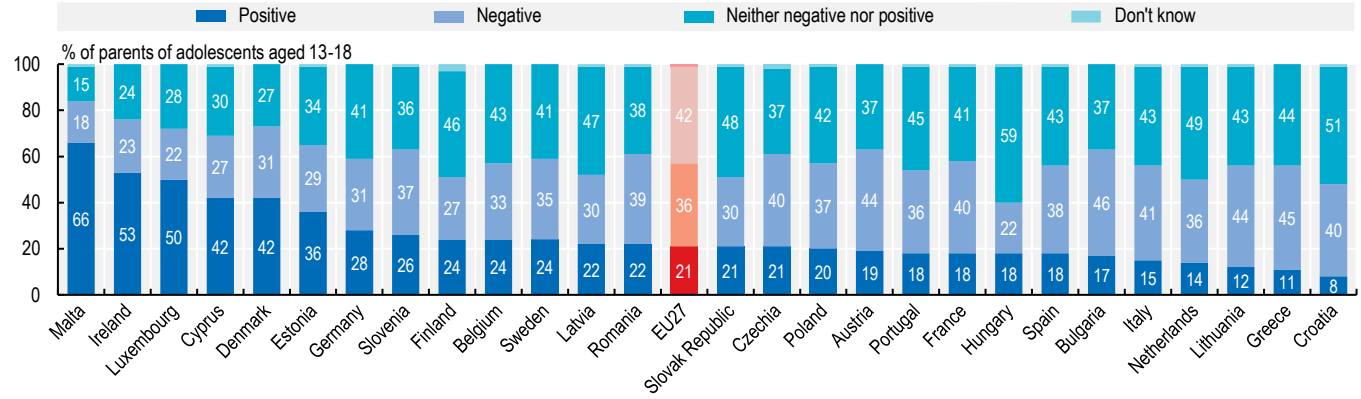
Figure 3.21. Adolescents' views on the impact of social media on their mental well-being, 2026



Note: The EU average is weighted.
Source: Flash Eurobarometer 579 (March/April 2026).

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Figure 3.22. Parents' views on the impact of social media on their child's mental well-being, 2026



Note: The EU average is weighted.
Source: Flash Eurobarometer 579 (March/April 2026).

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Suicides

While deaths by suicide account for just over 1% of all deaths in the EU, it is an important cause of death in several EU countries, particularly among men. The number of people reporting suicidal thoughts and suicide attempts is also several times greater than the number of suicide deaths, highlighting the need for effective suicide prevention campaigns.

In 2023, about 48 800 people died by suicide across EU countries, a reduction of more than 10% compared with 54 800 deaths in 2013. The lowest suicide rates are registered in Southern European countries (Cyprus, Greece, Malta and Italy), while the highest rates are registered in Lithuania, Slovenia and Hungary. The rates are also relatively high in Estonia, Latvia and Austria (Figure 3.23). Many factors can explain cross-country variations in suicide rates, including multiple risk or protective factors arising from cultural and religious context or associated to family structure, loneliness, access to mental care and climate. In addition, different registration practices for determining whether a death is classified as suicide can vary across countries.

Figure 3.23 shows the significant reduction in suicide rates over the past decade in most countries. On average, age-standardised suicide rates decreased by 15% between 2013 and 2023. The decrease was greatest in Lithuania with a reduction of almost 50%. There was also a strong reduction in Slovenia, Hungary and Latvia, thereby narrowing the gap with the EU average.

Suicide rates vary widely by sex and age. In all EU countries, suicide rates are much greater among men than among women, although in many countries women report more suicidal thoughts and attempts. This is due to the fact that men use more lethal means in suicide attempts (e.g. firearms). Across the EU, men accounted for over three-quarters (76%) of all suicide deaths in 2023. The gender gap in suicide rates was greatest in Latvia, Poland and Malta (Figure 3.24). Besides the use of more lethal means, other factors such as a greater reluctance to seek help during episodes of depression and excessive alcohol consumption also contribute to higher suicide rates among men.

Older people, and particularly older men, are also more likely to die by suicide. While the suicide rate among 15-to-29-year-old men was 9.8 per 100 000 population on average across EU countries in 2023, it was more than two times greater among men aged 45-54 and three times greater among those aged 65 and over. There is also a steady increase among women, but at lower rates (Figure 3.25, left panel). Higher suicide rates among older people are primarily driven by factors such as social isolation and chronic physical and mental health conditions resulting in lower self-sufficiency, self-esteem and quality of life.

However, even though suicide rates are much lower in younger people than in older people, they account for a much greater share of deaths at younger ages because mortality rates from other causes are much lower. Hence, nearly one in five deaths (19.7%) among men aged 15-29 and one in six deaths (16.5%) among women in that age group was due to suicides on average across EU countries in 2023. By comparison, suicide represented less than 1% of all deaths among both men and women aged 65 and over (Figure 3.25; right panel). Suicide is the second leading cause of deaths among young people aged 15-29 after accidents.

While men are far more likely than women to die by suicide, the gender gap in suicidal intent and behaviour is much smaller and, in several instances, even reversed with higher rates among women. Hospital data show that the number of women hospitalised due to self-harm is significantly higher than for men in all countries with available data. In 2023, women were hospitalised 1.7 times more than men due to self-harm on average across 13 EU countries. The biggest gender gaps were in Finland and the Netherlands where women were hospitalised about 2.5 times more than men (OECD, 2025[1]).

Effective measures to reduce deaths by suicide include targeted suicide prevention strategies, good access to mental healthcare and support, as well as mental health awareness and anti-stigma campaigns. Effective suicide prevention measures, such as the ones included in Austria's SUPRA programme, ensure support for high-risk groups, restrict access to suicidal means, raise awareness and support, and integrate suicide prevention into broader health promotion activities. In France, a focus on post-hospitalisation monitoring after a suicide attempt under the suicide prevention programme VigilanS has helped reduce repeat suicide attempts by an estimated 24% annually (OECD, 2025[2]).

Definition and comparability

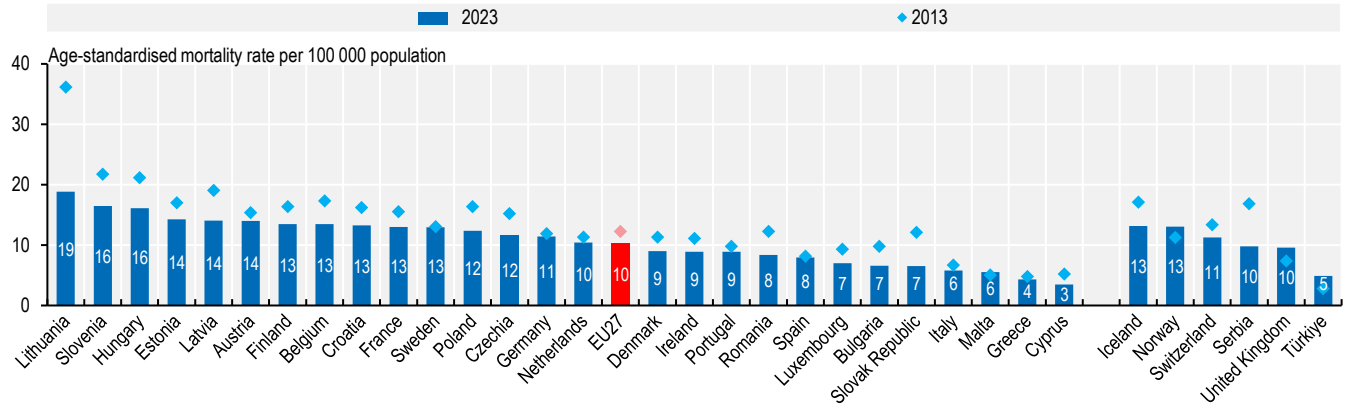
Data on death by suicide come from the Eurostat Database and relate to ICD-10 codes X60-X84 and Y87.0. Mortality rates are age-standardised to the European standard population adopted by Eurostat in 2013. For the United Kingdom, the data come from the WHO Mortality Database and have been age-standardised to the European standard population. The registration of suicide is a complex procedure, affected by factors such as how intent is ascertained, who is responsible for completing the death certificate, and cultural dimensions including stigma.

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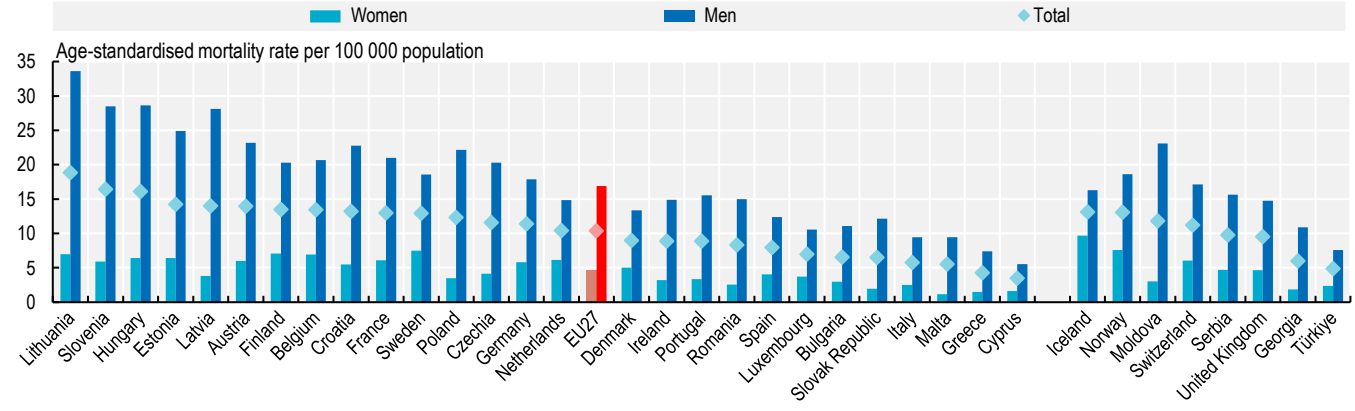
Figure 3.23. Suicide death rates, 2013 and 2023



Note: The EU average is weighted. Data for the United Kingdom have been calculated by the OECD.
Source: Eurostat, https://doi.org/10.2908/HLTH_CD_ASDR2 (accessed on 15 July 2026) and WHO Mortality Database for the United Kingdom.

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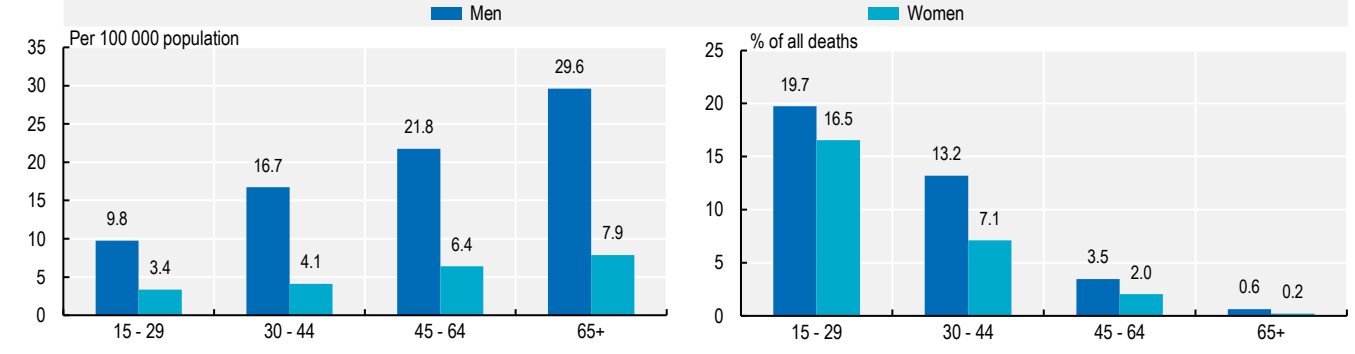
Figure 3.24. Suicide death rates by sex, 2023



Note: The EU average is weighted. Data for the United Kingdom have been calculated by the OECD.
Source: Eurostat, https://doi.org/10.2908/HLTH_CD_ASDR2 (accessed on 15 July 2026) and WHO Mortality Database for the United Kingdom.

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Figure 3.25. Suicide death rates, by age and sex, EU average, 2023



Note: The EU average is weighted.
Source: Eurostat, https://doi.org/10.2908/HLTH_CD_ARO and https://doi.org/10.2908/HLTH_CD_ACDR2 (both accessed on 15 July 2026).

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4 Risk factors

This chapter examines modifiable risk factors affecting the health of children, adolescents and adults in the European Union (EU), including tobacco and electronic cigarette use, harmful alcohol consumption, drug use, poor nutrition, physical inactivity, and overweight and obesity. Although smoking of traditional tobacco products among adolescents and adults has decreased in most EU countries, this has been accompanied by an increase in the use of electronic cigarettes, particularly among young people. Heavy episodic alcohol drinking among adolescents has also decreased but remains a significant problem, with nearly one-third of 15-16 year-olds reporting “binge drinking” at least once in the previous month in 2024. Establishing healthy nutritional habits early in life, including regular consumption of fruit and vegetables, is important to prevent serious health problems such as obesity, diabetes and heart disease. However, over half of children aged 6-9 did not eat fruit daily in 2022-2024, while over 60% did not eat vegetables daily. Among adults, about 40% did not consume fruit daily in 2025, and a similar proportion did not consume vegetables daily. Physical activity is also important at all ages. While most children aged 6-9 are sufficiently physically active, only 15% of adolescents at age 15 meet the WHO recommended level of daily physical activity. Among adults, nearly 40% reported in 2025 never engaging in physical activity or doing so less than once a week. Poor nutrition and physical inactivity contribute to high rates of overweight and obesity among children and adults. On average across EU countries, nearly 30% of children aged 6-9 were overweight or obese in 2022-2024, rising to over half among adults in 2025. Environmental risks, such as extreme temperatures, also pose increasing health threats. In 2024, exposure to high temperatures caused over 58 000 deaths in the EU.

Tobacco and electronic cigarette use among adolescents

Tobacco and nicotine use is a major risk factor for many diseases, including several types of cancer and cardiovascular and respiratory diseases. Nicotine is highly addictive and harmful, particularly for children and adolescents, whose brains are still developing, and exposure can have adverse effects on attention and learning. Smoking and nicotine use often begin during adolescence, despite a minimum legal age of 18 for buying tobacco products in most EU countries. Early initiation increases the likelihood of long-term dependence and future use of other nicotine and tobacco products.

While tobacco use among adolescents has continued to decline in most EU countries over the last decade, many adolescents still smoke. On average across EU countries, more than one in six (18%) 15-16 year-olds reported having smoked cigarettes at least once in the past month in 2024 (Figure 4.1). This proportion reached a high of over one in four in Romania, Bulgaria, the Slovak Republic, Croatia and Hungary, whereas less than one in ten reported having smoked cigarettes in the past month in Ireland, Malta and Sweden. Smoking rates are similar between girls and boys in most countries. On average, 18% of 15-16-year-old girls reported smoking during the past month compared to 17% of boys (ESPAD Group, 2025[1]).

Between 2019 and 2024, smoking rates among 15-16 year-olds fell by 2.6 percentage points (p.p.) on average in the EU, continuing a longer-term decline. However, they increased in Belgium, Croatia, Cyprus, Greece, Hungary and Slovenia, and remained stable in the Netherlands and the Slovak Republic.

Many countries have implemented a combination of policies to reduce smoking among children and adolescents, including higher taxes, smoking bans in indoor public spaces, sales and advertising restrictions, plain packaging, and public education campaigns.

However, the reduction in the use of traditional cigarettes among 15-16 year-olds has been accompanied by a rapid increase in the use of electronic cigarettes (e-cigarettes). On average across EU countries, almost one in four (23%) 15-16 year-olds reported using e-cigarettes in the last month in 2024, up from one in seven (14%) in 2019. This proportion ranged from over 30% in Poland, Croatia, Czechia and Hungary to less than 10% in Portugal (Figure 4.2). The largest increases in e-cigarette use among 15-16 year-olds were in Croatia, Slovenia and Greece, where the rates more than doubled between 2019 and 2024. The gender gap is larger for e-cigarette use than for traditional cigarette smoking, with an average of 25% of girls reporting e-cigarette use in the last month compared to 19% of boys (ESPAD Group, 2025[1]). This rise is a growing concern as adolescents who use e-cigarettes are more likely to subsequently initiate tobacco smoking (O'Brien et al., 2021[2]). According to a 2023 Eurobarometer survey, flavours and peer influence are the main reasons young people start using e-cigarettes (European Commission, 2024[3]).

A recent European Commission evaluation of the EU tobacco control framework, which comprises the Tobacco Products Directive (adopted in 2014) and the Tobacco Advertising Directive (adopted in 2003), found that these two directives have contributed to a decline in smoking and tobacco-related deaths across the EU. At the same time, the evaluation highlights growing challenges linked to the emergence and increasing use of nicotine products, such as e-cigarettes and nicotine pouches, particularly among young people. The evaluation also identifies important gaps in the existing framework, including the limited coverage of certain promotional practices in the digital environment, the absence of common EU rules on the advertising of newer nicotine products and on flavours in e-cigarettes, as well as divergent national approaches to plain packaging requirements for tobacco and related products (European Commission, 2026[4]). Some countries, such as Finland, Hungary, Latvia, the Netherlands and Slovenia, have already taken steps to tighten regulations on e-cigarette flavours.

Definition and comparability

Data for most countries are from the European School Survey Project on Alcohol and Other Drugs (ESPAD), whose most recent wave was carried out in 2024. ESPAD data are drawn from school-based representative samples of students who turn 16 in the calendar year of the survey. Current use of cigarettes and e-cigarettes is defined as the proportion of adolescents who report having smoked a cigarette or e-cigarette at least once during the month preceding the survey. Data from the Health Behaviour in School-aged Children (HBSC) survey are also used for those EU and non-EU countries that do not participate in ESPAD (with the most recent data available for 2022). The data relate to 15-year-olds.

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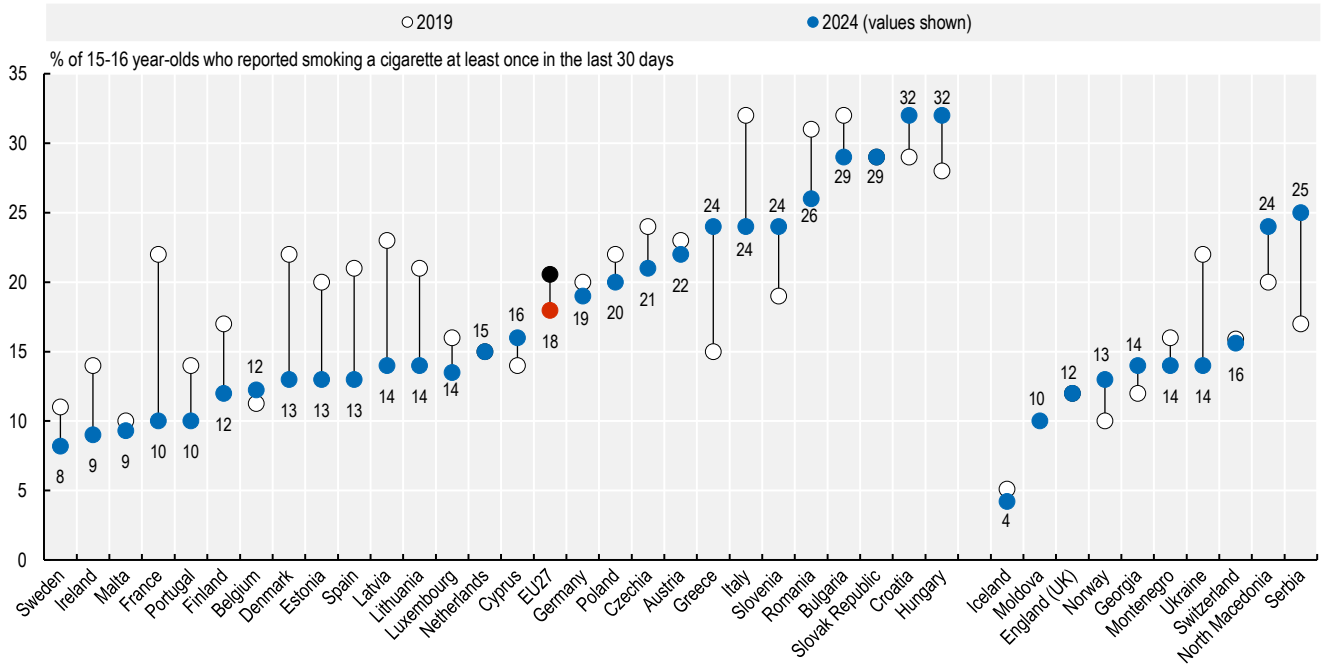
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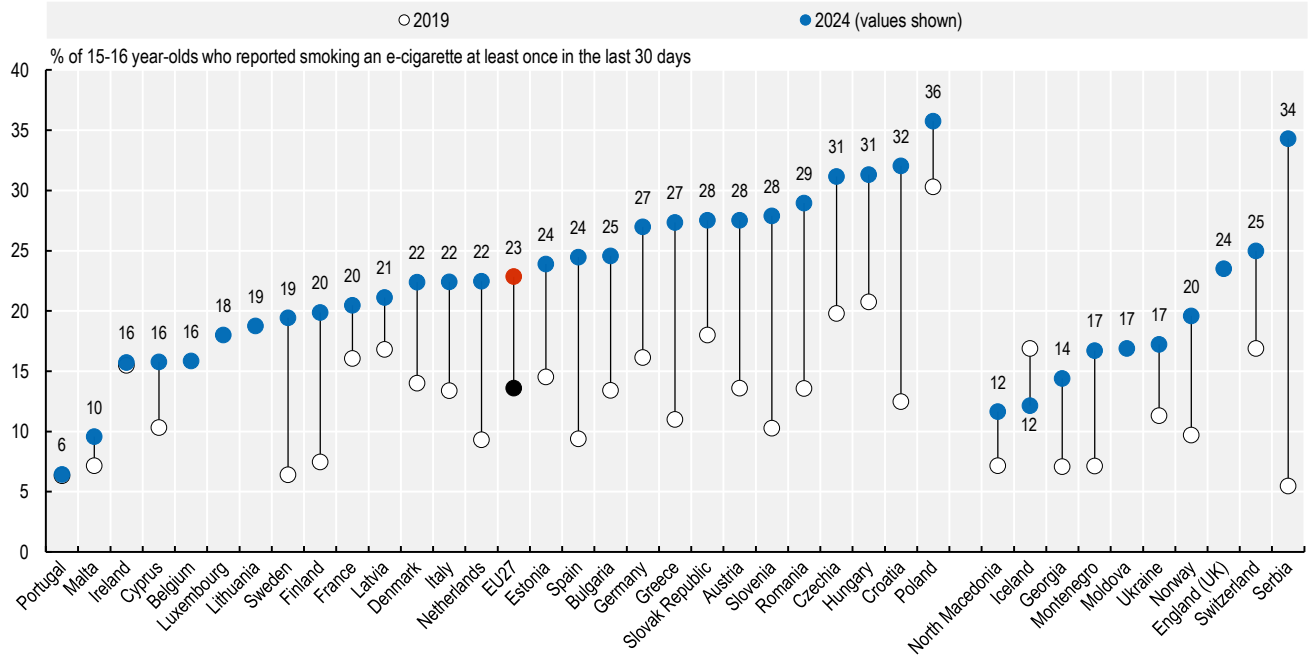
Figure 4.1. Tobacco smoking rates among 15-16 year-olds, 2019 and 2024



Note: The EU average is unweighted. Data for Belgium, Luxembourg, England (United Kingdom) and Switzerland relate to 2018 and 2022. Data for Belgium refer to the unweighted average of Flanders and Wallonia/Brussels.
Source: ESPAD Survey (2024 and 2019), complemented with HBSC Survey (2018 and 2022) for Luxembourg, Belgium, England (United Kingdom) and Switzerland.

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Figure 4.2. Electronic cigarette use among 15-16 year-olds, 2019 and 2024



Note: The EU average is unweighted. Data for Belgium, Luxembourg, England (United Kingdom) and Switzerland relate to 2018 and 2022. Data for Belgium refer to the unweighted average of Flanders and Wallonia/Brussels.
Source: ESPAD Survey (2024 and 2019), complemented with HBSC Survey for Luxembourg, Belgium and England (United Kingdom) in 2022, and for Switzerland in 2018 and 2022.

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Tobacco and electronic cigarette use among adults

Tobacco use remains the leading cause of preventable mortality in the EU, resulting in about 530 000 deaths in 2024 (IHME, 2026[1]). It is a key risk factor for many cardiovascular and respiratory diseases, and several types of cancer. The harmful effects of tobacco use extend beyond the individual, placing a significant burden on healthcare systems and society. The cost of tobacco use in the EU is estimated at EUR 80.7 billion per year, of which about half are direct costs to healthcare systems and the other half are indirect costs related to productivity losses and informal care (Salari, Maragkoudakis and Wollgast, 2026[2]).

In 2025, one in six adults (17%) across EU countries smoked tobacco products daily, ranging from 10% or less in Sweden and Finland to 29% in Bulgaria. Gender disparities persist, with men smoking more than women in all EU countries (21% compared to 13% on average). The gender gap in smoking prevalence was largest in Romania, Latvia and Lithuania, where rates were three to four times higher among men than women, in contrast to the Nordic countries, where the gap was small (Figure 4.3).

Over the last decade, smoking rates have decreased in most EU countries, with a particularly steep reduction (over 8 p.p.) in France and Estonia, as well as in the United Kingdom. The implementation of more stringent tobacco control policies, such as smoke-free environments, advertising bans and excise tax increases, has played a significant role in reducing smoking rates in many EU countries. These national efforts have been complemented by EU-level initiatives, including the goal of Europe's Beating Cancer Plan to achieve a tobacco-free generation by 2040. More recently, the 2024 revised Council Recommendation on smoke- and aerosol-free environments has encouraged Member States to strengthen protection from second-hand smoke and aerosols, particularly for children and young people, by extending smoke- and aerosol-free environment policies to key outdoor spaces such as public playgrounds and education premises (European Commission, 2024[3]).

Against this backdrop of gradual declines in smoking of traditional tobacco products, the use of electronic cigarettes (e-cigarettes) has emerged as a new public health challenge. E-cigarettes have become increasingly popular, particularly among young people. In 2025 (or the latest year with available data), 4.7% of all people aged 15 and over were regular users of e-cigarettes across EU countries, but this rate was over two times greater (10.6%) among 15-24 year-olds (Figure 4.4). E-cigarette use among young adults was particularly high in Estonia (29%), Czechia (25%), Luxembourg (23%) and Latvia (23%).

There is evidence that e-cigarettes can help increase quitting rates among conventional cigarette smokers (Lindson et al., 2026[4]). However, there are also concerns that e-cigarettes may act as a potential gateway to tobacco use, especially among young people. According to a 2023 Eurobarometer survey, 36% of e-cigarette users in EU countries mentioned stopping or reducing tobacco consumption as the main reason for taking up e-cigarettes, but 42% of e-cigarette users also reported that this did not help them reduce their tobacco consumption at all.

Policies to regulate e-cigarette use include age restrictions, taxes, indoor use bans, sales regulations, and flavour restrictions. In the EU, advertising and promotion of e-cigarettes are prohibited in various media contexts. Since 2025, several countries, such as Austria, Belgium, Bulgaria, France, Ireland, Poland and Spain, have banned or plan to ban the sale of disposable e-cigarettes as part of their anti-tobacco strategies (European Commission, 2026[5]).

Definition and comparability

Data on daily smoking are from the OECD collection of national survey data, complemented with the European Health Interview Survey 2019 for countries that have not supplied more recent data. The indicator is defined as the percentage of adults who reported smoking tobacco daily, excluding other tobacco products such as heated tobacco products or snus.

Data on regular users of e-cigarettes are also from the OECD collection of national survey data, complemented by the Eurobarometer Survey 2023 for countries that have not supplied more recent data. The indicator is defined as the percentage of adults who reported using e-cigarettes at least once per month. Caution should be used as relatively small sample sizes in some surveys can lead to substantial year-to-year fluctuations.

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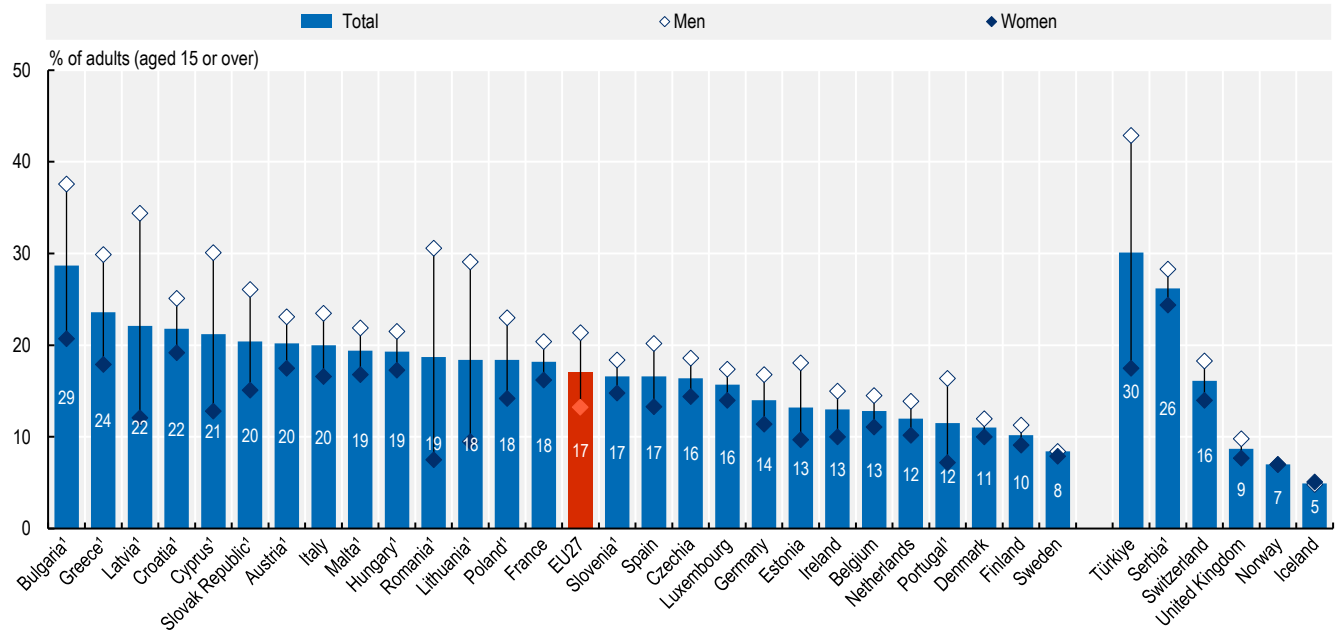
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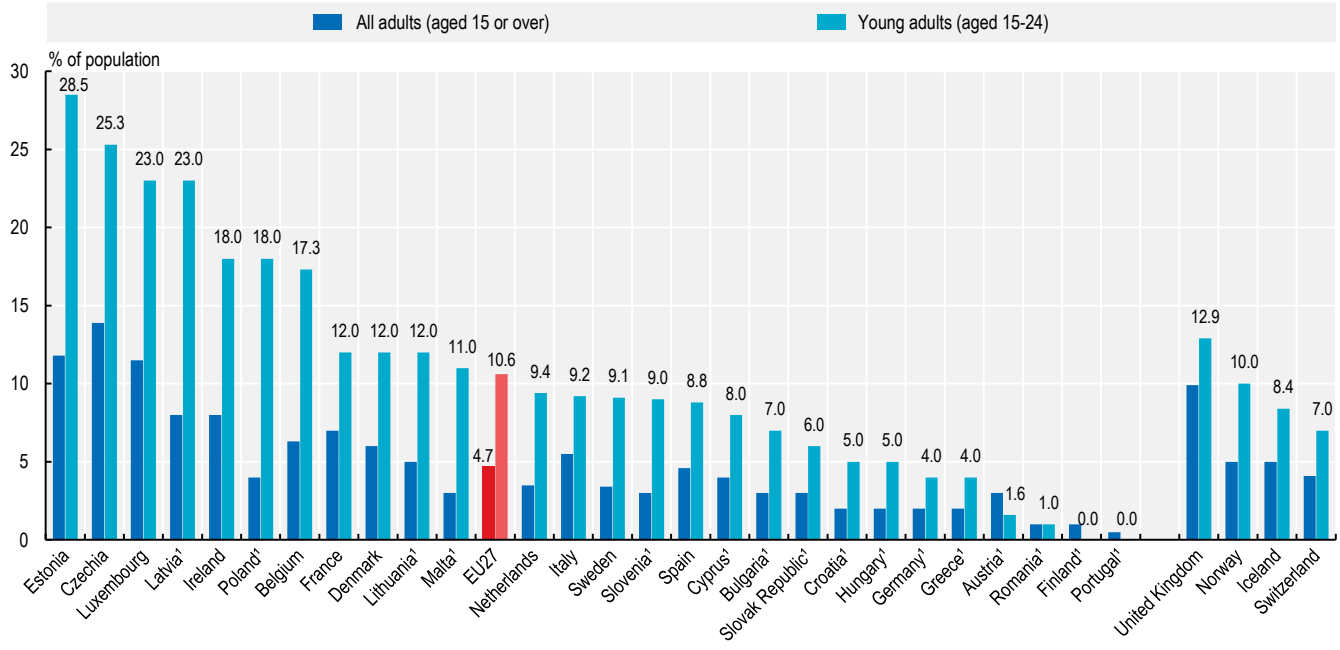
Figure 4.3. Daily tobacco smoking rates among adults, by gender, 2025 (or latest year available)



Note: The EU average is unweighted. 1. Data from EHIS (2019).
Source: OECD, https://data-explorer.oecd.org/s/5l1; complemented with Eurostat EHIS (2019), https://doi.org/10.2908/HLTH_EHIS_SK1E (both accessed on 10 July 2026).

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Figure 4.4. Regular use of electronic cigarettes, by age group, 2025 (or latest year available)



Note: The EU average is unweighted. 1. Data from Eurobarometer survey (2023).
Source: OECD, https://data-explorer.oecd.org/s/5l2; complemented with Eurobarometer survey (2023) (both accessed on 10 July 2026).

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Alcohol consumption among adolescents

Despite a legal drinking age of 18 in most EU countries, alcohol is frequently consumed by 15-16-year-old adolescents. Early initiation of harmful alcohol consumption and drunkenness among adolescents are of concern, as they are associated with negative health, education and social outcomes, and adolescents who start drinking at an early age are more likely to develop alcohol dependence later in life.

On average across EU countries, almost half (44%) of adolescents aged 15 and 16 reported having had at least one alcoholic drink in the last 30 days in 2024 (Figure 4.5). This proportion reached 60% or more in Austria, Germany and Denmark. These three countries are among the few EU countries where 16- and 17-year-olds can still buy beer and wine on their own (although in Denmark, from April 2025, the beverages must contain less than 6% of alcohol). By contrast, in Iceland, where the adolescent drinking level is the lowest, the legal age to purchase or consume any type of alcohol (including beer, wine and spirits) in bars and restaurants or state-run stores is 20 (OECD/European Observatory on Health Systems and Policies, 2025[1]).

The gender gap in alcohol consumption is relatively small. Across most countries, a slightly higher percentage of 15-16-year-old girls reported drinking alcohol at least once during the past month compared to boys. On average, 45% of girls reported having consumed alcohol in the past month compared to 43% of boys in 2024. This gender gap was particularly large in Latvia and Malta.

Heavy episodic drinking (also often referred to as binge drinking), defined as the consumption of at least five alcoholic drinks on a single occasion in the last 30 days, has decreased in most EU countries in recent years. Nonetheless, nearly one-third (32%) of 15-16 year-olds on average across EU countries reported engaging in binge drinking in 2024. This proportion exceeded 45% in Austria, Germany and Denmark, without any significant reduction in Germany and Denmark between 2015 and 2024. The prevalence of heavy episodic drinking was the lowest in Sweden at 18% (Figure 4.6). Historically, boys were more likely than girls to report heavy episodic drinking, but the proportions are now almost the same on average across EU countries, as the reduction among boys has been more pronounced than among girls.

Access to alcoholic beverages remains relatively easy for underage adolescents. Findings from the 2024 European School Survey Project on Alcohol and Other Drugs (ESPAD) show that 75% of 15-16-year-old students across EU countries perceive alcoholic beverages to be easy to obtain. This perception was highest in Denmark and Germany (94% in both countries), followed by Greece (92%), and lowest in Iceland (54%) (ESPAD Group, 2025[2]). In Greece, a new law on the Protection of Minors from Tobacco and Alcohol Products, adopted in 2025 and implemented in 2026, introduces stricter restrictions and digital age-verification requirements for the sale and provision of alcohol to minors.

EU countries have implemented a range of policies and interventions aimed at reducing harmful alcohol consumption among adolescents. These include measures to limit the availability of alcohol (e.g. restrictions on the location and hours of sales, and minimum age requirements), its affordability (e.g. through taxation or minimum unit pricing), and its marketing (e.g. regulating advertisements in traditional and social media, and restricting industry sponsorship of sport and youth events) (OECD, 2021[3]). Taxes on alcoholic beverages exist in all EU countries, but tax levels vary widely across countries and by beverage type. When it comes to advertising on social media and the internet, the most common type of regulation relates to restrictions on the content and/or the placement of advertising, although some countries have gone further and adopted advertising bans on social media (e.g. Norway).

Definition and comparability

The data come from the European School Survey Project on Alcohol and Other Drugs (ESPAD). The data on alcohol use relate to the consumption of any alcoholic beverage during the last 30 days. Heavy episodic drinking refers to consuming at least five alcoholic drinks on a single occasion in the last 30 days. A “drink” is defined as 1 glass/bottle/can of beer (33 cl), 1 glass of wine (15 cl), 1 glass of spirits (4 cl), 1 glass/bottle of cider (33 cl) or 1 glass/bottle of premixed drinks, such as spritz or alcopops (33 cl).

The data from the Health Behaviour in School-aged Children (HBSC) survey are also used for those EU and non-EU countries that do not participate in ESPAD. These data relate to alcohol consumption during the last 30 days among 15-year-olds, with the most recent data available for 2022.

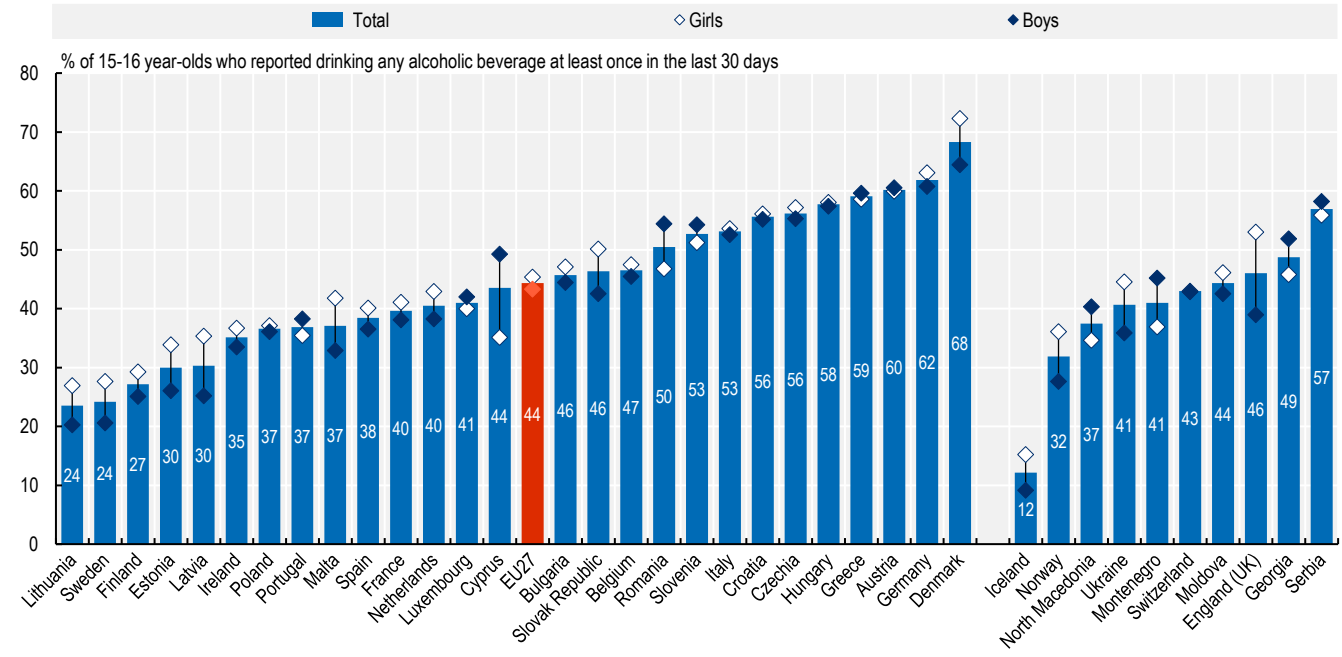
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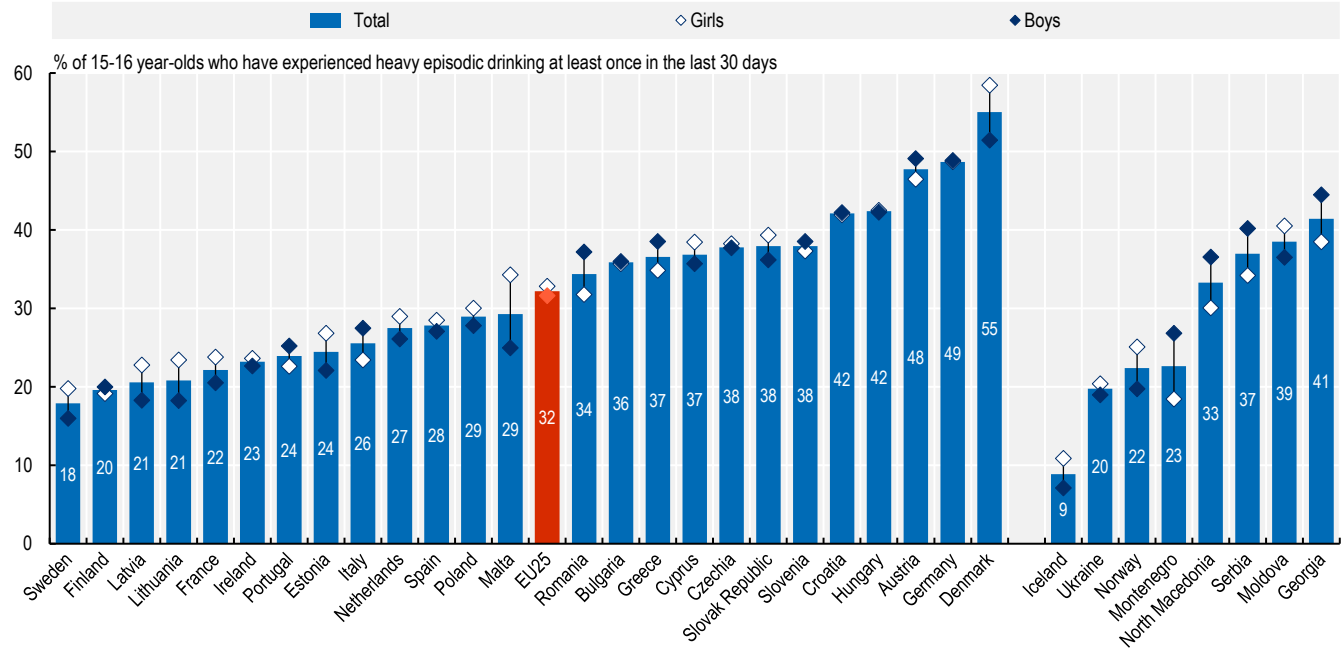
Figure 4.5. Alcohol consumption among 15-16 year-olds, by gender, 2024



Note: The EU average is unweighted. Data for Belgium, Luxembourg, England (United Kingdom) and Switzerland relate to 2022. Data for Belgium refer to the unweighted average of Flanders and Wallonia/Brussels.
Source: ESPAD survey (2024), complemented with HBSC Survey (2022) for Belgium, Luxembourg, England (United Kingdom) and Switzerland.

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Figure 4.6. Heavy episodic drinking among 15-16 year-olds, by gender, 2024



Note: The EU average is unweighted.
Source: ESPAD survey (2024).

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Alcohol consumption among adults

Harmful alcohol consumption is a major public health concern in the EU, contributing to various chronic diseases, injuries and premature mortality. OECD modelling estimates that between 2020 and 2050, harmful alcohol consumption exceeding one drink per day for women and 1.5 drinks per day for men will lead to over 125 000 premature deaths annually in the EU. Over the same period, the mortality impact of alcohol consumption is projected to reduce average life expectancy in the EU by one year compared to what it would have been without such consumption. The economic burden of harmful alcohol consumption is also large, with estimates across EU countries ranging from 0.4% to 1.5% of GDP (OECD, 2021[1]).

Alcohol consumption varies considerably across EU countries. Measured through sales data, overall alcohol consumption averaged 9.4 litres per adult across EU countries in 2024, down from 10.1 litres in 2014. Portugal, Latvia, Austria, Bulgaria and Spain registered the highest consumption, with over 11 litres per person, while Cyprus and Greece had the lowest consumption, with less than 7 litres per person (Figure 4.7).

While average alcohol consumption in the EU saw only a modest decline of 0.6 litres (-6%) between 2014 and 2024, notable changes have occurred in several countries. Eight EU countries registered a decrease of at least 10% in consumption per capita, thereby achieving the target set by the European framework for action on alcohol 2022-2025 of a 10% relative reduction in alcohol consumption by 2025. Lithuania recorded the largest reduction between 2014 and 2024 (-28%), reflecting the implementation of stricter alcohol control measures in 2016-2018, although some alcohol control policies were relaxed in 2024 (OECD/European Observatory on Health Systems and Policies, 2025[2]). Per capita alcohol consumption also decreased by 26% in Belgium, 19% in Malta and 18% in Finland and France between 2014 and 2024. By contrast, three EU countries (Portugal, Bulgaria and Croatia) registered an increase of at least 10% in per capita alcohol consumption during that period, with consumption levels now well above the EU average.

Significant gender disparities exist in alcohol consumption patterns in all countries. On average across EU countries, men were three times more likely to drink alcohol daily than women in 2025 (7.5% compared to 2.5%) (Figure 4.8). This gender gap is particularly large in Portugal: 27% of Portuguese men reported to drink alcohol daily according to the 2025 EU-SILC survey, a proportion four times greater than among women (6.8%). The percentage of daily drinkers among both Portuguese men and women is the highest across all EU countries. While alcohol control policy was strong in Portugal in the 2010s, it has since stagnated (OECD/European Observatory on Health Systems and Policies, 2025[3]).

Drinking patterns also vary by age, with older people more likely to drink frequently and younger people more likely to engage in heavy episodic drinking (binge drinking). On average across EU countries, only 2.1% of 25-34 year-olds reported to drink daily in 2025, while this proportion reached 5.5% among people aged 50-64 and 8.9% among people aged over 65. Data on heavy episodic drinking are not available from the EU-SILC survey but based on the previous European Health Interview Survey in 2019, 30% of 18-24 year-olds and 25.5% of 25-34 year-olds reported binge drinking at least once a month on average in EU countries, while this proportion dropped to 10.6% among people aged over 65.

EU countries have implemented various policies and interventions aimed at reducing harmful alcohol use, including taxation, restrictions on availability and advertising regulations. Several of these alcohol-control measures have proven to be effective, particularly when implemented as part of a broader policy package. A policy package focussed on promoting individual responsibility is often easier to implement and can include interventions such as sobriety checkpoints to counter drink-driving, workplace and school-based programmes, alcohol counselling in primary care and pharmacological treatment of alcohol dependence (OECD, 2021[1]).

Definition and comparability

Alcohol consumption is defined as annual sales of pure alcohol in litres per person aged over 15 (except in Denmark per person aged over 18). Consumption in Estonia, Italy, Latvia and Lithuania excludes tourist consumption. In Luxembourg, consumption is estimated as the average of consumption in France and Germany. Data on the proportion of adults who report drinking daily are from the EU Statistics on Income and Living Conditions (EU-SILC) survey and cover the population aged over 18. For the United Kingdom, the data come from the Health Survey for England and cover the population aged over 16.

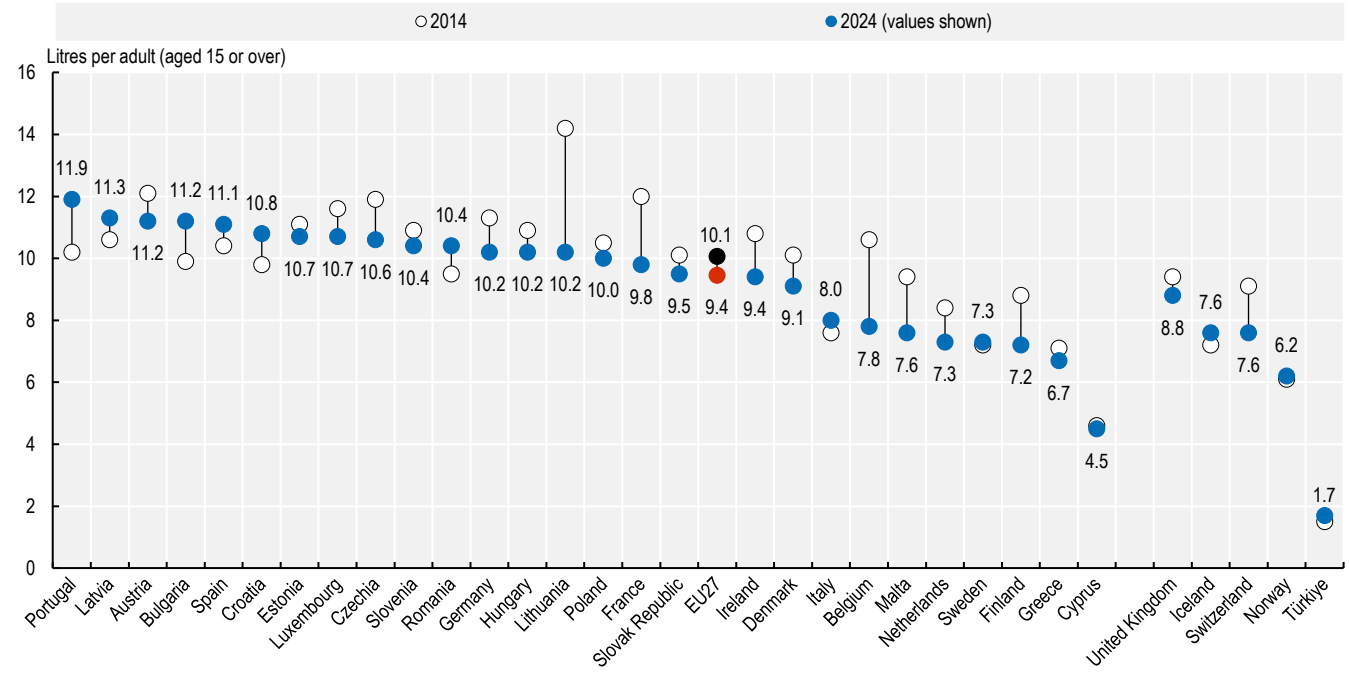
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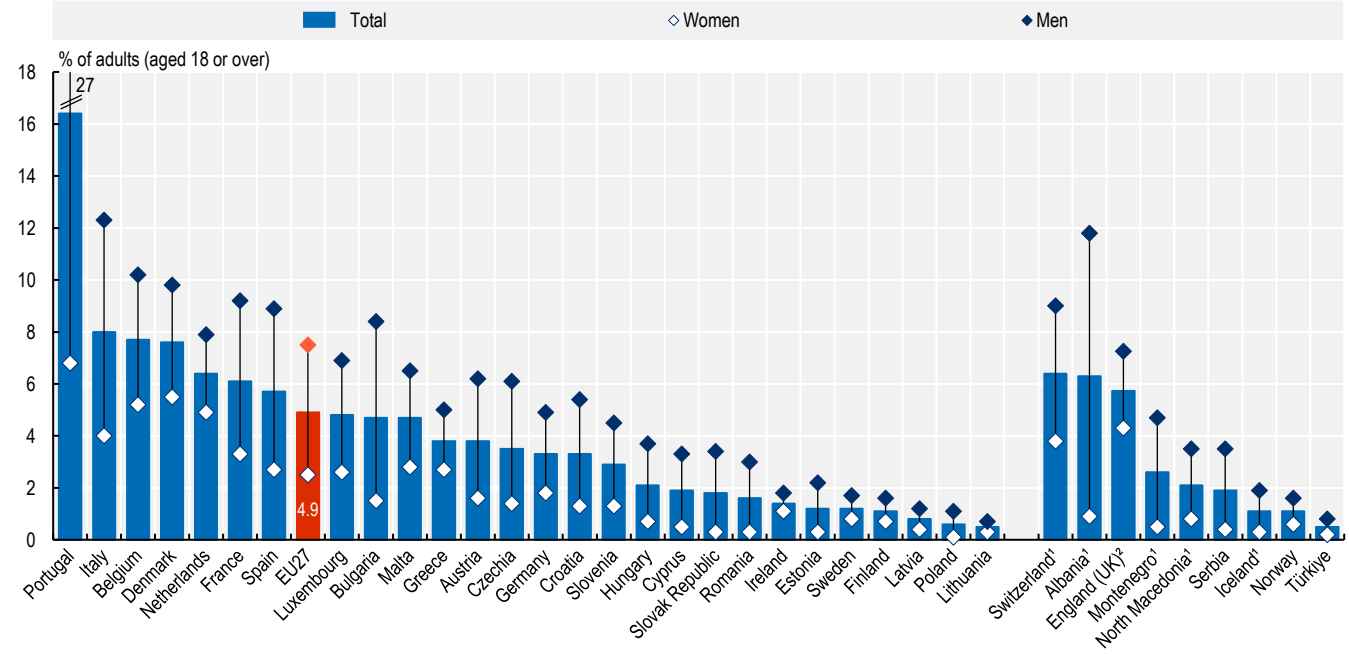
Figure 4.7. Changes in overall alcohol consumption among adults, 2014 and 2024 (or nearest year)



Note: The EU average is unweighted. The baseline year for Spain is 2015 (not 2014) to avoid a break in the series.
Source: OECD, https://data-explorer.oecd.org/s/5l3; complemented with data from the WHO Global Information System on Alcohol and Health (GISAH) for Malta and Cyprus (both accessed on 10 July 2026).

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Figure 4.8. Proportion of adults reporting to drink alcohol every day, by gender, 2025 (or nearest year)



Note: The EU average is weighted. The proportion for males in Portugal is 27%. 1. Data refer to 2022. 2. Data refer to 2024.
Source: Eurostat, https://doi.org/10.2908/ILC_HCH23; complemented with the Health Survey for England (2024).

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Use of drugs among adolescents and adults

Drug availability and use remain at high levels across the European Union, although considerable differences exist between countries. Almost 95 million people, or around a third of adults in the EU aged 15-64, have used illicit drugs at some point in their lives, with the experience of drug use being more frequently reported by males than females. The use of drugs, particularly among people who use them regularly and in bigger quantities, is associated with higher risks of cardiovascular diseases, mental health problems and accidents, as well as infectious diseases such as HIV and viral hepatitis when the drug is injected. Almost 7 600 deaths in the EU were related to drug use in 2024. Drug use is a major cause of preventable mortality among young people, both directly through overdose and indirectly through drug-related diseases, accidents, violence and suicide (EUDA, 2026[1]).

Cannabis is the drug most used among young people in Europe. Around 15% (15.4 million) of people aged 15 to 34 in EU countries reported having used cannabis in the last year based on the most recent surveys available. Cannabis use is highest in Italy, Spain, France and Czechia, with 18% or more people aged 15 to 34 reporting to have used cannabis in the last year (Figure 4.9). It is estimated that around 1.6% of European adults are daily or almost daily cannabis users. Around three-quarters are males and the majority under 35 years old. Trends in cannabis use vary across countries. Of the countries that have conducted surveys since 2023, three report increased use of 10% or more, ten a stable use and two report a lower use of at least 10% compared with the previous survey. In 2025, of the 63 cities with comparable data for both 2024 and 2025, one-third (21) reported an increase in cannabis residues in wastewater (EUDA, 2026[2]). The 2024 ESPAD school survey of 15-16-year-old students showed that cannabis is the most widely used drug at that age, with 13% of them reporting they had used cannabis at least once in their lifetime (ESPAD Group, 2025[3]).

Cocaine is the most used illicit stimulant in the EU. On average, around 2.5% of young people aged 15-34 across EU countries reported having used cocaine in the last year. This percentage is highest in the Netherlands and Ireland, with 5% or more having used cocaine at least once in the last year (Figure 4.10). Cocaine residues in municipal wastewater increased in 48 out of 85 cities with data for both 2024 and 2025. In the 2024 ESPAD school survey, on average, 2% of 15-16-year-old students reported having used cocaine at least once in their lifetime (ESPAD Group, 2025[3]).

The use of amphetamines and MDMA/ecstasy is slightly lower than the use of cocaine, with about 2.4% of young people aged 15-34 in EU countries reporting to have used MDMA/ecstasy in the last year and 1.4% to have used amphetamines. The use of MDMA is highest in the Netherlands, Czechia and Estonia. The use of amphetamines tends to be higher in Estonia, Bulgaria and the Netherlands.

The consumption of opioids (i.e. heroin and other opioids) remains responsible for the majority of drug overdose deaths (reported in seven out of ten fatal overdoses in the EU in 2024), often in combination with other substances. The main opioid used in Europe is still heroin, but there are concerns in several countries about the use of other synthetic opioids combined with stimulant substances.

More complex patterns of drug use are observed, including the use of non-controlled new psychoactive substances, polydrug use and substances such as ketamine and GBL/GHB now associated with drugs. At the end of 2025, the European Union Drugs Agency (EUDA) was monitoring 1 050 new psychoactive substances, 50 of which were first reported in Europe in 2025. The use of new psychoactive substances among young people aged 15 to 34 ranges from 0.1% in Latvia and Norway to 2.9% in Bulgaria.

Definition and comparability

Data on drug use prevalence are from national population surveys, as gathered by the European Union Drugs Agency (EUDA). The data presented focus on the percentage of young adults aged 15 to 34 years old reporting to have used different types of drugs in the last year. Such estimates of recent drug use produce lower figures than “lifetime experience” but reflect better the current situation. The information is based on the latest survey available for each country. The study year ranges from 2017 to 2024. To obtain estimates of the overall number of users in Europe, the EU average is applied to countries without prevalence data. Data from wastewater-based epidemiology and school surveys provide complementary information to general population surveys and further insight into the use of drugs in Europe. For more information, please see: https://www.euda.europa.eu/topics/prevalence-and-patterns-of-drug-use_en.

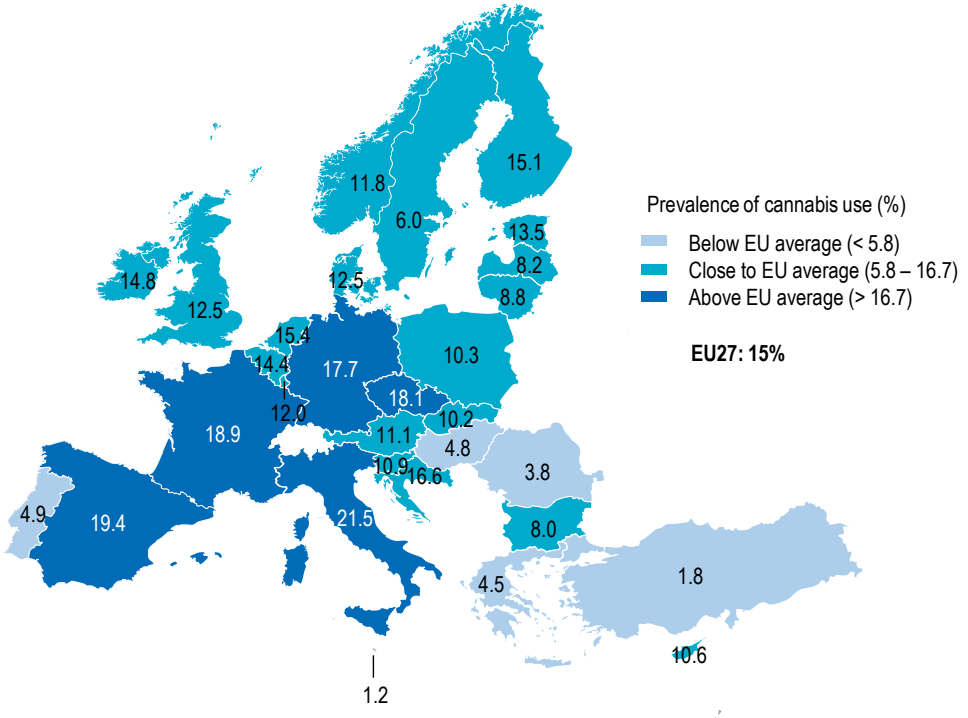
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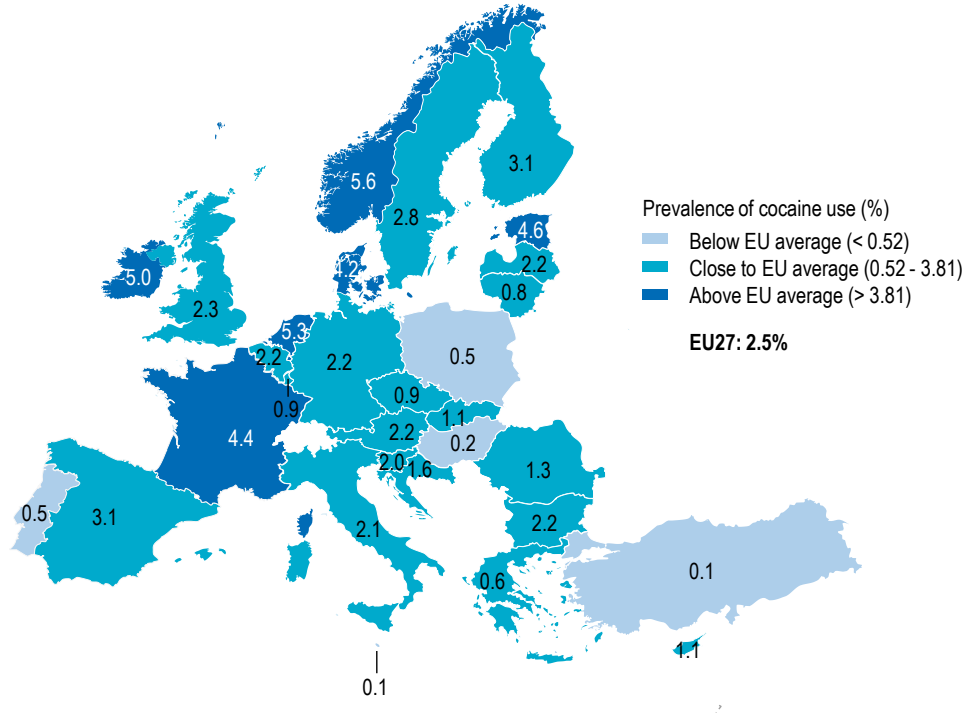
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Figure 4.9. Cannabis use over the last 12 months among people aged 15 to 34, 2024 (or nearest year)



Note: The EU average is weighted. The classification of countries as below, close to or above EU average is based on one standard deviation from the EU average.
Data for the United Kingdom refer to individuals aged 16-24 years.
Source: EUDA, 2026 complemented with the Crime Survey for England and Wales from the ONS for the United Kingdom.

Figure 4.10. Cocaine use over the last 12 months among people aged 15 to 34, 2024 (or nearest year)



Note: The EU average is weighted. The classification of countries as below, close to or above EU average is based on one standard deviation from the EU average.
Data for the United Kingdom refer to individuals aged 16-24 years.
Source: EUDA, 2026 complemented with the Crime Survey for England and Wales from the ONS for the United Kingdom.

Nutrition among children

Nutrition plays a crucial role in child and adolescent development, with lasting effects on health in adulthood. Establishing healthy nutritional habits early in life, particularly regular consumption of fruit and vegetables and limited intake of foods and beverages high in sugar, fat and salt, can help prevent serious health problems such as obesity, diabetes and cardiovascular diseases. Children's nutrition is influenced by a range of factors, including parental education, income and dietary habits, and by the availability and affordability of fresh products that can be affected by climate conditions.

Fruit and vegetables are important components of a healthy diet and contribute to achieving adequate intake of essential micronutrients. The WHO recommends eating at least 350 g of fruit and vegetables per day, equivalent to four to five portions. However, the recommended intake is far from being achieved, as only about half of 6-9-year-old children ate at least one portion of fruit every day on average across EU countries in 2022-2024, while this proportion was even lower (less than 40%) for those who ate at least one portion of vegetables each day (Figure 4.11 and Figure 4.12). In most countries, there is very little difference in fruit and vegetable consumption between boys and girls, but there is a greater difference depending on the education level of parents. Children of parents with a higher level of education were more likely to consume fruit every day than children of parents with a low to medium level of education in most countries, with an average difference of 10 p.p. (56% compared to 46% on average across EU countries). The same is true for vegetable consumption (47% compared to 35% on average across EU countries).

Several EU countries have implemented targeted policies to promote greater fruit and vegetable consumption among children and adolescents, including health education and promotion in schools and increasing the fruit and vegetable content in school meals (OECD, 2019[1]). At the EU level, the School Fruit, Vegetables and Milk Scheme, initially adopted in 2008 to promote fruit and vegetable consumption among school-aged children, was later expanded to include milk and other dairy products. In the 2024-2025 school year, over 19 million children mainly from primary schools across EU countries benefited from this scheme, supported by an EU budget of approximately EUR 130 million for fruit and vegetables and EUR 90 million for milk and other dairy products (European Commission, 2026[2]). An evaluation of the programme indicates that the scheme led to a short-term increase in the frequency and volume of fruit and vegetable consumption among school-aged children (Comino et al., 2022[3]).

According to WHO guidelines, children's sugar intake should not exceed 10% of their total energy intake. However, across European countries, it remains too high, with soft drinks being a major contributor. On average across EU countries, 16% of 6-9-year-old children were drinking sugary soft drinks more than three days per week in 2022-2024, rising to at least 30% in Hungary, Poland and the Slovak Republic. In nearly all countries, frequent consumption of sugary drinks was higher among children whose parents had a low to medium level of education (Figure 4.13).

On a more positive note, results from the Health Behaviour in School-aged Children (HBSC) survey indicate that the proportion of 15-year-olds that are consuming sugary soft drinks every day has decreased over the past decade on average across EU countries, falling from 20% in 2014 to 14% in 2022, although it has increased in some countries (Badur et al., 2024[4]).

Various policies can help reduce adolescents' consumption of sugar-sweetened soft drinks and their intake of other sugars added to food or drinks, including product reformulation to reduce sugar content, taxes based on sugar content, front-of-pack labelling to make nutritional information easier to understand, and advertising restrictions for high-sugar products (OECD, 2019[1]).

Definition and comparability

The data are from the sixth round of the WHO European Childhood Obesity Surveillance Initiative (COSI) carried out between 2022 and 2024 among children aged 6-9 years. Parents were asked how often in a typical week their child ate or drank fresh fruit, vegetables (including vegetable soup, excluding potatoes), snacks, and soft drinks containing sugar, with responses including "more than once a day", "once every day", "most days (4-6 days)", "some days (1-3 days)" and "never".

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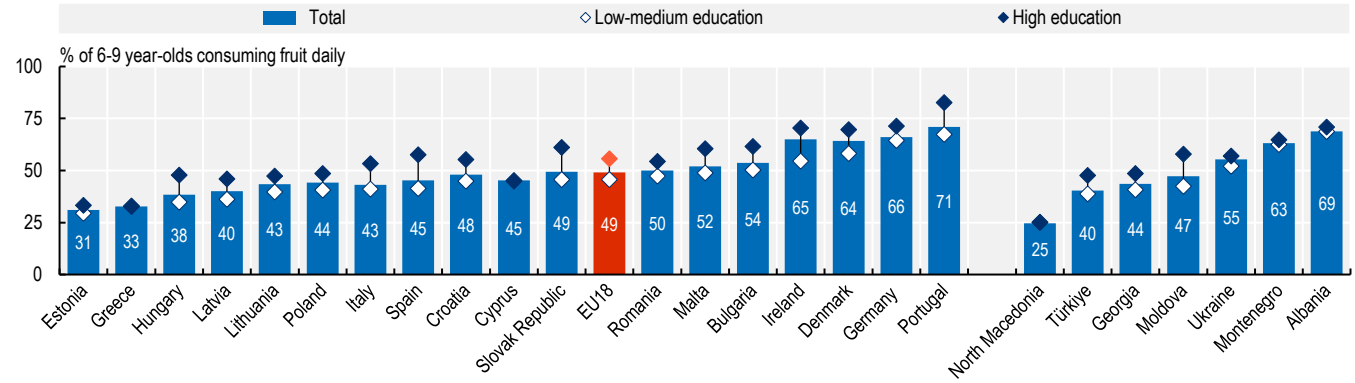
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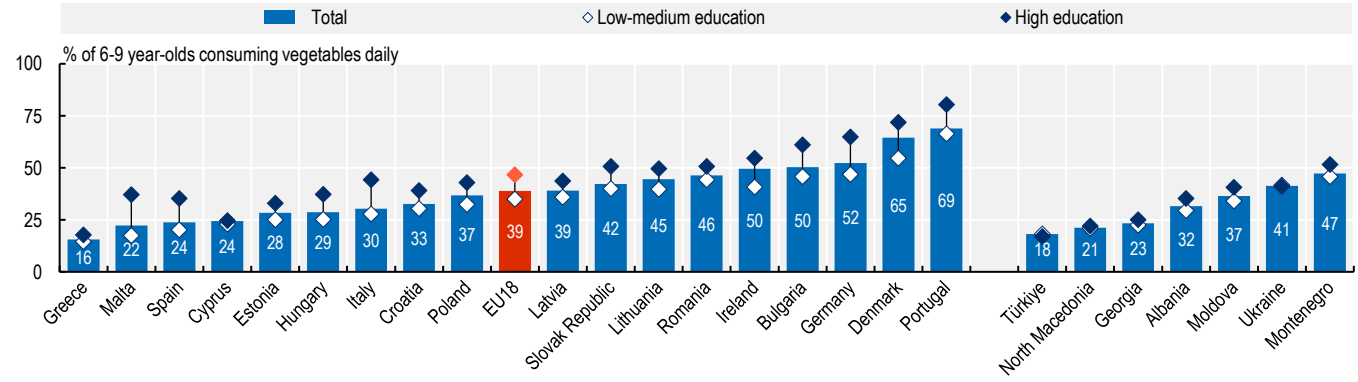
Figure 4.11. Daily fruit consumption among children, by parental education, 2022-2024



Note: The EU average is unweighted. Data for Germany refer to the Land of Bremen.
Source: WHO European Childhood Obesity Surveillance Initiative (COSI), 2022-2024.

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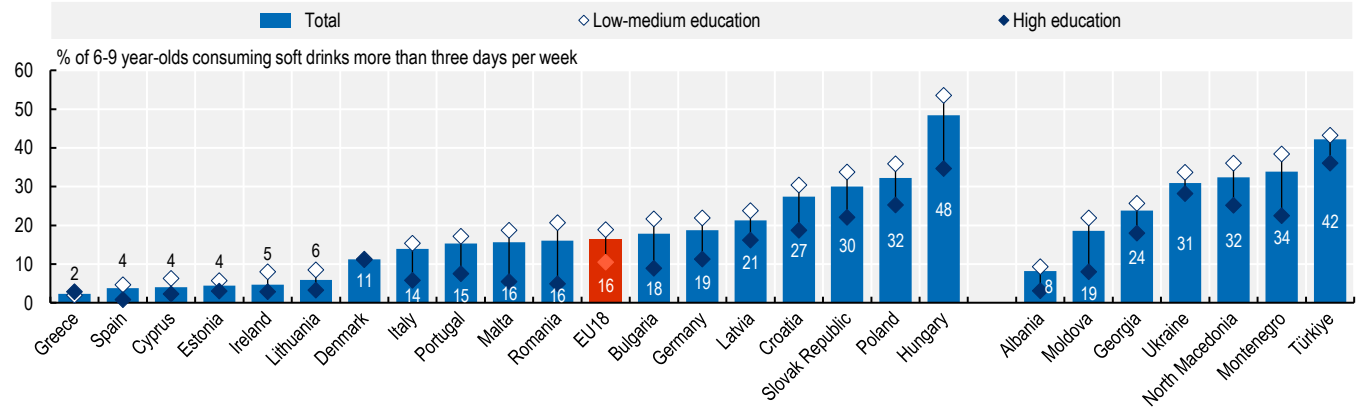
Figure 4.12. Daily vegetables consumption among children, by parental education, 2022-2024



Note: The EU average is unweighted. Data for Germany refer to the Land of Bremen.
Source: WHO European Childhood Obesity Surveillance Initiative (COSI), 2022-2024.

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Figure 4.13. Frequent consumption of sugary soft drinks among children, by parental education, 2022-2024



Note: The EU average is unweighted. Data for Germany refer to the Land of Bremen. Total values are shown.
Source: WHO European Childhood Obesity Surveillance Initiative (COSI), 2022-2024.

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Nutrition among adults

Fruit and vegetables are essential components of a healthy diet, providing essential vitamins, minerals and antioxidants. Regular consumption of these foods is associated with a reduced risk of chronic diseases, including cardiovascular diseases, metabolic conditions and certain types of cancer. Moreover, fruit and vegetables play a crucial role in weight management due to their relatively low-calorie density, and high water and fibre content, which promote satiety and help control overall calorie intake. However, many EU citizens face barriers to accessing quality meals, including fruit and vegetables, due to financial constraints. Over 38 million people in the EU (representing 1 out of 12 people) could not afford a proper meal every other day in 2025 (Eurostat, 2026[1]). This lack of affordability contributes to the significant health consequences associated with inadequate fruit and vegetable intake. In the EU, a diet low in fruit was linked to an estimated 86 000 deaths in 2023, while a diet low in vegetables was linked to around 74 000 deaths (IHME, 2026[2]).

The WHO recommends that everyone older than 10 years of age eat at least 400 g of fruit and vegetables per day, equivalent to five portions. On average across the EU in 2025, 58% of the population consumed fresh vegetables and 60% consumed fresh fruit at least daily. Belgium and Italy led in fresh vegetable consumption, with over three-quarters of their populations reporting to consume them at least daily. When it comes to fresh fruit consumption, Italy and Portugal topped the list, also with over three-quarters of their populations consuming them at least once a day. In contrast, only about one-third of adults in Hungary and Romania reported consuming fresh vegetables daily, while less than 40% in Lithuania, Romania, Hungary and Bulgaria reported consuming at least one fresh fruit daily (Figure 4.14).

Between 2017 and 2025, the prevalence of daily consumption of fruit and vegetables among adults in the EU has declined by over 4 p.p. This decline in fruit and vegetable consumption during this period may be at least partly attributed to rising prices. While over 50% of Europeans say they want to eat more fruit and vegetables, affordability and convenience (i.e. foods that are quicker to prepare) are some of the main barriers to achieving this goal (EIT Food, 2026[3]).

Socio-economic status influences people's regular consumption of fresh fruit and vegetables. Only about 53% of people living in households at risk of poverty (defined as those with a disposable income below 60% of the national median income) reported in 2025 to consume fruit daily, compared to about 61% among those living in households not at risk of poverty. When it comes to daily fresh vegetable consumption, the proportions were slightly smaller, with 52% of people living in households at risk of poverty reporting daily consumption compared to 60% among those living in households not at risk of poverty (Figure 4.15).

Age also affects the consumption patterns of fruit and vegetables. People aged over 55 eat more fruit and vegetables than younger people and have more established home cooking routines (EIT Food, 2026[3]).

Informational interventions through the use of mobile applications and personalised nutrition interventions have been found to be effective in promoting healthier dietary habits, including increased fruit and vegetable consumption and reduced fat intake (OECD, 2022[4]). These individual-level approaches can be complemented by policies that shape food environments. An EU-level assessment using the Healthy Food Environment Policy Index (Food-EPI) prioritised policy actions based on importance, achievability and equity. These included adopting a legislated ban on industrial trans-fats beyond the current EU limit of 2 g per 100 g of fat, banning the marketing of unhealthy foods to children and adolescents and applying a zero VAT rate to fresh fruit and vegetables (PEN Consortium, 2022[5]).

Definition and comparability

The prevalence of daily consumption of fruit and vegetables is based on data from the EU Statistics on Income and Living Conditions (EU-SILC) survey. The data are collected through personal interviews with people aged 16 or over. Fruit includes fresh, frozen, canned, or dried fruit, excluding fruit juice. Vegetables include fresh, frozen, and canned vegetables, as well as legumes (e.g. beans and lentils), but exclude vegetable juice and soups. The response categories "at least twice a day" and "once a day" have been combined into a single "daily" category.

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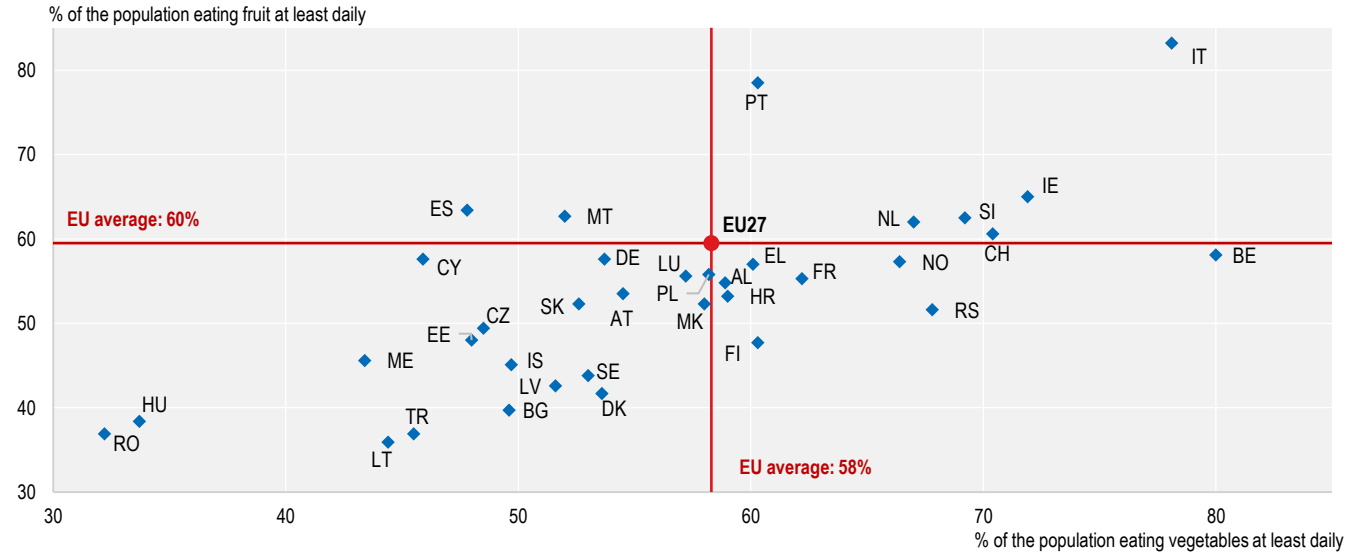
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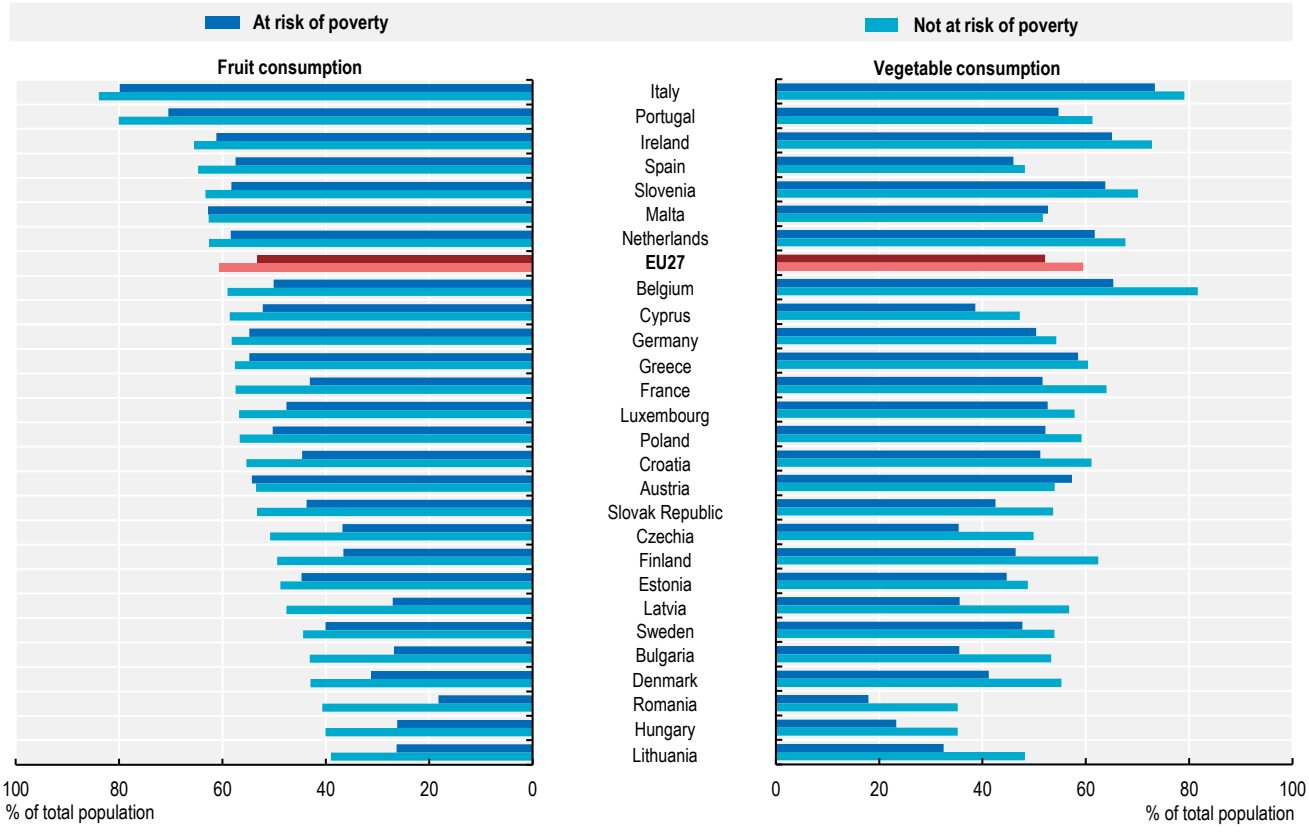
Figure 4.14. Population reporting daily consumption of fruit and vegetables, 2025 (or nearest year)



Note: The EU average is weighted. Data for Albania, Iceland, Montenegro, North Macedonia and Switzerland relate to 2022.
Source: Eurostat, based on EU-SILC, https://doi.org/10.2908/ILC_HCH11 (accessed on 10 July 2026).

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Figure 4.15. Daily fruit and vegetable consumption, by risk of poverty, 2025



Notes: The EU average is weighted. Households at risk of poverty are defined as those with disposable income below 60% of the national median income.
Source: Eurostat, based on EU-SILC, https://doi.org/10.2908/ILC_HCH11 (accessed on 10 July 2026).

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Physical activity and screen time among children and adolescents

Childhood and adolescence are critical periods for establishing lifelong healthy habits, including regular physical activity and avoiding excessive sedentary behaviours. Engaging in sufficient physical activity during these stages in life has numerous health benefits and reduces the risk of obesity and chronic diseases later in life (OECD/WHO, 2023[1]). The WHO has outlined a comprehensive strategy to promote physical activity through schools, including encouraging active travel to and from school, providing quality physical education, and offering active before- and after-school programmes (WHO, 2022[2]).

The vast majority of parents in EU countries report that their 6-9-year-old children meet the WHO recommended level of at least 60 minutes of physical activity per day. On average across the 15 EU countries with available data, 90% of parents of 6-9-year-old children reported that their children engaged in at least one hour per day of moderate-vigorous active play outside school hours in 2022-2024. This proportion was somewhat lower (less than 85%) in Estonia, Ireland and Malta (Figure 4.16). In most countries, there is little difference in physical activity between 6-9-year-old boys and girls.

Physical activity often diminishes as children age and move through adolescence. Data from the Health Behaviour in School-aged Children (HBSC) study show that on average across EU countries, only 22% of 11-year-olds and 15% of 15-year-olds reported engaging in at least 60 minutes of physical activity per day in 2022. There is a notable gender gap in physical activity among adolescents, with girls consistently being less active than boys in all EU countries (OECD/European Commission, 2024[3]). This gender disparity highlights the need for effective interventions to promote greater physical activity among adolescent girls.

Avoiding excessive sedentary behaviour and screen time among children and adolescents is a growing challenge. While screen use can have benefits, such as supporting learning and communication with friends and family, its duration, context and purpose determine whether it poses a risk by displacing activities that promote children's health and well-being. On average across EU countries in 2022-2024, 41% of parents reported that their 6-9-year-old children spent at least two hours a day during weekdays in front of a screen (including watching television and using computers and other electronic devices). This proportion was significantly higher during weekends, reaching 78%. It was also higher among children whose parents have a low or medium level of education than among children whose parents have a high level of education (Figure 4.17).

Screen time increases as children move through adolescence. According to a recent Eurobarometer survey, adolescents aged 13-18 across EU countries reported spending on average 4.5 hours on screens on a school day and 6.1 hours per day during the weekend. On a school day, 25% of adolescents exceed 6 hours of screen time, with this proportion reaching 46% during weekends (Figure 4.18). Adolescents spend more time on screens than their parents think, particularly during weekdays.

Adolescents tend to think that screens have a positive rather than a negative impact on their lives, while their parents think the opposite. Regarding the use of social media, nearly half (48%) of adolescents report that it benefits their mental well-being, mainly through entertainment, contact with friends or family and learning (see indicator "Adolescent mental health and well-being" in Chapter 3), yet nearly one in three report feeling stressed, sad or socially excluded because of it. By contrast, only 21% of parents think social media has a positive impact on their child's mental well-being (European Commission, 2026[4]).

Definition and comparability

The data for children aged 6-9 years are from the sixth round of the WHO European Childhood Obesity Surveillance Initiative (COSI), carried out between 2022 and 2024 and are based on parent responses. The data on time spent playing actively is based on the following question: "Outside school hours, how much time on average per day does your child play actively at a moderate-vigorous intensity?" The data on screen time are based on the question: "Outside school hours, how much time does your child on average per day watch TV or play with electronic devices (e.g. computer, tablet, smartphone)?"

The data on screen time of adolescents aged 13-18 years are from a Eurobarometer survey carried out in March/April 2026. They are based on responses from adolescents to the following question: "How much time on average do you think you spend on screens (e.g. smartphone, computer, tablet, TV, gaming console) in total on a typical school day and during the weekend?" The survey also collects information from parents about how much time they estimate their child spends on screens.

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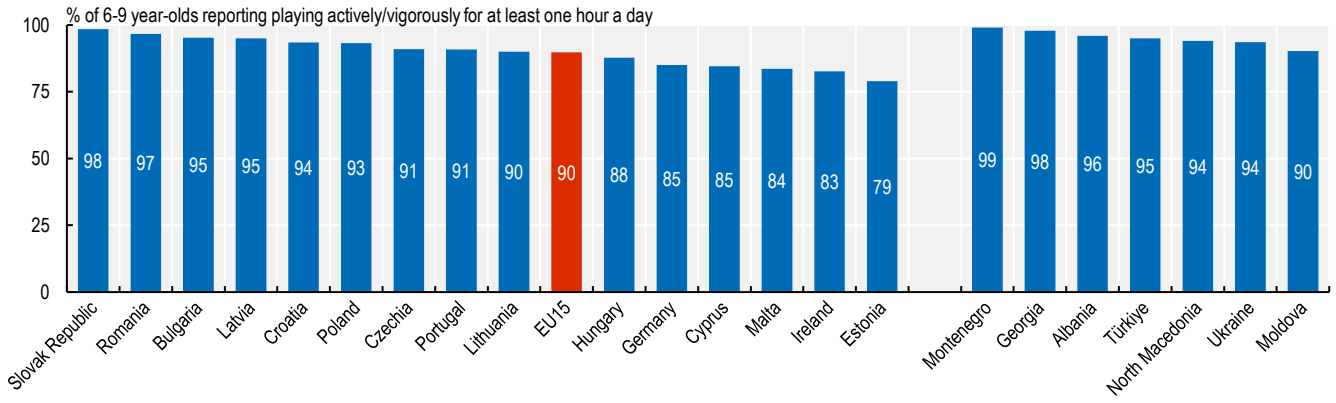
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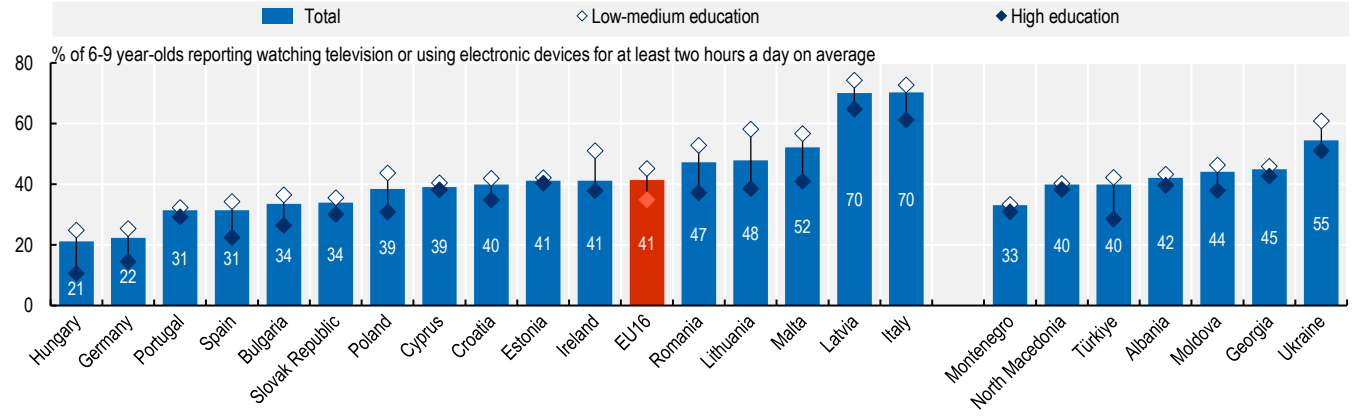
Figure 4.16. Share of 6-9-year-old children playing actively for at least one hour a day, 2022-2024



Note: The EU average is unweighted. Data for Germany refer to the Land of Bremen.
Source: WHO European Childhood Obesity Surveillance Initiative (COSI), 2022-2024.

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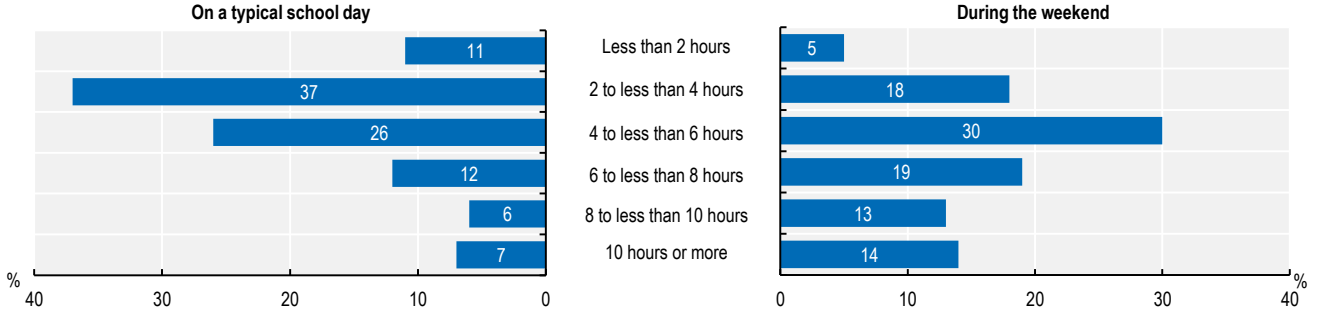
Figure 4.17. Share of 6-9-year-old children spending at least two hours a day on average watching screens, by parental education level, 2022-2024



Note: The EU average is unweighted. Data for Germany refer to the Land of Bremen.
Source: WHO European Childhood Obesity Surveillance Initiative (COSI), 2022-2024.

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Figure 4.18. Screen time of 13-18-year-old adolescents per day, EU average, 2026



Note: The EU average is weighted.
Source: Flash Eurobarometer 579 (conducted in March/April 2026).

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Physical activity among adults

Physical activity is a cornerstone of human health, offering profound benefits that extend far beyond mere fitness. Scientific evidence demonstrates that regular moderate- and vigorous-intensity activity significantly reduces mortality rates from cardiovascular diseases, the leading causes of death in the EU. This protective effect extends to a range of non-communicable diseases, including diabetes as well as certain types of cancer. Physical activity also acts as a natural mood enhancer, releasing endorphins that combat stress, anxiety and depression. In an era of increasing mental health concerns, the role of physical activity in promoting psychological well-being is more crucial than ever. Moreover, regular exercise has been shown to improve cognitive function, reducing the risk of age-related cognitive decline and dementia (OECD/WHO, 2023[1]).

The urgency of promoting active lifestyles is underscored by estimates of the health burden associated with insufficient physical activity. In 2023, low physical activity accounted for an estimated 1.20 million disability-adjusted life years (DALYs) and about 64 000 deaths in the EU, highlighting the potential to improve public health and reduce the strain on European healthcare systems by addressing this modifiable risk factor (IHME, 2026[2]).

Recognising the importance of physical activity for health and well-being, the WHO recommends that adults engage in at least 150 minutes of moderate-intensity physical activity (or 75 minutes of vigorous-intensity physical activity) per week. This WHO recommendation is often expressed as practising at least 30 minutes of moderate physical activity per day, 5 days a week. According to data from the European Health Interview Survey (EHIS), slightly less than one-third of adults were meeting the recommendation of engaging in at least 150 minutes of physical activity per week in 2019 (OECD/European Commission, 2024[3]). The EU-SILC survey provides more recent data on the frequency of physical activity among adults, but not on the duration. Based on the latest results from the EU-SILC 2025, one-third of adults in the EU reported engaging in some physical activity either each day or at least 4 to 6 times a week. By contrast, over one quarter reported never doing any physical activity. Physical activity levels are highest in Denmark, Finland and the Netherlands, and lowest in Bulgaria and Croatia (Figure 4.19).

In nearly all EU countries, the proportion of men doing physical activity either each day or at least 4 to 6 times per week was slightly higher than among women (34% of men compared to 32% of women on average). This gender gap is particularly large among younger adults (aged 16-24) and older adults (aged over 75).

The proportion of adults doing regular physical activity declines in middle age (aged 35-64) before picking up slightly during the first years following retirement (aged 65-74) and then falling again after age 75. On average across the EU, 37% of people aged 65-74 reported doing physical activity at least 4 times per week in 2025, but this proportion falls to 29% among people aged over 75 (Figure 4.20). Given that regular physical activity is crucial to mitigating the negative effects of ageing and reducing the risk of many chronic conditions, cognitive decline and falls, it is important to encourage older people to be physically active for as long as possible.

Many EU countries have programmes in place targeting physical activity among older adults. Programmes such as the Multimodal Training Intervention, initially developed in Iceland and since then transferred to certain regions in Spain and Lithuania, provide good examples of effective ways to promote physical activity as well as healthy eating among older people (OECD, 2022[4]).

Definition and comparability

The indicator on the frequency of (non-work-related) moderate-intensity physical activity (sports, fitness or recreational (leisure) physical activity) is based on data from the European Union Statistics on Income and Living Conditions (EU-SILC) survey conducted in 2025. In the data collection, the frequency of physical activity is categorised into six groups: at least twice a day, once a day, from 4 to 6 times per week, from 1 to 3 times per week, less than once a week and never. The categories “at least twice a day” and “once a day” have been combined into a single category labelled “at least once a day”. This indicator captures the frequency of physical activity but not the duration nor intensity and therefore cannot be used to assess compliance with the WHO recommendations.

The indicator on the share of people aged 65 or over reporting frequent physical activity is also based on data from the EU-SILC survey. It measures the proportion of people aged 65 to 74 and those aged 75 years or over who report engaging in physical activity outside working time in a typical week either at least once a day or from 4 to 6 times a week.

References

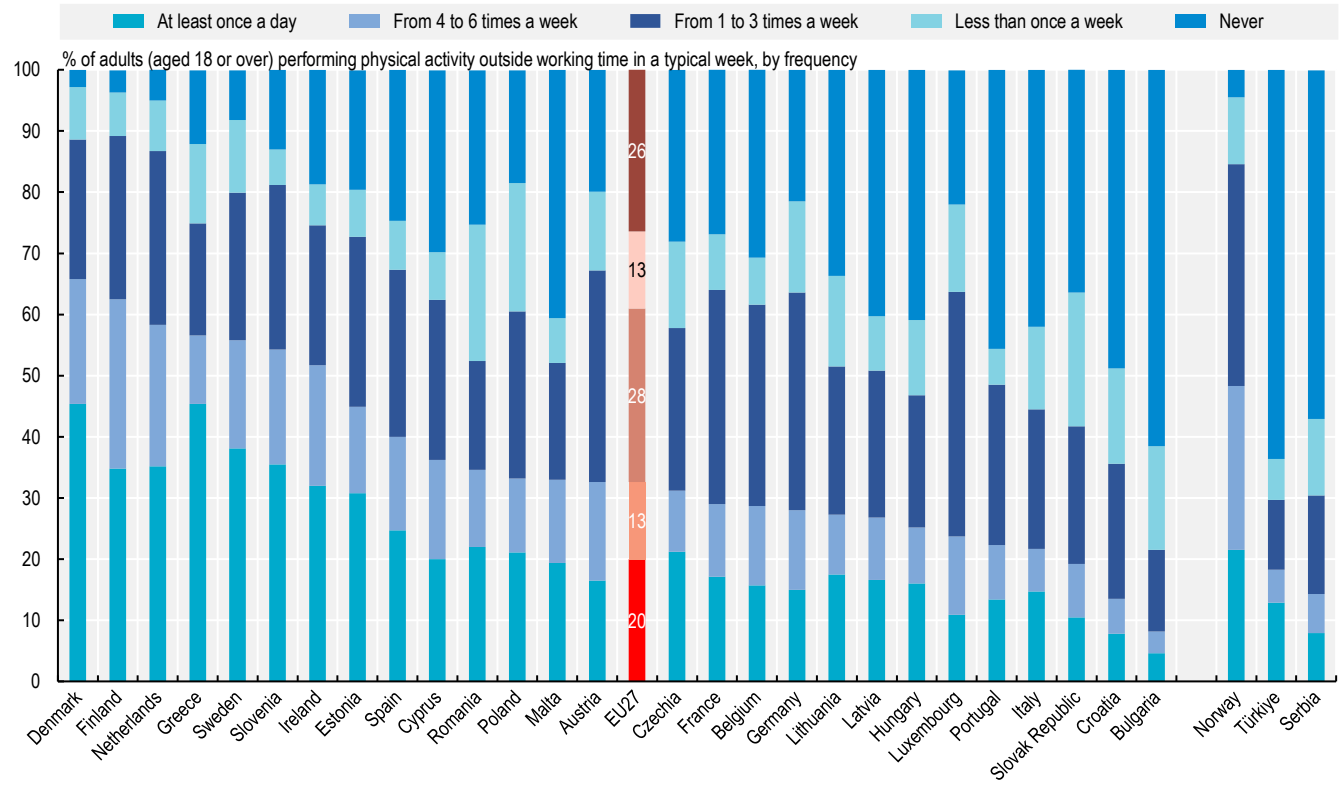
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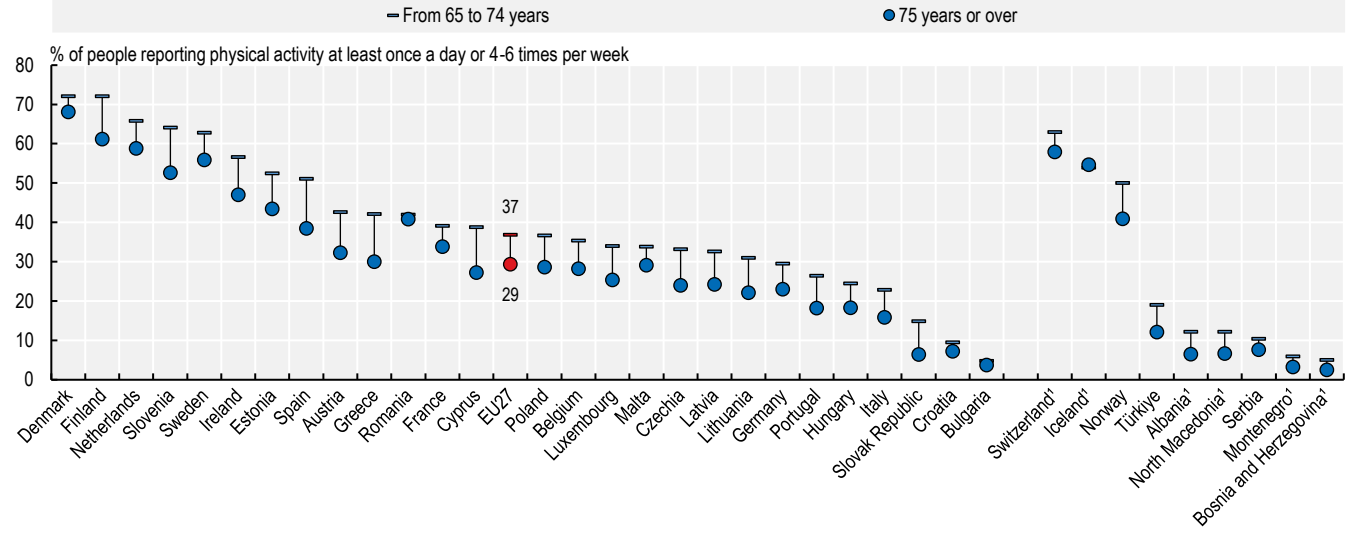
Figure 4.19. Frequency of adult physical activity outside working time in a typical week, 2025



Note: The EU average is weighted. Countries are ranked in descending order according to the frequency of physical activity, including responses from "at least once a day" and "from 4 to 6 times a week".
Source: Eurostat, based on EU-SILC, https://doi.org/10.2908/ILC_HCH07B (accessed on 10 July 2026).

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Figure 4.20. People aged over 65 reporting frequent physical activity, 2025 (or nearest year)



Note: The EU average is weighted. 1. Data refer to 2022.
Source: Eurostat, based on EU-SILC, https://doi.org/10.2908/ILC_HCH07B (accessed on 10 July 2026).

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Overweight and obesity among children

Childhood overweight and obesity are serious public health concerns with far-reaching consequences. Children living with overweight or obesity face a higher risk of poor health, an effect that persists into adulthood. Furthermore, obesity in children is often associated with psychosocial issues such as low self-esteem, bullying and poor academic performance, potentially exacerbating health and economic outcomes later in life (OECD, 2019[1]).

In the period 2022-2024, 29% of 6-9-year-old children on average across EU countries were living with overweight or obesity (Figure 4.21). Childhood overweight and obesity rates vary significantly across EU countries, with a more than two-fold difference between the lowest and highest rates, ranging from 20% in Denmark to 42% in Cyprus. Across nearly all countries, the prevalence of childhood overweight and obesity is at least slightly higher among boys than girls. On average in EU countries, 30% of 6-9-year-old boys were considered to be overweight or obese in 2022-2024 compared to 27% of girls of the same age. This gender gap is particularly large (over 5 p.p.) in Austria, Cyprus, Greece and Romania.

Looking at trends over time, overweight and obesity rates among 6-9 year-olds have remained stable in many countries between 2018-2020 and 2022-2024, but have increased significantly among boys and girls in Malta, Slovenia and Sweden (WHO, 2025[2]).

Socio-economic factors play a significant role in childhood overweight and obesity rates. In all EU countries with available data, children whose parents have a high level of education are less likely to be overweight or obese than those with a low to medium parental education (Figure 4.22). On average across EU countries, one quarter of 6-9-year-old children of parents with a high level of education were overweight or obese in 2022-2024 compared to one-third of those with low to medium parental education.

Parents are not always able to accurately perceive their child's weight status, particularly parents of children with overweight or obesity. This matters because parents play an important role in the prevention and treatment of childhood obesity. In all countries with available data, over half of parents of children living with overweight or obesity underestimated their child's weight status, thinking their child was either underweight or had a normal weight (WHO, 2025[2]).

A number of policies to tackle obesity specifically target children. These include restrictions on food and drink advertising to children, school-based wellness and educational programmes, measures to limit the availability of unhealthy food options in schools, and policies to encourage active transport to school (OECD, 2019[1]). Other broader policies, such as warning labels, price interventions, and mass media campaigns, can also contribute to tackling childhood obesity. For example, Greece has developed its first comprehensive National Action against Childhood Obesity, combining prevention, education, healthier food environments, physical activity, early identification and personalised support. By May 2026, it had provided 130 000 healthy school meals and more than 13 000 personalised nutritional counselling sessions (UNICEF, 2026[3]).

To support countries in implementing effective policies to combat childhood obesity, the European Union has facilitated collaboration among stakeholders across European countries to identify best practices. Following the 2014-2020 EU Action Plan on Childhood Obesity, the European Union is funding between 2023 and 2027 the PREVENT project, whose primary objective is to reduce cancer risk in adulthood by improving weight control interventions for children and adolescents. The project seeks to support the implementation of effective interventions to reduce childhood obesity tailored to different contexts, engaging a diverse range of users. PREVENT targets childhood obesity in schools in Greece, Sweden and Spain (Catalonia) (PREVENT, 2026[4]).

Definition and comparability

The data are from the sixth round of the WHO European Childhood Obesity Surveillance Initiative (COSI) carried out between 2022 and 2024 among children aged 6-9 years. Children's weight status is classified according to the 2007 WHO-recommended growth reference for children. Overweight and obesity are defined as a BMI-for-age value > +1 Z-score and > +2 Z-score, respectively. BMI is calculated as weight (kg) divided by height squared (m^2). The estimated prevalence of overweight includes children with obesity (WHO, 2025[2]).

The prevalence of overweight and obesity is calculated by parental education level grouped in two categories: i) low to medium, where both parents have lower education or at least one parent has lower education and the other has higher education and (ii) high, where both parents have higher education.

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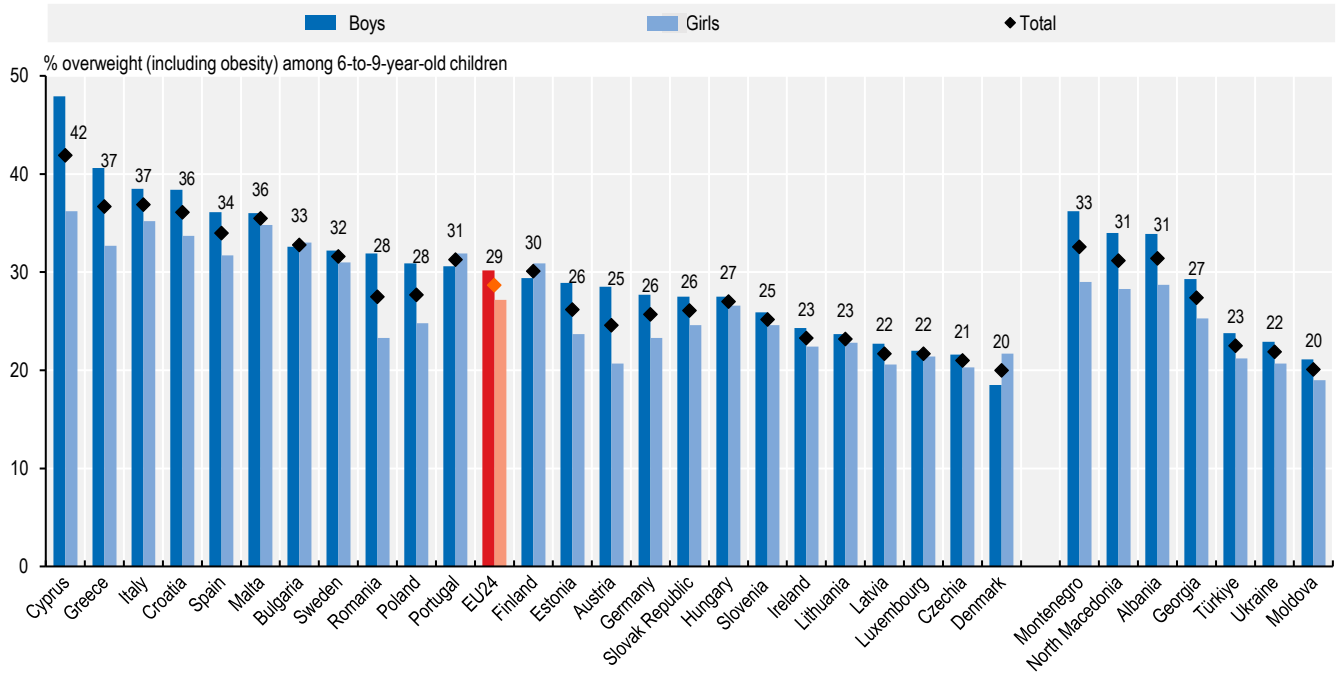
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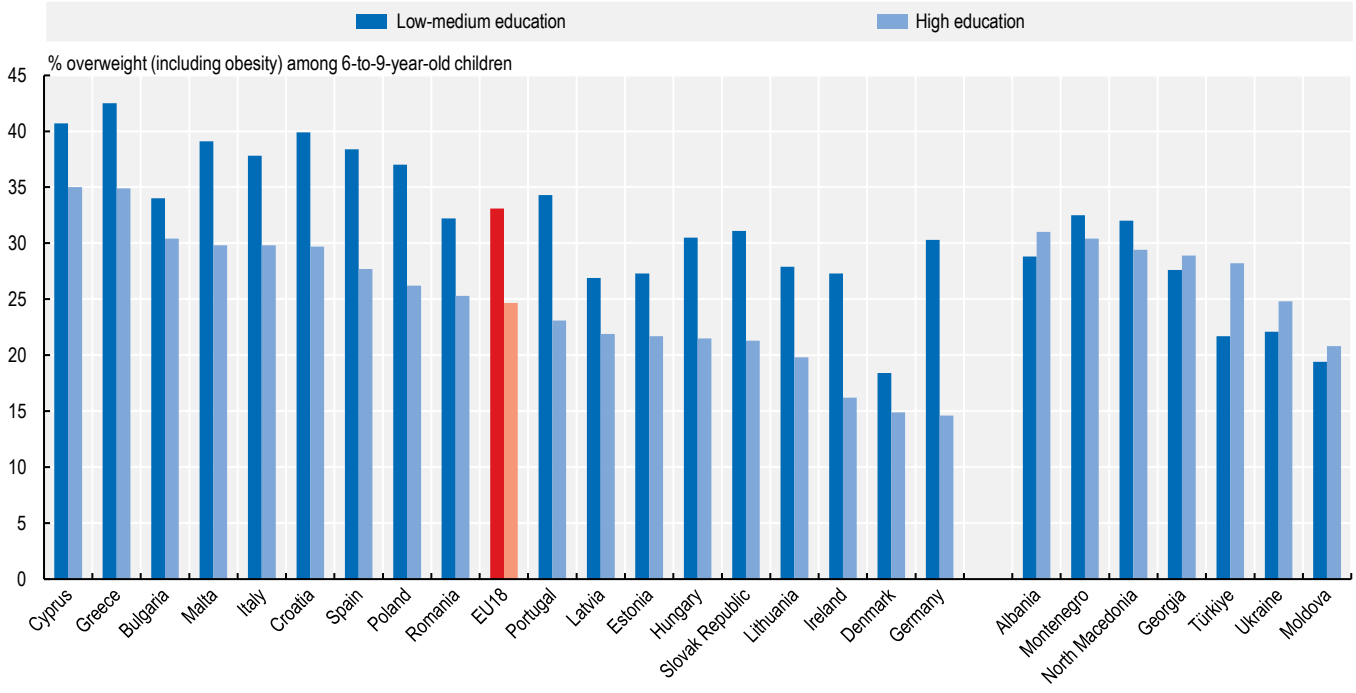
Figure 4.21. Overweight and obesity rates among children aged 6-9, by gender, 2022-2024



Note: The EU average is unweighted. Data for Germany refer to the Land of Bremen. Total values are shown.
Source: WHO European Childhood Obesity Surveillance Initiative (COSI), 2022-2024.

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Figure 4.22. Inequalities in overweight and obesity among children aged 6-9, by parental education, 2022-2024



Note: The EU average is unweighted. Data for Germany refer to the Land of Bremen.
Source: WHO European Childhood Obesity Surveillance Initiative (COSI), 2022-2024.

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Overweight and obesity among adults

Overweight and obesity are important risk factors for numerous non-communicable diseases, including cardiovascular diseases, diabetes, and certain types of cancer. Obesity carries a higher risk of serious health conditions than being overweight. At the EU level, the rising obesity prevalence has partially offset the health gains from reductions in smoking and harmful alcohol use between 2010 and 2022 (OECD, 2026[1]). In 2023, an estimated 429 000 deaths in the EU were associated with an excessive body mass index (BMI), highlighting the large impact of overweight and obesity on population health (IHME, 2026[2]).

Based on self-reported data, in 2025 over half (51%) of adults in EU countries were living with either overweight or obesity, a proportion that has remained unchanged since 2017. Adult overweight and obesity rates were highest in 2025 in Malta, Romania, Finland, Lithuania and Czechia, where over 60% of adults grappled with excess weight, and the rate was even higher in England (66%). In contrast, Italy boasted the lowest rate at 38% according to EU-SILC data, although data from a national survey show a higher rate of 47% in 2024 (Figure 4.23).

In all EU countries, the prevalence of overweight and obesity is higher among men than among women. On average, 58% of men in the EU were living with overweight or obesity compared to 44% of women. Overweight and obesity rates increase steadily with age up to 65-74 year-olds, after which they decrease slightly among people aged over 75.

Educational attainment plays a significant role in the prevalence of overweight and obesity in the EU. Less educated people are consistently more prone to overweight and obesity than the more educated. At the EU-wide level, the prevalence of overweight and obesity stood at 56% among those with lower education compared to 45% among those with a higher level in 2025. The magnitude of this education-related gap varied significantly among EU countries, reflecting a complex effect of socio-economic and cultural influences on public health. Portugal stood out with the most pronounced education-related gap, with a 21-p.p. difference between lower and higher education groups; Italy, Luxembourg and Spain followed with a gap of nearly 19 p.p. (Figure 4.24).

Focussing on trends in obesity rates, between 2017 and 2025, the EU's overall adult obesity rate showed a small increase from 15% to 16%. The obesity rate increased in all EU countries with the exception of Croatia, where it decreased, and Germany and Luxembourg, where it remained stable (Figure 4.25). In 2025, adult obesity rates varied nearly fourfold across EU countries, from 27% in Malta to 7% in Italy, although the rate in Italy is higher based on a national survey (12% in 2024).

Tackling obesity offers the greatest opportunity to reduce the burden of non-communicable diseases in the EU. This is driven primarily by its link to cardiovascular diseases and diabetes. Relative to maintaining current prevalence levels, reducing obesity would lower annual premature mortality by 3.6%, expand the workforce by 495 000 FTEs and boost GDP by 0.6% on average across EU countries over the period 2026-2050 (OECD, 2026[1]).

Many EU countries have strengthened population-wide strategies to reduce obesity and improve diet, signalling a shift from individual behaviour change to multisectoral policies that promote healthier food choices and physical activity (OECD, 2022[3]). An example of a multi-country initiative is the Nutri-Score voluntary front-of-pack colour-coded labelling system to help consumers make healthier food choices. First introduced in France in 2017, the system's effectiveness has led to broader adoption in five other European countries since then (officially adopted in Belgium and Switzerland in 2019, in Germany in 2020, in Luxembourg in 2021 and in the Netherlands in 2024). In France, brands adopting the Nutri-Score label represented over 60% of food sales volumes in 2024 (Santé publique France, 2026[4]).

Definition and comparability

The prevalence of overweight and obesity comes from the European Union Statistics on Income and Living Conditions (EU-SILC). Overweight and obesity are based on the body mass index (BMI), calculated by dividing weight in kilograms by the square of height in metres. Adults with a BMI ≥ 25 are considered overweight and those with a BMI ≥ 30 are considered obese. BMI is calculated based on self-reported information of body height and weight, which can be affected by various biases.

The data are stratified by education level, classified according to the International Standard Classification for Education (ISCED) 2011. "Higher education" refers to ISCED Levels 5-8 (tertiary education), while "Lower education" corresponds to ISCED Levels 0-2 (less than upper secondary education).

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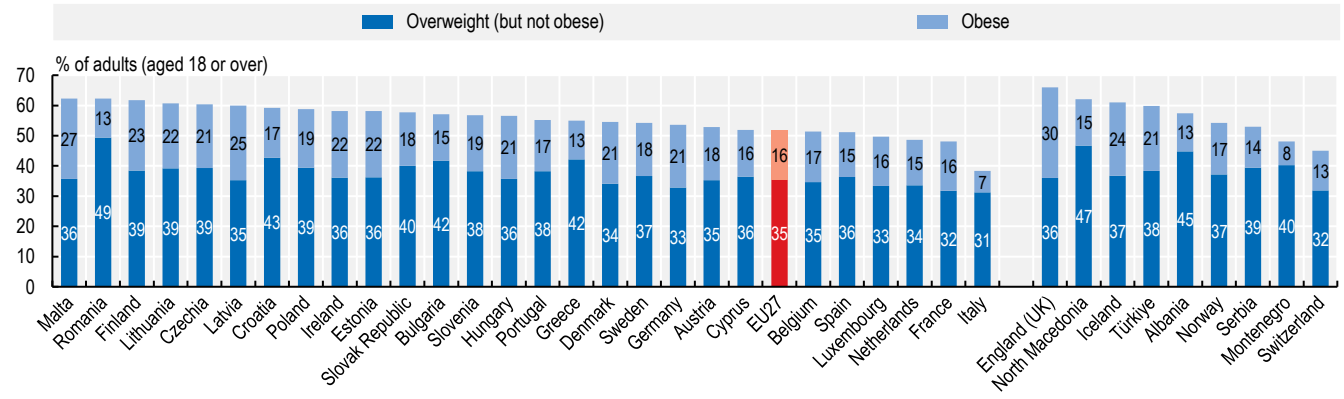
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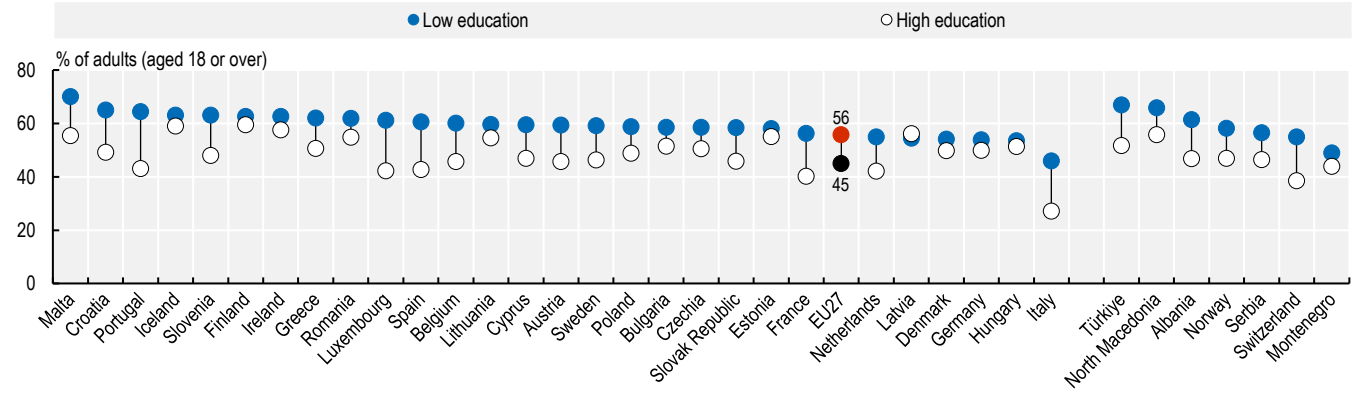
Figure 4.23. Self-reported adult overweight and obesity rates, 2025



Note: The EU average is weighted. Data for the United Kingdom refer to individuals aged 16 or over.
Source: Eurostat, https://doi.org/10.2908/ILC_HCH10; complemented with the Health Survey (2024) for England (both accessed on 10 July 2026).

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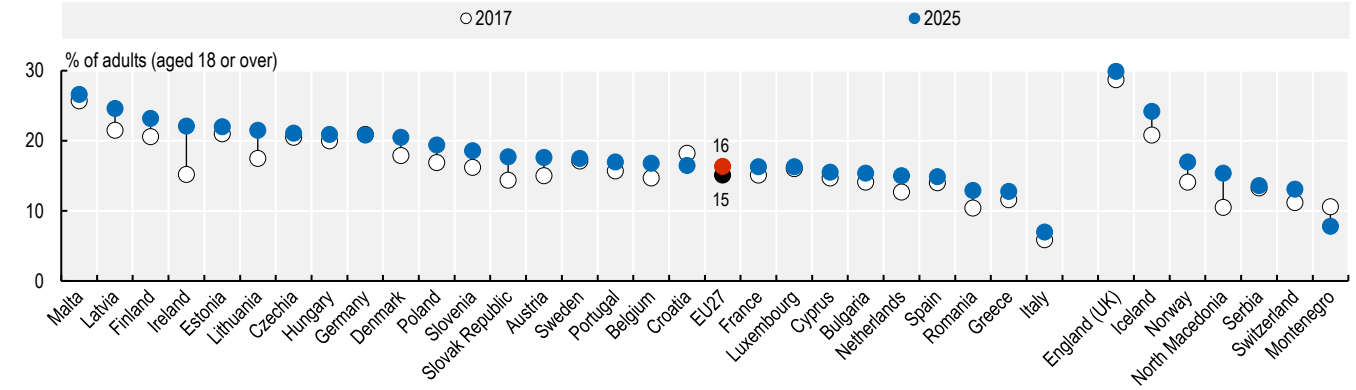
Figure 4.24. Self-reported adult overweight and obesity rates, by educational level, 2025



Note: The EU average is weighted.
Source: Eurostat, https://doi.org/10.2908/ILC_HCH10 (accessed on 10 July 2026).

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Figure 4.25. Changes in self-reported adult obesity rates, 2017 and 2025



Notes: The EU average is weighted. Data for the United Kingdom refer to individuals aged 16 or over.
Source: Eurostat, https://doi.org/10.2908/ILC_HCH10; complemented with the Health Survey (2024) for England (both accessed on 10 July 2026).

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Environment and health

The frequency and intensity of extreme temperature events have increased with a changing climate. Both extreme heat and extreme cold can cause health problems and lead to poor health outcomes and death. Temperatures in Europe have risen at more than twice the global average since the 1990s, making Europe the fastest-warming continent in the world. Rising temperatures are also creating more favourable conditions for the transmission of vector-borne diseases such as West Nile Virus.

Across EU countries, high temperatures are estimated to have led to more than 58 000 deaths in the summer of 2024, which was at the time the hottest ever summer recorded in Europe (Janoš et al., 2025[1]). Heat-related mortality rates were highest in Southern Europe, with death rates more than twice the EU average in Greece, Bulgaria, Croatia and Italy (Figure 4.26).

Summer 2026 was the hottest summer ever recorded in Western Europe, with August 2026 recorded as the hottest month of August ever globally (Copernicus/European Centre for Medium-Range Weather Forecasts, 2026[2]). High temperatures are estimated to have led to more than 50 000 excess deaths in European cities in the summer of 2026, including more than 13 000 deaths in Italian cities and nearly 7 300 deaths in French cities (Barnes et al., 2026[3]).

Many heat-related deaths are preventable, and well-designed heat-health action plans can serve as a critical tool for adapting to high temperatures by outlining in advance key actions to be taken and populations to be targeted to minimise any health impacts. Two-thirds of EU countries have developed heat-health action plans to address the health impacts of exposure to high temperatures in the population (European Climate and Health Observatory, 2024[4]).

Health systems themselves play a role in emitting greenhouse gases (GHG). OECD analysis suggests that in 2022, healthcare-related emissions in the 27 EU countries represented 3.8% of overall GHG emissions on average (Figure 4.27). This amounts to nearly 200 million tonnes of carbon dioxide-equivalent (CO_2-e) emissions. As a share of a country's overall emissions, the health sector contributed the most in Portugal, Germany and France, being responsible for at least 5% of overall emissions. However, a higher share of total emissions in at least some cases can reflect comparatively lower overall emissions in a country, rather than a particularly highly emitting health sector. On a per-capita basis, CO_2 -e emissions related to demand for healthcare averaged 408 kilogrammes per person across EU countries in 2022.

Transforming healthcare delivery to reduce GHG emissions, such as by promoting policies that reduce low-value care, can help to drive down GHG emissions while also helping to reduce waste in the system. National and cross-country initiatives to decarbonise supply chains and introduce green procurement standards for healthcare products are emerging (OECD, 2025[5]).

Definition and comparability

Data on heat-related mortality are based on detailed temperature data and weekly mortality data to estimate the fraction of summer deaths that can be attributed to exposure to temperatures above the minimum mortality temperature for the given area (Janoš et al., 2025[1]). The methodology for calculating the attributable fraction of heat-related deaths is based on an approach developed by Gasparrini and Leone (2014[6]).

Greenhouse gas emission estimates for the health sector are based on a "top-down" model that combines data from the OECD's Inter-Country Input-Output table, the environmental extension to this table, and data on health expenditure. The different types of greenhouse gases included in the model are expressed in CO_2-equivalent emissions. Emissions comprise those occurring in the various health facilities but also those generated in the supply of energy to facilities, emissions generated during the production of inputs used by health facilities, and the entire supply chain (Doucet et al., 2025[7]).

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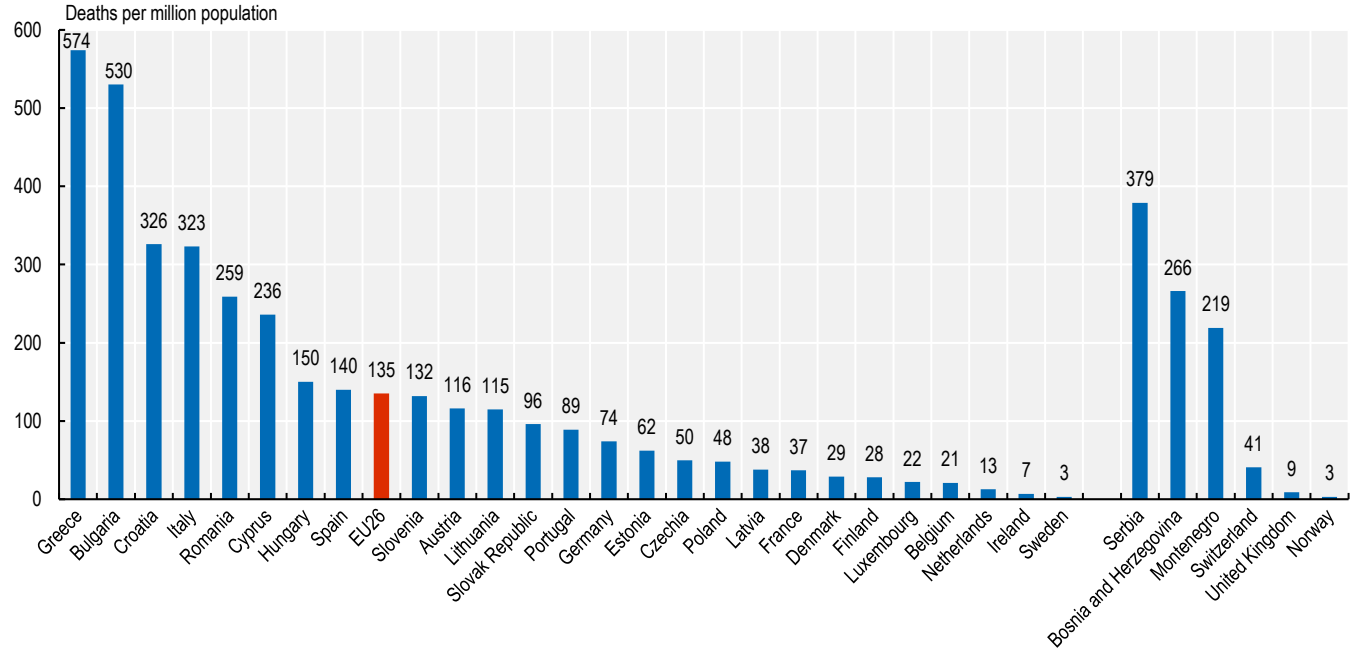
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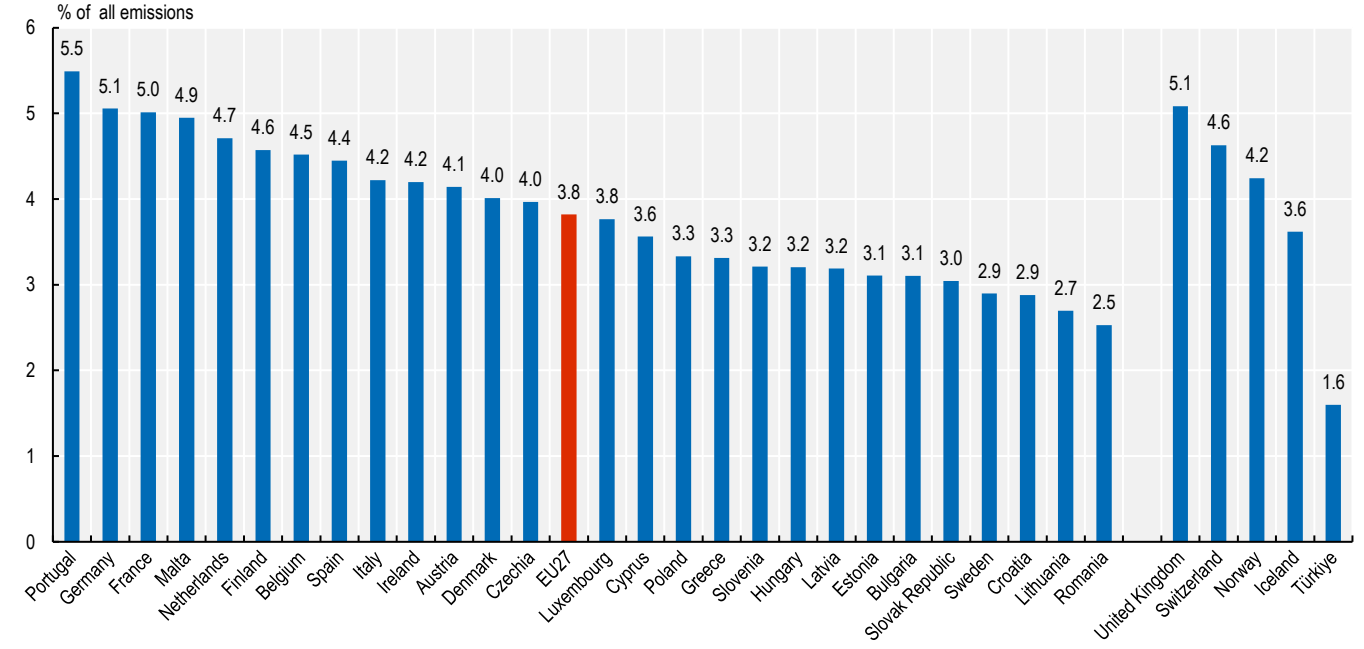
Figure 4.26. Heat mortality per million population, 2024



Note: The EU average is unweighted. Data is not available for Malta.
Source: Janoš et al (2025[1]), "Heat-related mortality in Europe during 2024 and health emergency forecasting to reduce preventable deaths".

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Figure 4.27. Share of all greenhouse gas emissions related to healthcare demand, 2022



Note: The EU average is unweighted.
Source: OECD Greenhouse Gas Footprint Estimates (based on methodology from Doucet et al. (2025[7]), "Measuring greenhouse gas emissions in the health sector: A new approach to model GHG emissions combining (JHAQ) health expenditure data and the multi-regional inter-country input-output (ICIO) tables".

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5 Health expenditure and financing

This chapter looks at recent trends in health spending, overall and disaggregated by type of health service and provider. There is a particular focus on how health spending has developed after transitioning out of the COVID-19 pandemic and the cost-of-living crisis. The chapter also analyses how healthcare is financed across Europe and takes a closer look at how much is spent on primary healthcare, preventive care and pharmaceuticals. After years of exceptionally high health spending growth in 2020 and 2021 and a subsequent decline and stagnation in 2022 and 2023, growth has picked up again in 2024, with a robust increase of around 5% per capita across the EU. As a result, spending on health as a share of GDP climbed to 10.2% in the EU in 2024, slightly above the pre-pandemic level (9.8%). Preliminary estimates for 2025 suggest a further increase of this ratio to 10.3%. Over the last decade, the share of health in total government expenditure has slightly increased, peaking in 2021. Regarding the financing of healthcare, government and compulsory schemes accounted for four-fifths of overall health spending across EU countries. However, out-of-pocket expenditure – which can impact individuals' access to care – remains an important source of health financing in several Southern, Central and Eastern European countries.

Health expenditure per capita

The level of per capita health spending – which captures both individual and population healthcare needs – and how this changes over time depends on a wide range of demographic, social and economic factors, as well as the financing and organisational arrangements of a country's health system. Consequently, there are large variations in the level and growth of health spending across Europe.

In 2024, health spending stood at about EUR 3 960 per capita across EU countries (when adjusted for differences in purchasing power). Switzerland was the highest spender in Europe – reaching over EUR 6 230 per person. Among EU Member States, health spending was highest in Germany, Austria and the Netherlands, where spending was more than one-quarter above the EU average. Spending levels were lowest in Romania and Hungary, with spending around half the EU average. Outside the EU, health spending drops significantly below these levels in some countries, standing at below EUR 1 000 per capita in Moldova, Ukraine and Georgia (Figure 5.1).

In the years leading up to the COVID-19 pandemic, annual per capita spending on healthcare grew by an average of 3.4% across EU countries (Figure 5.2). Between 2015 and 2019, annual spending growth was highest in Romania and Latvia where it stood at 11% and 8%, respectively. On the other hand, in France, Italy, Finland and Sweden, annual increases were much more moderate at less than 1% on average over the same period.

Between 2019 and 2024, per capita spending in EU countries grew on average at a slightly slower pace (3.0%) than during the pre-pandemic period, but with substantial year-on-year differences. Across the EU, annual growth in real terms was around 6% in 2020 and accelerated to over 9% in 2021 as governments mobilised funds to slow down and tackle the effects of the COVID-19 pandemic. With countries transitioning out of this health emergency, health spending per capita contracted by nearly 4% on average in EU countries in 2022. It stagnated in 2023 before recording robust growth again in 2024 – at around 5% per capita. For 2025, a return to pre-pandemic growth rates at between 3-4% is projected. The recent trajectory can be partly explained by economic and geo-political challenges that affected countries' ability to fund any additional spending on health in 2022 and 2023, as well as high inflation rates that were often eroding nominal spending increases (Mueller, Penn and Morgan, 2024[1]).

Trends in health spending growth diverged markedly across countries between 2019 and 2024 as the impact of the COVID-19 pandemic and the cost-of-living and energy crises differed between health systems. In Denmark, for example, the real level of health spending per capita stagnated when comparing 2019 and 2024. While recording high spending growth in 2021 (8%), this was followed by a subsequent drop of a similar magnitude in the following two years, resulting in a compound zero growth rate. On the other hand, Bulgaria and Poland saw particularly high increases in health spending between 2019 and 2024, with average annual real growth of 7-8%. In Poland, strong growth continued after the acute phase of the pandemic. Cyprus and Croatia also recorded robust growth during this period, at above 6% on average. Latvia followed a very particular spending trajectory – with an astounding real-term spending increase of 30% in 2021, followed by a decline in the two subsequent years, largely reflecting the decrease in COVID-19-related spending and resulting in a compound annual growth rate close to 5% for the 2019-2024 period. In contrast, many countries in Western and Northern Europe, such as France, Italy, Spain, Belgium and Sweden, saw only modest compound annual spending growth at around 1% – similar to or below growth in the pre-pandemic period.

Definition and comparability

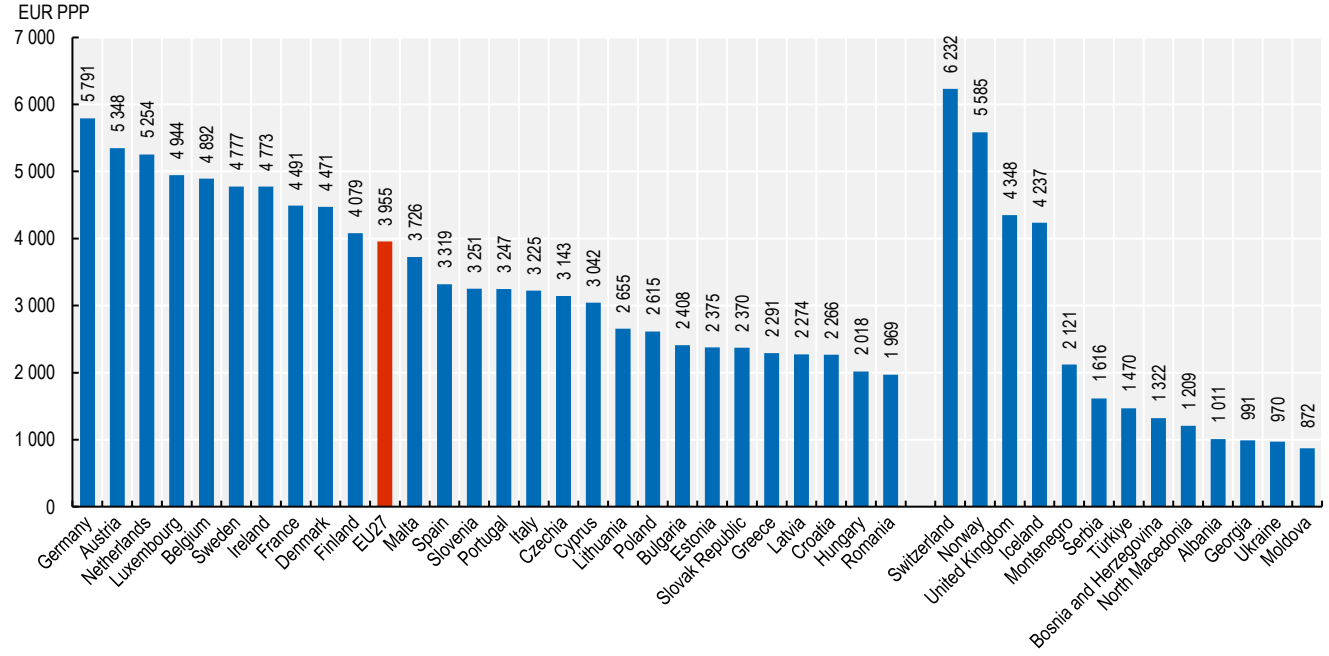
Expenditure on health, as defined in the System of Health Accounts (OECD, Eurostat and WHO, 2017), measures the final consumption of health goods and services. This refers to current spending on medical services and goods, public health and prevention programmes, and overall administration of healthcare provision and financing irrespective of the type of financing arrangement.

Countries' health expenditures are converted into a common currency (Euro) and are adjusted to take account of the different purchasing power of the national currencies. Economy-wide actual individual consumption (AIC) PPPs are used to compare relative expenditure on health in relation to the rest of the economy. For the calculation of growth rates in real terms, economy-wide AIC deflators are used. Although some countries produce their own health-specific deflators, these are not currently used due to the limited availability and comparability across all countries.

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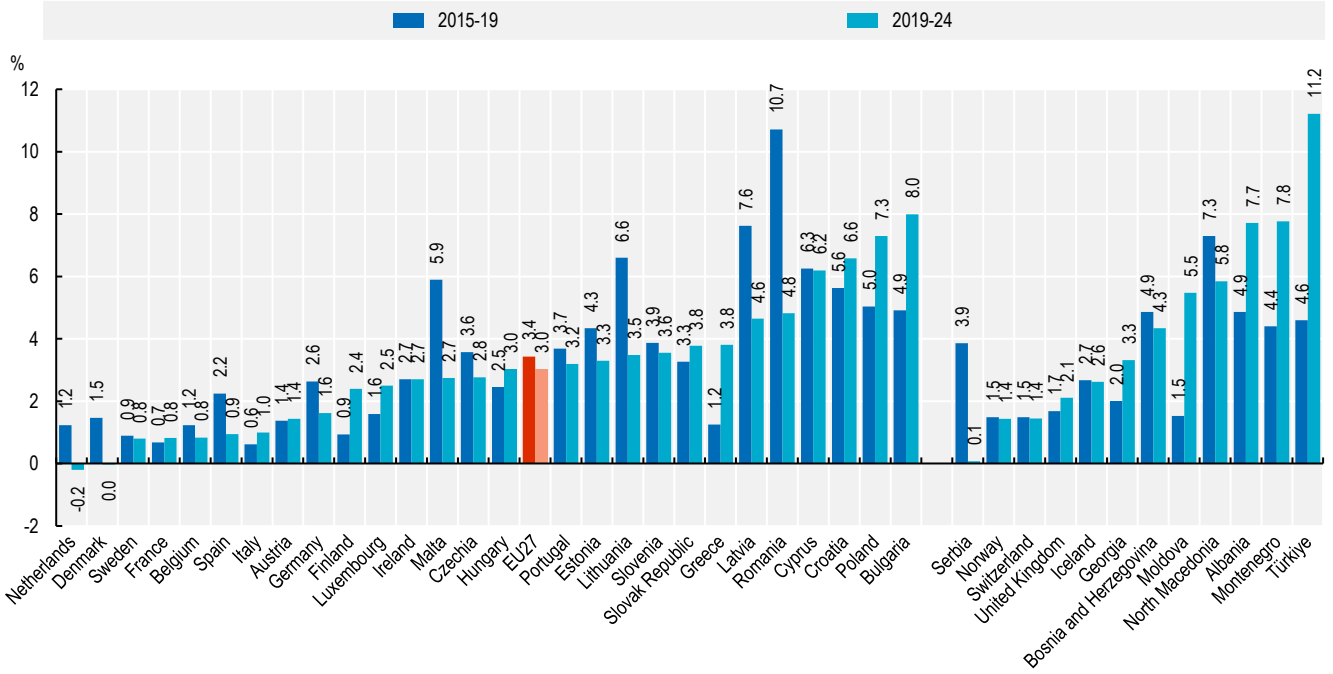
Figure 5.1. Health expenditure per capita, 2024 (or nearest year)



Note: The EU average is weighted.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026); WHO Global Health Expenditure Database.

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Figure 5.2. Average annual growth rate (real terms) in per capita health spending, 2015-2024 (or nearest year)



Note: The EU average is unweighted. Growth rates and time periods may have been adjusted to take account of breaks in series.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026); WHO Global Health Expenditure Database.

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Health expenditure in relation to GDP

The resources that a country allocates to healthcare compared to the size of the overall economy vary over time due to differences in both the growth of health spending and overall economic growth. During the 1990s and early 2000s – up until the financial and economic crisis of 2008 – EU countries generally saw health spending outpace the rest of the economy, leading to an almost continual rise in the ratio of health expenditure to gross domestic product (GDP). In recent years, the COVID-19 pandemic and the cost-of-living and energy crises led to further adjustments in this ratio.

In 2024, EU countries allocated 10.2% of their GDP to health on average (Figure 5.3). This was slightly above the ratio seen in 2023 but remained below the peak of 2020 and 2021, when the share reached 10.8%. The 2024 ratio remains slightly above the pre-pandemic level of 2019, when EU countries were dedicating around 9.8% of their economic output to health. Preliminary estimates for 2025 suggest a further increase of this ratio to 10.3%, mainly driven by sluggish economic growth. In 2024, Germany spent the most on health, equivalent to 12.2% of its GDP – followed by Austria (11.7%) and France (11.3%). A group of 15 EU countries allocated between 8% and 10% of their GDP to health, while spending in Luxembourg, Romania, Ireland and Hungary constituted less than 7% of their GDP. Outside of the EU, health spending in Switzerland (11.4%) and the United Kingdom (11.1%) was similar to the highest-spending EU countries, while Türkiye allocated the lowest share (4.9%).

Between 2015 and 2019, health expenditure per capita growth was broadly in line with GDP per capita growth in EU countries (Figure 5.4) with both indicators averaging an annual growth rate of around 3% in real terms. Consequently, health expenditure as a share of GDP remained relatively stable over this period in many countries, and slightly below 10% across the EU.

A major disruption of this trend occurred in 2020, as widespread pandemic-related lockdowns and other public health measures severely restricted economic activity, sending many EU economies into pronounced recessions, while health spending soared. In Greece, for example, per capita GDP dropped by 9% in that year, with health expenditure increasing by 6%. 2021 was characterised by a widespread economic recovery in Europe, more than compensating for the preceding downturn. In Croatia, Malta and Ireland, for example, economic output saw double-digit increases in that year. At the same time, the strengthening of public health measures and in particular the rollout of the COVID-19 vaccination campaigns led to unprecedented growth in health spending. Consequently, health spending per capita increased by more than 10% in one-third of all EU countries in 2021. Russia's war on Ukraine, the energy crisis, and supply chain disruptions later led to high inflation and slower-than-expected economic growth in 2022 and 2023 (Morgan and Mueller, 2026[1]). At the same time, as countries moved beyond the acute phase of COVID-19, health spending declined on average by nearly 4% in 2022 and stagnated in 2023. However, in 2024, health spending returned to strong growth, exceeding pre-pandemic growth rates, while GDP growth remained moderate across the EU.

The trajectory in the health expenditure-to-GDP ratio of major EU economies, such as France, Italy, Germany and Spain, has followed this EU-wide trend to different degrees. From 2015 to 2019, the ratio in these countries remained stable, with minor fluctuations not exceeding half a percentage point (p.p.). However, a significant increase was observed in 2020 in all four countries and by as much as 1.6 p.p. in Spain (Figure 5.4). In 2021, this indicator increased further in France and Germany while falling in Italy and Spain. In 2022 and 2023, the health expenditure as a share of GDP declined in all four countries. In 2024, another significant uptick of this indicator was recorded in Germany while it stagnated in the remaining three countries. As a consequence, in 2024, the health expenditure-to-GDP ratio in Germany was 0.8 p.p. above its pre-pandemic level, while in Italy and Spain these ratios stood below their 2019 levels. In France, the 2024 ratio was 0.3 p.p. above its value in 2019.

Definition and comparability

Gross domestic product (GDP) is the sum of final consumption, gross capital formation and net exports. Final consumption includes all goods and services used by households or the community to satisfy their needs. It includes final consumption expenditure of households, general government and non-profit institutions serving households.

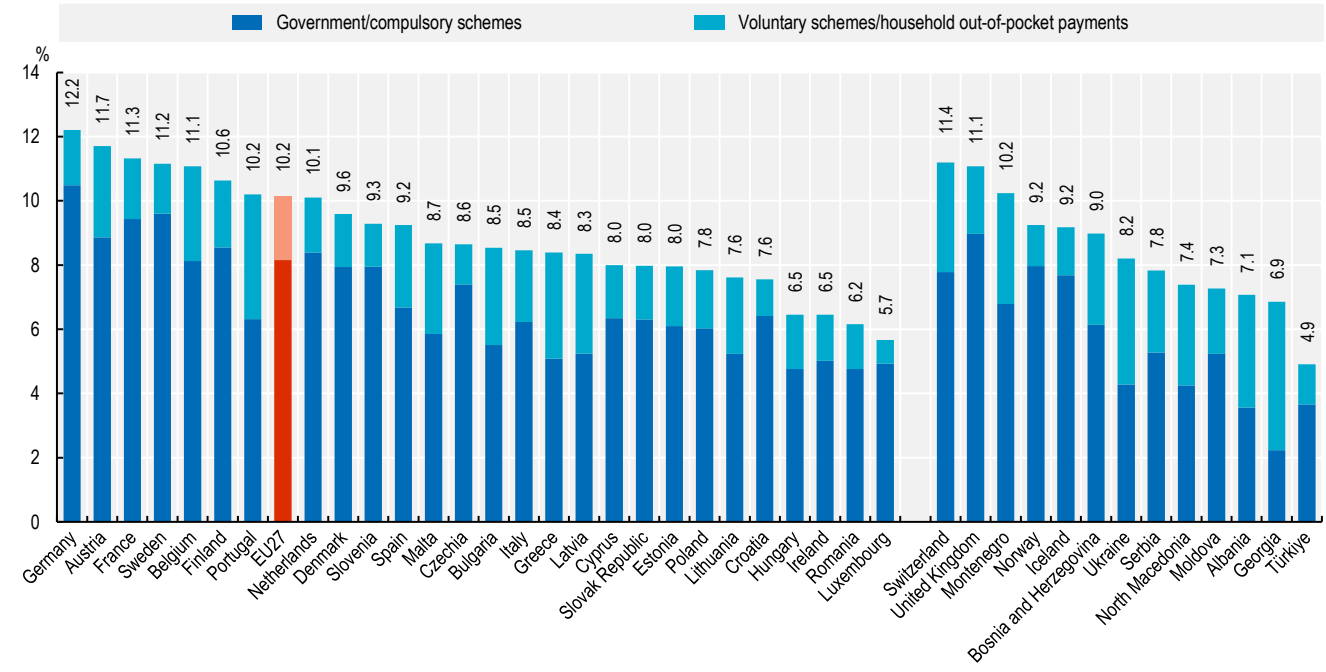
The GDP figures used to calculate the indicator health expenditure to GDP are based on official GDP data available as of mid-June 2026.

In countries such as Ireland and Luxembourg, where a significant proportion of GDP refers to profits exported and not available for national consumption, gross national income (GNI) may be a more meaningful measure than GDP, but for international comparability, GDP is used throughout. In both countries, GDP exceeds GNI substantially, leading to comparatively low health spending-to-GDP ratios.

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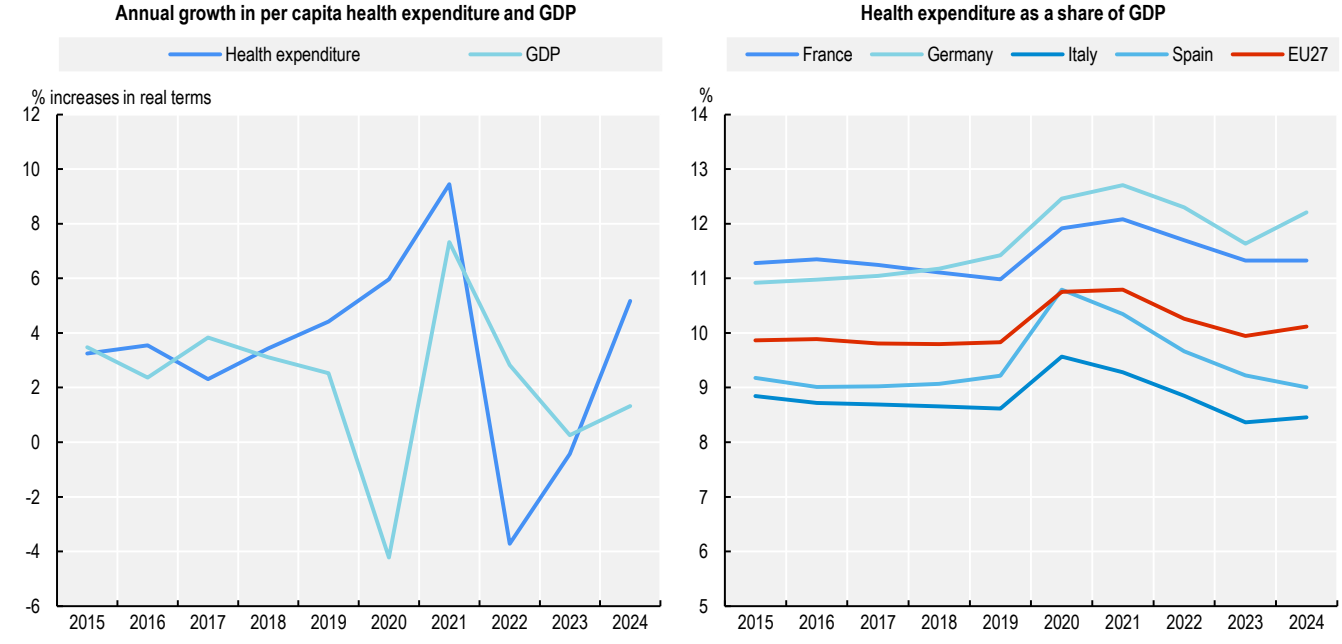
Figure 5.3. Health expenditure as a share of GDP, 2024 (or nearest year)



Note: The EU average is weighted.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026); WHO Global Health Expenditure Database.

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Figure 5.4. Trends in health expenditure in EU27 and selected countries, 2015-2024



Note: The EU average is weighted.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026) and https://data-explorer.oecd.org/s/5j1 (accessed on 20 July 2026); Eurostat, https://doi.org/10.2908/NAMA_10_GDP (accessed on 20 July 2026).

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Financing of health expenditure

There is a variety of financing arrangements through which individuals or groups of the population obtain healthcare – in some of these arrangements participation is automatic or compulsory, while in others it is at people's discretion. Government financing schemes, on a national or sub-national basis or for specific population groups, entitle individuals to healthcare based on residency. The other main method of financing is some form of compulsory health insurance (managed through public or private entities). Spending by households (out-of-pocket spending), both on a fully discretionary basis or part of some cost-sharing arrangement, can constitute a significant part of overall health spending. Finally, voluntary health insurance, in its various forms, can also play an important funding role in some countries.

Compulsory or automatic coverage, through government schemes or health insurance, forms the bulk of healthcare financing across the EU. Taken together, 80% of total health spending in the EU was financed through these schemes in 2024 (Figure 5.5). In Sweden and Denmark, central, regional, or local government schemes covered around 85% of all health spending. In France, Germany, Luxembourg, Slovenia, Croatia and the Netherlands, the main purchasers were compulsory health insurance schemes that financed more than three-quarters of all health spending (in these countries, the various levels of governments play no major role as financing schemes). In Slovenia, this reflects an important policy change as the country abolished complementary voluntary health insurance and introduced a fixed compulsory contribution within the compulsory health insurance scheme in 2024 (OECD/European Observatory on Health Systems and Policies, 2025[1]). As a consequence, social health insurance schemes absorbed most spending previously financed by voluntary health insurance.

Out-of-pocket payments accounted for 16% of all health spending in 2024 on average across EU countries, with households bearing more than 30% of all spending in Bulgaria, Greece and Latvia. Outside the EU, this figure is even higher in countries such as Georgia, Ukraine and Albania, where out-of-pocket payments made up 40-60% of all health spending. By contrast, the share of out-of-pocket spending was only around 9% in Luxembourg and Croatia and 10% in France. Some countries have reduced the burden on households in recent years. Cyprus, for example, has made substantial investments to increase public healthcare coverage and consequently the out-of-pocket share dropped from 44% in 2018 to 17% in 2024 (OECD/European Observatory on Health Systems and Policies, 2025[2]). In Ireland and Portugal, voluntary health insurance financed around 10% of health spending, substantially above the EU average of 4%.

To pay for healthcare services, financing schemes rely on different types of revenues. In 2024, public sources (which includes government transfers and social insurance contributions) funded 77% of all health spending on average across EU countries. Where government financing schemes are the principal financing mechanism, such as in Sweden and Denmark, government transfers fund 83% or more of healthcare expenditure. In countries such as Croatia, Poland, Slovenia and Germany, the majority of public funding refers to social insurance contributions payable by employers and employees. In some countries with social health insurance, government schemes do not play a big role as purchasers of health services but provide transfers and subsidies to other schemes. This is the case in Belgium, Czechia and Hungary, where government transfers to social health insurance schemes constitute an important funding source.

Public budgets finance many different services and healthcare competes for resources with other sectors such as education, defence, and housing. In this context, health spending accounted for an average of 15% of total government expenditure across the EU in 2024 (Figure 5.6). In Ireland and Germany, healthcare made up one-fifth of public spending. In Hungary, Greece, Luxembourg and Romania, by contrast, this figure was only around 10-11%. Since 2015, these shares have risen in most EU countries, with the share of total government expenditure allocated to health increasing by around 1.7 p.p. on average. This increase was particularly pronounced in Cyprus and Slovenia as a result of the reforms mentioned above.

Definition and comparability

The financing of healthcare can be analysed from the point of view of financing schemes (financing arrangements through which health services are paid for and obtained by people such as government schemes, social health insurance, voluntary health insurance, out-of-pocket payments) and types of revenues that financing schemes have to raise to pay for healthcare for the population these schemes are covering (e.g. government transfers, social insurance contributions, private insurance premium payments).

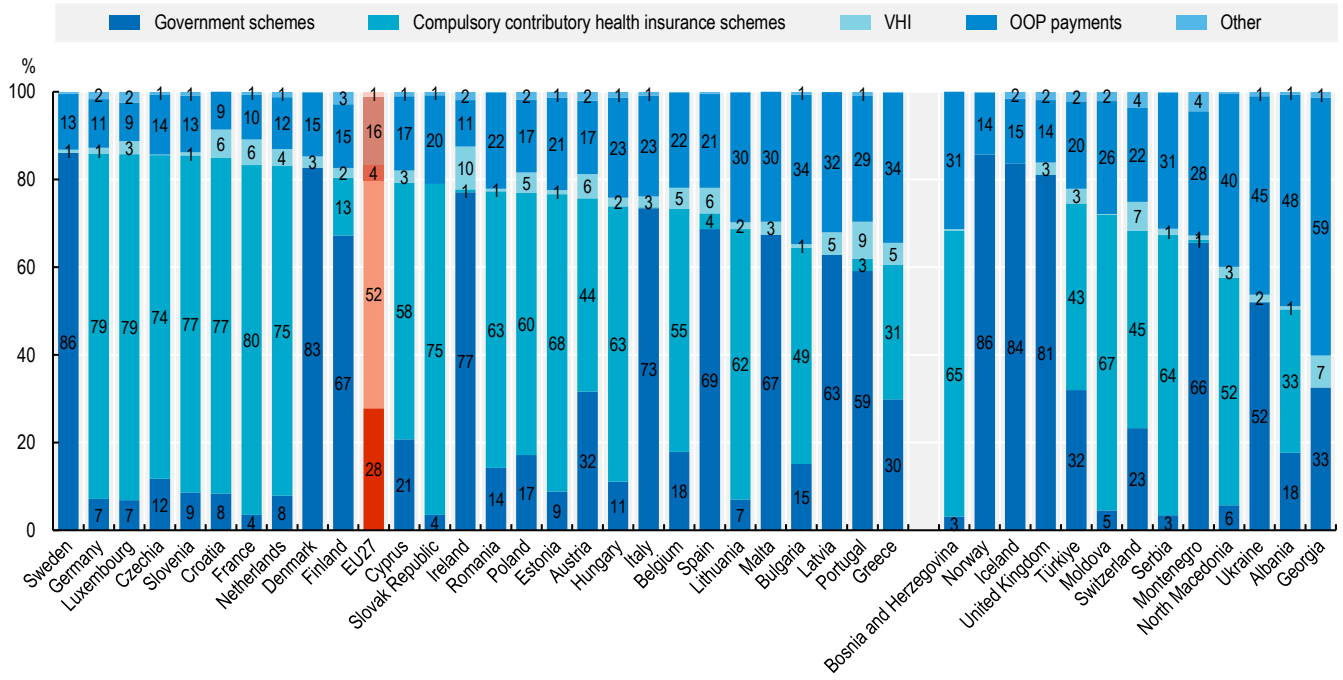
Total government expenditure, as defined in the System of National Accounts, includes as major components: intermediate consumption, compensation of employees, interest, social benefits, social transfers in kind, subsidies, other current expenditure and capital expenditure payable by central, regional and local governments as well as social security funds.

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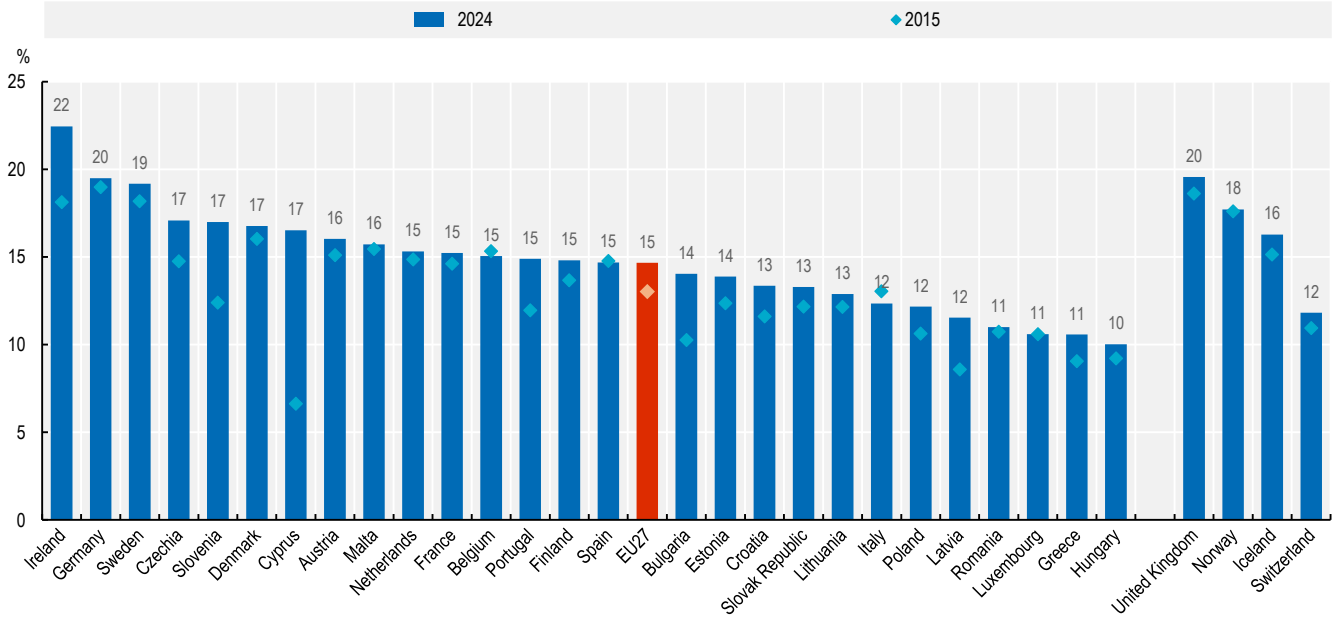
Figure 5.5. Health expenditure by type of financing, 2024 (or nearest year)



Note: Countries are ranked by government schemes and compulsory health insurance as a share of health expenditure. The EU average is weighted. The "Other" category refers to charities, employers, foreign and undefined schemes. VHI refers to voluntary health insurance. OOP refers to out-of-pocket payments.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026); WHO Global Health Expenditure Database.

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Figure 5.6. Health expenditure from public sources as a share of total government expenditure, 2015 and 2024 (or nearest year)



Note: For those countries without information on sources of revenues, data from financing schemes are used. The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5iz, https://data-explorer.oecd.org/s/5j8 (both accessed on 2 October 2026) and https://data-explorer.oecd.org/s/5j9 (accessed on 20 July 2026); Eurostat, https://doi.org/10.2908/GOV_10A_MAIN (accessed on 20 July 2026).

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Health expenditure by type of service

Several factors, including disease burden, system priorities and costs, determine the allocation of resources across different types of health services in countries. Across the EU, curative and rehabilitative care make up most of health spending, primarily delivered through inpatient and outpatient services, which jointly accounted for 59% of health spending in 2024. About one-fifth of health spending (18%) is directed toward retail medical goods (mostly pharmaceuticals), followed by 16% on health-related long-term care. The remaining 7% is spent on collective services such as prevention and public health, as well as administration (Figure 5.7).

Across the EU, 30% of all health spending is allocated to (curative and rehabilitative) outpatient care, which covers services provided to patients who are not formally admitted to a facility and do not stay overnight, and encompasses generalist and specialist outpatient services, dental care, homecare, and ancillary services. In Portugal, Estonia and Finland, spending on these types of services accounted for more than 40% of all health spending. By contrast, Greece, Romania and Bulgaria allocated only around one fifth of their overall health resources to outpatient care.

Inpatient (curative and rehabilitative) care involves a formal admission into a healthcare facility, usually a hospital, for treatment expected to require an overnight stay. In 2024, inpatient services (including day care) made up around 29% of all health spending across the EU. By exceeding 40%, Cyprus, Romania and Greece recorded the highest share of total health spending allocated to inpatient care. Greece has recently implemented measures to move away from a historically hospital-centric system such as the "Personal Doctor" scheme (OECD/European Observatory on Health Systems and Policies, 2025[1]). At the other end of scale, Nordic countries such as Finland, Denmark and Sweden along with the Netherlands and Malta, allocated only about 20% of all health spending to inpatient care.

Retail medical goods (mainly pharmaceuticals) consumed in outpatient settings represent the third largest spending category, at around 18% of all health spending. Differences in prices for international goods such as pharmaceuticals tend to show less variation across countries than for locally produced services. As a result, spending on medical goods in countries with lower incomes often accounts for a higher share of health spending relative to services. For example, across the EU, spending on medical goods accounted for around 30% of all health spending in Bulgaria, the Slovak Republic and Greece. In comparison, Denmark, Ireland and the Netherlands spent only around 10% of their total health expenditures on medical goods.

While spending on long-term care services accounted for approximately one-sixth of total health spending on average in 2024 across the EU, some countries with formal long-term care systems – such as the Netherlands, Sweden and Norway – allocated more than a quarter of their health resources to long-term care. By contrast, this share is much smaller in countries relying on more informal arrangements for long-term care. Consequently, in the Slovak Republic, Greece, Cyprus and Croatia, the share of long-term care was below 5%.

Despite notable year-on-year differences in the spending trajectory, compound annual growth rates are very similar for key health services when comparing the 2015-2019 and the 2019-2024 period across EU countries (Figure 5.8). Inpatient and long-term care display similar annual average spending growth rates over both periods, at around 3% and 4%, respectively. Very little change can also be observed for retail pharmaceuticals expenditure, with annual growth at below 2% on average. Annual increases for spending on outpatient care slowed down during and after the pandemic, from 4.7% (2015-2019) to 3.3% (2019-2024) – mainly because growth in generalist care was more limited than growth in specialist care. The average annual increase of administrative spending between 2019 and 2024 was marginal. Prevention is the service category that has had the most exceptional spending trajectory in the 2019-2024 period. Two years of strong double-digit growth in 2020 and 2021 were followed by two years of substantial spending declines as countries phased out COVID-19 related public health measures in 2022 and 2023. Nevertheless, with an average of 4.6% compound annual growth per capita between 2019 and 2024, it is still the category displaying the strongest growth in this period.

Definition and comparability

The System of Health Accounts (OECD/Eurostat/WHO, 2017[2]) defines the boundaries of the healthcare system from a functional perspective, with healthcare functions referring to the different types of healthcare services and goods. Current health expenditure comprises personal healthcare (curative and rehabilitative care, long-term care, ancillary services and retail medical goods) and collective services (prevention and public health services as well as health administration). Curative, rehabilitative and long-term care can also be classified by mode of provision (inpatient, day care, outpatient and home care). In some countries, ancillary services consumed or medical goods used during an inpatient stay may be allocated into other categories due to data limitations.

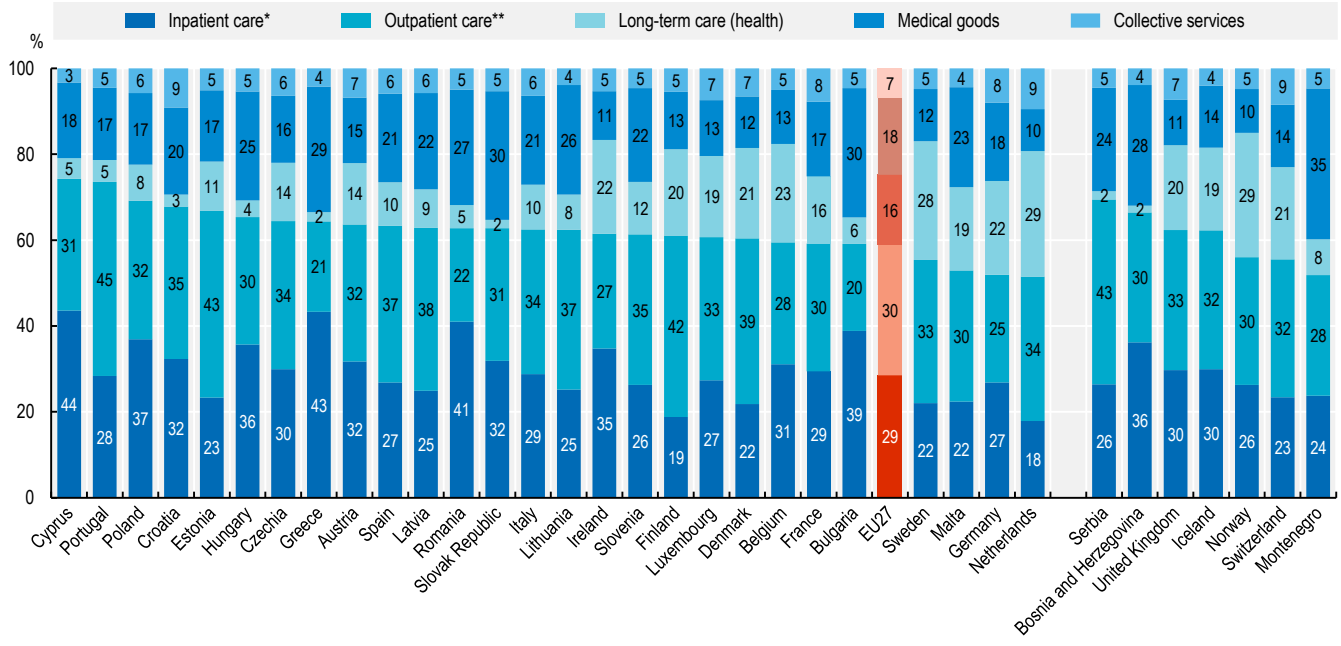
Long-term care (health) spending may include costs for social services in some countries (e.g. Cyprus and Germany), resulting in an overestimation in the share of long-term care (health) but also in health expenditure overall.

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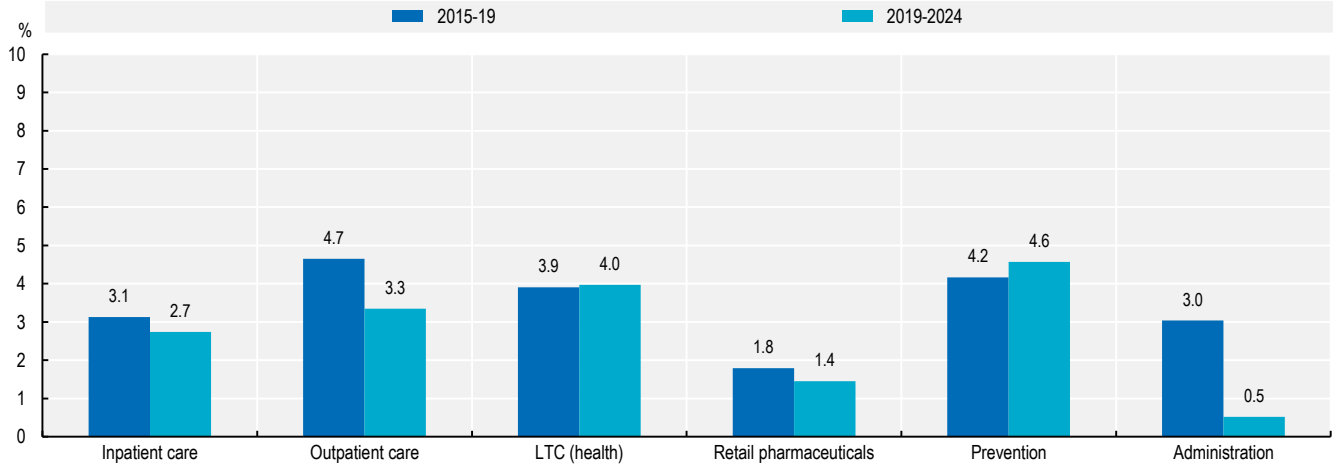
Figure 5.7. Health expenditure by type of service, 2024 (or nearest year)



Note: Countries are ranked by curative-rehabilitative care as a share of health expenditure. The EU average is weighted. * Refers to curative-rehabilitative care in inpatient and day care settings. ** Includes home care and ancillary services and can be provided in ambulatory care settings or hospitals.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026).

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Figure 5.8. Average annual growth rates of health expenditure per capita for selected goods and services, EU average, in real terms, 2015-2024



Note: The EU average is unweighted. Pharmaceuticals include other medical non-durables (e.g. medical face masks).
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026).

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Expenditure on primary healthcare

Effective primary healthcare (PHC) is the cornerstone of an efficient, people-centred, and equitable health system. Strengthening PHC has been identified as an effective way to improve care co-ordination and health outcomes and reduce wasteful spending, by limiting unnecessary hospitalisations and associated costs in hospitals and other parts of the health system.

In 2024, PHC (including dental care) represented 14% of all health spending on average across EU countries, ranging from 10% or less in the Netherlands, Luxembourg, Cyprus and Romania to around 20% in Lithuania, Estonia and Finland (Figure 5.9). Compared to a decade ago, this share has remained largely unchanged, indicating that spending on PHC has been growing in line with overall health spending. This suggests that PHC has generally not been the main focus of targeted investment in the health sector.

Regarding its composition, almost half of PHC spending across EU countries is on general outpatient care services, and 40% on dental care. Prevention services and home visits by general practitioners (GPs) and nurses account for a smaller proportion of spending on PHC. Spending on general outpatient care provided by ambulatory providers was particularly high in Poland, Slovenia and Bulgaria, reaching around 10% of overall health spending. In Germany, France, Luxembourg, Austria and Czechia, spending on general outpatient care was much lower overall, accounting for 5% of health spending or less.

In Lithuania and Estonia, the large share of PHC in overall health spending can be explained by spending on dental care. In both countries, dental care accounts for around 10% of their total health budgets – twice the EU average. This compares with the Netherlands, Poland, Belgium, Romania and Cyprus where dental care spending represents only 4% or less of total health spending.

Total spending on prevention (referring to services and public health interventions provided by ambulatory care providers and in other settings) has remained relatively stable at 3% of overall health spending across EU countries in the decade leading up to the pandemic, but increased significantly with the onset of the COVID-19 crisis. By 2021, this share had climbed to 6.3%, reflecting substantial investments in public health measures related to fighting the spread of the COVID-19 pandemic. However, much of the pandemic-induced spending growth in 2021 was related to time-limited emergency COVID-19 measures rather than long-term planned investments into population health. With public health emergency measures phased out after the acute phase of the pandemic, the share of preventive spending dropped in subsequent years and, by 2024, returned to levels similar to years before the pandemic.

The share of prevention ranged from around 5% of total health spending in the Netherlands, Finland and Italy to less than 2% in Poland, Belgium, Cyprus, Romania and Malta (Figure 5.10). That said, a recent analysis suggests that in many EU countries spending on prevention is underestimated (Morgan, Mueller and Ramachandran, 2026[1]). Yet, the fact that the position of prevention and public health in overall health budgets has changed little after the experience of the COVID-19 pandemic may suggest that health systems remain vulnerable to a major health crisis, with additional investments still needed to strengthen countries' health system resilience and their agility to respond to pandemics and other evolving threats (OECD, 2023[2]).

Definition and comparability

The OECD has developed a methodological framework based on the System of Health Accounts to estimate primary healthcare spending on which the results presented here are based (Mueller and Morgan, 2018).

The following functions are identified as *basic care services*: (i) General outpatient curative care (e.g. routine visits to a GP or nurse for acute or chronic treatment); (ii) Dental outpatient curative care (e.g. regular control visits as well as more complex oral treatment); (iii) Home-based curative care (mainly referring to home visits by GPs or nurses); (iv) Preventive care services (e.g. immunisation or health check-ups).

Where *basic care services* are provided by *ambulatory healthcare providers* such as doctors, dentists, ambulatory healthcare centres and home healthcare service providers, this may be considered a proxy for *primary healthcare*, and this definition is used here. Yet primary healthcare is a complex concept, and no definitive consensus exists on which services or providers should be included.

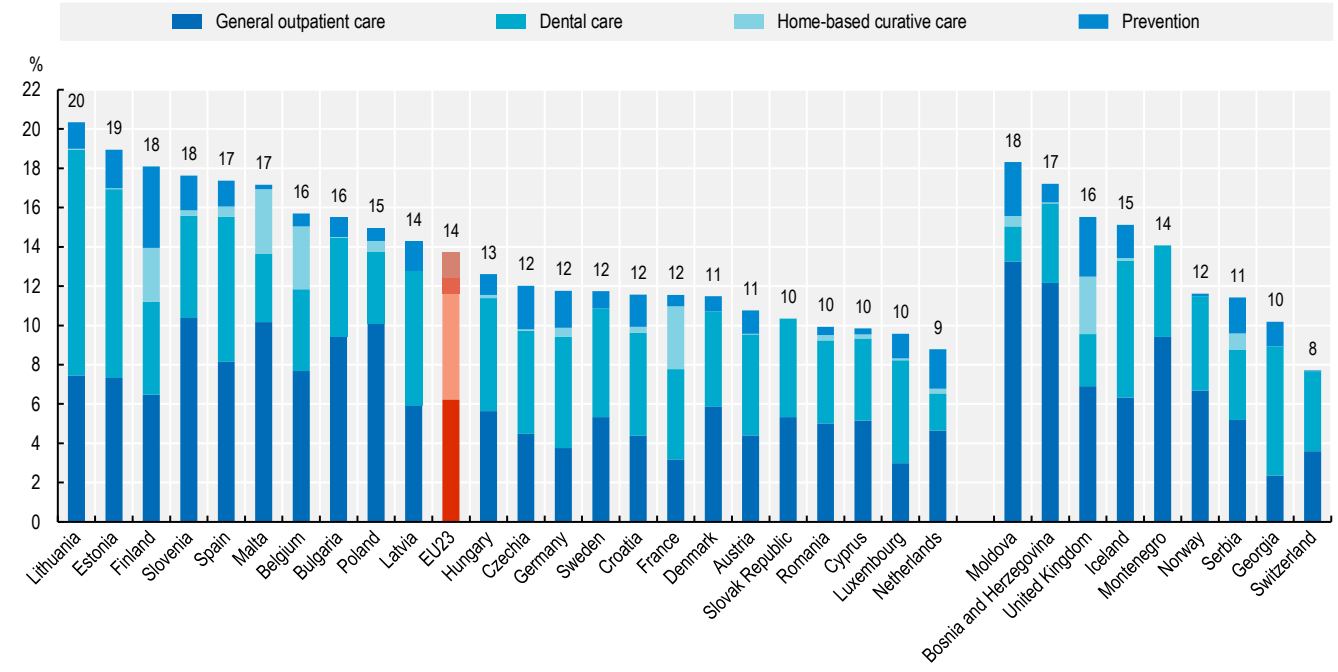
Comparability for this indicator is still limited and primarily depends on countries' capacity and methods used to distinguish between general outpatient and specialist services.

References

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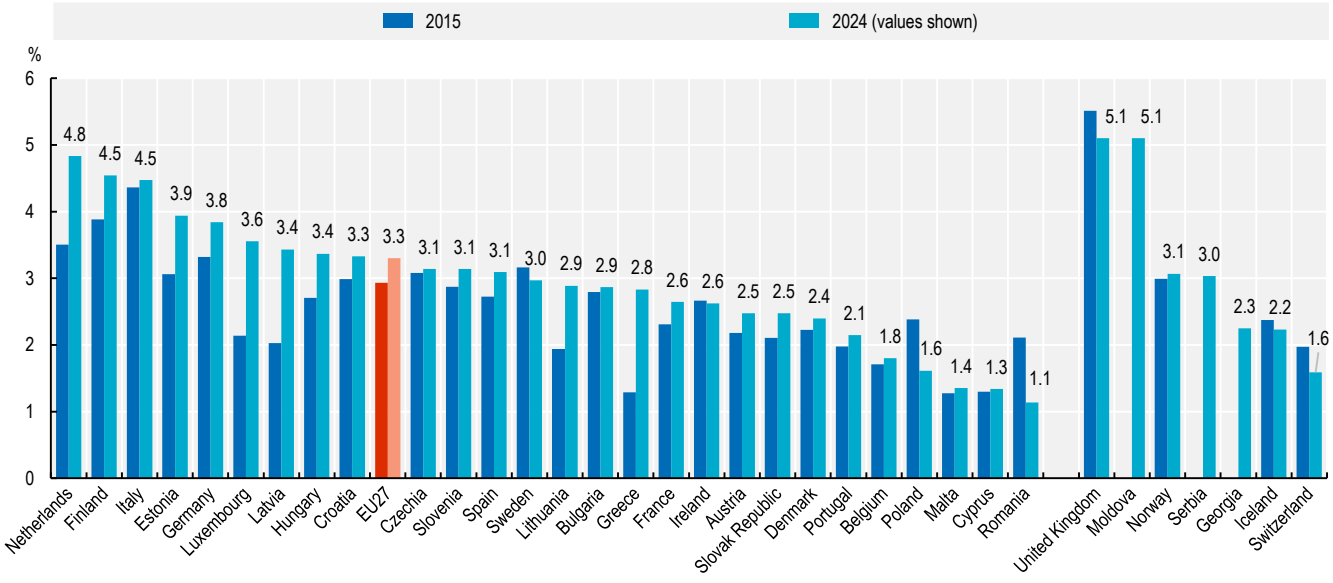
Figure 5.9. Spending on primary healthcare services as share of current health expenditure, 2024



Note: The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026).

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Figure 5.10. Share of spending on prevention in current health expenditure, 2015-2024



Note: The EU average is weighted.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026).

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Health expenditure by provider

Healthcare is delivered by a wide variety of providers, ranging from hospitals and medical practices to ambulatory facilities and retailers, which impacts expenditure patterns for various healthcare goods and services. Analysing health spending by provider can be particularly useful when considered alongside the functional breakdown of health expenditure, giving a fuller picture of the organisation of health systems.

The organisational differences in healthcare delivery across EU countries can be substantial, resulting in wide variations in the distribution of health spending across providers. At 37%, activities delivered in hospitals accounted for the largest proportion of health system funding across EU countries. This average was substantially exceeded in Croatia, Cyprus and Spain, where hospital activities received around half of all financial resources (Figure 5.11). On the other hand, Germany, Lithuania and Luxembourg only allocated around 30% of their total health budgets to hospitals.

After hospitals, the second largest provider category is ambulatory providers. This covers a wide range of facilities with most spending related to either medical practices including GPs and specialists (as in Austria, France and Germany) or ambulatory healthcare centres (as in Finland, Ireland and Sweden). Across EU countries, care delivered by ambulatory providers accounts for around a quarter of all health spending on average. Within this, around two-thirds of all spending relate to GP and specialist practices and ambulatory healthcare centres, and roughly one-fifth relate to dental practices. Overall, one-third was spent on ambulatory providers in Belgium, Finland, Luxembourg, Lithuania and Germany, but this share was below 20% in Croatia, Bulgaria, Greece, Romania and the Slovak Republic.

Other main provider categories include retailers (mainly pharmacies), which accounted for one-sixth of all health spending across EU countries and residential long-term care facilities (mainly providing inpatient care to dependent people), to which one in ten euros spent on health can be attributed. The latter provider group plays a much more central role in the health systems of the Netherlands, Malta, Sweden and Finland than elsewhere.

Across EU countries, there is wide variation in the range of activities that may be performed by the same category of provider, reflecting differences in the organisation of health systems. These cross-country differences are most pronounced in the hospital sector (Figure 5.12). Although inpatient curative and rehabilitative care define the primary activity of hospitals (accounting for 70% of all hospital spending on average throughout the EU), they can also be important providers of outpatient care in many countries – for example, through accident and emergency departments, specialist outpatient units, or laboratory and imaging services. In Finland and Denmark, outpatient care accounts for more than half of hospital expenditure, since specialist treatment typically occurs in hospital outpatient departments. In Bulgaria, Germany and Greece, on the other hand, spending in hospitals is heavily concentrated in inpatient care (over 90%), with very little outpatient and day care spending. Over recent decades, many countries have shifted some inpatient services to day care departments, aiming to achieve efficiency gains and a reduction in waiting times. As a result, day care services account for 15% or more of all hospital expenditures in Cyprus, Croatia, Belgium, Ireland and Portugal.

Definition and comparability

The universe of healthcare providers is defined in the System of Health Accounts (OECD/Eurostat/WHO, 2017[1]) and encompasses primary providers, i.e. organisations and actors that deliver healthcare goods and services as their primary activity, as well as secondary providers for which healthcare provision is only one among a number of activities.

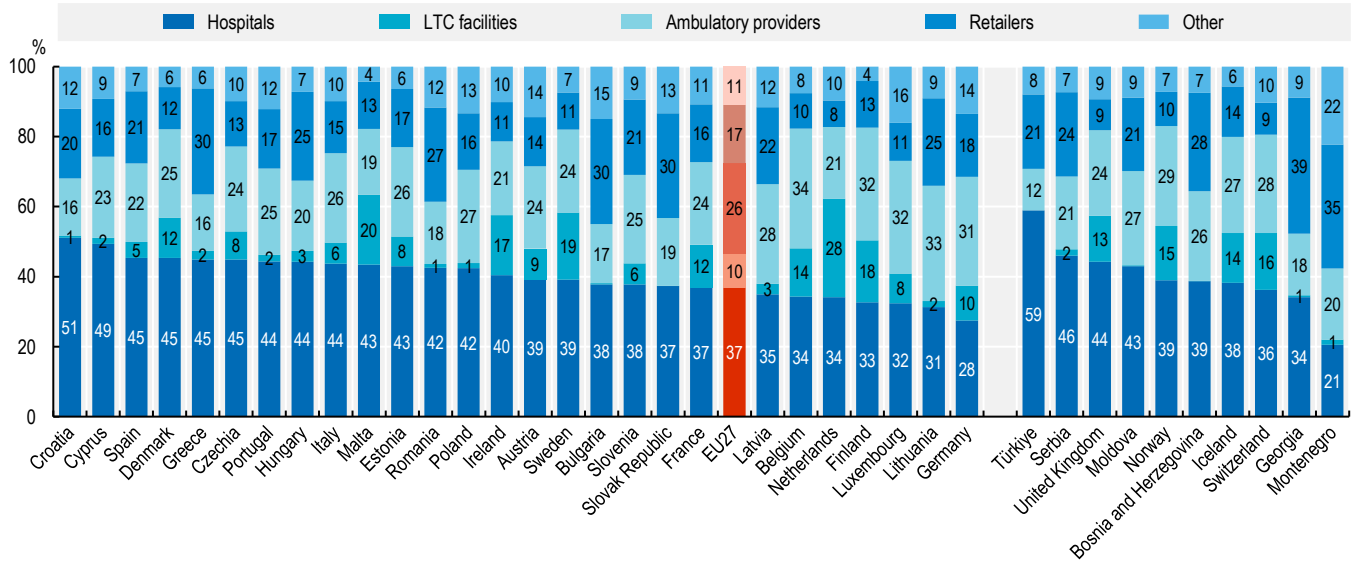
The main categories of primary providers are hospitals (acute and psychiatric), residential long-term care facilities, ambulatory providers (practices of GPs and specialists, dental practices, ambulatory healthcare centres, providers of home healthcare services), providers of ancillary services (e.g. ambulance services, laboratories), retailers (establishments whose primary activity is the retail sale of medical goods, e.g. pharmacies), and providers of preventive care (e.g. public health institutes). Secondary providers include residential care institutions whose main activities might be the provision of accommodation but also provide nursing supervision as a secondary activity, supermarkets that sell over-the-counter medicines, or facilities that provide healthcare services to a restricted group of the population such as prison health services. Secondary providers also include providers of healthcare system administration and households as providers of home healthcare.

Health facilities are classified into a provider category based on their principal activity. Depending on the organisation of healthcare in a country, there may be challenges to clearly distinguish services provided by outpatient units and inpatient units if they are part of an integrated service delivery model.

References

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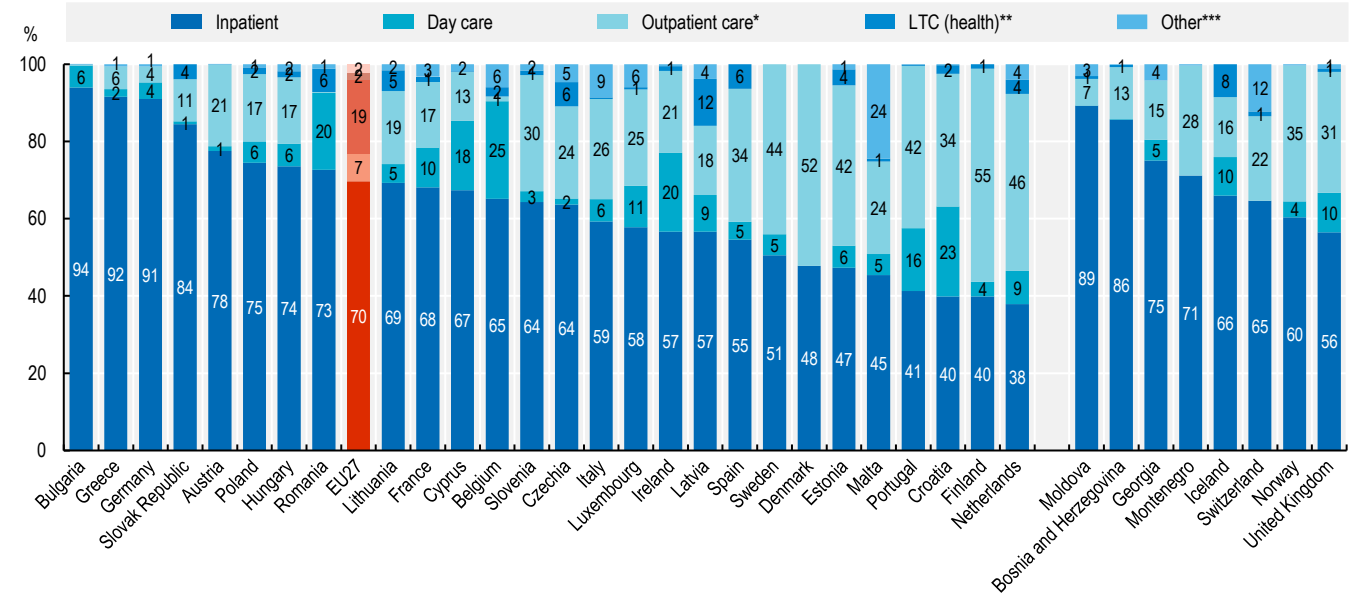
Figure 5.11. Health expenditure by provider, 2024 (or nearest year)



Note: The EU average is weighted.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026).

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Figure 5.12. Hospital expenditure by type of service, 2024 (or nearest year)



Note: The EU average is weighted. *Refers to curative-rehabilitative care provided to outpatients or at their homes and ancillary services. **Refers to LTC services for people with LTC needs. ***Includes medical goods and collective health services.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026).

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Pharmaceutical expenditure

Pharmaceutical care evolves over time as a result of novel medicines entering the market. While new medicines may offer alternatives to existing treatments, and in some cases, the prospect of treating conditions previously considered incurable, costly innovations can have major implications for overall healthcare budgets. Across the EU, pharmaceuticals are an important cost component, with those dispensed by pharmacies and other retail outlets ("retail pharmaceuticals") accounting for around one-seventh (14%) of all health spending.

In 2024, EU countries spent on average EUR 550 per capita on retail pharmaceuticals (including other medical non-durables) but with substantial differences across countries (Figure 5.13). A variety of factors influence the level of per capita spending on retail pharmaceuticals, including distribution, prescribing and dispensing, pricing and procurement policies, and patterns of uptake of novel and generic medicines. With EUR 808 per capita, retail pharmaceutical spending was highest in Germany and nearly three times higher than in Denmark or the Netherlands, where a large number of medicines are dispensed as part of inpatient or outpatient treatments outside traditional retail channels, and hence not included in the retail pharmaceutical figures. Pharmaceutical spending was also high in Bulgaria and Malta, where per capita spending was almost one-third above the EU average. By contrast, in Poland and Estonia, per capita pharmaceutical spending was almost 50% below the EU average.

Prescription medicines account for almost three-quarters of spending on retail pharmaceuticals (including other medical non-durables) in the EU, with over-the-counter medicines (i.e. medicines that do not require a prescription from a physician and are generally paid out of patients' pockets) and other medical non-durables making up the remaining part. Exceptions to this spending pattern can be found in Poland and Lithuania, where over-the-counter medicines represent more than half of all retail pharmaceutical spending.

In most EU countries, retail pharmaceuticals are predominantly financed by public payers. On average, around 70% of the total pharmaceutical retail bill in the EU is covered by government and compulsory insurance schemes (Figure 5.14). In 2024, public coverage was highest in Germany and France where over 80% of all pharmaceutical retail spending was publicly financed. Meanwhile, public coverage for retail pharmaceuticals was below 40% in Bulgaria, Denmark and Poland. Voluntary health insurance (VHI) generally covers a modest part of spending on retail pharmaceuticals. Its share was highest in France and Denmark but even there, VHI only financed 6% of all retail pharmaceutical spending.

Retail pharmaceutical spending only gives a partial picture of the total costs of pharmaceuticals in the health system. Spending on medicines in the hospital sector and other non-retail settings, where costs of medicines are included in overall treatment costs, can be significant – typically accounting for 20% or more on top of retail spending (Morgan and Xiang, 2022[1]). In Denmark, the share of pharmaceutical spending occurring in non-retail settings is much higher, standing at 43% of total pharmaceutical spending in 2024. Since financial coverage for pharmaceuticals consumed in non-retail settings is much higher than for retail pharmaceuticals, the public coverage of total pharmaceutical spending is substantially above the percentage for the retail sector only.

Over the last decade, hospital pharmaceutical spending has grown substantially, driven by new high-cost treatments in specialties such as oncology and immunology. While hospital and other non-retail pharmaceutical spending increased more rapidly than retail medicines in most countries, with the highest growth rates in Germany, Spain and Czechia, the reverse trend can be observed in Denmark and Switzerland (Figure 5.15). In Denmark, patent expirations and effective price regulations have helped contain expenditure growth in both the retail and hospital sectors (OECD/European Observatory on Health Systems and Policies, 2025[2]).

Definition and comparability

Pharmaceutical expenditure covers spending on prescription medicines and self-medication (often referred to as over-the-counter products). Some countries cannot report a breakdown, and their data may include medical non-durables (such as first aid kits, hypodermic syringes and facemasks). This typically leads to an overestimation by 5-10%. Retail pharmaceuticals are those provided outside hospital care or during an outpatient care episode, dispensed by a retail pharmacy or bought from a non-specialist retailer such as a supermarket, and where the prices should include wholesale and retail margins and value added tax. Comparability issues exist regarding the administration and dispensing of pharmaceuticals for hospital outpatients. In some countries, the costs are included under curative care, in others, under pharmaceuticals.

Hospital and other non-retail pharmaceuticals include drugs administered or dispensed during an episode of care in hospital or in another healthcare setting. The costs of pharmaceuticals consumed in hospitals and other healthcare settings are reported as part of the costs of inpatient, outpatient or day-case treatment. Non-retail pharmaceuticals also include the costs of vaccines that are consumed as part of a vaccination campaign and that are not procured via retailers.

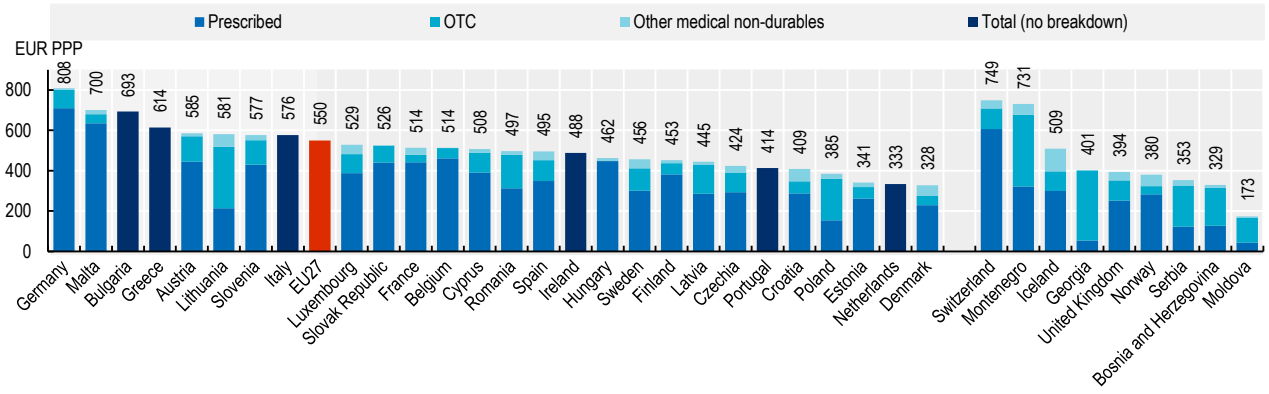
Total pharmaceutical spending refers to "net" spending: it is adjusted for rebates paid by manufacturers, wholesalers or pharmacies.

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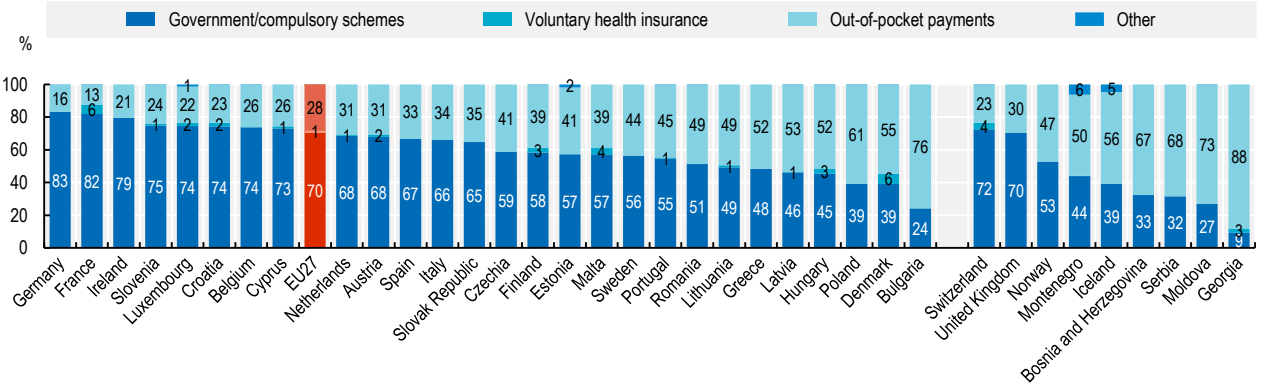
Figure 5.13. Expenditure on retail pharmaceuticals and medical non-durables per capita, 2024 (or nearest year)



Note: The EU average is weighted. OTC refers to over-the-counter medicines.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026).

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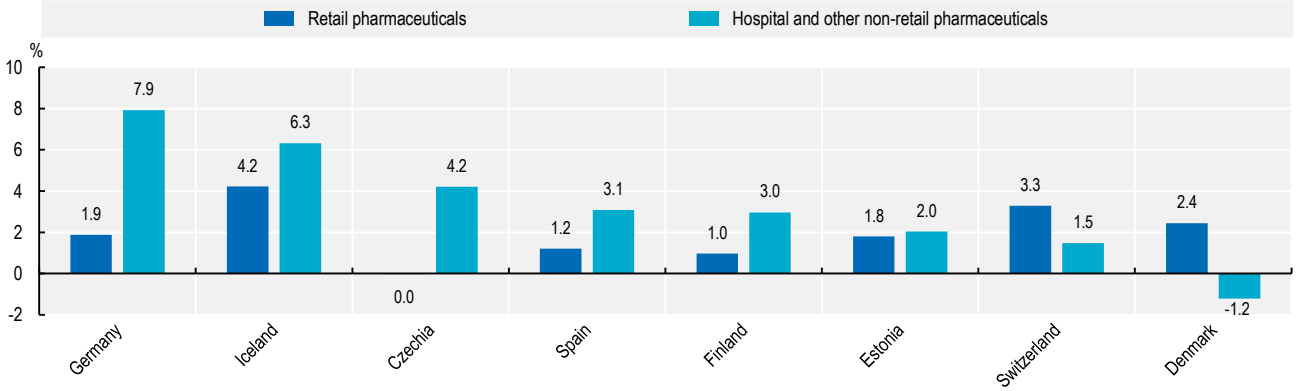
Figure 5.14. Expenditure on retail pharmaceuticals and medical non-durables by type of financing, 2024 (or nearest year)



Note: The EU average is weighted. The category "Other" includes non-profit-schemes, enterprises and rest of the world.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026).

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Figure 5.15. Annual average growth in retail and hospital pharmaceutical expenditure, in real terms, 2015-2024 (or nearest years)



Note: Hospital and other non-retail pharmaceutical expenditure cover all other non-retail settings in which pharmaceuticals can be consumed.
Source: OECD, https://data-explorer.oecd.org/s/5iz (accessed on 2 October 2026).

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6 Effectiveness: Quality of care and patient experience

This chapter starts with a broad indicator of avoidable mortality, providing a general assessment of the effectiveness of public health and healthcare systems in reducing premature deaths. Four leading causes of preventable mortality – lung cancer, ischaemic heart disease, alcohol-related deaths and chronic obstructive pulmonary disease – accounted for almost half of all preventable deaths in the EU in 2023. Vaccination remains one of the most effective prevention interventions, but most EU countries still fall short of immunisation targets for childhood measles, human papillomavirus among adolescents and influenza among adults aged 65 and over. Patients with chronic conditions generally report positive experiences of primary care, although care co-ordination is less favourable and varies across countries. Cancer incidence has increased over the past decade and is projected to rise further due to population ageing and exposure to other risk factors. Breast cancer screening participation has stagnated or declined in many EU countries and recent data point to decreases in the early diagnosis of cervical cancer in several countries. Cancer survival has improved, but substantial cross-country differences persist. Avoidable hospital admissions for chronic conditions have declined across many EU countries, reflecting improvements in disease management and primary care. However, considerable variation remains in admissions, readmissions and post-discharge outcomes, highlighting continuing challenges in care integration and continuity for people with chronic conditions.

Avoidable mortality (preventable and treatable)

Indicators of avoidable mortality capture premature deaths (before age 75) from causes considered to be preventable through effective public health measures or treatable through timely and effective healthcare. In 2023, over one in five deaths (21% or 1.03 million deaths) across the EU were considered avoidable. Of these, about 655 000 deaths could have been prevented through effective primary prevention or other public health measures (i.e. measures taken before the onset of disease or injury to reduce its occurrence), while about 376 000 could have been avoided through more effective and timely healthcare interventions (i.e. measures taken after the onset of disease to reduce case-fatality). Avoidable mortality is influenced by a range of factors, including healthcare, as well as behavioural and socio-economic determinants.

In 2023, lung cancer was the largest cause of preventable mortality, accounting for 21% of preventable deaths in people under age 75. Four leading causes of preventable mortality – lung cancer, ischaemic heart disease, alcohol-related deaths and chronic obstructive pulmonary disease (COPD) – accounted for nearly half (46%) of all preventable deaths in the EU (Figure 6.1). Other major causes of preventable mortality include accidents, stroke and suicide. The four most common causes of treatable mortality – ischaemic heart disease, colorectal cancer, breast cancer and stroke – accounted for more than half of all deaths from treatable causes (55%). Deaths from some causes, such as ischaemic stroke, are allocated equally between preventable and treatable categories (see Definition and Comparability box).

The rate of preventable mortality in 2023 was lowest in Cyprus, Italy and Malta, as well as Switzerland, at less than 105 per 100 000 population under age 75, more than 30% below the EU average of 151 per 100 000. Sweden, Luxembourg and Spain also had low preventable mortality rates, more than 25% lower than the EU average. In contrast, preventable mortality was around two times higher than the EU average in Hungary and Latvia (Figure 6.2).

Differences in preventable mortality across countries in 2023 were driven by cardiovascular diseases, alcohol-related causes and lung cancer. Preventable mortality from ischaemic heart disease exceeded 50 deaths per 100 000 population in Latvia, Lithuania and Hungary, more than three times the EU average, while mortality from stroke was particularly high in Bulgaria, Latvia and Romania. Alcohol-related mortality rates were more than twice the EU average in several Central and Eastern European countries, reaching nearly 50 deaths per 100 000 in Estonia. Lung cancer remained another major contributor, with mortality rates almost twice the EU average in Hungary and at least 30% above the EU average in Croatia and Poland. Much of this can be attributed to differences in the prevalence of preventable risk factors, such as smoking and alcohol consumption (see indicators on “Tobacco smoking and electronic cigarette use among adults” and “Alcohol consumption among adults” in Chapter 4).

Preventable mortality in the EU decreased by 12% between 2013 and 2023, driven largely by reductions in mortality from lung cancer (20%), ischaemic heart disease (21%) and stroke (23%). Preventable mortality from stroke and lung cancer declined in all EU countries. However, preventable mortality from alcohol-specific disorders rose in Estonia and Croatia compared to 2013.

Luxembourg, Sweden, France and Belgium, as well as Switzerland, Norway and Iceland, had the lowest rates of treatable mortality in 2023, with fewer than 60 deaths per 100 000 population under age 75 – at least 30% below the EU average of 87 treatable deaths per 100 000. However, Romania, Latvia and Bulgaria had treatable mortality rates more than two times above the EU average. The higher rates in this latter group of countries were mainly driven by higher mortality rates from ischaemic heart disease and stroke.

Mortality from treatable causes decreased by 12% in the EU between 2013 and 2023, the same rate as preventable causes. The 21% decrease in mortality from ischaemic heart disease played an important role, with particularly large declines in Lithuania and Estonia, while breast cancer mortality among women aged under 75 decreased by 18% and colorectal cancer mortality by 16% on average in the EU.

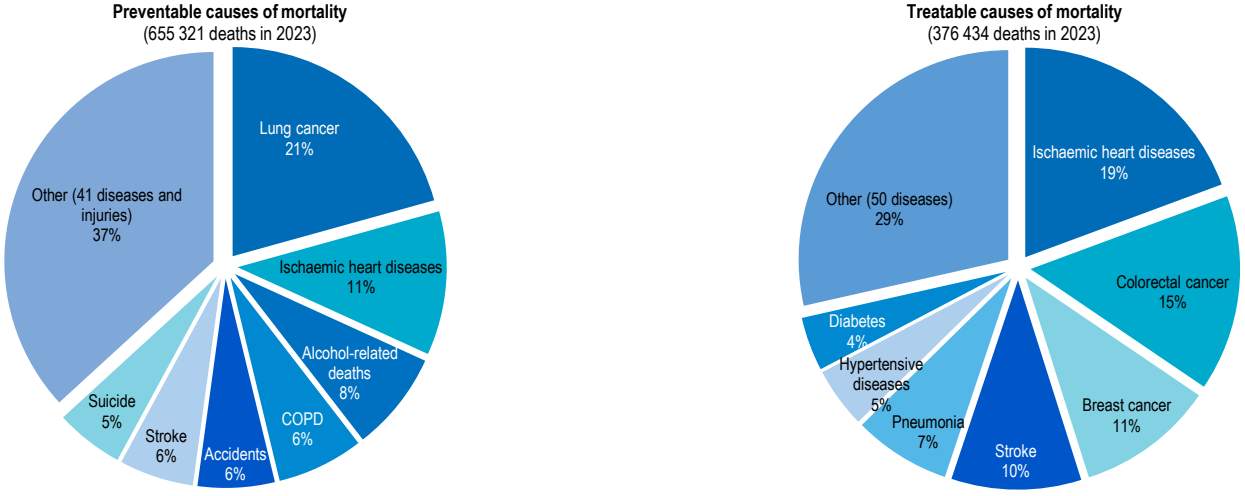
Definition and comparability

The data are based on the joint OECD and Eurostat lists of avoidable mortality, including a list of preventable and treatable causes of mortality. The age threshold of premature mortality is set at under 75 for all causes. The attribution of causes of death to the preventable or treatable mortality list is based on whether the death could have been avoided predominantly through prevention or healthcare interventions. Causes of death that can be avoided either through prevention or treatment once they have occurred were attributed to the preventable category on the rationale that if these diseases are prevented, there would be no need for treatment. In cases when there was no strong evidence of predominance of preventability or treatability (e.g. ischaemic heart disease, stroke, diabetes, hypertension), the methodological convention was to allocate the causes on a 50/50 basis to the two categories to avoid double counting the same cause of death (OECD/Eurostat, 2022[1]).

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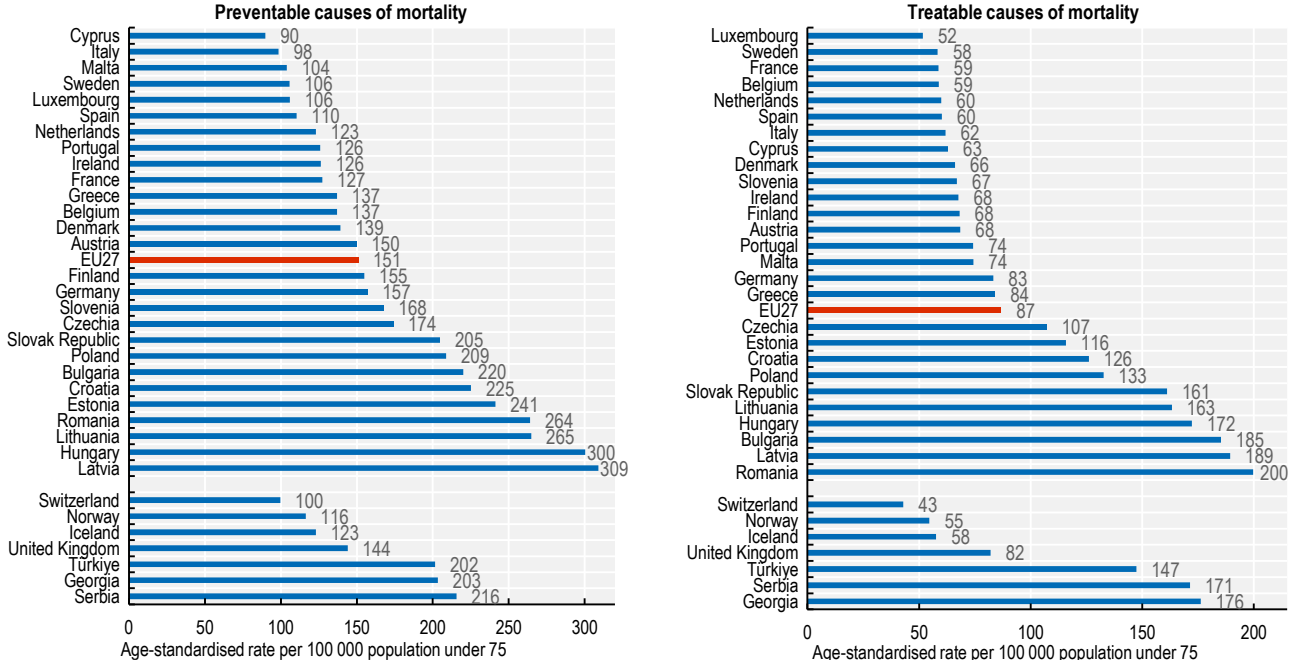
Figure 6.1. Main causes of avoidable mortality in the European Union, 2023



Note: Data are based on the OECD/Eurostat definitions and lists of preventable and treatable causes of mortality in people under age 75. The lists attribute half of all deaths for some diseases (e.g. ischaemic heart disease, stroke, diabetes and hypertension) to the preventable mortality list and the other half to treatable causes, so there is no double-counting of the same death. COPD = chronic obstructive pulmonary disease.
Source: Eurostat, https://doi.org/10.2908/HLTH_CD_APR (accessed on 12 October 2026).

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Figure 6.2. Mortality rates from avoidable causes, 2023



Note: The EU average is weighted. The data for the United Kingdom have been calculated by the OECD based on the European population structure.
Source: Eurostat, https://doi.org/10.2908/HLTH_CD_APR (accessed on 12 October 2026); United Kingdom: WHO Mortality Database.

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Routine vaccinations

Vaccination is one of the most effective public health interventions, offering substantial health and economic benefits by protecting against infectious diseases. Strong vaccine uptake is supported by convenient and equitable access, vaccine confidence, trust in public institutions and health literacy.

Childhood vaccination has dramatically reduced infectious disease morbidity and mortality worldwide. For measles, the WHO recommends 95% coverage with two doses of measles-containing vaccine. However, in 2025, only three EU countries (Hungary, Cyprus and Portugal) reached this level (Figure 6.3). Rates of immunisation for measles were particularly low in Romania (68%), Belgium (73%) and Estonia (75%), as well as Bosnia and Herzegovina (54%) and Montenegro (66%). Across EU countries, an average of 87% of children received the recommended measles vaccinations in 2025 – 3 percentage points (p.p.) below pre-pandemic levels in 2019. Compared to 2019, there were particularly strong declines in Estonia (-15 p.p.), Bulgaria (-11 p.p.) and Belgium (-9 p.p.). Persistent gaps in measles vaccination coverage among specific population groups, including in countries with high national coverage, have fuelled outbreaks. Measles incidence reached its highest level in decades in Europe in 2024; although cases declined in 2025, they remained twice as high as in 2023 (ECDC, 2026[1]).

Human papillomavirus (HPV) is contracted by most of the sexually active population at some point in their lifetime. In rare cases, a persistent infection with a cancer-causing HPV strain can lead to various cancers in both men and women, notably cervical, vaginal, vulvar, anal, oropharyngeal and penile cancers. Vaccination is key for primary prevention and is estimated to prevent around nine in ten cervical cancer cases. As of 2026, all EU countries recommend HPV vaccination for adolescent girls and boys, while the schedule and mode of delivery vary by country. In 2025, 62% of girls on average across EU countries had received all recommended doses of the HPV vaccine by age 15 (Figure 6.4). Only Portugal, Spain and Sweden, together with Iceland and Norway, reached the WHO 2030 target of 90% coverage for girls, while coverage was 15% or lower in Poland, Romania and Bulgaria. Coverage among boys is generally lower, averaging about 50% across the 24 EU countries with data, reflecting their more recent inclusion in vaccination programmes. Nine EU countries, as well as Norway and the United Kingdom, had vaccinated at least 60% of boys. At the EU level, the Council Recommendation of June 2024 on vaccine-preventable cancers supports Member States in their efforts to reach, by 2030, the objective of fully vaccinating at least 90% of the EU target population of girls and significantly increasing the HPV vaccination of boys (Council of the European Union, 2024[2]).

Influenza causes around 7 000 to 12 000 deaths per year in the EU, most of which occur among people aged over 65. Annual vaccination is recommended for high-risk groups, including older adults. Vaccination reduces the risk of influenza complications, hospitalisations and mortality among older adults, and it also reduces the risk of major cardiovascular events and mortality. Figure 6.5 shows that the WHO's target influenza immunisation rate of 75% was only reached in Denmark, Ireland and the United Kingdom in 2024/25. Coverage was below 20% in seven EU countries (the Slovak Republic, Poland, Latvia, Hungary, Slovenia, Romania and Bulgaria). Influenza vaccination coverage for people aged over 65 has increased in most countries, reaching 40% on average across EU countries in 2024/25, up from 36% in 2018/19. This reflects expansion of influenza vaccination campaigns and increased awareness of the benefits. Still, coverage remains below the peak of 44% reached in 2020/21, when influenza vaccine uptake increased in many countries amid heightened risk perception and public health efforts to mitigate the impact of respiratory infections during the first year of the COVID-19 pandemic.

Definition and comparability

Measles vaccination coverage is the share of children in the target age group who have received two doses of the vaccine in a given year. Target age groups vary with national schedules (specified at https://vaccine-schedule.ecdc.europa.eu/). Administrative data record doses delivered under national schedules, while official data refer to the data reported as the most likely true coverage by the national authorities in case of biases in the administrative data. Where unavailable, estimates informed by administrative data, survey data and contextual information are used (calculated by WHO/UNICEF).

HPV vaccination coverage is the share of the population reaching age 15 in the reporting year who received the full recommended schedule of HPV vaccine.

Influenza vaccination coverage is the share of people aged 65 and over who received an annual influenza vaccination. In most European countries, data cover two calendar years of the vaccination campaign (e.g. the autumn of 2024 and winter and spring of 2025 for the 2024/25 campaign), although in some countries the data relate to one calendar year only (e.g. 2025).

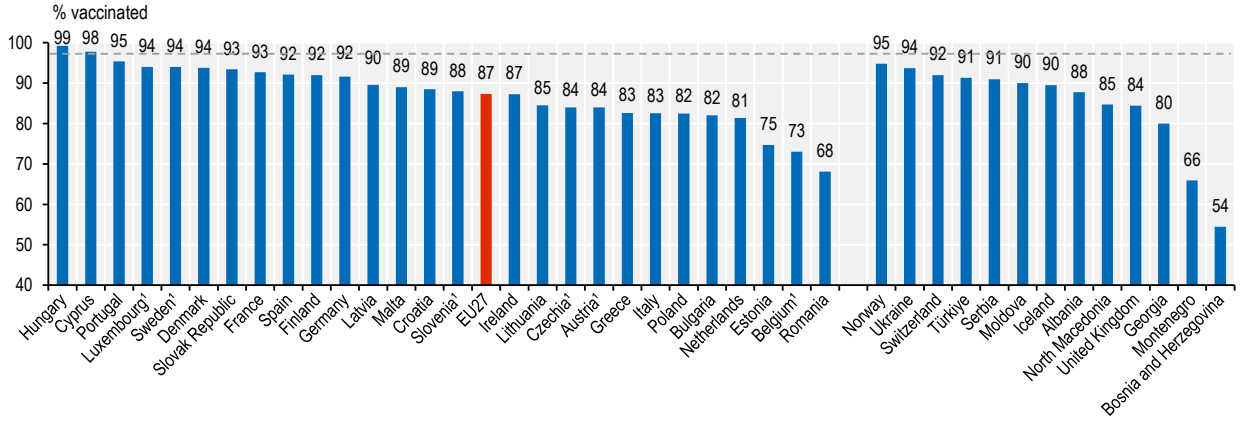
Immunisation data coverage may be affected by registry design and collection practices, such as parental-consent requirements for recording childhood vaccinations in registries (e.g. the Netherlands).

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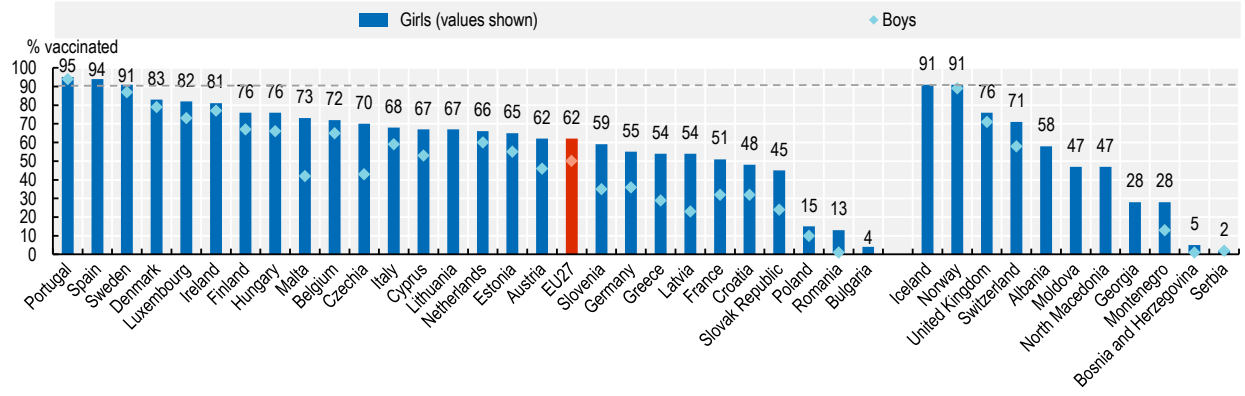
Figure 6.3. Percentage of eligible children who have received two doses of a measles vaccine, 2025



Note: The EU average is unweighted. 1. Data refer to estimates. The line indicates the WHO minimum target of 95% for measles.
Source: WHO/UNICEF.

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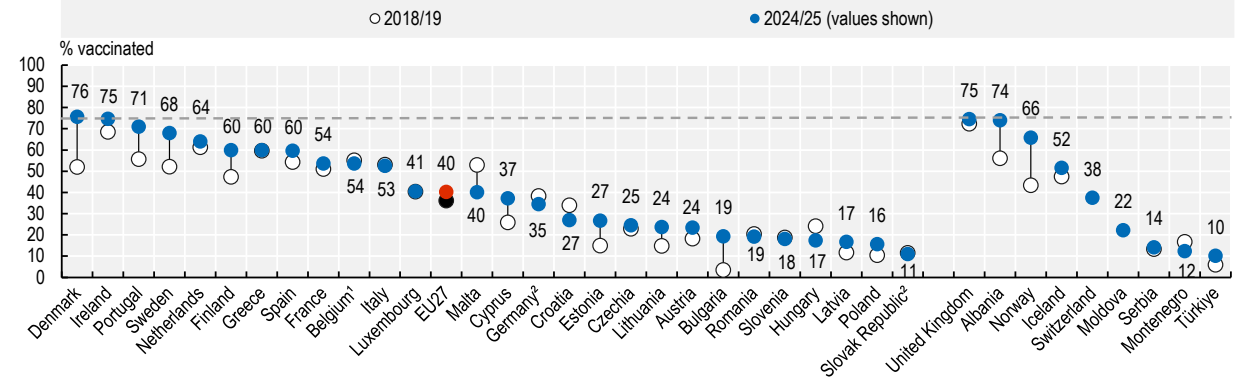
Figure 6.4. HPV vaccination coverage with all recommended doses among girls and boys by age 15, 2025



Note: The EU average is unweighted. The data refer to coverage estimates in children turning 15 in the reference year calculated by the WHO. The line indicates the WHO minimum target of 90% of girls vaccinated.
Source: WHO/UNICEF.

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Figure 6.5. Percentage of population aged 65 and over vaccinated against influenza, 2024/25 and 2018/19 (or nearest years)



Note: The EU average is unweighted. 1. Exclude nursing home residents. 2. Broader age range. The line indicates the WHO minimum target of 75% of older adults vaccinated.
Source: OECD, https://data-explorer.oecd.org/s/5jy (accessed on 12 October 2026); Portugal: Directorate-General of Health (Autumn-Winter 2024-2025 Seasonal Vaccination Campaign: Final Report).

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Person-centredness of primary care

Incorporating people's voices into healthcare system performance assessment is a core component of national and international efforts to improve quality of care (OECD, 2021[1]). Over the past decade, OECD countries have significantly expanded their use of patient-reported measures to inform healthcare policymaking (Kendir et al., 2025[2]) and created channels for patient input to improve health system performance and person-centredness. The OECD's Patient-Reported Indicator Surveys (PaRIS) assess health outcomes and care experiences as reported by primary care users, with a focus on people living with chronic conditions, shedding light on variations in primary care quality (OECD, 2025[3]).

PaRIS results show that people living with chronic conditions reported generally high levels of experienced quality in primary care. On average across the 11 EU participating countries, 86% of patients with chronic conditions rated the quality of care they received positively (good, very good or excellent), ranging from 96% in Czechia to 69% in Portugal (Figure 6.6). While the results were similar among people without chronic conditions in most countries, in some countries, such as Italy, Greece and Portugal, people without chronic conditions reported up to 6 p.p. higher levels of quality of care.

Trust in healthcare professionals is a fundamental component of people-centred care, especially for those living with chronic conditions who require ongoing interaction with the health system. Across EU countries, 76% of patients with chronic conditions reported trusting the last healthcare professional they saw, ranging from 86% in Belgium to 57% in Greece (Figure 6.7). The average rate was higher than the average for trust in the healthcare system overall across OECD countries (62%) (OECD, 2025[3]). PaRIS results show that having a central point of contact, maintaining longer-term relationships with care professionals and having longer appointments are positively associated with trust.

When care is "person-centred", it is tailored to the individual needs, preferences and values of the patient. Figure 6.8 (left panel) shows the proportion of patients who reported positive experiences of person-centred care (scores above 12 points out of 24). On average, across EU countries, 87% reported positive experiences, ranging from 93% in Belgium to 77% in Portugal. Improving continuity of information, reducing the need for patients to repeat the same health information, and involving patients more fully in decision making are critical steps towards achieving more people-centred care.

Primary care plays a crucial role in co-ordinating care for people with chronic conditions, who usually see several healthcare professionals across different healthcare settings. Figure 6.8 (right panel) shows the proportion of patients who reported positive experiences of care co-ordination (based on a score above 7.5 points out of 15). The average across EU countries was 62%, ranging from 78% in Romania to 47% in Greece. These results suggest that further improvements to care co-ordination are needed, particularly for people with multiple chronic conditions, across EU countries. In Greece, ongoing reforms have focussed on strengthening the Personal Doctor system, chronic disease management structures and referral pathways to support better continuity and co-ordination of care. Strengthening care planning, supporting systematic medication reviews, and reinforcing continuous information sharing across healthcare settings and professionals are key strategies to enhance co-ordination and person-centredness of care.

Definition and comparability

The Patient-Reported Indicator Surveys (PaRIS) cover a representative sample of people aged over 45 who are linked to their primary care practices. All respondents had used primary care in the past six months, and all results are age- and sex-standardised. The methodology and questionnaire are detailed in Chapter 7 of the PaRIS report (OECD, 2025[3]). The PaRIS Public Use Files can be accessed at: https://www.oecd.org/en/data/datasets/paris-public-use-files.html.

Experienced quality is an overall measure of how patients rate the care they have received over the past 12 months. It shows the percentage of primary care users who reported the experienced quality of care as "excellent", "very good" or "good" compared to "fair" or "poor". Trust in healthcare professionals refers to the degree to which patients have confidence and trust in the healthcare professional they saw or spoke to, with a positive outcome defined as responding "yes, definitely". Person-centredness measures the extent to which patients' needs, preferences and values are central to their care. A positive experience is defined as a score of at least 12 on the 24-point person-centred care component of the Person-Centred Co-ordinated Care Experience Questionnaire (P3CEQ). Experienced co-ordination, the extent to which patients experience a seamless and continuous journey through different healthcare practices and settings, shows the percentage of patients reporting a positive experience, with a score of at least 7.5 on the 15-point care co-ordination component of P3CEQ.

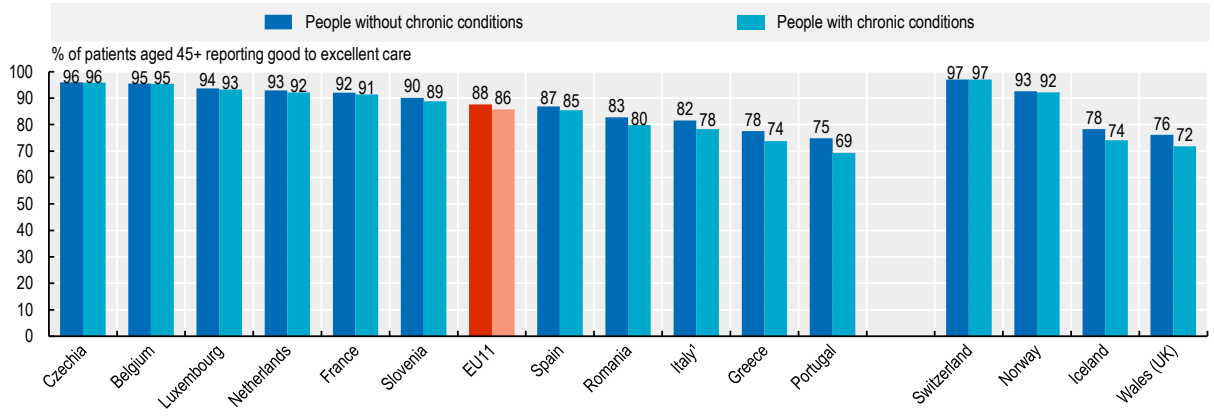
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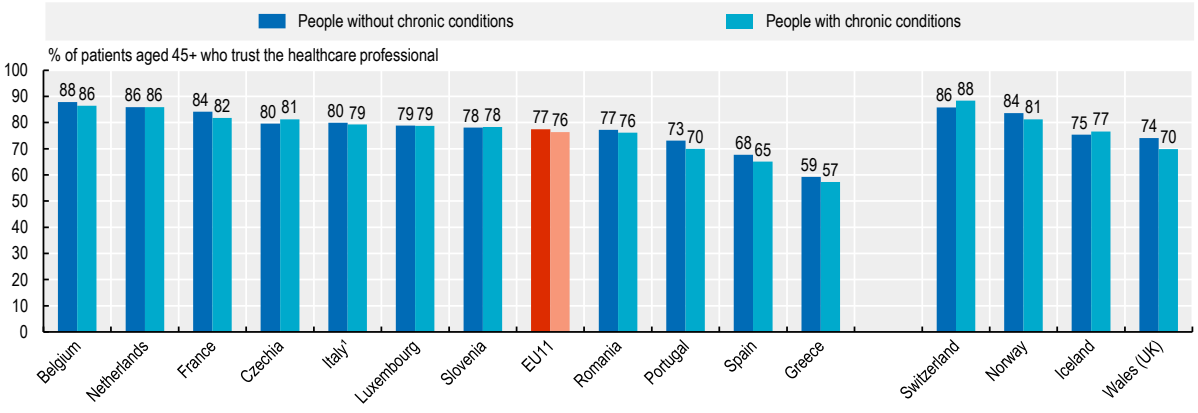
Figure 6.6. Experienced quality of primary care, 2024



Note: The EU average is unweighted. 1. Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions.
Source: OECD PaRIS Database, https://data-explorer.oecd.org/s/5hq (accessed on 12 October 2026).

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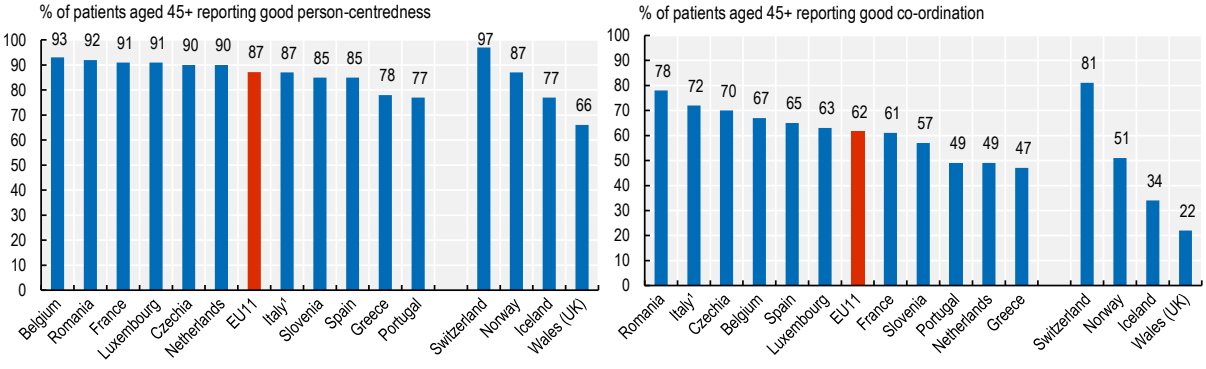
Figure 6.7. Trust in healthcare professionals among primary care users, 2024



Note: The EU average is unweighted. 1. Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions.
Source: OECD PaRIS Database, https://data-explorer.oecd.org/s/5hq (accessed on 12 October 2026).

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Figure 6.8. Person-centredness and experienced co-ordination among primary care users with chronic conditions, 2024



Note: The EU average is unweighted. 1. Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions.
Source: OECD PaRIS Database, https://data-explorer.oecd.org/s/5hq (accessed on 12 October 2026).

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Safe prescribing in primary care

Safe prescribing of medications is an indicator of healthcare quality. Medication-related harm remains a major and largely preventable source of avoidable morbidity, particularly among older people and those living with multiple chronic conditions. Inappropriate prescribing can include the use of medicines where risks outweigh benefits, unnecessary continuation of long-term treatments, or the simultaneous use of multiple medicines that increase the risk of adverse drug events. Beyond its impact on patients, inappropriate prescribing contributes to avoidable healthcare utilisation and unnecessary expenditure.

For older people, most guidelines advise complete avoidance of benzodiazepines, medications that are used to treat anxiety and sleep disorders, because of the associated risks of dizziness, confusion and falls. Long-term benzodiazepine use can lead to adverse outcomes, including overdose, tolerance, dependence and dose escalation. Long-acting (as opposed to short-acting) benzodiazepines are further discouraged for older adults because they take longer for the body to eliminate (OECD, 2017[1]).

In 2024, rates varied substantially across reporting countries, revealing marked differences in prescribing practices and patterns of long-term benzodiazepine use. Long-term benzodiazepine use declined across 12 EU countries, with the average falling from 37 to 26 per 1 000 people aged 65 and over between 2014 and 2024 (Figure 6.9). The decline is consistent with growing awareness of the risks associated with prolonged benzodiazepine use among older adults and efforts in several countries to promote deprescribing. Prescribing rates remained above the EU average in Ireland, Luxembourg, Spain and Portugal in 2024.

While reducing inappropriate use of specific medicines is an important patient safety objective, a broader challenge for primary care is ensuring the safe management of patients prescribed multiple medicines (Figure 6.10). Polypharmacy is often defined as the prescribing of five or more medications simultaneously. While polypharmacy may be justified for the management of multiple comorbidities, inappropriate polypharmacy – such as the use of inappropriate combinations of medications, overuse and duplication – presents an increased patient safety risk due to medication interactions (de Bienassis et al., 2022[2]). Risks associated with polypharmacy are substantial and include medication-related harms, drug interactions, falls, and cognitive impairment.

According to the OECD's Patient-Reported Indicator Surveys (PaRIS), on average across 11 EU countries, more than one in four primary care patients aged 45 and over with chronic conditions reported taking five or more medications (Figure 6.10). The proportion varied from 35% in Slovenia, 34% in Italy and 32% in Luxembourg and France to 18% in Romania and 14% in Wales (United Kingdom). In three of the surveyed EU countries (Luxembourg, Italy and Slovenia), more than 5% of patients were taking ten or more medications. Registry-based analyses of individuals aged 75 and older offer a valuable complement to self-reported data, revealing that more than half of this population is taking more than five medications concurrently in many EU countries (OECD, 2025[3]). Rationalisation of polypharmacy in primary care through deprescribing can lead to more effective, patient-centred, safer prescribing, while reducing wasteful expenditure.

Interventions to improve medication safety include regular medication reviews by doctors, nurses and pharmacists, patient education on medication self-management, clinical decision-support tools, stronger medication reconciliation processes and systematic deprescribing initiatives. Such approaches are particularly important for older people and patients with multimorbidity, who are more likely to experience adverse drug events and consult a range of different providers. As European populations continue to age, ensuring that medicines are used appropriately and safely will remain an important component of high-quality primary care.

Definition and comparability

Data on trends in prescribing benzodiazepines for chronic use are collected through the OECD Healthcare Quality and Outcomes (HCQO) data collection. The denominator comprises people aged 65 and over. The numerator comprises those who had more than 365 DDDs of benzodiazepines prescribed during the reference period.

Data on patient-reported polypharmacy are collected through the PaRIS survey data. They refer to the proportion of people aged 45 and over with chronic conditions who visited their primary care practice in the past six months and reported taking more than five medications on a regular or ongoing basis, as prescribed by a doctor or nurse. For information on sources and methods for the PaRIS survey data, please see the section on "Person centredness of primary care".

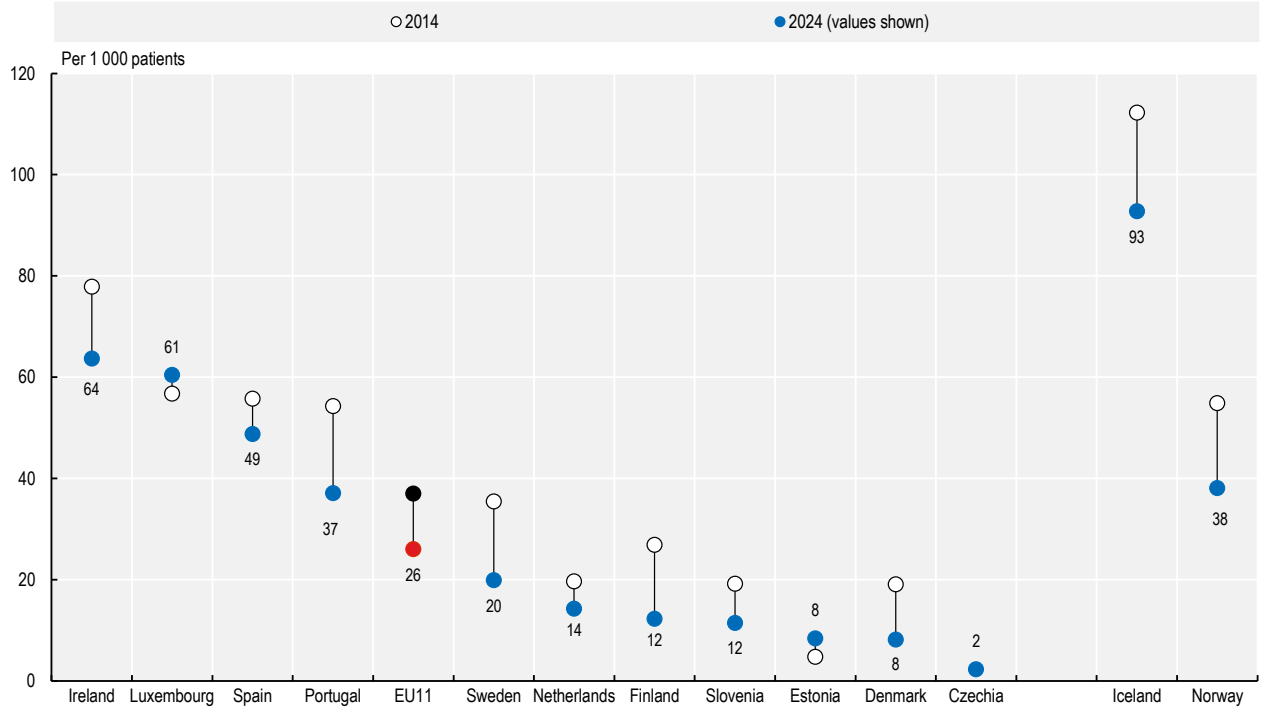
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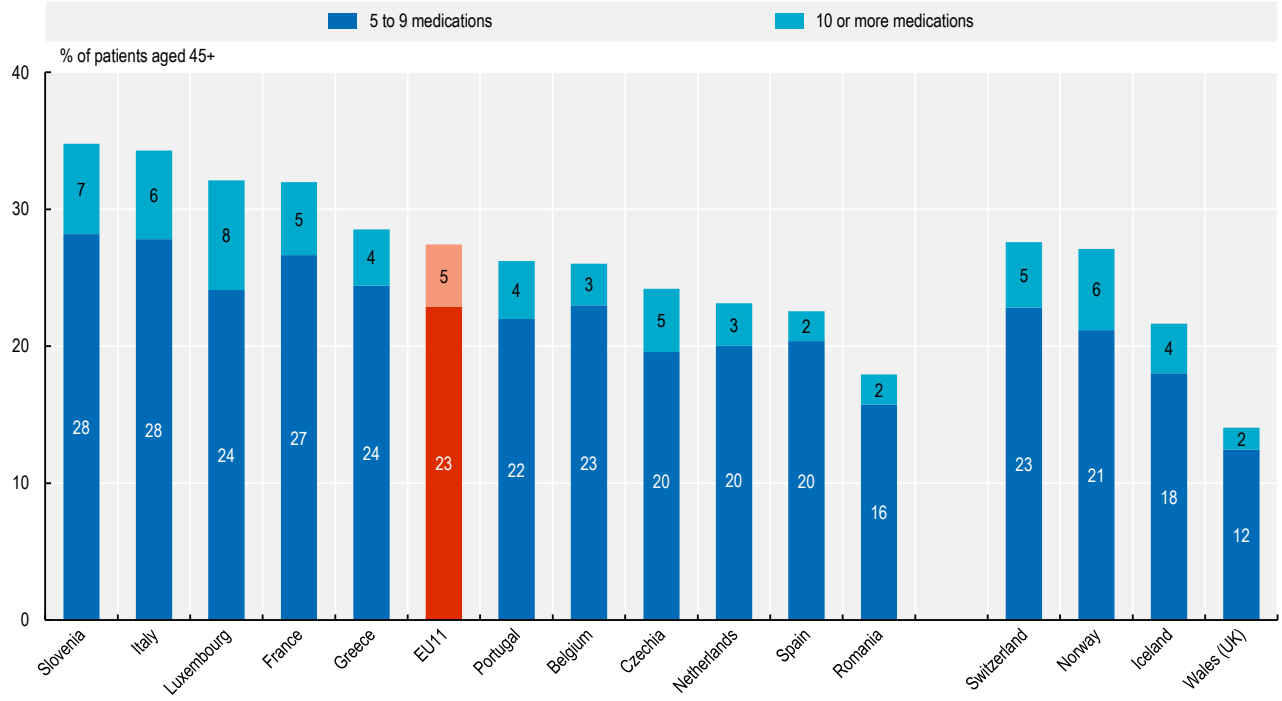
Figure 6.9. Chronic benzodiazepine use per 1 000 patients aged 65 and over, 2024 and 2014 (or nearest years)



Note: The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5k0 (accessed on 12 October 2026).

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Figure 6.10. Polypharmacy among primary care users with chronic conditions, 2024



Note: The EU average is unweighted. Data for Italy refer to outpatients for specialist visits in selected regions.
Source: OECD PaRIS Database, https://data-explorer.oecd.org/s/5hq (accessed on 12 October 2026).

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Safe acute care: Workplace culture and patient experiences

Measures of patient safety culture from the perspective of health workers can be used – along with patient-reported experiences of safety and traditional patient safety indicators – to give a holistic perspective of the state of safety in health systems.

A positive patient safety culture for health workers results in shared perceptions of the importance of safety, increased transparency and trust, and higher levels of shared responsibility, along with improved confidence in organisational and national safety initiatives. A positive patient safety culture is associated with better health outcomes and patient experiences, as well as improved organisational productivity and staff satisfaction (G20 Health & Development Partnership, 2021[1]).

Figure 6.11 and Figure 6.12 illustrate two domains of the Hospital Survey on Patient Safety Culture (HSPSC), which asks hospital staff to provide information on aspects of their work environment and whether they are conducive to good patient safety. It distinguishes countries depending on which version of the HSPSC survey is used. In general, the HSPSC 2.0 version survey gives higher scores than the HSPSC 1.0 version.

Figure 6.11 shows staff perceptions of whether important patient care information is transferred across hospital units and during shift changes. Positive perceptions from staff of the safety of handoffs and information exchange vary across EU countries, with a difference of 7 p.p. (63% in Portugal and 56% in Slovenia) for countries using HSPSC version 2.0. Figure 6.12 shows that most hospital workers feel that staffing levels and the pace of work are not adequate for providing safe patient care. Across all staff categories, positive perceptions on staffing and work pace are highest in Poland and Latvia (50% or more with positive perceptions across the different categories). In those countries where a breakdown is available by staff category, there is in most cases a disconnect between perceptions among management and frontline staff (doctors and nurses). On average, across the five countries using HSPSC 2.0, only 41% of physicians and 43% of nurses in hospitals perceived staff levels and work pace to be safe, compared to 52% of management staff.

Patient perspectives are also critical to making health systems safer and more people-centred. According to data from the OECD PaRIS initiative, on average across the 11 EU participating countries, 29% of primary care users aged 45 and over reported having experienced an event or circumstance that could have resulted, or did result, in unnecessary harm to themselves, such as not getting an appointment when needed; receiving a wrong or delayed diagnosis or treatment; or experiencing problems with communications between healthcare professionals. Rates ranged from over 50% of primary care users in Greece and Romania, to under 15% in Belgium and Czechia (Figure 6.13). Some countries have recently strengthened their national frameworks for patient safety; for example, Greece adopted a National Strategy for Quality of Care and Patient Safety for 2025-2030, covering governance, adverse event reporting and patient engagement. Experiencing patient-reported safety-related problems or circumstances that could have resulted in harm is linked with lower trust in healthcare professionals and the health system. Trust in the healthcare system was reported by only 45% of people who had experienced such an event, compared with 70% of those who had not (OECD, 2025[2]).

Definition and comparability

Health worker perceptions of patient safety are based on the assessment of hospital workers using the Hospital Survey on Patient Safety Culture (HSPSC), versions 1.0 and 2.0. There are differences in the average performance between HSPSC 1.0 and 2.0 – and scores generated using HSPSC 1.0 are normally lower. Other factors may also influence the compatibility of the data, including differences in the total number of survey respondents, in the types and number of participating hospitals, and response rates (de Bienassis and Klazinga, 2024[3]). Careful interpretation of patient safety culture indicators is required because of these differences.

For information on sources and methods for the PaRIS survey data, please see the section on “Person centredness of primary care”.

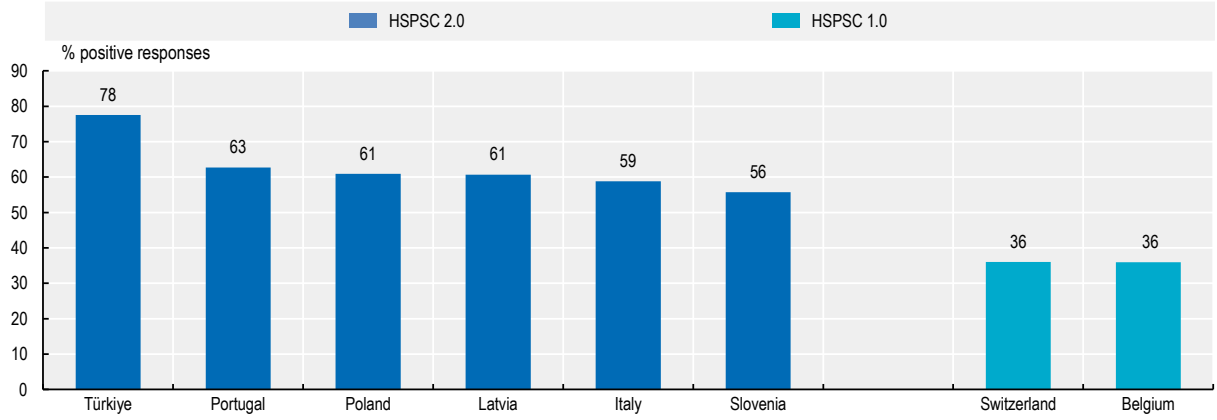
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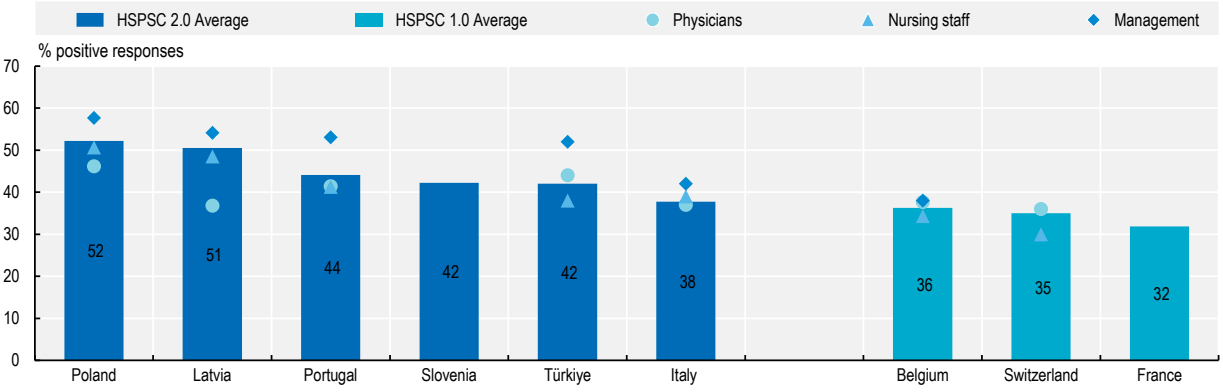
Figure 6.11. Health workers' perceptions of handoffs and information exchange, 2023 (or nearest year)



Note: Scores on the HSPSC 2.0 survey are usually higher than on the HSPSC 1.0 survey.
Source: OECD, https://data-explorer.oecd.org/s/5k2 (accessed on 12 October 2026); de Bienassis and Klazinga (2024[3]), "Comparative assessment of patient safety culture performance in OECD countries: Findings based on the Hospital Survey on Patient Safety Culture versions 1 and 2", https://doi.org/10.1787/d0552328-en.

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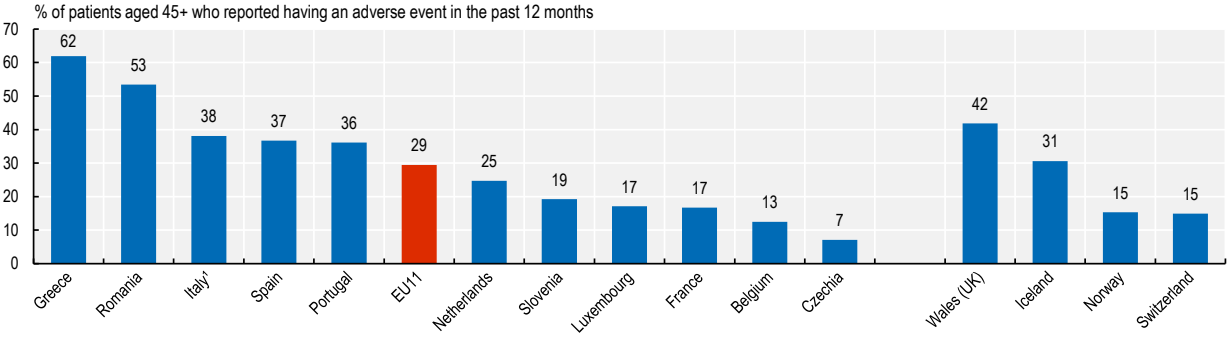
Figure 6.12. Health workers' perceptions of adequate staff levels and work pace, by job category, 2023 (or nearest year)



Note: Scores on the HSPSC 2.0 survey are usually higher than on the HSPSC 1.0 survey.
Source: OECD, https://data-explorer.oecd.org/s/5k2 (accessed on 12 October 2026); de Bienassis and Klazinga (2024[3]), "Comparative assessment of patient safety culture performance in OECD countries: Findings based on the Hospital Survey on Patient Safety Culture versions 1 and 2", https://doi.org/10.1787/d0552328-en.

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Figure 6.13. Primary care users reporting that something went wrong over the course of their care in the last 12 months, 2024



Note: The EU average is unweighted. 1. Data for Italy refer to patients enrolled in outpatient settings for specialist visits in selected regions.
Source: OECD PaRIS Database, https://data-explorer.oecd.org/s/5hq (accessed on 12 October 2026).

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Cancer care quality

Screening increases the proportion of cancers detected and diagnosed at an early stage, improving the likelihood of successful treatment and contributing to better outcomes and lower health expenditures. However, sufficient uptake of cancer screening is required to ensure the desired impact of reducing cancer mortality in the population. Approximately 90% of EU countries, as well as Iceland and Norway, had introduced population-based breast cancer screening programmes as of 2022, and 75% had implemented cervical and colorectal cancer screening programmes. Countries have adopted organised screening programmes by systematically inviting the eligible populations. Since the 2022 Council Recommendation on strengthening prevention through early detection, several Member States have introduced screening pilots for lung, prostate and gastric cancer. Additionally, countries are facilitating screening among socio-economically disadvantaged communities using outreach activities, self-sampling and digital solutions to strengthen awareness, improve accessibility and increase participation.

The average breast cancer screening uptake across EU countries remained broadly stable between 2014 and 2024, at around 54% of eligible women (Figure 6.14). The highest participation rates (above 75%) were reported in Denmark, Finland, Sweden, Norway and Slovenia. In contrast, less than 25% of the target population participated in breast cancer screening in Romania, Greece and Bulgaria. About half of EU countries have reported a drop in participation from 2014 to 2024, with the Netherlands (-13 p.p.), Luxembourg (-9 p.p.) and Malta (-9 p.p.) registering the largest decreases. Lithuania, the Slovak Republic, Croatia, Greece, Estonia and Bulgaria reported notable improvements in screening uptake by 5 p.p. or more between 2014 and 2024. Increased screening uptake can be attributed to the transition from opportunistic to population-based cancer screening programmes. The Slovak Republic implemented organised breast cancer screening in 2019. Lithuania introduced organised screening in 2024 with centrally co-ordinated invitations via letters, e-mails and SMS. In Greece, free mammography screening offered since 2022 was incorporated into a national organised prevention programme (PROLAMVANO) in 2024.

The uptake of cervical cancer screening has stalled or even declined in many countries in Europe over the last decade, which in turn negatively impacts timely diagnosis. The share of cervical cancers diagnosed at an early stage decreased by 5 p.p. or more between 2018 and 2022 in three EU countries (Sweden, Latvia and the Netherlands), as well as in Iceland and Norway (Figure 6.15). The decrease in the EU average share (from 45% in 2018 to 42% in 2022) likely reflects reduced screening participation in addition to delays in access to and financial barriers to screening and diagnostic care for cervical cancer (OECD/European Commission, 2026[1]). Country initiatives to improve awareness, access and uptake of screening and diagnostic care, especially among underserved populations, are needed to reduce late diagnosis of cervical cancer.

Lower post-surgical mortality rates related to different types of cancer indicate the delivery of safe and effective cancer care. Based on the most recent three-year averages (where data were available), EU countries reported a crude 30-day mortality rate after colorectal cancer surgery of 2.9%. The Netherlands, Ireland and Denmark, as well as Norway outside the EU, performed best and reported the lowest mortality rates of less than 2%. Croatia reported a rate more than twice the EU average, while Latvia's rate was around 50% higher (Figure 6.16). Gender disparities are observed in most countries. In almost all EU countries, men had higher 30-day mortality rates than women, except for Portugal where nearly identical mortality rates for both sexes were reported. Higher rates of comorbidities, risk factors, and more advanced tumours among men predispose them to post-surgical complications and an increased risk of mortality.

Definition and comparability

Breast cancer screening participation is defined as the number of eligible women aged 50-69 who have received a bilateral mammography within the past two years (or according to the specific screening interval recommended in each country) divided by the number of women eligible for an organised screening programme. Changes in the age-eligible population and screening frequency may impact the comparability of participation rates between countries and over time.

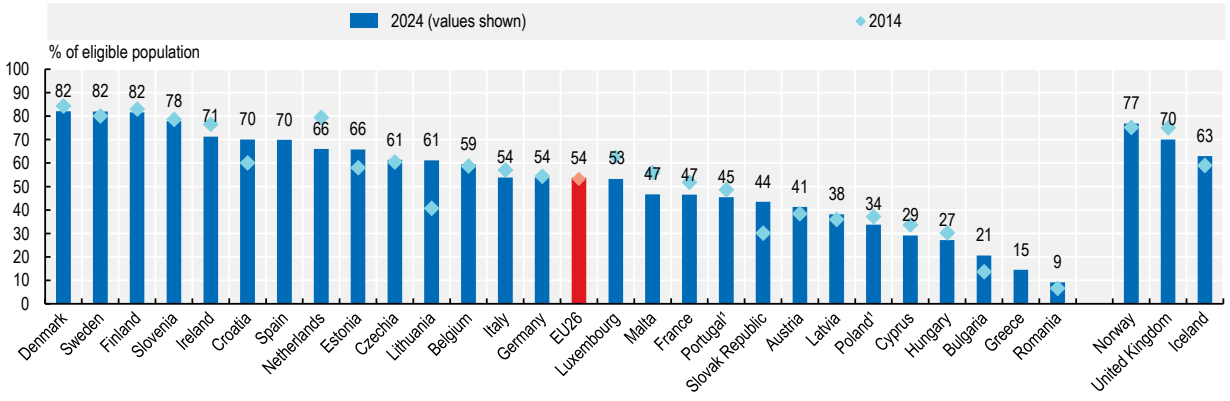
The share of cervical cancer diagnosed at early stage is defined as the proportion of cancers classified as Tumour, Node, Metastasis (TNM) or International Federation of Gynaecology and Obstetrics (FIGO) stage I, relative to the total number of cervical cancers reported with available staging data.

30-day crude mortality rate after colorectal cancer surgery is defined as the percentage of colon or rectal cancer surgeries which resulted in death within 30 days of the date of surgery. The data refer to the most recent 3-year average in all countries for the period spanning 2018-2023, except for Luxembourg and Slovenia, where only one data point was available.

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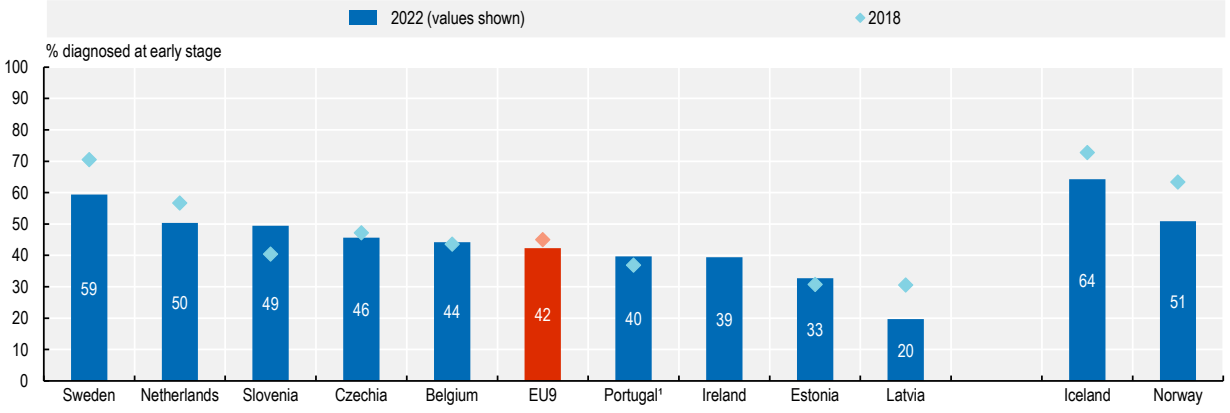
Figure 6.14. Participation in breast cancer screening over the past two years among women aged 50-69, 2024 and 2014 (or nearest years)



Note: The EU average is unweighted. Survey data are used for Romania (not included in EU average calculation). 1. 2014 data refer to 2019.
Source: OECD, https://data-explorer.oecd.org/s/5k4; Eurostat, https://doi.org/10.2908/HLTH_PS_PREV (both accessed on 12 October 2026).

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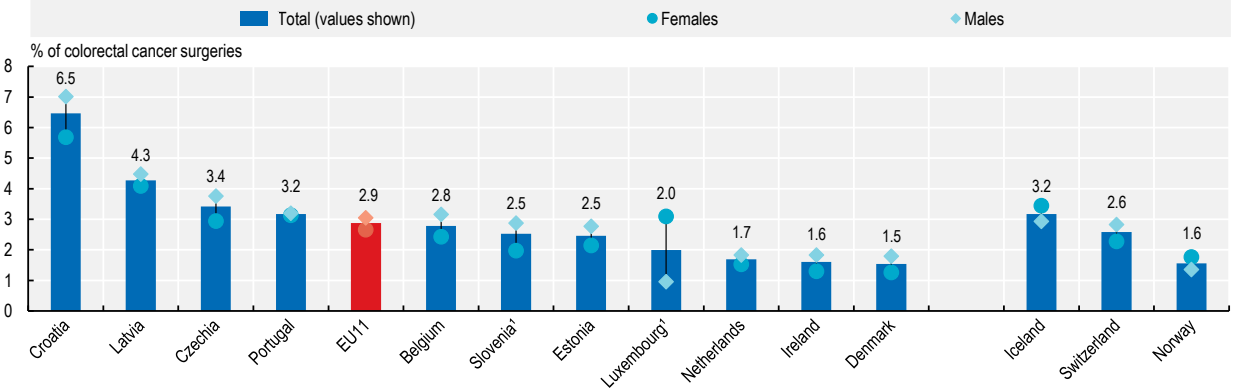
Figure 6.15. Share of cervical cancer diagnosed at early stage among women aged 15 and over, 2022 and 2018 (or nearest years)



Note: The EU average is unweighted. Ages 15+. Early stage refers to Tumour, Node, Metastasis (TNM) stage I. 1. 2022 data refer to 2021.
Source: OECD pilot cancer data collection 2025.

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Figure 6.16. 30-day crude mortality rates after colorectal cancer surgery, most recent three-year average



Note: The EU average is unweighted. Ages 15+. Latest available three-year averages shown (2018-2023). 1. One-year data shown.
Source: OECD pilot cancer data collection 2025.

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Cancer survival

Cancer survival is determined by the stage at diagnosis, as well as the delivery of effective treatment accessible to all patients. In recent decades, EU countries have expanded cancer screening programmes (see section on "Cancer screening") to improve early diagnosis and cancer survival. Croatia, Belgium and Germany introduced national lung cancer screening programmes for population groups at high risk, such as long-term smokers, while 16 EU countries have implemented pilots to assess feasibility. EU countries are strengthening cancer care systems to improve access to timely, effective and affordable treatment, supported by standardised care pathways to streamline the patient journey and reduce care delays. Differences in cancer survival are affected by the availability of a cancer specialist workforce, equipment and medicines (OECD, 2024[1]). Country initiatives to improve survival include investment in radiotherapy equipment in Bulgaria and Poland, and efforts to increase treatment quality through care co-ordination and centralisation in Latvia (OECD/European Commission, 2025[2]). Concentrating care and specialist expertise in accredited cancer centres supports delivery of high-quality cancer care.

Breast cancer has the highest incidence among women in all EU countries (see section on "Cancer incidence and mortality" in Chapter 3). The average five-year net survival from breast cancer among women in EU countries improved from 82% in 2005-2009 to 86% in 2015-2019, in part because the widespread use of population-based mammography screening has led to more cancers being diagnosed at an earlier, more treatable stage. Improved understanding of tumour biology has facilitated the development of targeted and effective therapies, increasingly prescribed for specific breast cancer subtypes. Five-year net survival estimates for women diagnosed during 2015-2019 ranged from 90% and above in Luxembourg, Sweden and Denmark to 80% or lower in Latvia and Poland. Both Latvia and Poland have low proportions of screen-detected breast cancers, which may contribute to poorer prognosis. While the extent of improvement varies, survival estimates are markedly higher in EU countries with the highest income, which may in part reflect investment and reimbursement of expensive cancer biologics, as well as, more broadly, earlier diagnosis and improvements in surgery and radiotherapy (Figure 6.17).

Colorectal cancer is the second most common cause of death from cancer. The expansion of colorectal cancer screening programmes over the last decade has increased the share of early diagnoses. Advances in treatment – including improved surgical techniques, radiation therapy and combination chemotherapy, and treatment planning by multidisciplinary teams – have all contributed to higher survival. Five-year net survival estimates for patients diagnosed during 2015-2019 averaged 64% for colon cancer across EU countries, an increase from 57% among patients diagnosed 10 years earlier (Figure 6.18). Five-year survival ranged from less than 60% in Poland, Latvia, Bulgaria and Croatia to over 70% in Belgium and Denmark. Some countries have shown considerable improvement in colon cancer survival, including an absolute increase of 8 p.p. in Czechia (to 61%), 12 p.p. in Malta (to 64%) and 14 p.p. in Denmark (to 72%).

Across EU countries, lung cancer has the highest cancer mortality for both men and women. It accounts for 20% of all cancer deaths and has one of the lowest levels of survival. Earlier detection and diagnosis of lung cancer through rapid care pathways and major breakthroughs in systemic and targeted therapies – especially immunotherapy – have improved survival prospects for what was once an even poorer prognosis. Five-year net survival estimates for patients diagnosed during 2015-2019 averaged 20% across EU countries, an increase from 14% for patients diagnosed ten years earlier (Figure 6.19). Survival ranges from less than 15% in Czechia, Lithuania, Croatia and Bulgaria to 25% and over in Sweden, Denmark and Cyprus. Increases of 10 p.p. in five-year survival for 2015-2019 compared with survival ten years earlier were particularly notable in Denmark and Ireland, two European countries with the highest income, but much smaller increases of 3% or less in Poland, Croatia and Latvia.

Definition and comparability

Five-year net survival is the cumulative probability that cancer patients survive their cancer for at least five years following diagnosis, after controlling for the risks of death from other causes and taking into account that these competing risks are higher in older people. Five-year net survival for patients diagnosed during 2005-2009 is based on a cohort approach, since all patients have been followed up for at least five years. The period approach was used to allow estimation of five-year survival when five years of follow-up are not available for all patients. Cancer survival estimates are age-standardised with the International Cancer Survival Standard weights. Patient data were provided by national or regional cancer registries. Data quality control and survival analysis were performed centrally for all countries as part of the CONCORD programme for the global surveillance of cancer survival, led by the Cancer Survival Group at the London School of Hygiene and Tropical Medicine (Allemani et al., 2026[3]).

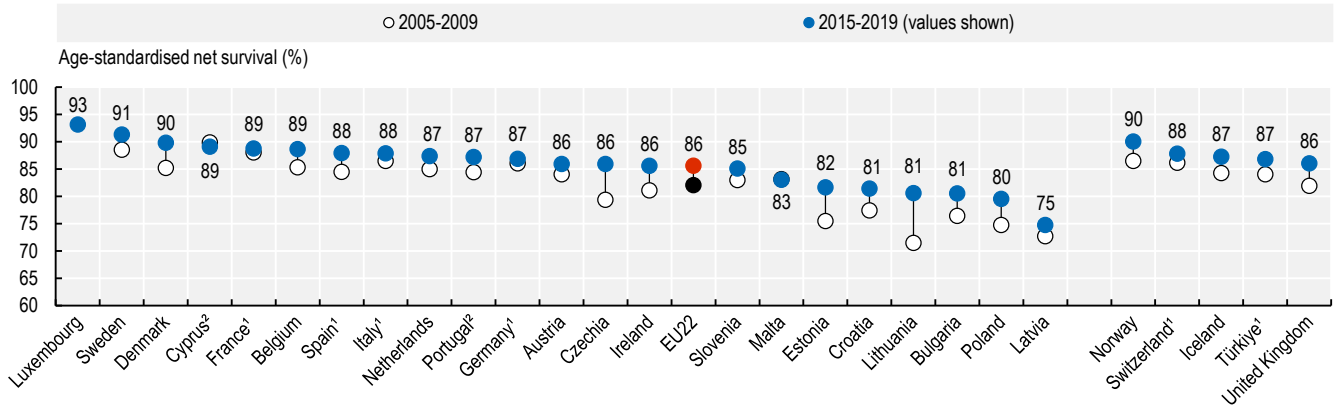
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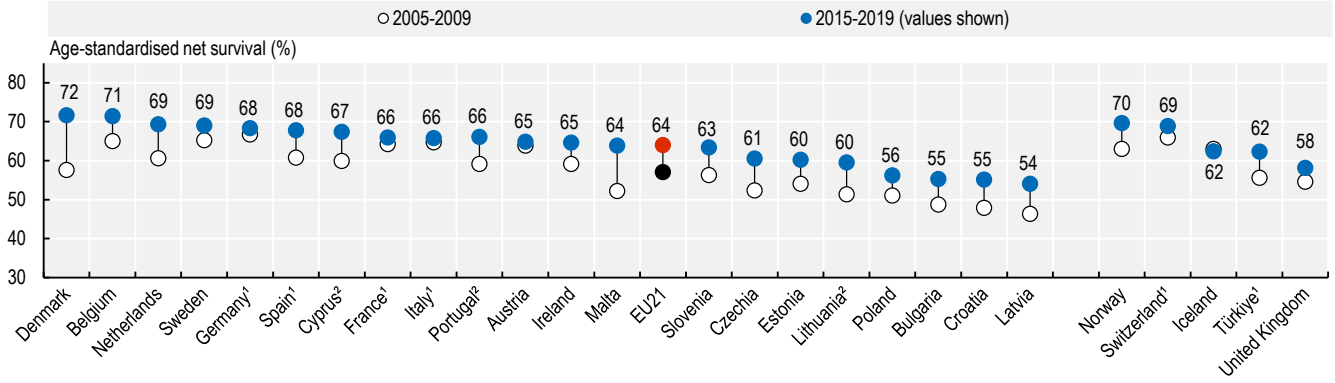
Figure 6.17. Breast cancer five-year net survival (%), women diagnosed 2005-2009 and 2015-2019



Note: The EU average is unweighted. 1. Regional coverage. 2. Estimates were less reliable if 15% or more of patients were lost to follow-up or censored alive within five years of diagnosis, or registered only through death certificate or autopsy, or if 15% or more dates were incomplete.
Source: CONCORD-4, London School of Hygiene and Tropical Medicine.

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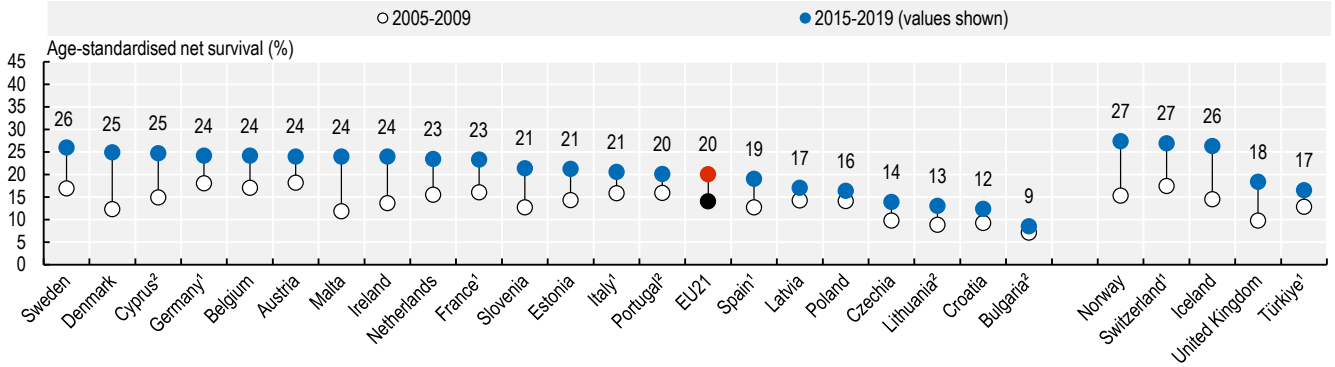
Figure 6.18. Colon cancer five-year net survival (%), adults diagnosed 2005-2009 and 2015-2019



Note: The EU average is unweighted. 1. Regional coverage. 2. Estimates were less reliable if 15% or more of patients were lost to follow-up or censored alive within five years of diagnosis, or registered only through death certificate or autopsy, or if 15% or more dates were incomplete.
Source: CONCORD-4, London School of Hygiene and Tropical Medicine.

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Figure 6.19. Lung cancer five-year net survival (%), adults diagnosed 2005-2009 and 2015-2019



Note: The EU average is unweighted. 1. Regional coverage. 2. Estimates were less reliable if 15% or more of patients were lost to follow-up or censored alive within five years of diagnosis, or registered only through death certificate or autopsy, or if 15% or more dates were incomplete.
Source: CONCORD-4, London School of Hygiene and Tropical Medicine.

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Avoidable hospital admissions

Primary care is often the first point of contact with health systems and plays a key role in preventing avoidable hospital admissions. Inadequate access to timely, high-quality primary care for chronic conditions such as asthma, chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF) and diabetes can lead to acute deterioration and unnecessary hospitalisations (OECD, 2020[1]). Effective prevention and management strategies are well established for all four conditions, and much of this care can be delivered in primary care settings. Effective disease management, regular monitoring, patient education, support for self-management and appropriate use of medications can help reduce complications and avoid costly hospital admissions. In addition, effective co-ordination across primary, community and urgent care services can help avoid unnecessary hospital admissions and ensure patients receive care in the most appropriate setting. While avoidable hospital admissions for these chronic conditions can be used as an indicator of the quality and accessibility of primary care, very low admission rates may also partly reflect barriers in access to hospital care.

Figure 6.20 shows that the combined hospital admission rates for asthma and COPD fell by 32% between 2013 and 2023, now averaging 158 admissions per 100 000 population across 22 EU countries. Italy, Croatia and Portugal reported the lowest admission rates for the two conditions, while Ireland, Denmark and Germany reported the highest rates. Countries reporting the highest admission rates also have high estimated COPD prevalence (Safiri et al., 2022[2]).

Advances in cardiovascular disease (CVD) care and management, and reductions in CVD mortality, have increased the number of people living with chronic cardiovascular conditions, including CHF. In 2023, hospital admission rates for CHF varied more than four-fold across 20 EU countries, averaging 248 admissions per 100 000 population (Figure 6.21). Portugal, Croatia, Belgium and Ireland, as well as the United Kingdom, reported the lowest admission rates, with fewer than 150 admissions per 100 000 population. By contrast, Poland, Lithuania, the Slovak Republic, Malta, Germany and Czechia recorded rates exceeding 350 admissions per 100 000 population. While admission rates for CHF fell by 20% on average between 2013 and 2023, trends varied across countries. Portugal and Italy recorded reductions of more than 40%, while admission rates increased slightly in Poland and the Slovak Republic. In Poland, persistently high rates reflect not only barriers to primary care but also high CVD burden, improved survival after myocardial infarction, and a system oriented to inpatient care. Poland has introduced policies designed to shift care from hospitals towards outpatient specialist and primary care (OECD/European Observatory on Health Systems and Policies, 2025[3]).

In 2023, hospital admissions for diabetes varied more than six-fold across 22 EU countries (Figure 6.22). Italy and the Netherlands, as well as Iceland, reported the lowest admission rates, while Lithuania, the Slovak Republic and Germany reported the highest rates. Although hospital admissions for diabetes fell by 32% on average between 2013 and 2023, trends varied across countries. Hungary, Austria, Italy and Czechia recorded reductions of more than 50%, while admissions increased by over 10% in Spain and Latvia, as well as the United Kingdom and Switzerland. Differences in diabetes prevalence and access to hospital care may partly explain this variation. As with CHF, preventing complications of diabetes relies heavily on patients' ability to manage their condition and control clinical and behavioural risk factors, making patient-centred education, regular monitoring and support key components of primary care for people living with diabetes (OECD, 2020[1]).

Definition and comparability

The indicators are defined as the number of hospital admissions with a principal diagnosis of asthma, COPD, CHF or diabetes among people aged 15 and over per 100 000 population. Rates are age- and sex-standardised to the 2015 OECD population. Admissions resulting from a transfer from another hospital, same-day admissions, obstetric hospitalisations and admissions where the patient died in hospital are excluded. Additional condition-specific exclusions apply for CHF (cardiac procedure) and for asthma and COPD (cystic fibrosis and anomalies of the respiratory system).

Disease prevalence and access to inpatient care may explain some variations in cross-country rates. Differences in data definition, diagnostic and coding practices, admission thresholds, service organisation, and indicator calculation methods may affect comparability. The exclusion of transfers cannot be fully implemented by some countries. Differences in data coverage of the national hospital sector across countries may also influence indicator rates. Very low or rapidly declining rates should be interpreted with caution and assessed alongside access, readmission and mortality indicators.

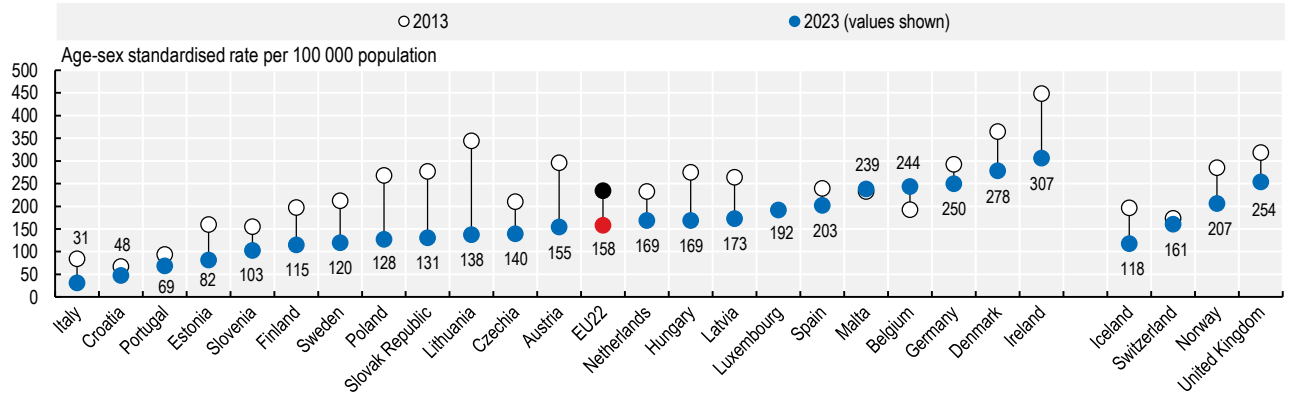
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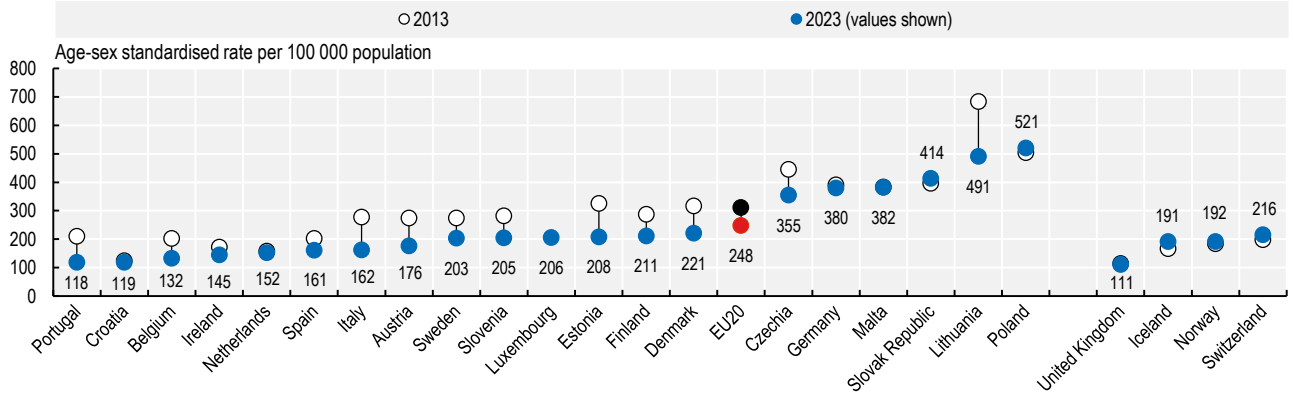
Figure 6.20. Asthma and chronic obstructive pulmonary disease hospital admissions in adults, 2023 and 2013 (or nearest years)



Note: The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5k6 (accessed on 12 October 2026).

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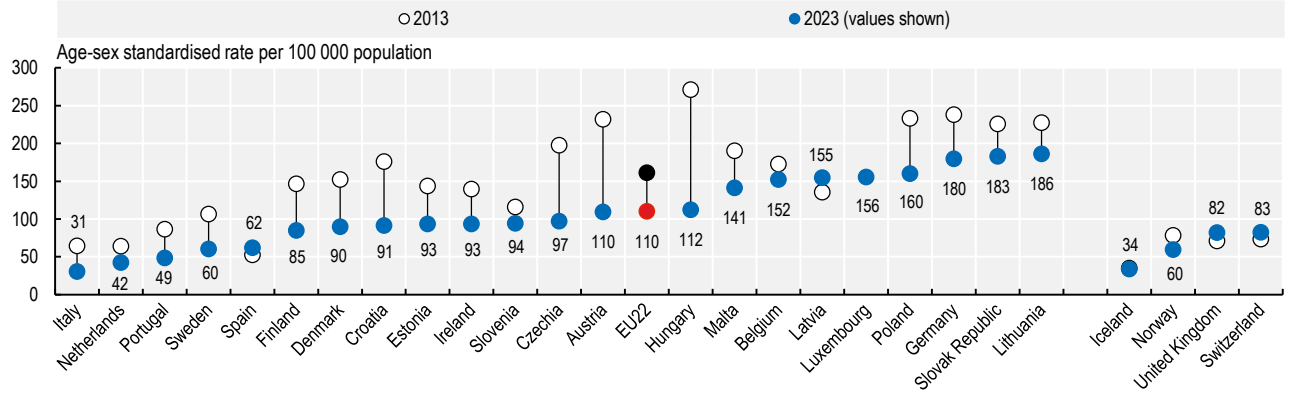
Figure 6.21. Congestive heart failure hospital admissions in adults, 2023 and 2013 (or nearest years)



Note: The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5k6 (accessed on 12 October 2026).

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Figure 6.22. Diabetes hospital admissions in adults, 2023 and 2013 (or nearest years)



Note: The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5k6 (accessed on 12 October 2026).

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Integrated care

As the number of people living with chronic conditions grows, health systems face increasing pressure to co-ordinate services across providers and settings. Poor integration can lead to unmet care needs, avoidable hospitalisations, duplicated care and higher costs. In response, many countries are strengthening integrated and people-centred models of care to improve patient outcomes and experiences, promote health equity and support health workforce well-being (OECD, 2023[1]).

Integrated care policies can improve patient outcomes and healthcare system efficiency by reducing unnecessary and duplicative care. Integrated care also bridges health, social and long-term care services, thereby supporting continuity of care, helping patients navigate the system to access appropriate care and reducing avoidable complications. Key approaches include strengthening governance across levels of care, developing interoperable information systems, aligning financial incentives among providers, and supporting collaboration across healthcare professionals to improve medication continuity and self-management. Optimal integration across levels of care is particularly important for patients with stroke and chronic heart failure (CHF), as it can reduce avoidable hospital readmissions and mortality while improving adherence to recommended prescribing practices (Barrenho et al., 2022[2]). Among patients discharged from hospital, indicators such as readmission rates, mortality and compliance with prescription guidelines provide important measures of how effectively health systems deliver co-ordinated and integrated care.

Figure 6.23 shows the share of patients experiencing adverse outcomes within one year of discharge for ischaemic stroke and CHF in 2023. There is substantial variation in post-discharge outcomes. On average, among patients admitted with ischaemic stroke in 2023, 61% survived and were not readmitted to hospital, 23% survived but were readmitted, and 16% died. Among patients admitted with CHF in 2023, 44% survived and were not readmitted to hospital, 34% survived but were readmitted, and 23% died. For stroke, in nearly all countries, among patients who were readmitted after discharge, readmissions for conditions other than the original diagnosis accounted for a larger share than stroke-related readmissions.

For stroke patients, one-year mortality ranged from below 10% in Bulgaria, Denmark, Slovenia and Switzerland, to over 20% in Estonia, Czechia, Latvia and Italy. For CHF patients, one-year mortality ranged from below 15% in Bulgaria, Slovenia, Denmark, Lithuania, Iceland and Switzerland, to above 28% in Latvia, the Netherlands, Czechia and the United Kingdom. Hospital readmissions within one year of stroke ranged from 1.5% in Lithuania and Latvia to 12% in Denmark, Iceland and Norway for stroke-related reasons, and from below 12% in Italy and Estonia, Iceland and Switzerland to over 29% in Czechia and Malta for other causes. For CHF patients, one-year readmission rates ranged from 5% in Latvia to above 15% in Denmark, Slovenia and Norway for CHF-related causes, and from below 15% in the Netherlands, Switzerland and Iceland to 33% in Malta for other causes. These findings highlight opportunities to strengthen transitional care and continuity of care for people with chronic conditions.

Approximately one in seven people who survive an ischaemic stroke will experience a second stroke within one year. To reduce the risk of future vascular events, clinical guidelines recommend that patients receive antihypertensive and antithrombotic medications as part of secondary prevention after hospital discharge. The presence of at least one prescription for these medicines within 18 months after discharge serves as an indicator of appropriate follow-up care and the extent to which care is integrated between hospital and community settings (Barrenho et al., 2022[2]). Figure 6.24 shows that the prescription rate for antihypertensive medications among patients discharged after an ischaemic stroke ranged from 68% in the Netherlands to 83% in Sweden, while the prescription rate for antithrombotic medications ranged from 31% in Croatia to 94% in Sweden.

Definition and comparability

Indicators refer to people aged 45 and over admitted non-electively (unplanned admissions) for a first recorded ischaemic stroke or CHF event. A first-time event is defined as no prior hospital admission for the same condition within the past five years. The year assigned to each indicator corresponds to the year of the first-time event, with outcomes measured over the following 12 months for mortality and readmissions, and 18 months for prescriptions. Rates are age- and sex-standardised. Integrated care indicators require linkage of hospital, death registries, and prescription or reimbursement claims using unique patient identifiers. Country coverage depends on the availability and quality of linkable data.

Definitions of planned/unplanned admission vary across countries. Most define unplanned as hospital admission via emergency care or care requiring immediate curative intervention.

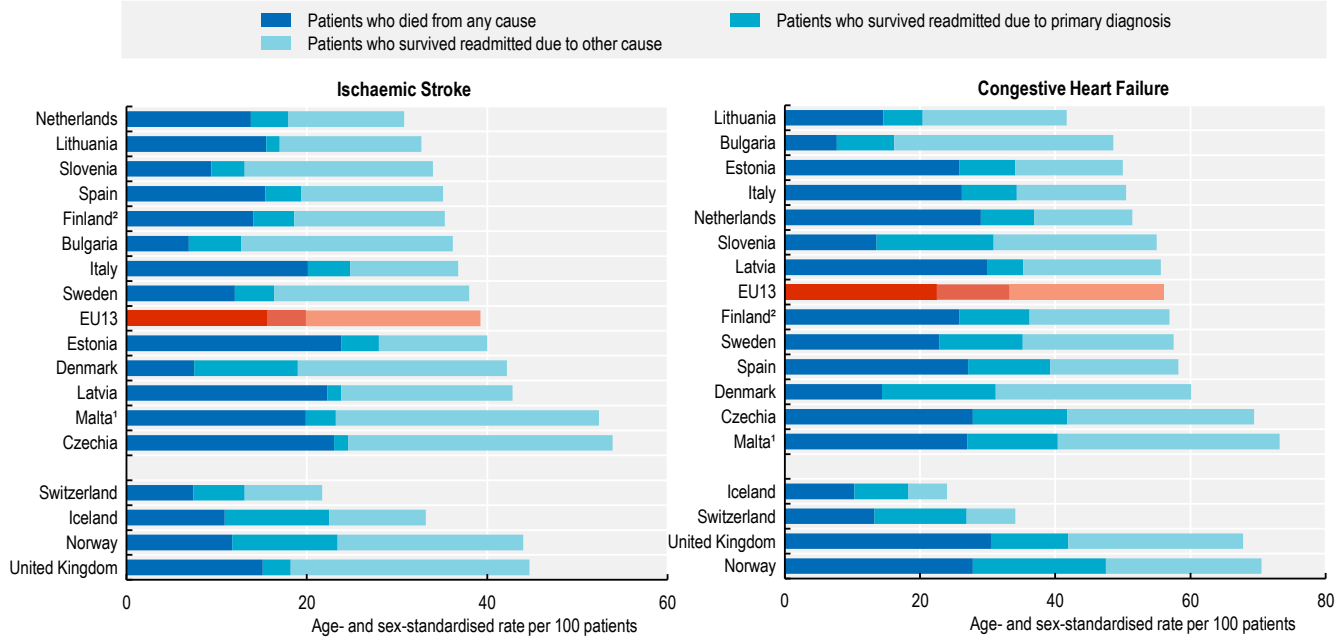
Prescription data are drawn from national prescription or reimbursement databases; antithrombotics such as low-dose aspirin obtained without a prescription or outside reimbursement are not captured, which may lead to underestimation in some countries.

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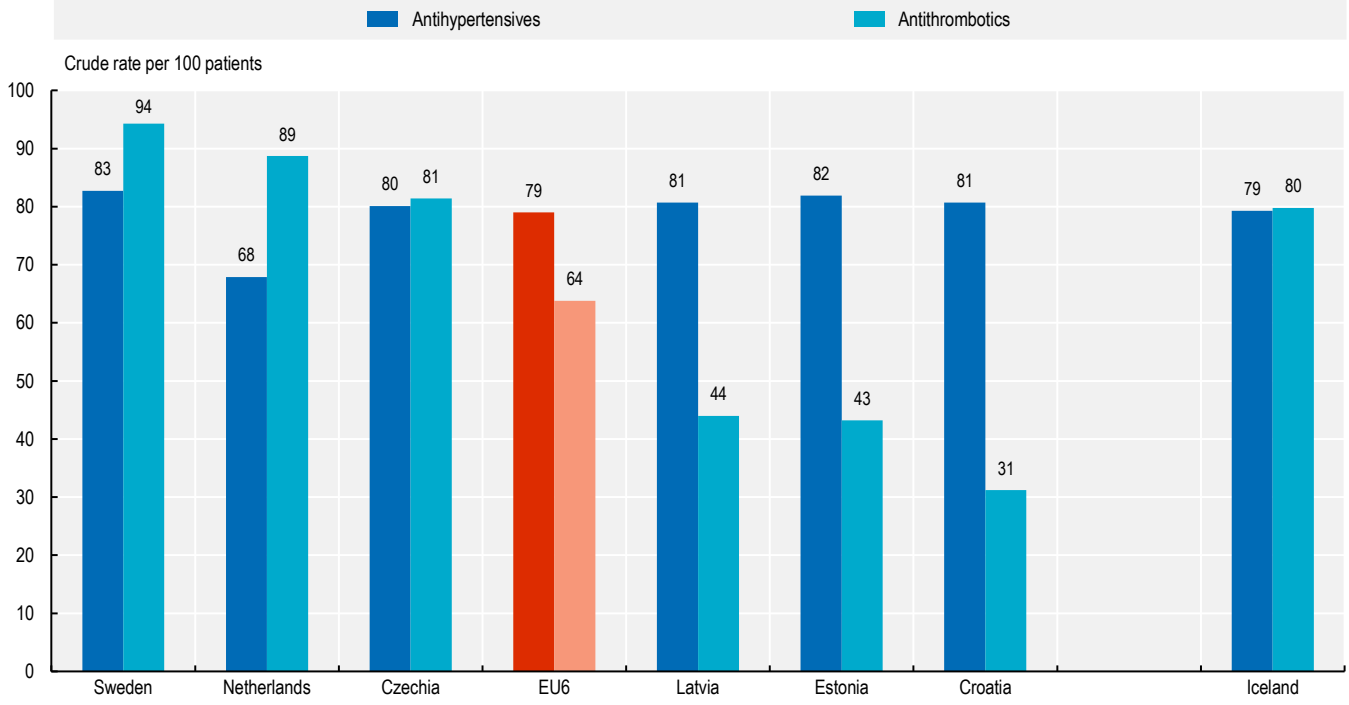
Figure 6.23. Patients with adverse outcomes within one year of discharge after ischaemic stroke and congestive heart failure, 2023 (or nearest year)



Note: The EU average is unweighted. 1. Data refer to 2020. 2. Data refer to 2019.
Source: OECD, https://data-explorer.oecd.org/s/5k7 (accessed on 12 October 2026).

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Figure 6.24. Patients receiving at least one antihypertensive and antithrombotic prescription in the 18 months following discharge after ischaemic stroke, 2023 (or nearest year)



Note: The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5k7 (accessed on 12 October 2026).

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Mortality following acute myocardial infarction (AMI)

Mortality due to coronary heart disease has declined substantially over recent decades (see indicator on "Mortality from cardiovascular diseases" in Chapter 3). Reductions in smoking (see indicator on "Tobacco smoking and electronic cigarette use among adults" in Chapter 4) and improvements in the treatment of heart disease have contributed to this decline. Despite this progress, acute myocardial infarction (AMI) remains one of the leading causes of death and the main cause of cardiovascular death in many OECD countries, highlighting the need for further reductions in risk factors and improvements in care quality (OECD, 2025[1]).

Thirty-day mortality following hospital admission for AMI reflects processes of care, such as timely transport of patients and timely and effective medical interventions. The indicator reflects both the quality of hospital care and the timeliness and effectiveness of pre-hospital diagnosis, treatment and transport. Thirty-day mortality rates are also related to differences in patterns of hospital transfers, length of stay and AMI severity.

Figure 6.25 shows mortality rates within 30 days of admission to hospital for AMI using unlinked data – that is, only counting deaths that occurred in the hospital where the patient was initially admitted – among patients aged 45 and over. The lowest rates in 2023 were in the Netherlands and Sweden as well as in Iceland and Norway (less than 4%), while the highest rates were in Latvia (14%) and Romania (13%).

Figure 6.26 shows the same 30-day mortality rate calculated using linked data, whereby deaths are recorded regardless of where they occurred after hospital admission (in the hospital where the patient was initially admitted, after transfer to another hospital or after discharge). Based on these linked data, AMI mortality rates in 2023 ranged from 5% in the Netherlands to 15% in Latvia. Outside the EU, Iceland also reported a mortality rate below 5%.

Case fatality rates for AMI decreased substantially before the pandemic, between 2013 and 2019, but have remained broadly stable since 2019. Between 2013 and 2019, across EU countries, the average rate fell from 7.9% to 6.7% for same-hospital deaths and from 11.2% to 9.6% for deaths in and out of hospital. Since 2019, progress has stalled, with average rates in 2023 at 7.0% for same-hospital deaths (Figure 6.25) slightly above 2019, and 9.5% for deaths in and out of hospital (Figure 6.26) in 2023.

The mortality rate within 24 hours of hospital admission, which usually excludes deaths in ambulance or hospital emergency departments, was below two per 100 patients in Malta, Spain, Italy, Denmark and Austria but above 3.5 per 100 patients in Latvia, Romania and Lithuania in 2023 (Figure 6.27). Timely access to pre-hospital care is crucial for short-term outcomes for AMI patients. To ensure timely delivery of treatment, countries are increasingly allowing citizens to use automated external defibrillators (AEDs) without prior training. Several OECD countries have also overcome regulatory barriers to allow non-medical pre-hospital staff to perform certain medical tasks such as diagnosis and the prescription and administration of medicines.

Definition and comparability

The case fatality rate measures the percentage of people aged 45 and over who die within 24 hours or within 30 days following hospital admission for a specific acute condition. For most countries, data refer to deaths after formal hospital admissions, excluding deaths in hospital emergency departments and prior to hospital arrival. Unlinked data include only deaths that occurred in the same hospital as the initial admission; linked data include deaths recorded regardless of where they occurred, including in another hospital or outside the hospital where AMI was first recorded. The linked-data-indicator requires a unique patient identifier to link the data across the relevant datasets, which is not available in all countries. Rates based on linked data are generally higher because they include deaths after transfer or discharge. Some cross-country variation may also reflect differences in coding, admission practices and case ascertainment.

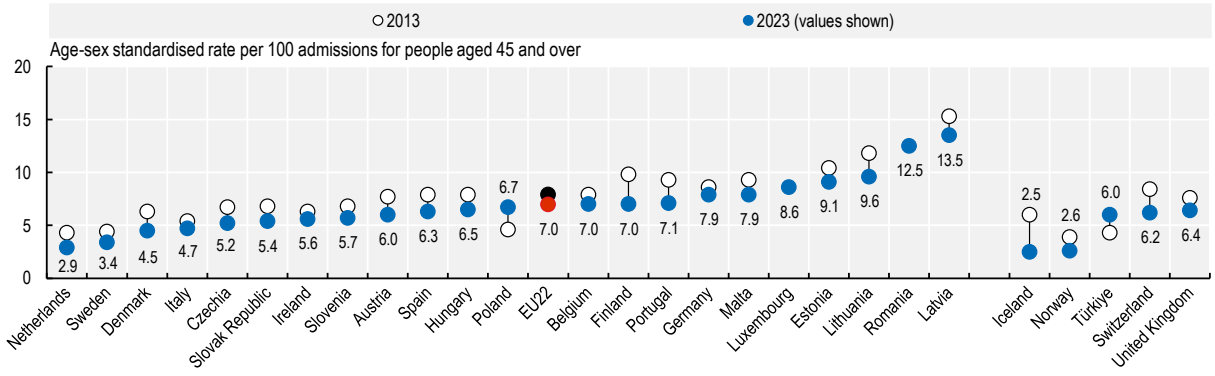
Rates are age- and sex-standardised to the 2013 OECD population aged 45 and over admitted to hospital for AMI, using ICD-10 codes I21-I22.

Cross-country comparability may be affected by differences in hospital coverage. While most countries report data covering all hospitals, some countries report data only from public or publicly funded hospitals (e.g. Hungary, Ireland and Portugal).

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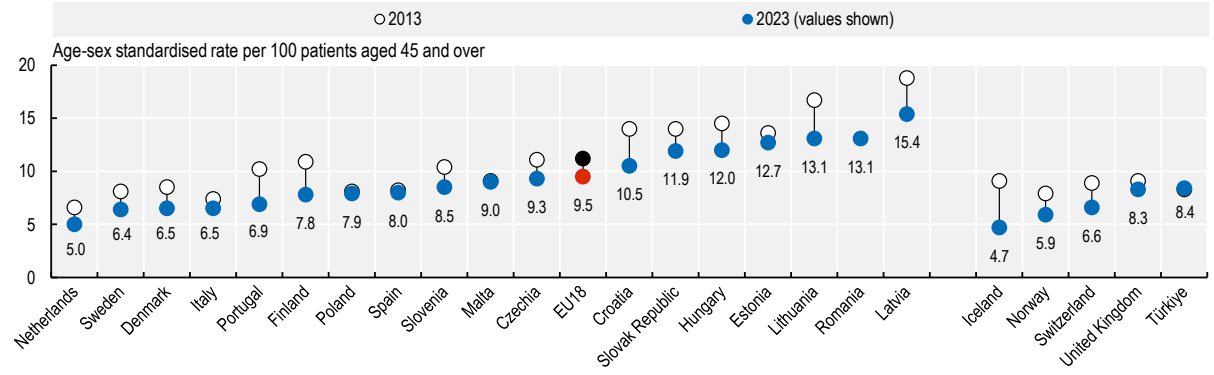
Figure 6.25. Thirty-day mortality after admission to hospital for acute myocardial infarction based on unlinked data, 2023 and 2013 (or nearest years)



Note: The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5k8 (accessed on 12 October 2026).

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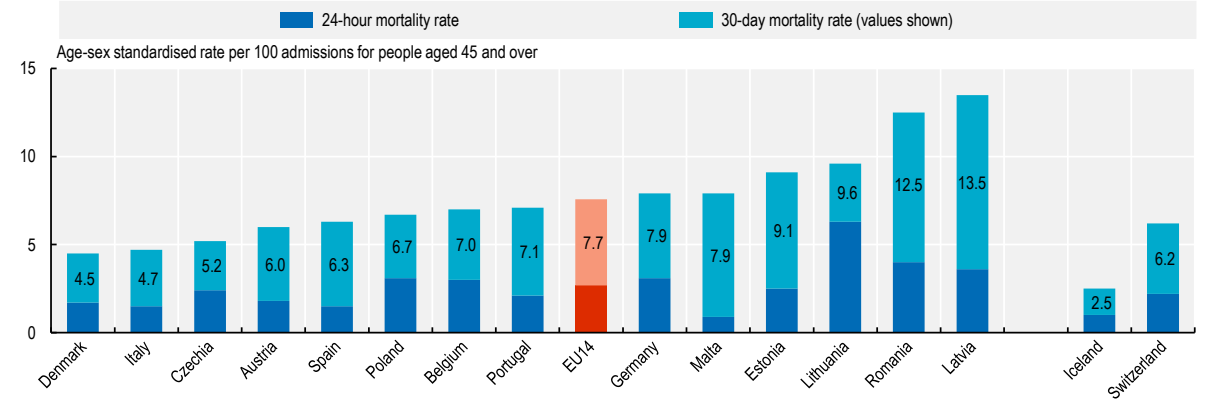
Figure 6.26. Thirty-day mortality after admission to hospital for acute myocardial infarction based on linked data, 2023 and 2013 (or nearest years)



Note: The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5k8 (accessed on 12 October 2026).

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Figure 6.27. Mortality within 24 hours and 30 days of admission to hospital for acute myocardial infarction based on unlinked data, 2023 (or nearest year)



Note: The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5k8 (accessed on 12 October 2026).

StatLink https://stat.link/egcvkb

Mortality following ischaemic stroke

Stroke is a leading cause of death, accounting for 7% of all deaths across EU countries in 2023 (see sections on “Main causes of mortality” and “Mortality from cardiovascular diseases” in Chapter 3). A stroke occurs when the blood supply to part of the brain is interrupted, leading to damage or death of brain tissue. Of the two types of stroke, about 85% are ischaemic (caused by clotting) and 15% are haemorrhagic (caused by bleeding). Timely diagnosis is essential for time-sensitive treatment such as intravenous thrombolysis to remove or disperse blood clots and thrombectomy to remove a blood clot from a blocked blood vessel.

Figure 6.28 shows the case fatality rates within 30 days of hospital admission for ischaemic stroke using unlinked data, capturing only deaths that occurred in the hospital where the patient was initially admitted. Figure 6.29 shows the same indicator using linked data, whereby deaths are recorded regardless of where they occurred after hospital admission, including in another hospital or outside the hospital where the stroke was first recorded. The indicator using linked data is more comprehensive and comparable, but it requires a unique patient identifier and the capacity to link data – which are not available in all countries. Consequently, case fatality rates based on linked data are higher than those based on unlinked data because they capture all deaths occurring within 30 days of admission, regardless of where they occurred.

Across 21 EU countries that reported unlinked data, 8.8% of patients died within 30 days of hospital admission for ischaemic stroke in 2023 (Figure 6.28). Case fatality rates were highest in Latvia, Romania and Malta, where 13% or more of ischaemic stroke patients died within 30 days of admission. Rates were below 5% in Denmark and Sweden. Outside the EU, Norway also reported rates below 5%. In Norway, mobile stroke ambulances equipped with on-board computed tomography scanners are available to enable the early diagnosis and treatment of acute ischaemic stroke; in addition, 95% of stroke patients in Norway received care in specialised stroke units in 2023 (OECD, 2025[1]). By contrast, in Latvia where case fatality rates were relatively high, only about half of stroke patients received care in specialised stroke units in 2022 (Masiliūnas et al., 2026[2]).

Across 18 EU countries that reported linked data, an average of 13.4% of patients died within 30 days of hospital admission for ischaemic stroke in 2023 (Figure 6.29). Case fatality rates exceeded 15% in Latvia, Lithuania, Croatia and Estonia, while they were below 9% in Denmark, as well as in Norway and Switzerland.

Treatment for ischaemic stroke has advanced dramatically over recent decades, with systems and processes now in place in many EU countries to identify suspected ischaemic stroke patients and deliver acute reperfusion therapy quickly. Progress was substantial in the years leading up to the COVID-19 pandemic. Across EU countries, average case fatality rates for ischaemic stroke declined between 2013 and 2019, from 9.9% to 9.1% based on unlinked data (Figure 6.28) and from 15.1% to 13.8% based on linked data (Figure 6.29). Between 2019 and 2023, case fatality rates based on both linked and unlinked data remained broadly stable.

Countries can further improve the quality of stroke care through timely transport and diagnosis, rapid access to reperfusion therapy and access to specialised facilities such as stroke units. New models of care can deliver reperfusion therapy even more quickly and efficiently, such as pre-hospital triage by telephone and treatment initiated in ambulances (OECD, 2025[1]). For example, Portugal has expanded access to time-sensitive reperfusion therapy, with the proportion of ischaemic stroke episodes receiving mechanical thrombectomy increasing from 3.7% in 2017 to 10.2% in 2023 (Portuguese Directorate-General of Health, 2025[3]).

Definition and comparability

Case fatality rates, and unlinked and linked data, are defined in the section on “Mortality following acute myocardial infarction (AMI)”. Ischaemic stroke refers to ICD-10 codes I63-I64.

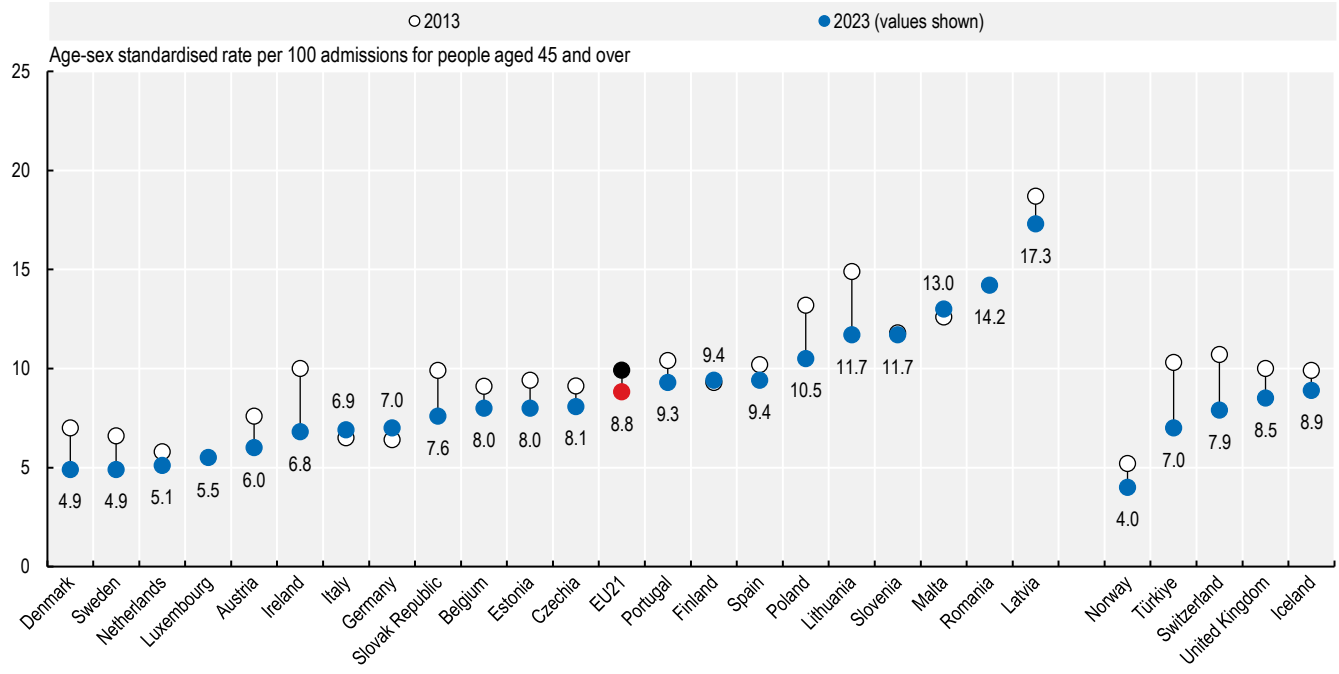
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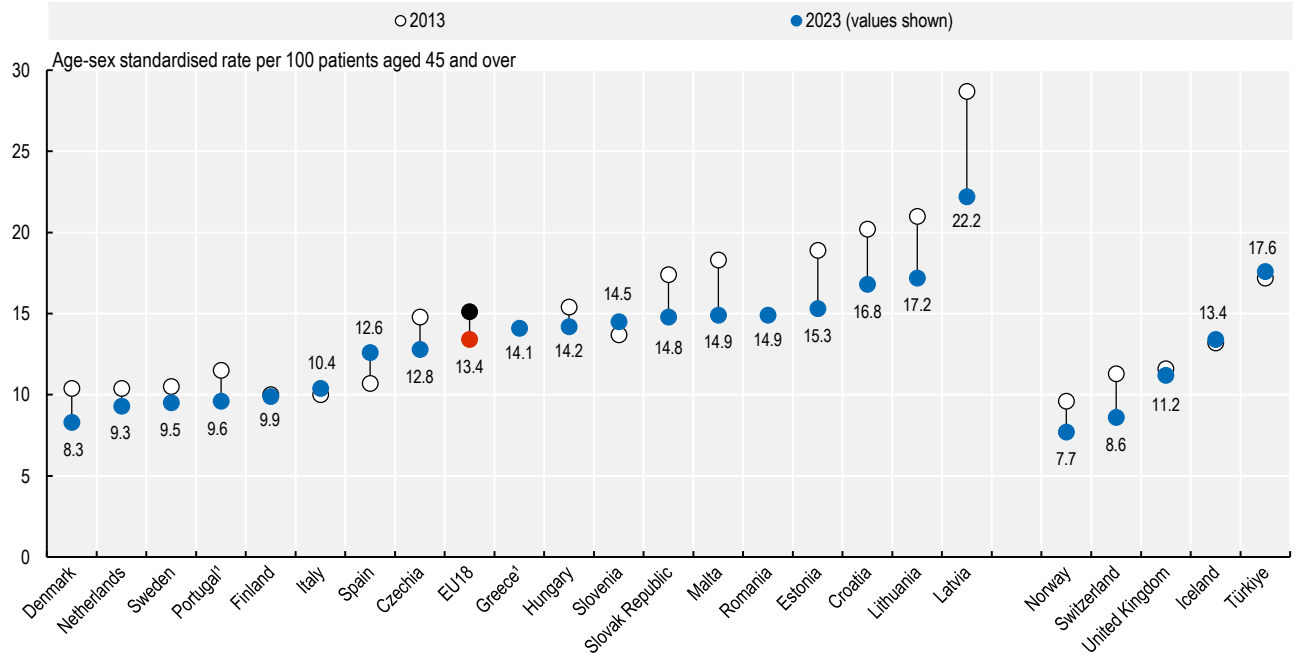
Figure 6.28. Thirty-day mortality after admission to hospital for ischaemic stroke based on unlinked data, 2023 and 2013 (or nearest years)



Note: The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5k8 (accessed on 12 October 2026).

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Figure 6.29. Thirty-day mortality after admission to hospital for ischaemic stroke based on linked data, 2023 and 2013 (or nearest years)



Note: The EU average is unweighted. 1. Data refer to 2020 instead of 2023.
Source: OECD, https://data-explorer.oecd.org/s/5k8 (accessed on 12 October 2026).

StatLink https://stat.link/bya3g8

7 Accessibility: Affordability, availability and use of services

Most EU countries have achieved universal coverage for a core set of health services, although the range of services covered and the degree of cost-sharing vary, potentially raising affordability issues for some population groups. Effective access to different types of care can also be restricted due to health workforce shortages, long waiting times or long distance to reach the closest healthcare provider. While unmet medical care needs due to financial, waiting time or geographic barriers remained relatively low in most EU countries in 2025, these unmet needs are nearly twice as high among people in the lowest income group compared to the rest of the population on average in the EU. Achieving and sustaining universal access to care requires having a sufficient number and the right mix of health workers, with an appropriate geographic distribution to respond to the needs of the entire population, regardless of where they live. Despite the increase in the number of health workers over the past decade in most EU countries, the estimated shortage of doctors, nurses and midwives remained close to 1.2 million in 2024. There also continue to be wide disparities in the geographic distribution of doctors, with a particularly high density in national capital regions and much lower in rural and remote areas.

Unmet healthcare needs

Accessibility to healthcare can be limited for several reasons, including cost, distance to the closest health facility and waiting times. Information about unmet healthcare needs is usually sought using population-based surveys, but different survey methodologies and instruments provide different results. The data presented in this section rely on Eurostat's EU-SILC survey.

According to this survey, most of the population in EU countries reported that they had no unmet medical care needs for financial reasons, geographic reasons or waiting times in 2025. Considering only people who expressed having had a need for healthcare (i.e. excluding those who reported not having any care needs), 3.6% of adults reported some unmet medical care needs in the EU in 2025 (Figure 7.1; left panel). While this proportion was very low in countries such as Cyprus, Malta and Czechia (less than 1%), it was 10% or more in Greece, Finland, Estonia and Latvia.

In Greece, 20% of adults reported having some unmet medical care needs in 2025, reflecting, among other things, the impact of high out-of-pocket payments and long waiting lists, particularly in rural and remote areas. However, reported unmet needs fell by 2 percentage points (p.p.) in Greece compared to 2024. The Greek Ministry of Health has embarked on a series of reforms since 2022 to improve access to medical care, but the effects of these reforms may not be fully felt yet. A central component of these reforms has been the introduction of the Personal Doctor scheme in 2022 to provide population-wide access to first-point contact physicians (OECD/European Observatory on Health Systems and Policies, 2025[1]).

In all EU countries, the burden of unmet needs for medical care falls disproportionally on people who are economically disadvantaged. On average across the EU, 5.9% of people at risk of poverty (defined as having a disposable income below 60% of the national median disposable income) reported having some unmet medical care needs in 2025, a proportion nearly two times greater than among the rest of the population (3.1%). In Greece, 30% of people in this low-income group who had a medical care need reported their need going unmet in 2025. This proportion reached 17-19% in Finland, Latvia and Romania.

In most countries, a larger proportion of the population indicates some unmet needs for dental care than for medical care (Figure 7.1; right panel). This is mainly because dental care is only partially included (or not included at all) in public schemes in many countries, so it must either be paid out-of-pocket or covered through purchasing private health insurance. Across the EU, 6.3% of people who had dental care needs reported that their needs were not met in 2025. Such unmet dental care needs were reported by more than 15% of people in Greece, Romania, Portugal, Latvia and Finland. Unmet dental care needs are nearly three times higher among people at risk of poverty (14.2% on average in the EU) compared to the rest of the population (5.1% on average).

Reasons for unmet medical or dental care needs vary across the EU countries. While in Greece most people reporting unmet medical care needs reported costs as the main reason for forgoing medical care, in Estonia and Finland more than 90% of unmet needs were due to long waiting times (Figure 7.2). In Estonia, progress has been achieved in recent years in reducing the proportion of the whole population reporting unmet needs due to waiting times, with the proportion falling from 12% in 2023 to about 7% in 2025. This followed the introduction of a package of measures in 2023 to ensure access to general medical care and improve continuity of care (OECD/European Observatory on Health Systems and Policies, 2025[2]). By contrast, in Finland, not much progress has been achieved in recent years in reducing the proportion of people reporting unmet medical care needs due to waiting times (see indicator "Waiting times for elective surgery").

Definition and comparability

The EU Statistics on Income and Living Conditions (EU-SILC) survey asks people aged 16 and over whether there was a time in the previous 12 months when they felt they needed medical care or dental care but did not receive it, and if so for what reason. The data presented in this section relate to three specific reasons: the care was too expensive, the distance to travel too far or the waiting times too long. The data presented in Figure 7.1 consider only the population who reported having had some medical or dental care needs (thereby excluding those who did not have any needs), while the data presented in Figure 7.2 consider all survey respondents because the data on specific reasons for unmet medical care needs are not available for those reporting that they had some care needs. This explains why the proportion of people with unmet care needs is slightly lower in Figure 7.2 than in Figure 7.1.

Some variations in the survey question across countries may affect data comparability. While most countries refer to both a medical examination or treatment, the question in some countries (e.g. Czechia and Spain) only refers to a medical examination/consultation, resulting in lower rates of unmet needs.

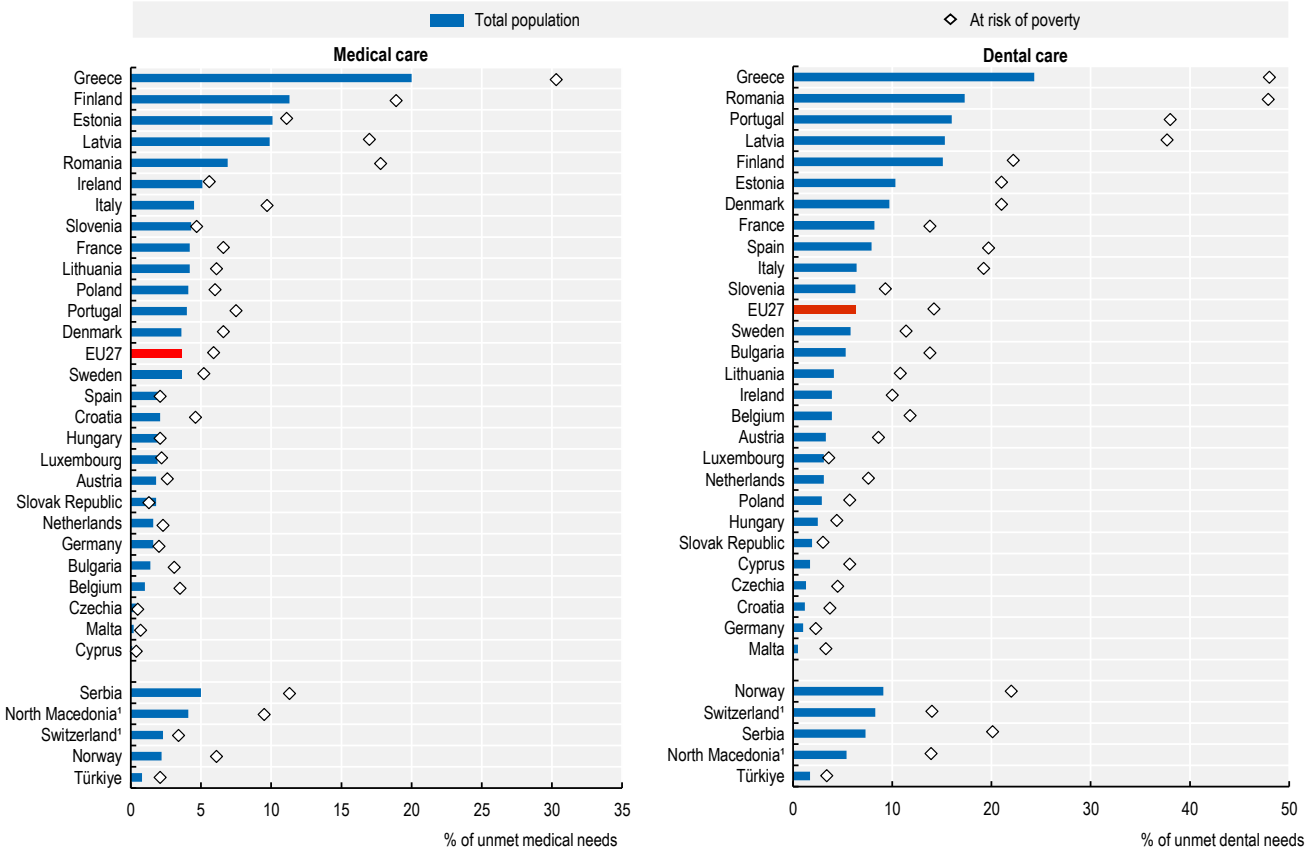
People at risk of poverty are defined as those with an equivalised disposable income below 60% of the national median disposable income.

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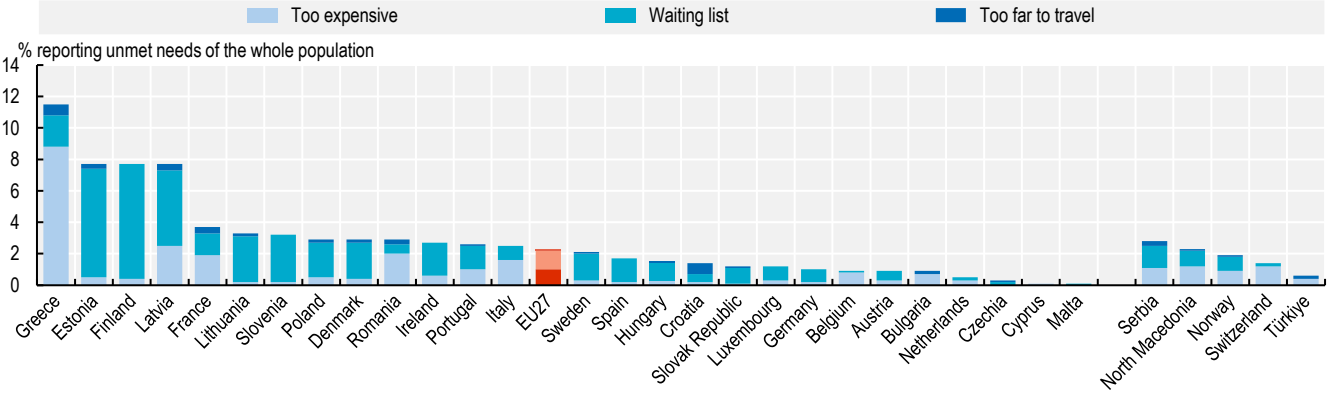
Figure 7.1. Unmet needs for medical and dental care due to financial, distance or waiting time reasons, 2025 (or nearest year)



Note: The EU average is weighted. 1. Data from 2024.
Source: Eurostat, https://doi.org/10.2908/HLTH_SILC_08B and https://doi.org/10.2908/HLTH_SILC_09B (both accessed on 30 September 2026).

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Figure 7.2. Main reasons for reporting unmet needs for medical care, 2025 (or nearest year)



Note: The EU average is weighted.
Source: Eurostat, https://doi.org/10.2908/HLTH_SILC_08 (accessed on 30 September 2026).

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Population coverage for healthcare

The share of the population covered by a public or private scheme provides an important measure of access to care and the financial protection against the costs associated with healthcare. However, population coverage is only a partial measure of access and coverage: the range of services covered and the degree of cost-sharing for those services also define how comprehensive healthcare coverage is in a country (see indicator "Extent of healthcare coverage").

Most European countries have achieved universal (or near-universal) coverage of healthcare costs for a core set of services, usually including consultations with doctors, tests and examinations, and hospital care (Figure 7.3). Yet, in some countries, coverage of these core services may not be universal. In Ireland, for example, only Medical Card and GP visit card holders who accounted for less than half of the population in 2024 were covered for the costs of all GP services. While the country has made substantial progress in expanding primary care coverage under *Sláintecare* reforms, the European Commission has called on Ireland to continue accelerating the transition towards universal and accessible primary care in the 2026 European Semester Spring Package (European Commission, 2026[1]).

Romania is the only EU country where at least 10% of the population is not covered for healthcare costs. The main groups of uninsured people include Romanians living abroad but still counted as residents, long-term unemployed people, people who did not pay health insurance premiums, and people without a valid identity card (which is a prerequisite for health insurance registration). This last issue particularly affects the Roma population and undocumented migrants. People without insurance nonetheless have free access to a state-funded minimum benefits package covering key services such as emergency care, maternal care and, since 2023, primary care and specialist consultations for certain chronic conditions (OECD/European Observatory on Health Systems and Policies, 2025[2]).

Although basic primary health coverage generally covers a defined set of benefits, in many countries accessing health services entails some degree of cost-sharing. In most countries, additional health coverage can be purchased through private insurance to cover any cost-sharing left after basic coverage (complementary insurance), add additional services (supplementary insurance) or provide faster access or a greater choice of providers (duplicate insurance). In most EU countries, less than half the population holds additional private health insurance, with the exceptions of Belgium, the Netherlands, Luxembourg, France and Croatia where coverage exceeds half of the population (Figure 7.4).

Over the last decade, the population covered by additional voluntary private health insurance has increased in most EU countries with available data, but it has fallen in some countries such as France and Slovenia. Several factors affect the evolution of private health insurance coverage, notably gaps in access to publicly financed services and government interventions in health insurance markets. In France, the compulsory requirement for employers to provide complementary insurance for nearly all private sector employees, introduced in 2016, narrowed the scope of voluntary health insurance to individual contracts. As a result, the percentage of the population covered by voluntary private health insurance dropped from 95% before this reform to 58% in 2017 and has remained stable since then. In Slovenia, the 2024 policy reform replaced complementary insurance with a compulsory healthcare contribution under the social health insurance system, sharply reducing private health insurance coverage from 94% of the population in 2023 to 24% in 2024 (OECD/European Observatory on Health Systems and Policies, 2025[3]).

Definition and comparability

Population coverage for healthcare is defined as the share of the population covered for a set of healthcare goods and services (covering at least hospital care and outpatient medical care) under public programmes and through primary private health insurance. Public coverage refers both to government programmes, generally financed by taxation, and social health insurance, generally financed by payroll taxes. Voluntary private health insurance (VHI) refers to additional (secondary) insurance, excluding primary private health insurance. Complementary VHI complements coverage of government/compulsory insured services by covering all or part of the residual costs not otherwise reimbursed (e.g. cost-sharing, co-payments). Supplementary VHI provides coverage for additional health services not covered by government/compulsory schemes. Duplicate VHI offers coverage for health services already included under government/compulsory schemes, but offering access to different providers (e.g. private hospitals) or levels of service (e.g. faster access to care).

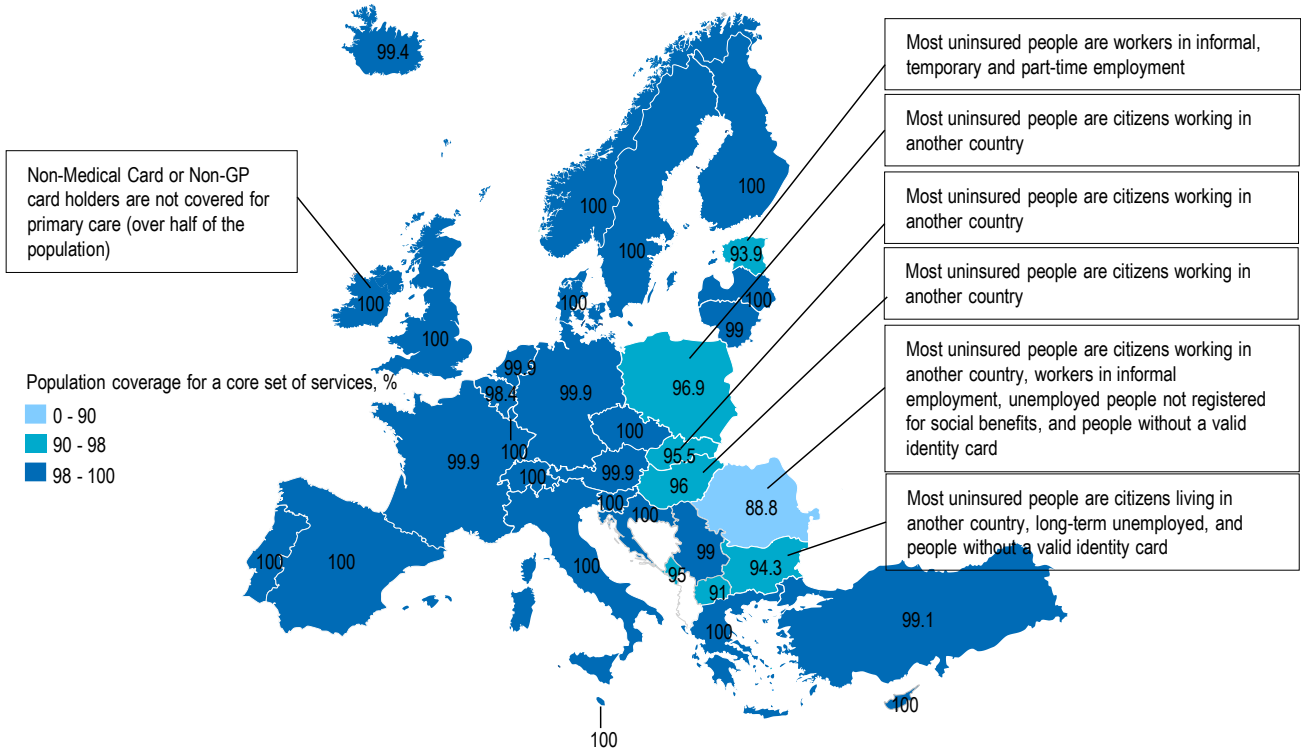
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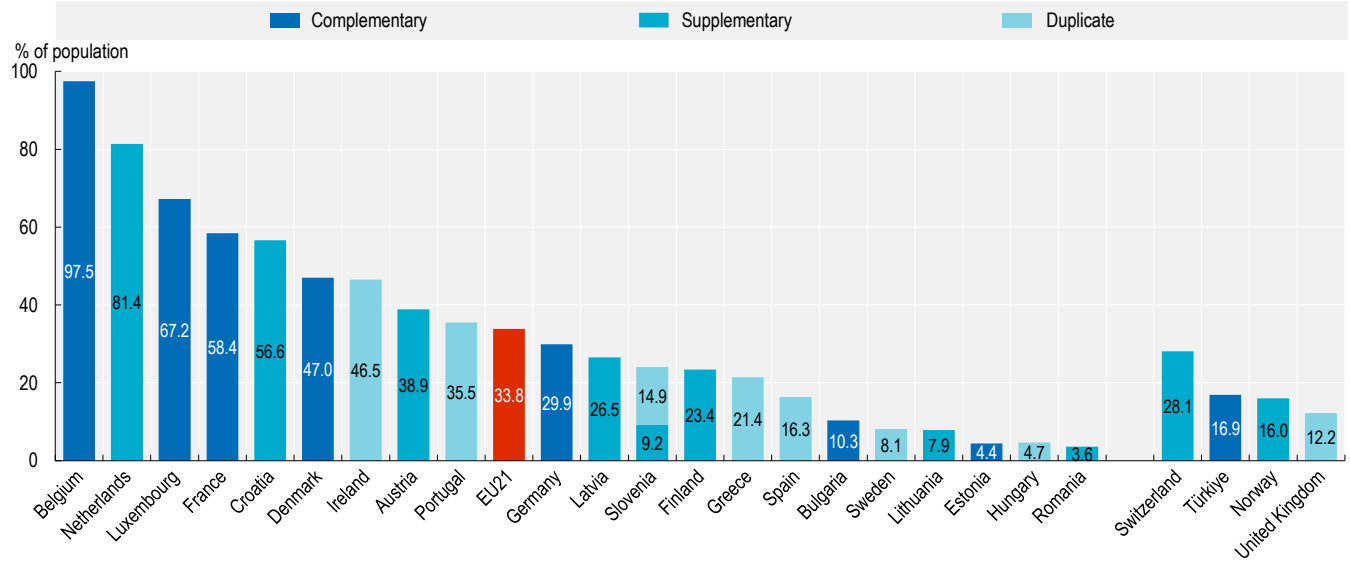
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Figure 7.3. Population coverage for a core set of services, 2024 (or nearest year)



Note: Data include public coverage and primary private health insurance coverage.
Source: OECD, https://data-explorer.oecd.org/s/5kk (accessed on 30 September 2026); European Observatory Health Systems in Transition (HiT) Series for non-OECD countries.

Figure 7.4. Private health insurance coverage, 2024 (or nearest year)



Note: The EU average is unweighted. The data exclude primary private health insurance. The additional (secondary) private health insurance can be both complementary and supplementary in Bulgaria, Denmark, Germany, Luxembourg and Türkiye.
Source: OECD, https://data-explorer.oecd.org/s/5kk (accessed on 30 September 2026) and OECD Reviews of Health Systems: Romania 2025.

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Extent of healthcare coverage

In addition to the share of the population entitled to core health services, the extent of healthcare coverage is defined by the range of services included in a publicly defined benefit package and the proportion of costs covered. Figure 7.5 assesses the extent of coverage for key health services by calculating the share of expenditure covered under government schemes or compulsory health insurance. Differences in the extent of coverage across countries can be the result of specific services being included or excluded in the publicly defined benefit package (such as a particular pharmaceutical drug or medical treatment), different cost-sharing arrangements, or some services only being covered for specific population groups in a country (such as dental treatment).

On average, four-fifths of all healthcare costs were covered by government or compulsory health insurance schemes in 2024 across the EU. However, financial protection is not uniform across all types of health services and there are substantial differences across countries. Generally, inpatient services are more comprehensively covered than any other type of care, with free access or very limited cost-sharing in many countries. As a result, 92% of all inpatient costs were borne by public payers across the EU. Coverage rates were near 100% in Sweden, Estonia, Romania, Slovenia, Hungary and Germany. In Greece, on the other hand, public sources covered only around two-thirds of total costs of inpatient care. In that country, inpatient care in public hospitals is provided without cost-sharing but copayments in private hospitals contracted by the public purchaser and direct payments for non-covered services can explain the low public coverage overall (OECD/European Observatory on Health Systems and Policies, 2025[1]).

Public coverage for outpatient medical care is less comprehensive than for inpatient care but more than three out of every four euros (77%) spent on these services were still covered by government and compulsory insurance schemes across the EU in 2024. However, coverage was less than 60% in Latvia, Bulgaria, Portugal, Italy and Malta. In Latvia and Portugal, patients are increasingly seeking alternatives to the public system through private providers, with significant increases in duplicative voluntary health insurance over the past decade to cover these costs. In contrast, government and compulsory insurance schemes paid over 90% of these costs in the Slovak Republic, Denmark, Czechia, Sweden and Germany. In some of these countries, outpatient primary and specialist care are generally free at the point of service, but user charges may still apply for specific services or if non-contracted private providers are consulted. For example, in Czechia, almost all health services are free at the point of use, except for a small fee for out-of-hours emergency care services.

Coverage for dental care costs is far more limited across EU countries. Many countries restrict benefits to specific treatments or age groups, and many services require either substantial cost-sharing or must be paid for fully out-of-pocket by the patient. As a result, only around one-third of total costs (35%) are borne by government schemes or compulsory insurance across the EU. More than 60% of dental spending is covered in only four EU countries: Croatia, Slovenia, France and Germany. In Malta, Romania and Spain, the level of public coverage is very low. Voluntary health insurance for dental care is common in European countries and either provides full coverage of some services or coverage of cost-sharing obligations. It covers more than 10% of all dental costs in Denmark, Luxembourg and France and over 40% in the Netherlands.

Coverage for pharmaceuticals is also typically less comprehensive than for inpatient and outpatient care. Across the EU, 61% of all pharmaceutical retail spending is financed by government or compulsory insurance schemes. The most generous coverage can be found in Germany and France where over 80% of the pharmaceutical retail costs are covered. Conversely, this share is less than 40% in Bulgaria, Poland and Denmark.

Finally, the coverage for therapeutic appliances, such as glasses, hearing aids and other medical devices, is generally low across European countries – with great variation across the various products. Collectively, government and compulsory insurance schemes cover more than 50% of these expenses in only four EU countries (France, Germany, Malta and the Netherlands).

Definition and comparability

Healthcare coverage is defined by the share of the population entitled to services, the range of services included in a benefit package and the proportion of costs covered by government schemes and compulsory insurance schemes. Coverage provided by voluntary health insurance and other voluntary schemes such as charities or employers is not considered. The core functions analysed here are based on definitions in the System of Health Accounts (OECD/Eurostat/WHO, 2017[2]).

Comparability issues for this indicator may arise when health expenditure reporting is not comprehensive. For example, if some household spending for private inpatient or outpatient treatment is missing from the reported health spending data in a country, the calculated indicators of public financial coverage may be overestimated.

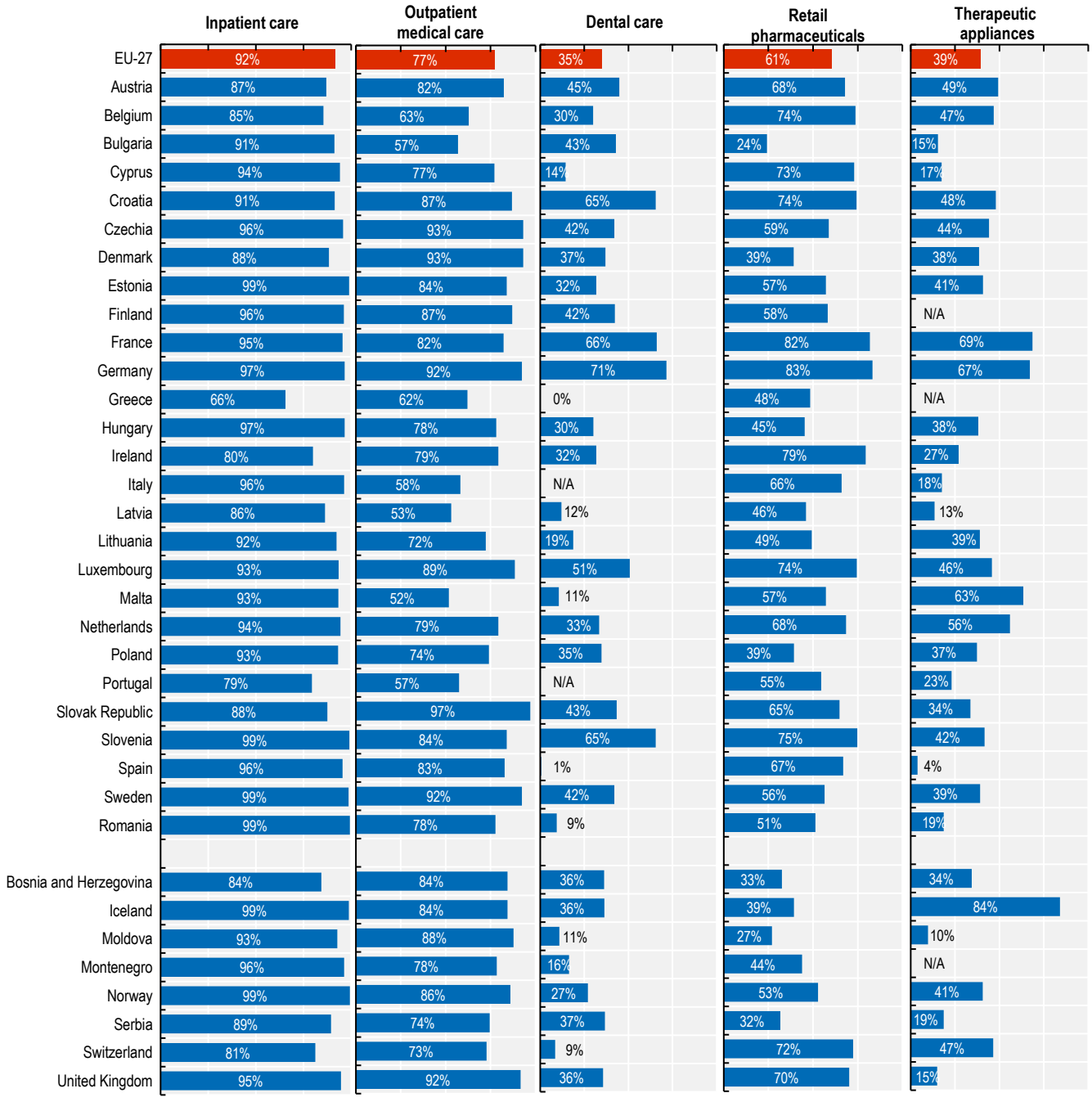
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OECD/Eurostat/WHO (2017), *A System of Health Accounts 2011: Revised edition*, OECD Publishing, Paris, https://doi.org/10.1787/9789264270985-en. [2]

Figure 7.5. Healthcare coverage for selected services, 2024 (or nearest year)

Government and compulsory insurance spending as proportion of total health spending by type of services



Note: Outpatient medical services mainly refer to services provided by generalists and specialists in the outpatient sector. Retail pharmaceuticals include prescribed and over-the-counter medicines as well as medical non-durables if dispensed to outpatients (pharmaceuticals consumed during a hospital stay are excluded). Therapeutic appliances refer to vision products, hearing aids, wheelchairs and other medical devices. N/A means data not available. The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5kl (accessed on 30 September 2026).

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Financial hardship and out-of-pocket expenditure

Health systems provide adequate financial protection when payments for healthcare do not expose people to financial hardship. A lack of financial protection can reduce access to healthcare, undermine health status, deepen poverty, and exacerbate health and socio-economic inequalities. Exposure to financial hardship for people using health services can also lead to catastrophic health spending, with poorer households and those who must pay for long-term treatment – such as medicines for chronic illness – particularly vulnerable. Financial protection is weakened by a health system's reliance on out-of-pocket (OOP) payments for healthcare. On average across EU countries, 15% of all spending on healthcare comes directly from patients through OOP payments (see section on "Health expenditure by type of financing" in Chapter 5).

The share of household consumption spent on healthcare provides an aggregate assessment of the financial burden of out-of-pocket payments. In 2024, around 3% of total household spending was on health services across the EU. This share ranged from less than 2% in Croatia and Luxembourg to around 5% or more in Malta, Bulgaria and Portugal (Figure 7.6).

Health systems in EU countries differ in the degree of coverage for different health services (see section on "Extent of healthcare coverage"). Pharmaceuticals and other medical goods are the main driver of household spending in the EU, accounting for 42% of OOP spending on health on average in 2024 (Figure 7.7). In Bulgaria, the Slovak Republic, Romania and Poland, pharmaceuticals accounted for over 60% of OOP spending. Outpatient care accounted for more than a fifth of household spending on healthcare on average, but was especially high in Portugal and Italy where they accounted for around half of all OOP spending (but in these two countries dental care is included in this figure). Dental care represented 16% of OOP spending on health on average, but was around one-third in Spain, Lithuania and Estonia. Long-term care made up 11% of all household out-of-pocket spending on health in 2024 in EU countries, but accounted for more than 40% in Germany and France. Finally, inpatient care played only a minor role (7%) in the composition of OOP spending in EU countries, except in Greece (31%).

The indicator most widely used to measure financial hardship associated with OOP payments for households is the incidence of catastrophic health spending (Cylus, Thomson and Evetovits, 2018[1]). This varies considerably across EU countries, from fewer than 2% of households experiencing catastrophic health spending in Sweden, Slovenia, Ireland and the Netherlands, to close to 15% of households or more in Latvia and Bulgaria (Figure 7.8) (UHC watch, 2026[2]). Across all countries, poorer households (those in the lowest consumption quintile) are most likely to experience catastrophic health spending. Countries with comparatively high levels of public spending on health and low levels of OOP payments typically have a lower incidence of catastrophic spending (WHO Europe, 2023[3]).

However, policy choices are also important, particularly around coverage policy. Population entitlement to publicly financed healthcare is a prerequisite for financial protection, but not a guarantee of it. Countries with a low incidence of catastrophic spending on health are also more likely to limit the use of co-payments; exempt people with low incomes and frequent users of care from co-payments; use low fixed co-payments instead of percentage co-payments; and cap the co-payments a household has to pay over a given time period (as, for example, in Austria, Belgium, Germany, Ireland, Spain and the United Kingdom).

Definition and comparability

Out-of-pocket (OOP) payments are expenditures borne directly by a person at the time of using any health good or service. They include cost-sharing (different modes of co-payments) and other expenditure paid directly by private households. For the calculation of total OOP payments as a share of final household consumption, aggregate OOP payments obtained from national health accounts are divided by final household consumption as defined in national accounts.

Catastrophic health spending is defined as OOP payments that exceed a predefined percentage of the resources available to a household to pay for healthcare. Household resources available can be defined in different ways, leading to measurement differences. In the data presented here, these resources are defined as household consumption minus a standard amount representing basic spending on food, housing and utilities. The threshold used to define households with catastrophic spending is 40% of household capacity to pay for healthcare. Results are disaggregated into quintiles by consumption per person using the OECD equivalence scale. Microdata from national household budget surveys are used to calculate this indicator.

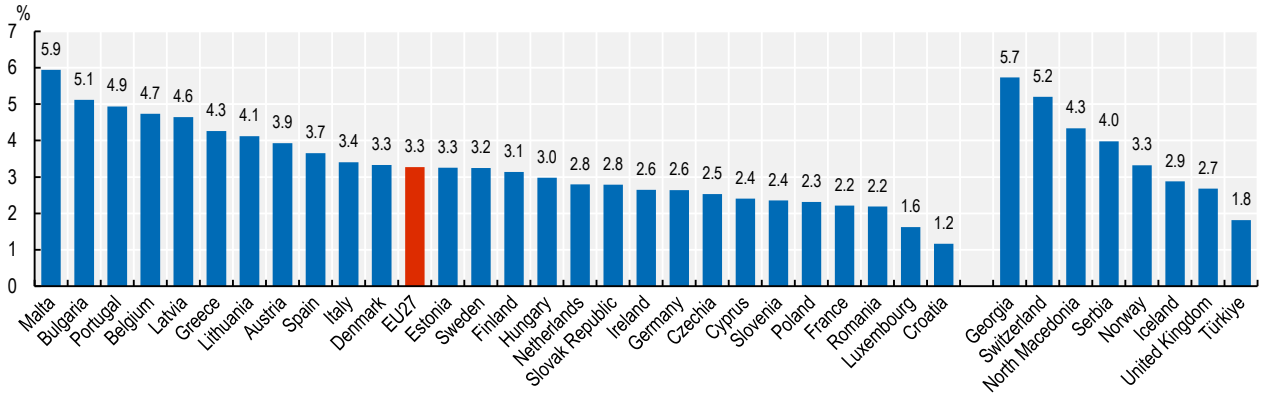
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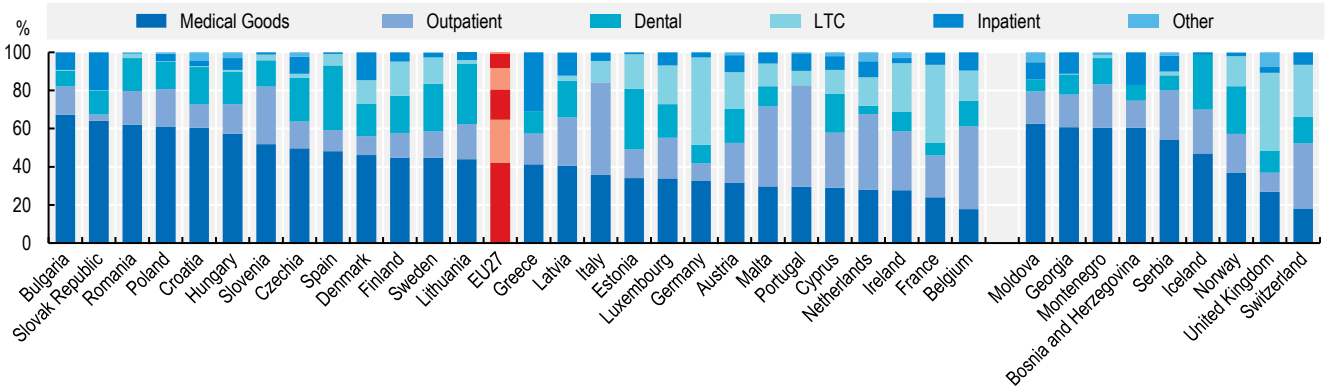
Figure 7.6. Out-of-pocket spending on health as share of final household consumption, 2024 (or nearest year)



Note: The EU average is unweighted.
Source: OECD, https://data-explorer.oecd.org/s/5kl and https://data-explorer.oecd.org/s/5kp (both accessed on 30 September 2026).

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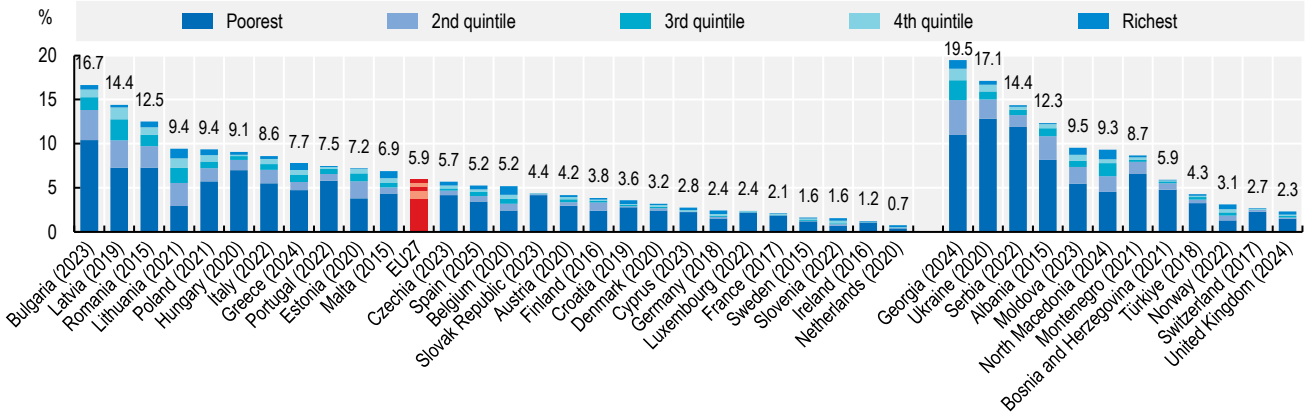
Figure 7.7. Out-of-pocket spending on health, by type of services, 2024 (or nearest year)



Note: The EU average is unweighted. "Medical Goods" include retail pharmaceuticals and therapeutic appliances.
Source: OECD, https://data-explorer.oecd.org/s/5kl (accessed on 30 September 2026).

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Figure 7.8. Share of households with catastrophic health spending by consumption quintile, latest year



Note: The EU average is unweighted. The data for the Netherlands and Norway are likely to be underestimated due to the way out-of-pocket spending is covered in their household budget surveys.
Source: WHO Regional Office for Europe, 2023 and UHC watch, 2026.

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Availability of doctors

Proper access to medical care requires having a sufficient number of doctors, with a proper mix of generalists and specialists, and a proper geographic distribution to serve the population in the whole country.

The overall number of doctors in EU countries has increased by about 25% over the past decade, rising from about 1.6 million in 2014 to just over 2.0 million in 2024. In all EU countries with consistent trend data, the number of doctors increased more rapidly than the size of the population since 2014. On average across countries, the number of doctors rose from 3.6 per 1 000 population in 2014 to 4.3 in 2024. This increase was driven mainly by a strong growth in the number of new medical graduates (see indicator "Medical and nursing graduates" in Chapter 8). A positive net immigration of doctors from non-EU countries to EU countries also contributed to the rise, although some EU countries have experienced some net emigration of doctors to other countries (OECD, 2025[1]).

In 2024, Greece had the highest number of doctors per population, followed by Italy, Austria and Cyprus, with at least 5.5 practising physicians per 1 000 population in these four countries (Figure 7.9). In Cyprus, the number of doctors has steadily increased over the past decade, nearly doubling between 2014 and 2024, driven by a steady growth in both the number of domestically-trained and foreign-trained doctors.

While there has been a substantial increase in the number of doctors over the past decade in many EU countries, this does not mean that shortages of doctors have reduced. Increases in the demand for doctors due to population ageing, reductions in the average working hours of doctors, and imbalances in the mix and geographic distribution of doctors, may have contributed to persisting shortages overall or in certain specialty areas or regions. In many countries, the increase in the number of doctors was at least partly offset in terms of workforce capacity by a reduction in working hours, as many doctors aim to achieve a better work-life balance. Data from the EU Labour Force Survey show that while general practitioners (GPs) and specialist doctors continue to work longer hours than the average worker in all countries, the average working hours of both GPs and specialists have decreased over the past decade in many EU countries. On average across 19 EU countries with consistent trend data, the average working hours of GPs fell from 42.8 hours per week in 2014 to 39.4 hours in 2024 (an 8% reduction), while the average working hours of specialists fell from 42.3 hours to 40.3 hours (a 5% reduction). This reduction in working time was more pronounced among male doctors than female doctors, even though male doctors continue to work longer hours.

The main concern about the shortage of doctors in many countries has been the growing shortage of GPs, particularly in rural and remote areas, restricting access to primary care. Whereas the overall number of doctors per capita has increased in all countries, the share of GPs has come down in most countries as the number of specialists increased even more rapidly. On average across EU countries, less than one in five doctors were GPs in 2024, whereas over two-thirds were specialists (Figure 7.10). A few countries, such as Finland, Belgium, Luxembourg and Ireland, have been able to maintain a better balance between GPs and specialists, with GPs accounting for at least 25% of all doctors in these countries.

Several countries have increased the number of postgraduate training places in general medicine to address current and projected shortages of GPs. In Belgium, France and the United Kingdom, over 40% of all new postgraduate training places have been allocated to general medicine in recent years (OECD, 2025[2]). However, many countries are struggling to attract enough new medical graduates to fill available places in general medicine because of the lower prestige and remuneration of general practice (see indicator "Remuneration of doctors (general practitioners and specialists)").

In many countries, the density of physicians is greater in national capital regions and other urban areas than in rural areas, reflecting the concentration of hospitals and specialised services such as surgery in urban centres and physicians' preferences to live and work in cities (see indicator "Geographic access to doctors and hospitals").

Definition and comparability

Practising physicians are defined as doctors who are providing care for patients. In some countries, the numbers also include doctors working in administration, management, academic and research positions ("professionally active" physicians), adding another 5-10% of doctors. Interns and resident physicians who provide services under the supervision of other doctors are included in most countries.

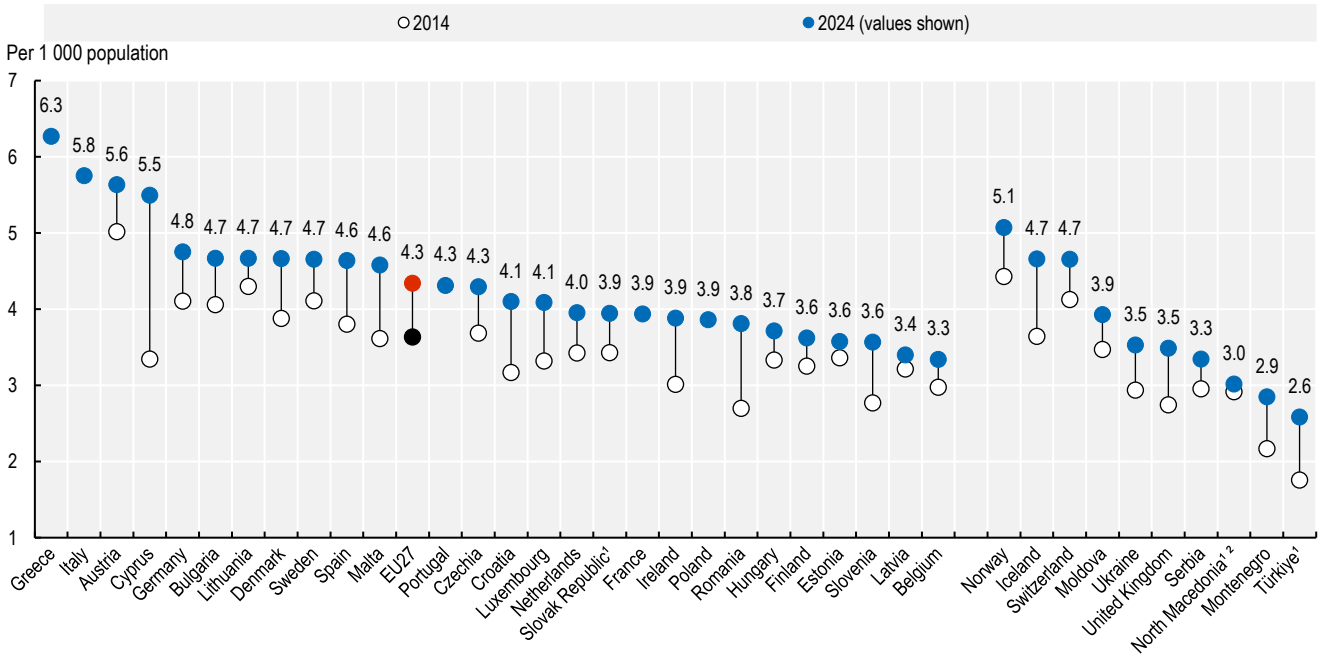
In Finland and Switzerland, the number of GPs may include other generalist (non-specialist) medical practitioners working in hospital (not in primary care), thereby resulting in an over-estimation.

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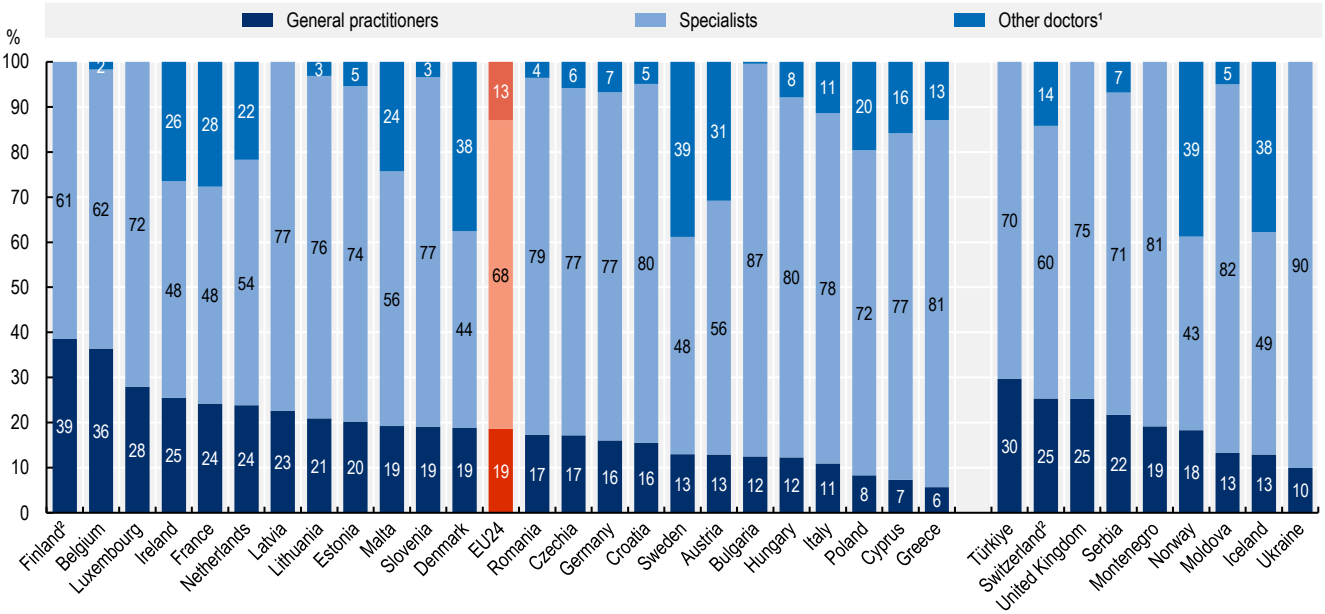
Figure 7.9. Practising doctors per 1 000 population, 2014 and 2024 (or nearest year)



Note: The EU average is unweighted. 1. Data include not only doctors providing direct care to patients, but also those working in the health sector as managers, educators, researchers, etc. (adding another 5-10% of doctors). 2. The latest year refers to 2020 for North Macedonia.
Source: OECD, https://data-explorer.oecd.org/s/5jx; Eurostat, https://doi.org/10.2908/HLTH_RS_PRS2 (both accessed on 30 September 2026); WHO National Health Workforce Accounts for Moldova and Ukraine.

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Figure 7.10. Share of different categories of doctors, 2024 (or nearest year)



Note: The EU average is unweighted. 1. The category "Other doctors" includes non-specialist doctors working in hospital, recent medical graduates who have not yet started post-graduate specialty training, and any other doctors not further defined. 2. The number of GPs in Finland and Switzerland may include other generalists (non-specialists) working in hospital (not in primary care), thereby resulting in an over-estimation.
Source: OECD, https://data-explorer.oecd.org/s/5jz; Eurostat, https://doi.org/10.2908/HLTH_RS_PHYSCAT (both accessed on 30 September 2026).

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Geographic access to doctors and hospitals

Achieving universal access to healthcare requires a proper distribution of doctors and hospitals in all parts of the country. The geographic distribution of doctors often varies widely within countries, sometimes resulting in “medical deserts” in some regions. While various definitions of “medical deserts” exist reflecting different types of access issues, the term typically relates to long geographical distance to the nearest doctor or facility.

Figure 7.11 shows that the density of doctors in many countries is particularly high in national capital regions, reflecting the concentration of hospitals and specialised services in national capitals. This is the case for example in Austria, Belgium, Croatia, Czechia, Denmark, Greece, Hungary, Poland, Portugal, Romania and the Slovak Republic. Data available at a more disaggregated level confirm the tendency of having higher densities of doctors in metropolitan areas than in remote areas. For example, in Lithuania and Poland, the density of doctors was more than three times higher in metropolitan areas than in remote areas in 2023, and there are also large gaps in other countries like France and Hungary (OECD, 2025[1]).

Doctors may be reluctant to practise outside urban regions due to concerns about their professional life and social amenities for their families (including job opportunities for partners and education opportunities for children). Countries have tried to address the shortages of doctors (and in particular general practitioners) in rural and remote areas through policies that can be grouped in four categories: 1) policies related to the education and training of doctors (including both the selection of students and the content and location of education and training programmes); 2) financial incentives to attract more doctors in underserved areas; 3) improvements in other aspects of the working conditions of doctors practicing in underserved areas to increase attractiveness and retention; and 4) regulations to restrict the choice of practice location of newly-trained doctors. Evidence shows that one of the policy levers that has the strongest and most lasting effect is to select and train more medical students from these underserved areas as they are more likely to end up practising in these areas after completing their training, although these policies take time to have any effect because of the length of the education and training period. Other policy levers may also be used as complementary measures, but they generally have weaker or shorter-lived effects when used alone.

In Greece, the government introduced in 2024 a comprehensive package of financial and non-financial incentives for physicians serving in officially designated remote and hard-to-staff regions, with the aim to reduce geographic imbalances and ensure continuous healthcare delivery in underserved areas (Government of Greece, 2024[2]). In France, successive governments have implemented various measures over the past two decades to try to address the growing shortage of doctors and in particular general practitioners in an increasing number of regions, with limited success. One of the main policy interventions has been to provide several types of financial incentives to attract more self-employed doctors in underserved areas. However, a recent report from the French Audit Office questioned the cost-effectiveness of at least some of these financial incentives, noting that the effectiveness of these programmes had not been demonstrated and that these programmes only responded partly to the multiple factors influencing the choice of practice location of self-employed doctors (French Audit Office, 2025[3]).

There are also marked variations in physical access to hospitals between the population living in urban or rural and remote areas. On average across EU countries in 2023, 83% of the population lived within a 15-minute drive from the nearest hospital (Eurostat, 2025[4]). Most urbanised and densely populated regions in Western and Central Europe had better proximity to hospital services, with less than 30% of the population living beyond this threshold. By contrast, more than half of the population lived more than a 15-minute drive from the nearest hospital in most regions of Ireland and Romania (Figure 7.12).

Definition and comparability

Regions can be classified in different territorial levels. The Nomenclature of Territorial Units for Statistics (NUTS) is the EU’s standard regional classification system. NUTS 2 corresponds to basic regions for regional policies (generally corresponding to the first administrative level below the national government), while NUTS 3 corresponds to smaller regions for more detailed analysis. Figure 7.11 presents data at the NUTS 2 level. The indicator on driving distance to the nearest hospital (Figure 7.12) draws on Eurostat’s NUTS 3-level calculations. The data for NUTS 2 regions were calculated by the OECD using Eurostat’s NUTS 3-level data and aggregated to the NUTS 2 level using population weights.

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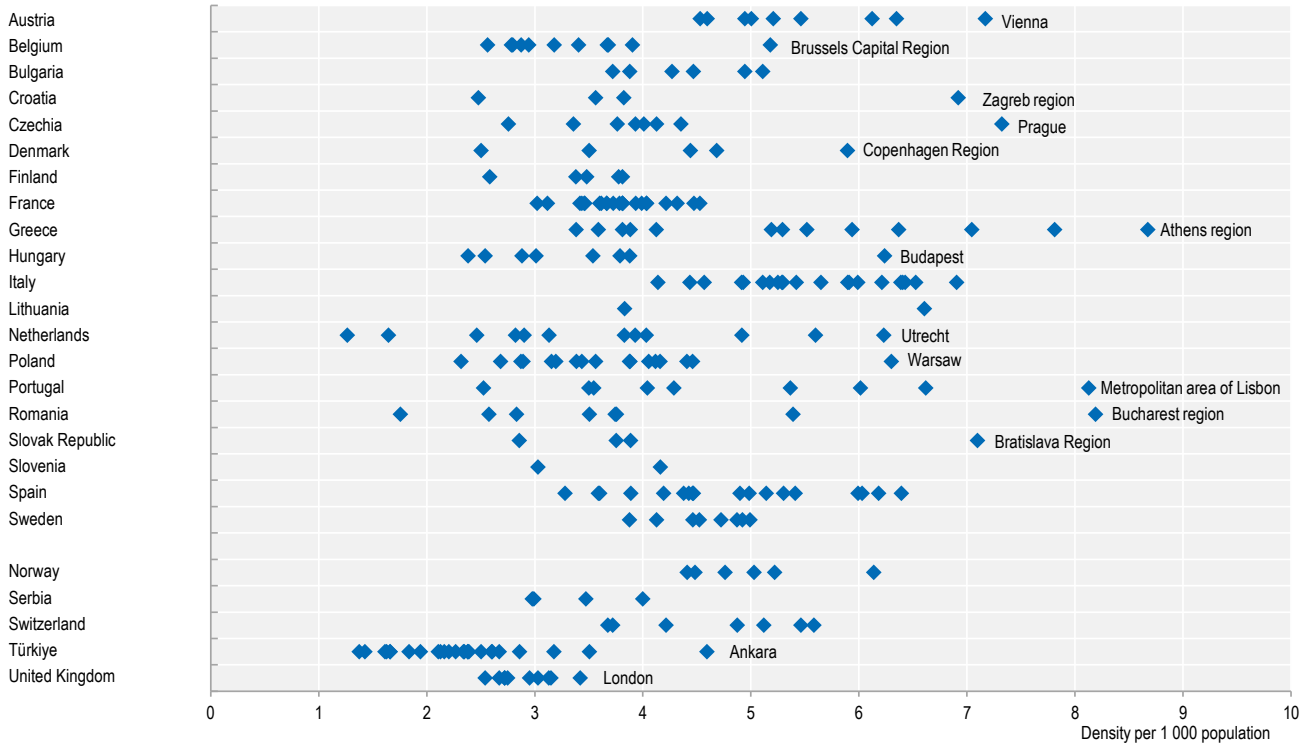
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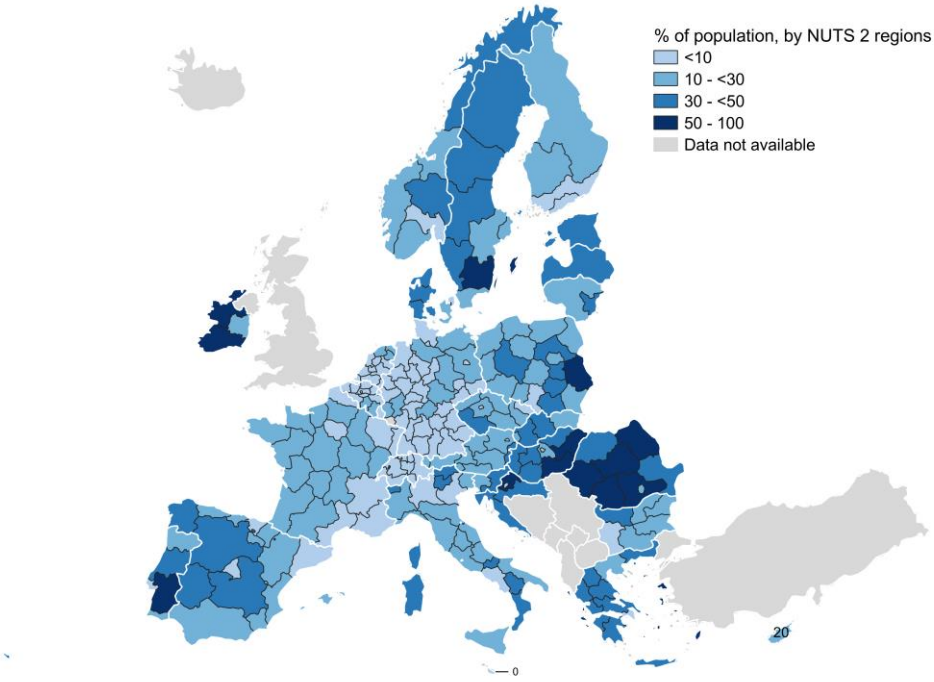
Figure 7.11. Doctor density by Territorial Level (NUTS) 2 regions, 2024 (or nearest year)



Note: Data for the United Kingdom refer to 2022.
Source: Eurostat, https://doi.org/10.2908/HLTH_RS_PHYSREG; OECD, https://data-explorer.oecd.org/s/5kn (both accessed on 30 September 2026); NHS and ONS statistics for the United Kingdom.

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Figure 7.12. Population living more than 15 minutes driving time of a hospital, 2023



Source: OECD calculations based on Eurostat methodology and data (Eurostat-GISCO hospital locations 2023).

Remuneration of doctors (general practitioners and specialists)

The remuneration of different categories of doctors affects the financial attractiveness of general practice and different specialties. Differences in doctors' earnings across countries can also act as a "push" or "pull" factor influencing physician migration. In many countries, governments can determine or influence the level and structure of physician remuneration by regulating their fees or by setting salaries when doctors are employed in the public sector.

Doctors (both GPs and specialists) continue to earn substantially more than the average wage in all European countries with available data, although the extent of the gap varies widely. In most countries, GPs earned between two to four times more than the average national wage in 2024, while specialists earned between two and five times more (Figure 7.13). Germany, France and Belgium stand out with relatively high remuneration for both GPs and specialists relative to national average wages, although the earnings of self-employed doctors in Belgium are over-estimated because practice expenses are not deducted. By contrast, the earnings gap is generally smaller for salaried doctors in several Nordic and Southern European countries, although differences in employment status and data coverage need to be taken into account when making comparisons.

Specialists generally earned more than GPs, particularly among the self-employed. In Belgium, self-employed specialists earned more than twice as much as self-employed GPs in 2024. In Germany, the gap between the earnings of self-employed specialists and GPs is smaller (about 20%). Such variation can reflect differences in payment systems, fee schedules, workloads as well as the range of services provided by different categories of doctors.

When comparing doctors' income, it is important to bear in mind that the remuneration of different categories of surgical or medical specialties can vary widely within each country. Calculating a generic average across the many different specialties hides important differences in the earning potential across the various disciplines, which can influence the career decisions of young doctors in training. While there are differences across EU countries, some recurring patterns exist. On average, radiologists, anaesthesiologists and ophthalmologists are among the highest-paid specialists across EU countries, earning around 60-80% more than GPs (Figure 7.14). On the other hand, the income of paediatricians and psychiatrists is typically either slightly below or above the level of GPs.

There are significant income gaps across specialties in some countries such as Germany where radiologists earn over two times more than GPs and paediatricians. The gap is narrower in countries such as Portugal, where radiologists and ophthalmologists have incomes similar to those of GPs, while surgeons and anaesthesiologists make about 10% more than GPs. However, this apparent equity should be interpreted with caution because the Portuguese data cover only the statutory base salaries of NHS-employed physicians which do not vary by specialty, and they exclude overtime and other supplementary or incentive-based payments, as well as private-practice income. They may therefore mask substantial differences in total remuneration across specialties.

Various factors can explain the variation in remuneration levels across countries and specialties, such as remuneration methods in general (such as salaries or fee-for-service for self-employed doctors), specific hourly or monthly wages, or fees for services paid and differences in workload (number of working hours).

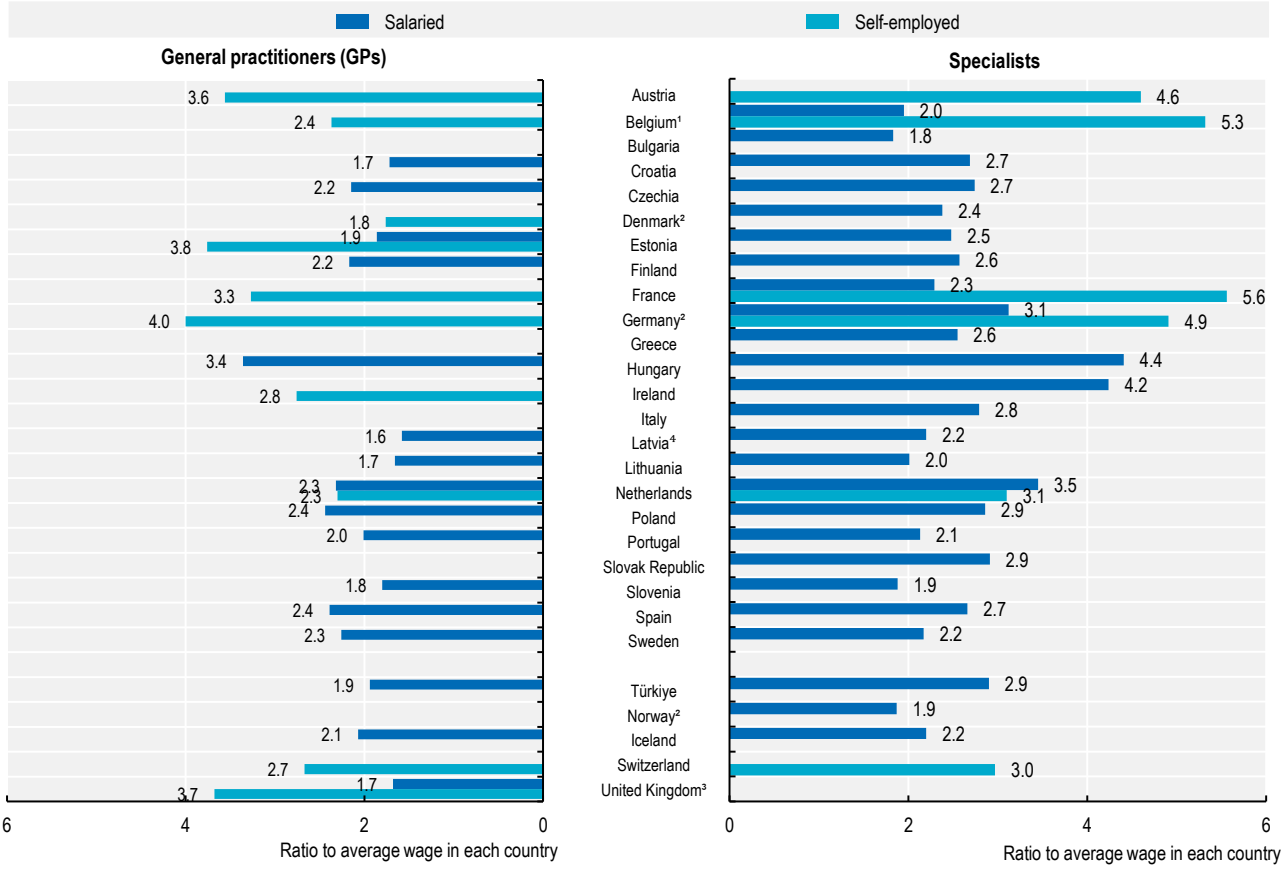
Definition and comparability

The remuneration of doctors refers to average gross annual income and normally excludes practice expenses for self-employed doctors (except in Belgium where practice expenses are included, resulting in an over-estimation). A distinction is made between salaried and self-employed doctors, although in some countries this distinction is blurred as some salaried doctors are allowed to have a private practice and some self-employed doctors receive part of their remuneration through salaries. While the regular OECD data collection only distinguishes between GPs and all other specialists combined, a pilot data collection starting in 2025 has begun collecting data on the remuneration of a selected subgroup of specialties. The data do not account for any difference in the working hours of GPs and different specialties within and across countries nor between salaried and self-employed GPs and specialists.

A number of data limitations result in an underestimation of the remuneration of doctors in some countries: 1) payments for overtime work, bonuses and other supplementary income are excluded in some countries (in Austria for GPs, in Ireland and Italy for salaried specialists, and in Portugal, Slovenia and Sweden for salaried GPs and specialists); 2) incomes from private practices for salaried doctors are not included in several countries (e.g. Czechia, Iceland, Ireland, Portugal and Slovenia); 3) data in several countries relate only to public sector employees who often earn less than those working in the private sector (Denmark, Greece, Hungary, Iceland, Ireland, Portugal, Norway, the Slovak Republic, Sweden and the United Kingdom); and 4) informal payments, which may be common in certain countries, are not included.

The income of GPs and all specialists combined is compared to the average wage of full-time employees in all sectors in the country, while the income of the selected subgroup of specialties is compared to the income of GPs in each country.

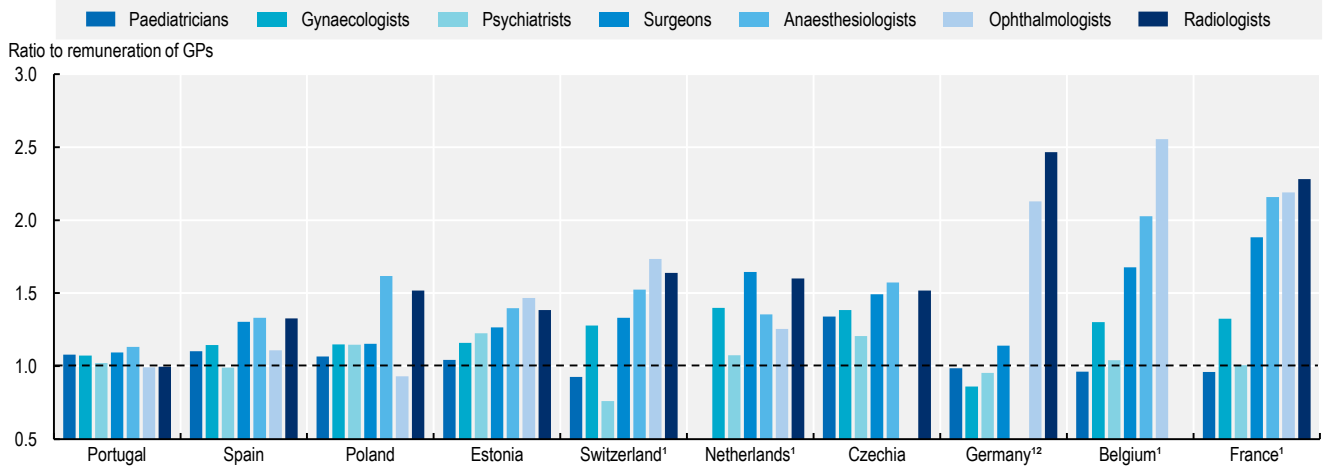
Figure 7.13. Remuneration of doctors, ratio to average wage, 2024 (or nearest year)



1. Practice expenses of self-employed GPs and specialists are included (resulting in an over-estimation). 2. Data for both salaried GPs and specialists are reported under salaried specialists as it is not possible to separate these two groups. 3. The data for GPs relate to England only. 4. GPs in training are included.
Source: OECD, https://data-explorer.oecd.org/s/5kq (accessed on 30 September 2026).

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Figure 7.14. Remuneration of different categories of specialists compared to general practitioners, 2024 (or nearest year)



Note: The dotted horizontal line represents parity with remuneration of GPs. Countries are ordered based on the average remuneration across specialties. 1. Data refer to self-employed specialists. 2. Radiologists include physicians with radiotherapy and nuclear medicine specialties (resulting in an overestimation).
Source: National sources.

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Availability of dentists and consultations with dentists

Dental health is an important component of overall health. Poor oral health is linked to the development of other chronic diseases, such as cardiovascular diseases and diabetes, and leads to poor health outcomes in older adults (Council of European Dentists, 2026[1]). Disadvantaged groups are particularly affected by poor oral health, which may be due to financial barriers to accessing dental care. In most countries, unmet needs for dental care are greater than for medical care, mainly because dental care is not included or only partially included in many public insurance schemes. In some countries (Greece, Latvia, Portugal), unmet need exceeds 15% amongst the lowest income group (see indicator "Unmet healthcare needs").

Dentists play an important role in the prevention, detection and treatment of oral health problems. Most EU countries have seen an increase in the number of practising dentists between 2014 and 2024, with the EU average increasing from 0.8 to 0.9 per 1 000 population (Figure 7.15). Greece, Cyprus and Bulgaria had the highest number of practising dentists with over 1.2 per 1 000 population, while Ireland had the lowest with 0.5.

There is no accepted European standard for the frequency with which patients should visit the dentist. Increasingly, dental organisations recommend risk-based, individualised treatment plans with a focus on prevention as opposed to simple time-based visit schedules (Council of European Dentists, 2026[1]). On average across EU countries, there were 1.3 consultations per person in 2024, up slightly from 1.2 in 2014 (Figure 7.16). Many countries have consultation rates between 0.9 and 1.5 per year, with little change between 2014 and 2024. Dentist consultations are particularly high in the Netherlands, and particularly low in Romania, Cyprus and Hungary. There is a major disconnect between the number of dentists in Cyprus (which is amongst the highest in the EU) and the number of consultations reported (which is among the lowest). However, the reported data on consultations capture only publicly financed visits, resulting in a huge underestimation since only about 7% of visits to the dentist in Cyprus occur in the public system. In Romania, the data on consultations includes both public and private visits, but the low number of consultations is due to the high cost of dental care borne directly by patients. Only 9% of dental care spending is publicly funded in Romania (see indicator "Extent of healthcare coverage"). More than 90% of dentists work in private practices, and these practices have increasingly leveraged cross-border dental tourism to sustain their activities.

The Netherlands is a significant outlier in the number of consultations performed at 3.5 per population, 2.7 times the EU average. This is an increase from 2.6 times in 2014, which was already by far the highest among EU countries. Only 0.1% of the Dutch population report unmet dental care needs. There is universal coverage for children under 18 and very high rates of supplemental insurance coverage among adults, which allow for frequent visits (OECD/European Observatory on Health Systems and Policies, 2025[2]). Cultural factors also influence dental visits, including societal norms and early childhood education. However, as in other countries, there are significant socio-economic differences in access to dental care (RIVM, 2024[3]).

Definition and comparability

Practising dentists refer to those providing services to patients, including stomatologists and dental surgeons. However, in some countries stomatologists are reported as doctors, not as dentists (e.g. Belgium). In Montenegro, the data relate to all licensed dentists resulting in an overestimation. The data for Ireland is an estimate. Private providers are not counted in Serbia.

Dentist consultations may include both office-based and hospital visits depending on country. Most countries use administrative data, but some use health survey results (Netherlands, Spain and Switzerland) which may suffer from recall bias and may limit comparability due to the differing characteristics of respondents vs. non-respondents. There is also variability in whether children are counted and, if not, the age at which counting begins for adults (e.g. over 24 in Sweden, over 18 in Denmark, over 15 in Switzerland). Some countries do not cover, or only partially cover, consultations privately financed or provided in the private sector (Austria, Cyprus, Hungary and the United Kingdom), resulting in an under-estimation. In some countries (Germany, the United Kingdom) the data refer to the number of dental treatment cases only, which groups multiple visits for the same concern and therefore also results in underestimation.

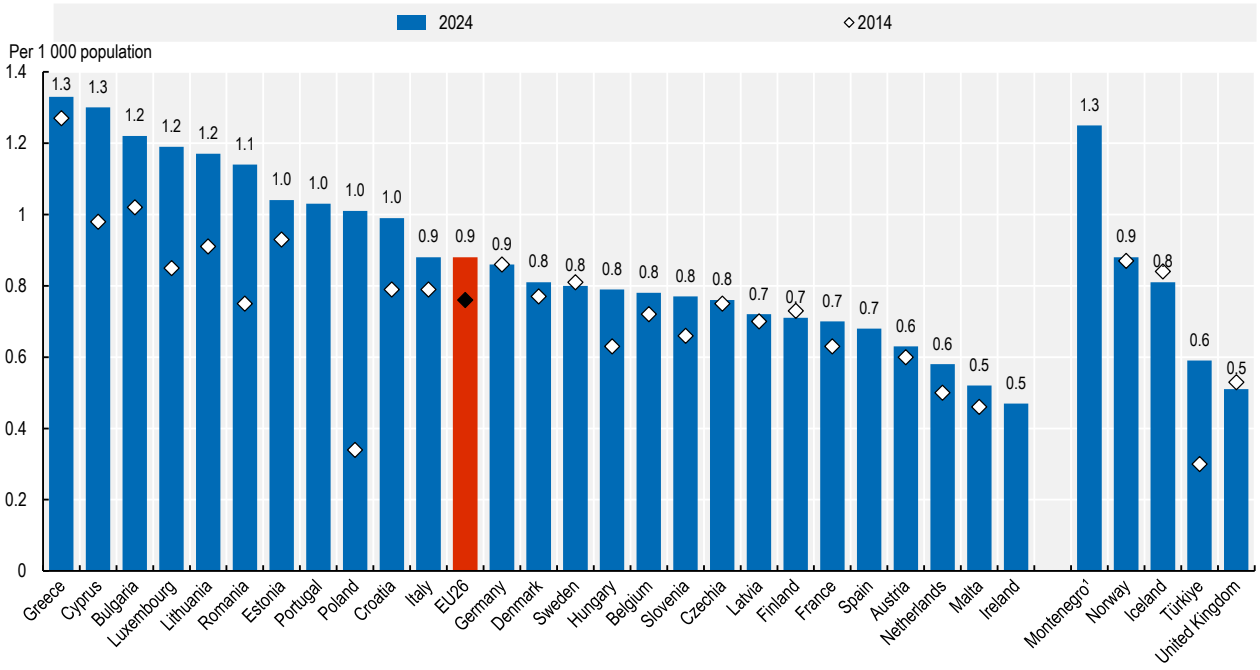
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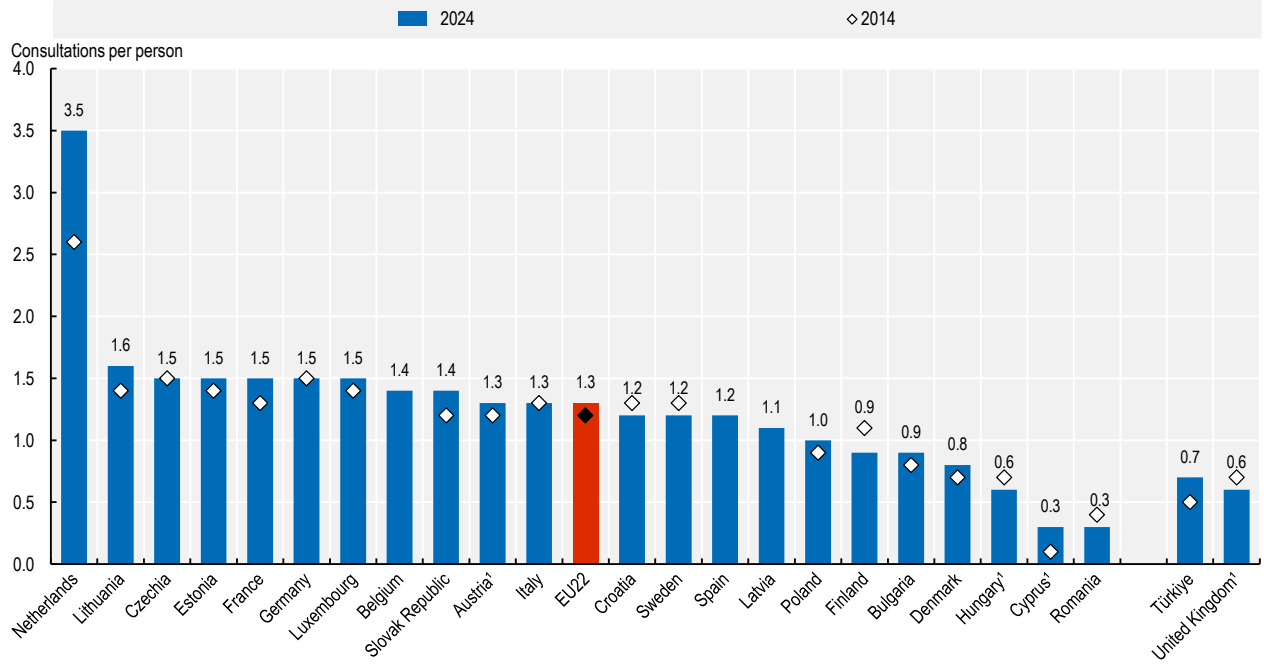
Figure 7.15. Practising dentists per 1 000 population, 2014 and 2024 (or nearest year)



Note: The EU average is unweighted. 1. For Montenegro, the data refer to all dentists licensed to practice, resulting in a large over-estimation of the number of practising dentists.
Source: OECD, https://data-explorer.oecd.org/s/5k1; Eurostat, https://doi.org/10.2908/HLTH_RS_PRS2 (both accessed on 30 September 2026).

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Figure 7.16. Number of dentist consultations per person, 2014 and 2024 (or nearest year)



Note: The EU average is unweighted. 1. The number in Austria, Cyprus, Hungary and the United Kingdom is underestimated as it does not cover or only partially covers consultations privately financed or provided in the private sector.
Source: OECD, https://data-explorer.oecd.org/s/5k3; Eurostat, https://doi.org/10.2908/HLTH_HC_DENT (both accessed on 30 September 2026).

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Availability of nurses

Nurses are the most numerous category of health workers in nearly all EU countries. While the number of nurses per population has increased over the past decade in most EU countries, two-thirds of countries (19 out of 27) still reported a shortage of nurses in 2025 (EURES, 2026[1]). Based on some minimum staffing thresholds to achieve universal health coverage proposed by the Institute of Health Metrics and Evaluation of 3.54 doctors and 11.45 nurses and midwives per 1 000 population (Haakenstad et al., 2022[2]), EU countries had an estimated shortage of close to 1.2 million nurses, midwives and doctors in 2024, with most of this shortage relating to nurses.

On average across EU countries, there were 8.6 nurses per 1 000 population in 2024, up from 7.7 in 2014 (Figure 7.17). These include nurses with a level of qualifications meeting the EU Directive on the recognition of professional qualifications, as well as other categories of nurses who may have lower qualifications but still be recognised as nurses in some countries. Among EU countries, the number of nurses per capita in 2024 was highest in Luxembourg and Ireland with over 14 nurses per 1 000 population, followed by Finland and Germany with over 12 nurses per 1 000 population. Outside the EU, the number was highest in Switzerland, Iceland and Norway with all these countries having more than 15 nurses per 1 000 population. Over one-third of nurses in Switzerland and Iceland are considered "associate professional" nurses trained at a lower level and performing lower tasks. In some countries that have below average numbers of nurses such as Italy and Spain, a large number of healthcare assistants (or nursing aids), who are not recognised as nurses, provide assistance to nurses and patients.

Between 2014 and 2024, the number of nurses per capita has increased at least slightly in most EU countries. Latvia is an exception in having seen a significant reduction in the density of nurses over the past decade and now has the lowest number of nurses per population along with Greece, at 4.1 per 1 000 population, less than half the EU average. To address the shortages of nurses and other health workers, Latvia adopted the Healthcare Workforce Development Strategy 2025-2029 that prioritises improving the working conditions and introducing new professional roles such as greater involvement of general nurses in service delivery. In parallel, a new EU-funded initiative aims to recruit over 450 health professionals to the public sector by 2029, building on earlier efforts like the "Nurses in Riga" initiative (OECD/European Observatory on Health Systems and Policies, 2025[3]).

The overwhelming majority of nurses in EU countries are women, accounting for over 85% of all nurses in 2024. A few countries have been more successful in attracting more men into nursing. For example, in Italy, nearly one-quarter (24%) of nurses are men. Attracting more men into nursing could increase the potential pool of new recruits. It requires addressing the persistent stereotype that views nursing as a profession suited primarily for women and efforts to improve nurse working conditions and pay rates.

Nurses outnumber physicians in most EU countries, with the exception of Bulgaria and Cyprus. In 2024, there were more than two nurses per doctor on average across EU countries. The ratio was highest (over 3.5 nurses per doctor) in Ireland, Luxembourg and Finland (Figure 7.18).

The demand for nurses is expected to continue to rise in the coming years due to population ageing while about one-quarter of nurses on average across EU countries are aged over 55 and therefore approaching retirement age (see indicator "Age profile and training origin of nurses" in Chapter 8). Increasing the retention rate of nurses is a growing concern to avoid exacerbating current and future shortages. Concerns about growing shortages have prompted many countries to increase the number of places in nursing education programmes, and the number of new nurse graduates has increased at least slightly over the past decade in most EU countries (see indicator "Medical and nursing graduates" in Chapter 8).

Definition and comparability

The number of nurses includes those providing direct care to patients ("practising"), but in a few countries also those working as managers, educators or researchers ("professionally active"). In countries where there are different levels of nurses, the data include both "professional" nurses (including general and specialist nurses meeting the qualification level described under the EU Directive on the recognition of professional qualifications) and "associate professional" nurses who might have a lower level of qualifications but are nonetheless recognised as nurses in their country. Healthcare assistants (or nursing aids) who are not recognised as nurses are excluded.

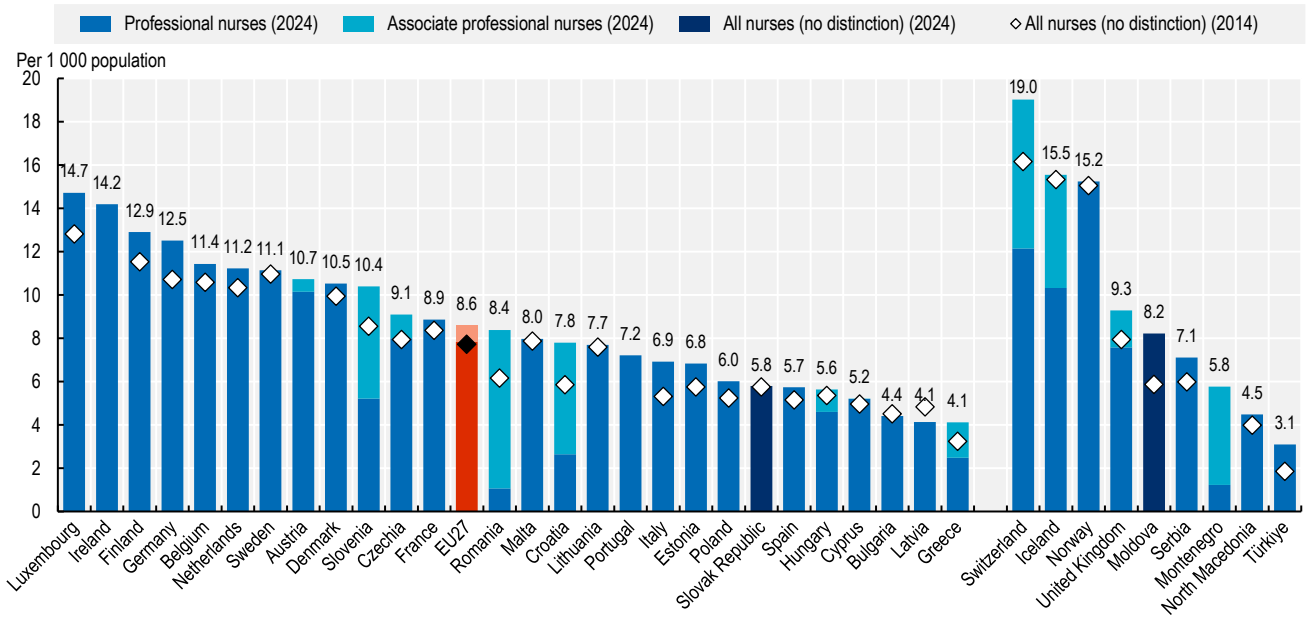
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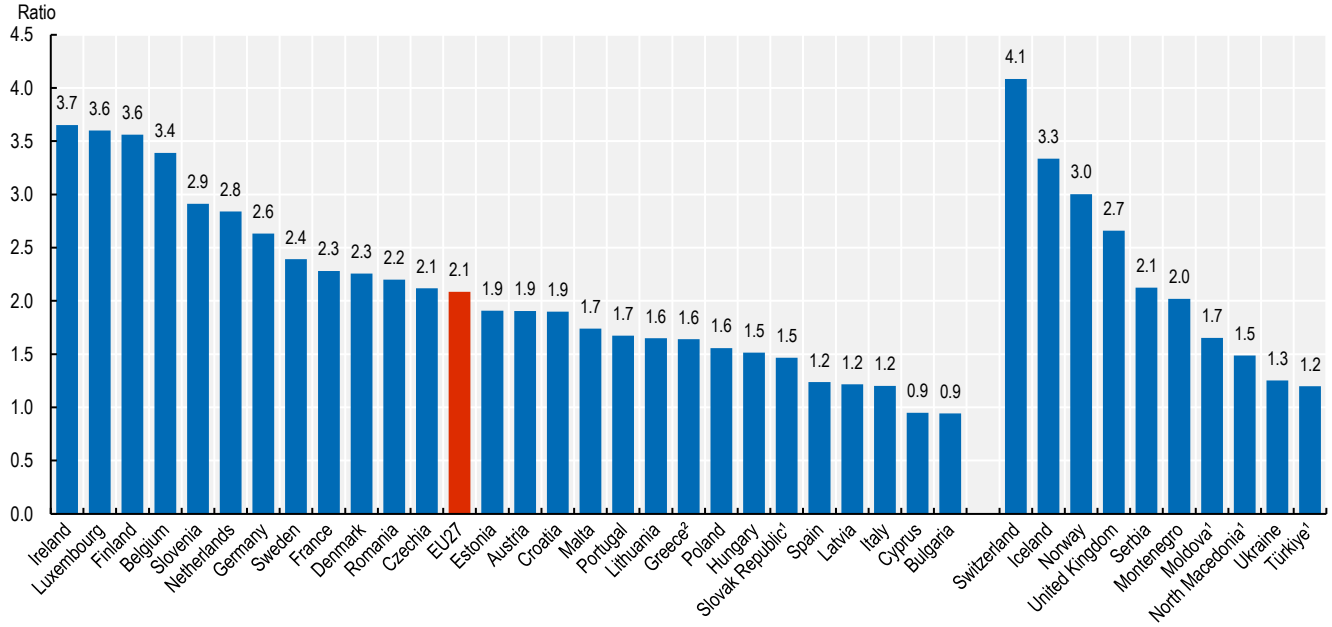
Figure 7.17. Practising nurses per 1 000 population, 2014 and 2024 (or nearest year)



Note: The EU average is unweighted. Professional nurses refer to nurses with an education level meeting the EC Directive on the recognition of professional qualifications (a minimum of 3 years of postsecondary education for general nurses and at least an equivalent level of education for specialist nurses). Associate professional nurses include other categories of nurses that are recognised in some countries. A few countries are not able to make a clear distinction between these two main categories.
Source: OECD, https://data-explorer.oecd.org/s/5k5; Eurostat, https://doi.org/10.2908/HLTH_RS_PRS2 (both accessed on 30 September 2026).

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Figure 7.18. Ratio of nurses to doctors, 2024 (or nearest year)



Note: The EU average is unweighted. 1. For countries that have not provided data for practising nurses and/or practising doctors, the numbers relate to "professionally active" nurses and doctors. 2. For Greece, the data refer to nurses and doctors employed in hospitals.
Source: OECD, https://data-explorer.oecd.org/s/5jx and https://data-explorer.oecd.org/s/5k5; Eurostat, https://doi.org/10.2908/HLTH_RS_PRS2 and https://doi.org/10.2908/HLTH_RS_PRS2 (all accessed on 30 September 2026).

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Remuneration of nurses

Persistent nursing shortages across much of Europe reflect, in part, the continuing challenges of recruiting new nurses and retaining experienced staff. Relative pay levels can influence both the attractiveness of the profession and the incentives to remain in nursing. On average across EU countries, the remuneration of hospital nurses in 2024 remained around 20% higher than the average wage for all workers. In Italy, Portugal, Finland, France and Sweden, nurses earned no more than the average wage of all workers, whereas in Poland and Czechia they earned around 65% and 50% more than the national average wage (Figure 7.19).

Comparing the remuneration of hospital nurses in Euros adjusted for differences in purchasing power across countries provides an indication of the relative economic well-being of nurses and the financial incentives to consider moving to another EU country. In 2024, hospital nurses in Luxembourg earned almost three and a half times more than those in Portugal in purchasing power parity terms. Following Luxembourg, the remuneration of hospital nurses was highest in the Netherlands and Belgium.

In most countries, the remuneration of nurses increased in real terms during the decade leading up to the pandemic. This was particularly the case for nurses in Hungary, Poland, the Slovak Republic and Czechia, where average annual real wage growth exceeded 4% between 2010 and 2019 (Figure 7.20). These sustained increases helped narrow, although not eliminate, remuneration gaps with higher-paying countries. In contrast, the remuneration of nurses decreased in real terms between 2010 and 2019 in Greece, Finland, Italy and Portugal, as well as the United Kingdom.

Since 2019, trends in nurses' real remuneration have become more varied across Europe. Following the pandemic, many governments reviewed nurses' pay, with some introducing temporary bonuses and others implementing permanent salary increases to improve recruitment and retention. At the same time, the sharp rise in inflation from 2021 substantially eroded the purchasing power of wages in many countries, meaning that nominal salary increases did not always translate into gains in real remuneration. For the 19 EU countries for which data are available, nurses' real remuneration increased on average by around 1.5% per year between 2019 and 2024, masking substantial variation across countries.

Hungary and Poland maintained strong average annual real wage growth of 7.1% and 6.6%, respectively, between 2019 and 2024, while remuneration also increased at a similar rate in Türkiye. In Hungary and Poland, these increases formed part of broader government strategies to improve recruitment and retention through phased salary increases and regular wage indexation (OECD/European Observatory on Health Systems and Policies, 2025[1]; 2025[2]). Nevertheless, countries such as the Slovak Republic continue to experience persistent nurse shortages despite substantial pay increases, underlining that competitive pay is only one element of a broader strategy to improve working conditions and retain the nursing workforce (OECD/European Observatory on Health Systems and Policies, 2025[3]).

By contrast, real remuneration continued to decline in the United Kingdom (around -1.2% per year) and Italy (around -1.5%), while Denmark, Portugal, Sweden and Spain also recorded more modest declines. Although inflationary pressures have eased markedly since their peak in 2022, maintaining competitive remuneration remains an important challenge for health systems seeking to recruit and retain sufficient numbers of nurses.

Definition and comparability

The remuneration of nurses refers to average gross annual income, including social security contributions and income taxes. In most countries, the data relate specifically to nurses working in hospitals. Data refer only to "professional" nurses in most countries, except in Switzerland where they also include "associate professional" nurses. The data for some countries (e.g. Portugal and the United Kingdom) include only hospital nurses working in the NHS (public sector). The data for the United Kingdom cover England only and exclude additional earnings such as payments for night and weekend work. The data for some countries do not include additional payments such as overtime payments (Italy) or holiday bonus (Slovenia). Informal payments, which may represent a significant part of total income in some countries, are not reported. The income of nurses is compared to the average wage of full-time employees in all sectors in the country, which may include broader components of income. It is also compared across countries based on a common currency (Euros) and adjusted for purchasing power parity.

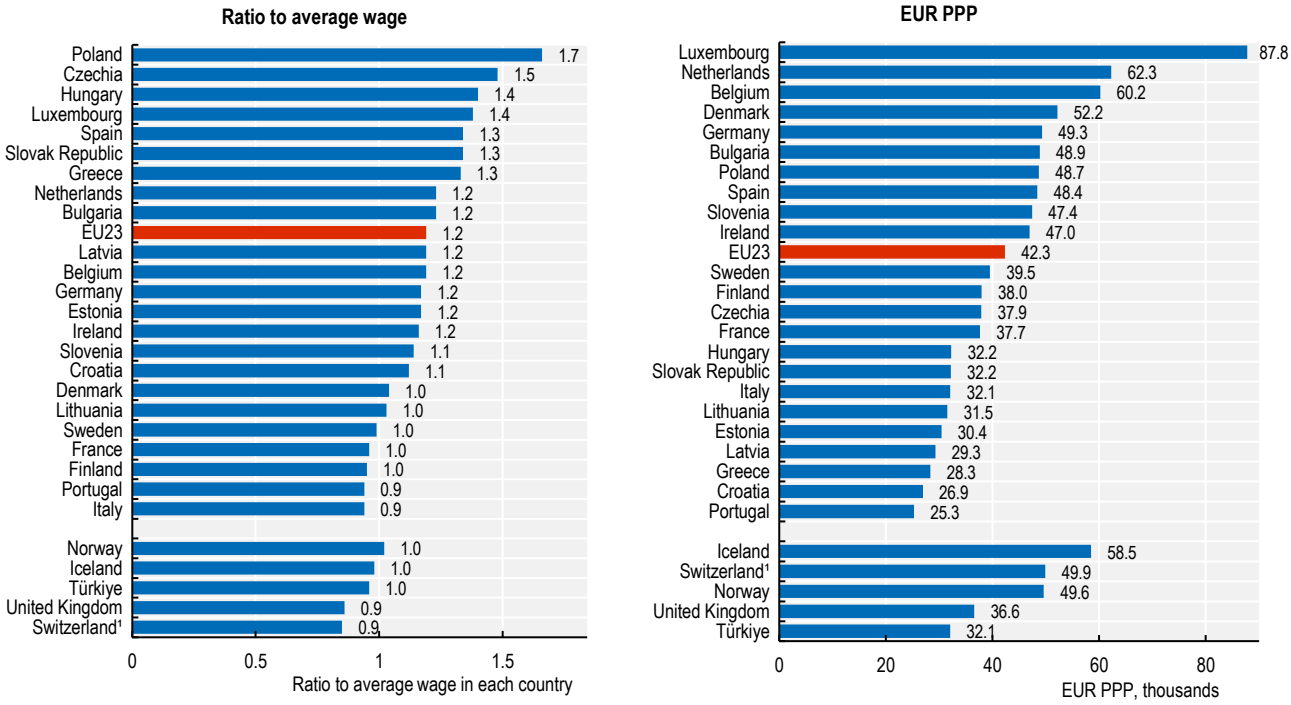
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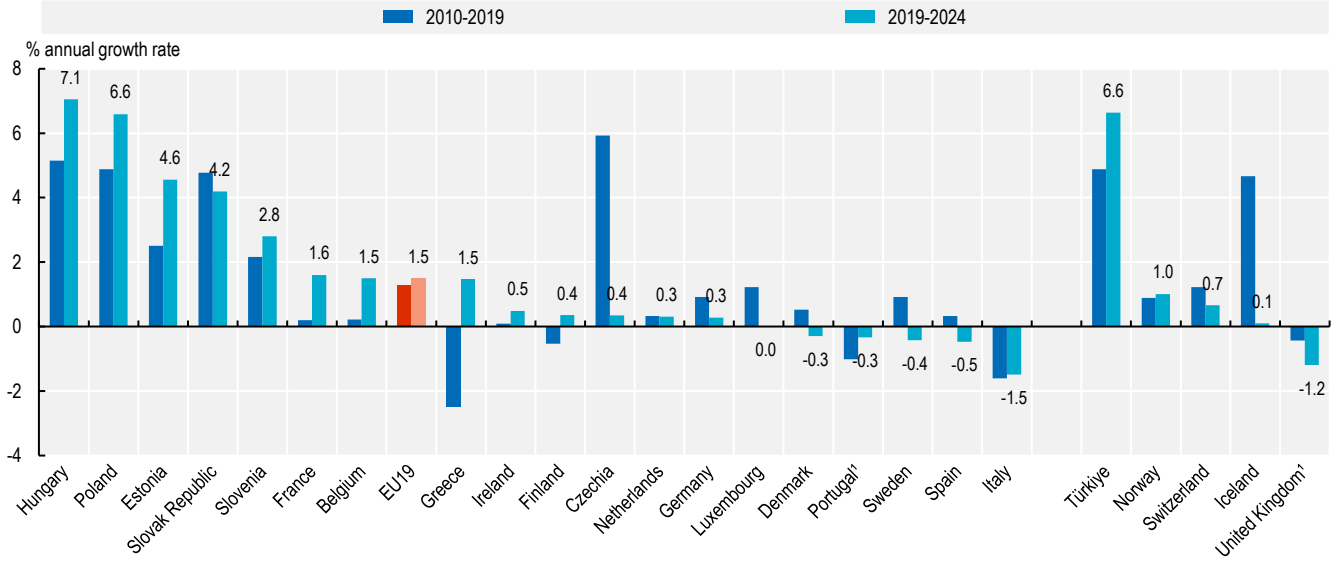
Figure 7.19. Remuneration of hospital nurses, 2024 (or nearest year)



Note: The EU average is unweighted. 1. The data also include "associate professional" nurses who have lower qualifications and revenues.
Source: OECD, https://data-explorer.oecd.org/s/5kr (accessed on 30 September 2026).

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Figure 7.20. Trends in remuneration of hospital nurses (in real terms), 2010-2024



Note: The EU average is unweighted. 1. Data for Portugal and the United Kingdom (England) include only hospital nurses working in the NHS (public sector).
Source: OECD, https://data-explorer.oecd.org/s/5kr (accessed on 30 September 2026).

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Use of diagnostic imaging technologies

Modern diagnostic imaging technologies are important tools, allowing prompt detection, monitoring, and treatment of diseases. This section focusses on the use of three diagnostic imaging technologies: computed tomography (CT), magnetic resonance imaging (MRI), and positron emission tomography (PET).

CT uses ionizing radiation to generate images and is used mainly for the visualisation of bones and solid organs. It was the most widely used imaging technology in most European countries in 2024, with an EU average of 182 exams per 1 000 population, compared to 102 for MRI and 6 for PET (Figure 7.21). This reflects CT's earlier adoption, relatively low cost, and its ability to be performed rapidly, particularly in emergency situations. MRI, by contrast, uses magnets to visualise muscles and soft tissues. PET scans use molecular compounds to detect changes at the cellular level and are mainly used in cancer detection and treatment monitoring. They can be combined with other modalities, such as in PET-CT, to further increase its diagnostic yield.

Overall diagnostic imaging rates are increasing across the EU. On average, there were 291 exams performed per 1 000 population in 2024 across the three modalities, an increase of nearly one-third from 219 in 2019 (Figure 7.21). All countries registered an increase in imaging rates between 2019 and 2024. Luxembourg, Austria, France and Portugal registered significant growth over this five-year period, and by 2024 had over 40% more exams per population than the EU average. The number of exams in 2024 was lowest in Bulgaria and Romania, although they have also experienced significant growth since 2019.

Looking specifically at MRI, there is a large disparity in use across the EU (Figure 7.22). While most countries have increased the use of MRI since 2019, MRI exams are performed six times more often in Austria, Luxembourg, Germany and France than in Bulgaria. Similar trends are observed for the use of PET, indicating persisting large disparities in the use of advanced imaging modalities between countries.

While modern diagnostic imaging plays an important role in timely diagnosis and health status monitoring, there are concerns with overuse. Inappropriate use of CT scans has been reported in 20-40% of cases, exceeding 70% of cases for certain indications (Brkljacic, 2024[1]). Similarly, recent European data suggest that 24% of MRI exams may be inappropriate (Ståhlbrandt, 2023[2]). Low back pain is the most common cause of diagnostic imaging overuse (Müskens et al., 2021[3]). Overuse of all imaging modalities comes with a large financial cost to health systems (Kjelle et al., 2024[4]).

To reduce the use of inappropriate and unnecessary imaging, the European Society of Radiology publishes clinical decision tools to help providers decide if imaging is needed and, if so, which modality to use (European Society of Radiology, 2022[5]). This has led to multi-country audits and the production of recommendations designed to support appropriate imaging use (Brkljacic, 2024[1]). These guidelines have begun to be implemented across Europe in countries like Belgium, Cyprus and Spain (Demuth, 2025[6]).

Definition and comparability

An exam is defined as a medical imaging session to study one (or more than one) body part that yields one or more views for diagnostic purposes. While data in most countries cover CT, MRI and PET exams in hospitals as well as in the ambulatory sector, the data coverage is more limited in some countries. Any CT, MRI and PET exams performed outside hospitals are not included in Albania, Portugal, Switzerland and the United Kingdom, while exams performed during inpatient stays in hospitals are not included in Norway and Cyprus. Furthermore, Cyprus and Serbia only report data on the public sector, and the Netherlands and Norway only report publicly financed exams.

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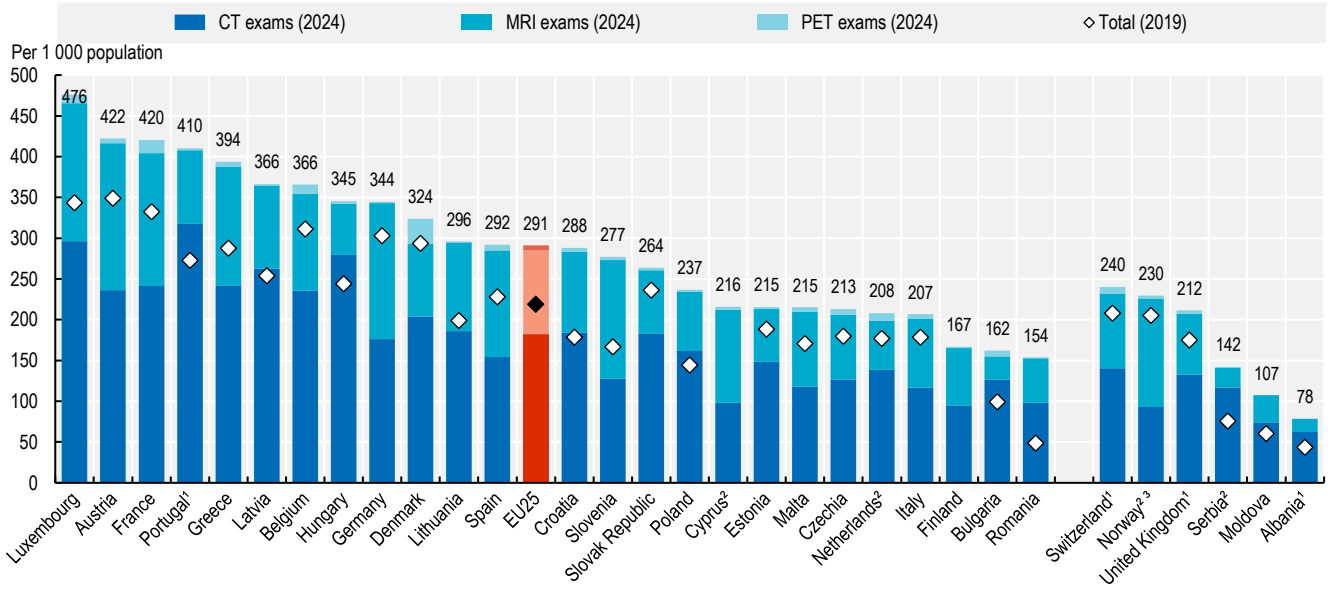
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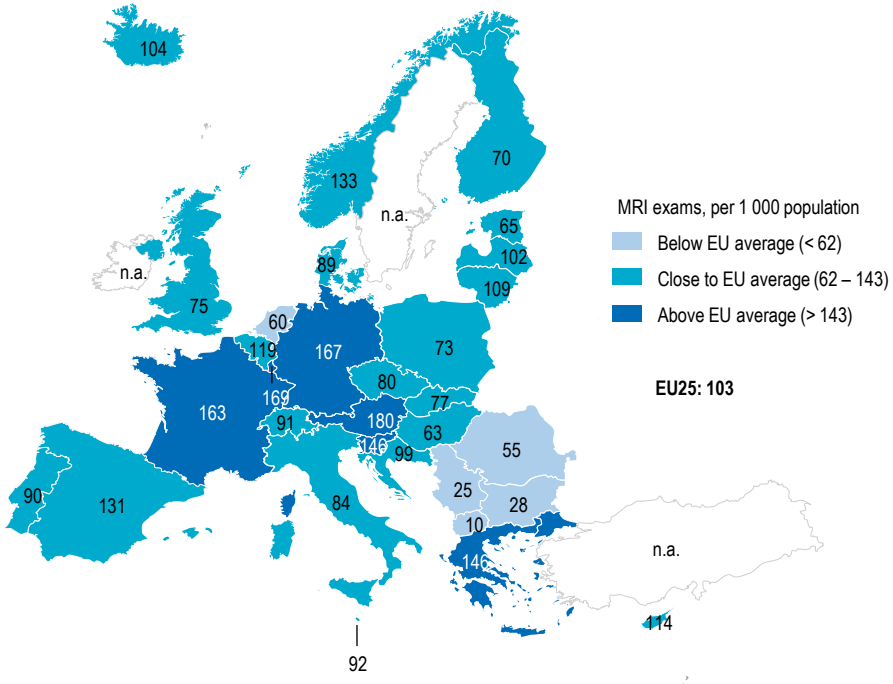
Figure 7.21. CT, MRI and PET exams per 1 000 population, 2019 and 2024 (or nearest year)



Note: The EU average is unweighted. 1. Any exams conducted outside hospitals are not included in Portugal, Switzerland, the United Kingdom and Albania. 2. Data for Cyprus and Serbia include only the public sector, and for the Netherlands and Norway only publicly financed exams. 3. Exams performed in hospitals are not included in Norway.
Source: OECD, https://data-explorer.oecd.org/s/5k9; Eurostat, https://doi.org/10.2908/HLTH_CO_EXAM (both accessed on 30 September 2026).

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Figure 7.22. MRI exams per 1 000 population, 2024 (or nearest year)



Note: The EU average is unweighted. The classification of countries as below, close to or above EU average is based on one standard deviation from the average. Exams conducted outside of hospitals are not included in Portugal, the United Kingdom and Switzerland. Data for Cyprus and Serbia include only the public sector, and for the Netherlands and Norway only publicly financed exams. Exams performed in hospitals are not included in Norway. Data refer to 2020 for Iceland.
Source: OECD, https://data-explorer.oecd.org/s/5k9; Eurostat, https://doi.org/10.2908/HLTH_CO_EXAM (both accessed on 30 September 2026).

Hospital beds and discharges

On average across EU countries, there were 5.1 hospital beds per 1 000 population in 2024 but variation was large (Figure 7.23). Bulgaria, Germany and Romania had over 40% more beds per population than the EU average, while the Nordic countries (Finland, Denmark, Sweden) and the Netherlands had the lowest numbers (less than 2.5 beds per 1 000 population).

Over the past decade, the number of hospital beds per capita has decreased in nearly all EU countries, facilitated by the growing use of day care and efforts to move care to communities and outpatient care settings where possible. On average, the number of hospital beds per capita fell by 8% between 2014 and 2024. The largest reduction occurred in Finland, with a fall of over 45%. This reduction affected mainly long-term care and psychiatric care beds, but the number of acute care beds was also reduced in Finland through the centralisation of specialist care leading to mergers of hospitals and closures of some smaller hospitals (OECD/European Observatory on Health Systems and Policies, 2025[1]). The number of hospital beds per population also came down markedly in Sweden, Lithuania and Luxembourg, despite most of these countries having already lower than the EU average number of beds per population. In Luxembourg, this reduction was mainly driven by strong population growth while the absolute number of beds only decreased slightly. In contrast, the number of beds per population increased in Bulgaria and Romania. In both countries, this increase was driven by a substantial decrease in population size, but in Bulgaria the hospital sector has also grown over the past decade mainly due to private sector expansions, adding to the overconcentration of hospital structures in the largest cities (OECD, 2026[2]).

When it comes to hospital activities, there were 157 hospital discharges per 1 000 population on average across EU countries in 2024. In most cases, hospital discharge rates were highest in countries that also had some of the highest numbers of beds – Bulgaria, Germany and Austria (Figure 7.24). They were lowest in the Netherlands, Italy and Portugal. These variations in hospital stays largely reflect differences in the supply of beds, clinical practices and payment systems that can provide incentives for hospitals to encourage bed usage.

Changes in national hospital policies and overall care setting organisation have contributed to the reduction of hospital discharges in most EU countries over the last decade. On average, hospital discharges were 15% lower in 2024 than in 2014. This reflects country efforts to reduce hospital stays by improving the availability and quality of care provided outside hospital, substituting inpatient stays with intensified home care, and reducing readmissions.

Bed occupancy rates provide an indication of any spare capacity in hospitals to admit additional patients if needed. Although there is no general consensus about the "optimal" occupancy rate, an occupancy rate of about 85% is often considered as a maximum to reduce the risk of bed shortages when there is a sudden increase in need for admissions as was the case during the pandemic (NICE, 2018[3]). In 2024, the bed occupancy rate in curative care units was on average 69% in EU countries, 4 p.p. less than a decade ago (Figure 7.25). Ireland had a bed occupancy rate of 90% in public hospitals in 2024, the highest among EU countries, but the bed occupancy rate is slightly lower (88%) when all hospitals (including private hospitals) are included. In contrast, Bulgaria, Hungary and Greece had bed occupancy rates below 60% in 2024, indicating a lot of spare capacity. Cyprus also has a relatively low occupancy rate overall, which is driven by a particularly low rate in private hospitals (45%), whereas the occupancy rate in public hospitals is much higher (76%).

Definition and comparability

Hospital beds include all available beds, occupied and unoccupied, in general hospitals, mental health and other specialty hospitals. However, data for some countries do not cover all hospitals (e.g. the data do not include some specialised hospitals in Belgium, long-term care psychiatric facilities in the Netherlands, privately financed private hospitals in Sweden, long-term care private hospitals in Ireland, and all private hospitals in the United Kingdom and Montenegro). In Austria, beds for same-day care are included, resulting in an over-estimation.

Discharge is defined as the release of a patient who has stayed at least one night in hospital. It includes deaths in hospitals following inpatient care. Same-day discharges are excluded. Healthy babies born in hospitals are excluded from hospital discharge rates in most countries except otherwise indicated (these comprise between 3% and 10% of all discharges). Data for the Netherlands include only acute care, resulting in some under-estimation. In the United Kingdom, data are restricted to public hospitals.

The occupancy rate for curative care beds is calculated as the number of hospital bed-days related to curative care, divided by 365, and divided by the number of available curative care beds.

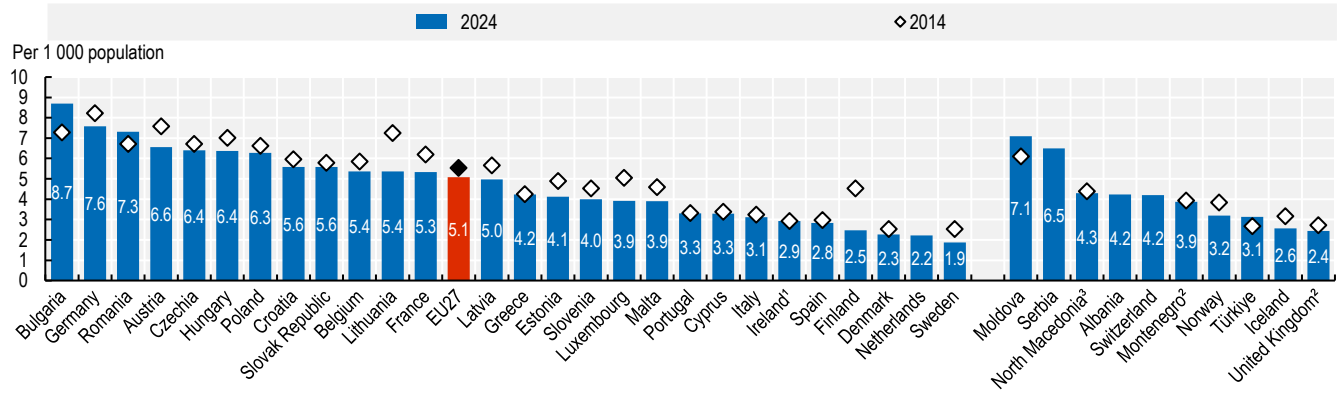
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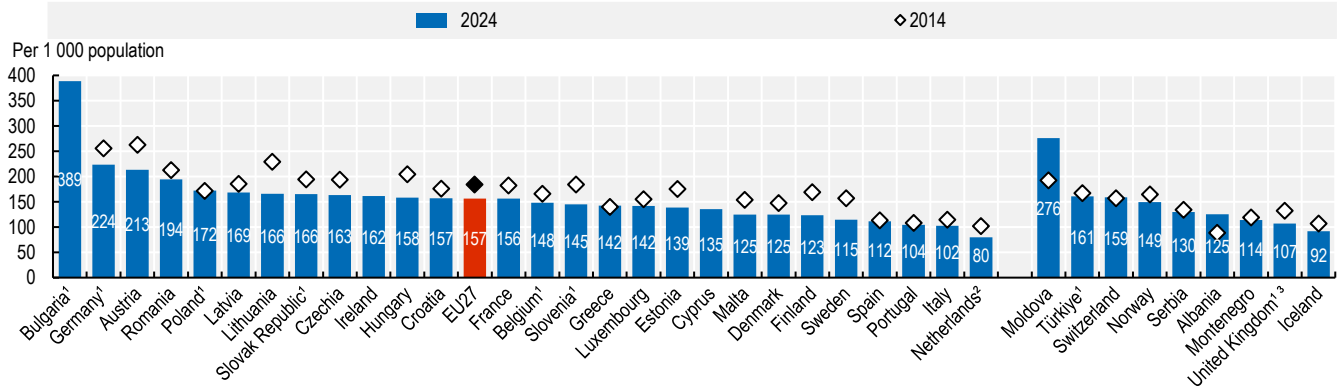
Figure 7.23. Hospital beds per 1 000 population, 2014 and 2024



Note: The EU average is weighted. 1. Data for Ireland exclude long-term care private hospitals. 2 Data for Montenegro and the United Kingdom cover beds in public hospitals only. 3. The latest year available for North Macedonia is 2020.
Source: OECD, https://data-explorer.oecd.org/s/5ka; Eurostat, https://doi.org/10.2908/HLTH_RS_BDS1 (both accessed on 30 September 2026).

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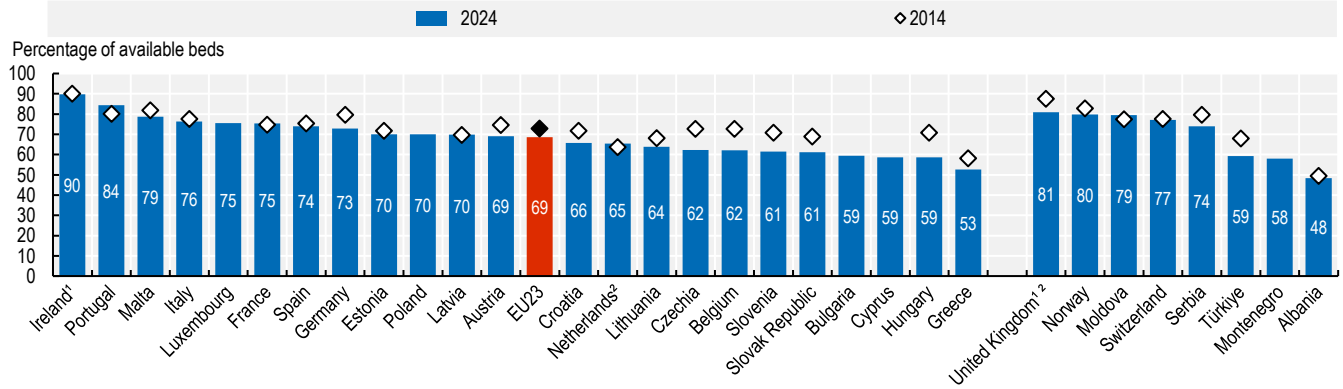
Figure 7.24. Hospital discharges per 1 000 population, 2014 and 2024 (or nearest year)



Note: The EU average is unweighted. 1. Data for 2014 include healthy newborns (between 3-10% of all discharges), for Türkiye also in 2024. 2. Data refer only to curative (acute) care, excluding psychiatric acute care. 3. Data exclude activity in private hospitals.
Source: OECD, https://data-explorer.oecd.org/s/5kb (accessed on 30 September 2026).

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Figure 7.25. Occupancy rate of curative (acute) care beds, 2014 and 2024 (or nearest year)



Note: The EU average is unweighted. 1. Data refer only to public hospitals for Ireland (to avoid a break in the series) and for the United Kingdom. 2. The latest year available is 2021.
Source: OECD, https://data-explorer.oecd.org/s/5kj; Eurostat, https://doi.org/10.2908/HLTH_CO_BEDOC (both accessed on 30 September 2026).

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Volumes of cataract surgeries, hip and knee replacements

Cataract surgeries and hip and knee replacements are amongst the most common elective (non-urgent) surgical procedures performed in the EU. In 2024, over 5 000 000 cataract surgeries were performed (an increase of more than 15% over 2019), there were over 1 000 000 hip replacements (an increase of 15%) and over 820 000 knee replacements (an increase of 36%). This trend is driven by an increasing demand for these surgeries linked to population ageing. On average across EU countries in 2024, there were 1 162 cataract surgeries, 220 hip replacements and 168 knee replacements per 100 000 population (Figure 7.26, Figure 7.27, and Figure 7.28).

Cataract surgery rates in 2024 were highest in Luxembourg, France and Austria, while Denmark, Ireland and the United Kingdom noted significant increases over the reference period (Figure 7.26). In most countries, nearly all cataract surgeries are performed as day cases with patients returning home the same day. In some countries, like Poland, the share of cataract surgery performed as day cases has increased rapidly over the past decade, rising from about 30% of the total interventions in 2014 to 95% in 2024. By contrast, in other countries like Romania and Bulgaria, the share of day cases has not increased significantly and remains low relative to other EU countries, with only about 45% of cataract cases in Romania and 50% in Bulgaria performed as day cases. This may reflect higher reimbursement to hospital for inpatient stays or constraints on the development of day surgery.

Amongst EU countries, hip and knee replacements in 2024 were highest in Germany, Austria, Finland and Denmark, with hip and knee replacement rates at least 30% higher than the EU average. All four countries recorded substantial increases in the volume of these surgeries since 2019. Outside of the EU, Switzerland also performed a high and rising volume of both procedures. Romania reported the lowest volume of knee replacements and the third lowest number of hip replacements. While differences in population structure and the share of older populations may explain part of the variation across countries, earlier OECD work has shown that large differences persist even after age standardisation and country rankings do not change significantly (McPherson, Gon and Scott, 2013[1]).

Many countries have been able to significantly increase their volume of hip and knee replacements between 2019 and 2024, either to reduce the backlog that built up during the pandemic or simply to address persisting long waiting times. In Czechia, a significant increase in orthopaedic surgery volumes (85% for knee replacements and 60% for hip replacements between 2019 and 2024) followed the lifting of reimbursement limits for providers to avoid lengthening waiting times. Most recently, further initiatives have been undertaken to promote the use of day surgeries to improve cost efficiency (OECD/European Observatory on Health Systems and Policies, 2025[2]). Similarly, in Portugal, the substantial increase in the volume of surgical activities between 2019 and 2024 (about 33% for cataract surgery and knee replacement, and 25% for hip replacement) has enabled either a reduction or stabilisation of waiting times depending on the procedure (see indicator on “Waiting times for elective surgery”). Outside the EU, the increase in surgical activities in the United Kingdom has also contributed to a reduction in waiting times for these three procedures. By contrast, Finland has seen continued increases in waiting times for these procedures in recent years despite the growing volume of surgical activities, indicating that the growth in the supply of procedures has not been sufficient to meet the growing demand, in part due to population ageing (OECD/European Observatory on Health Systems and Policies, 2025[3]).

Definition and comparability

The count of surgical interventions includes all modes of delivery (including inpatient and day cases). While most countries include both total and partial hip replacement, some countries only include total replacement. In some countries, such as the Netherlands and Portugal, the data exclude private hospital or privately funded activities, thereby underestimating the total number of procedures. In Cyprus and Ireland, recent expansion in the data collection to cover private hospitals since 2020 prevent accurate comparisons with prior years and so 2020 data were used.

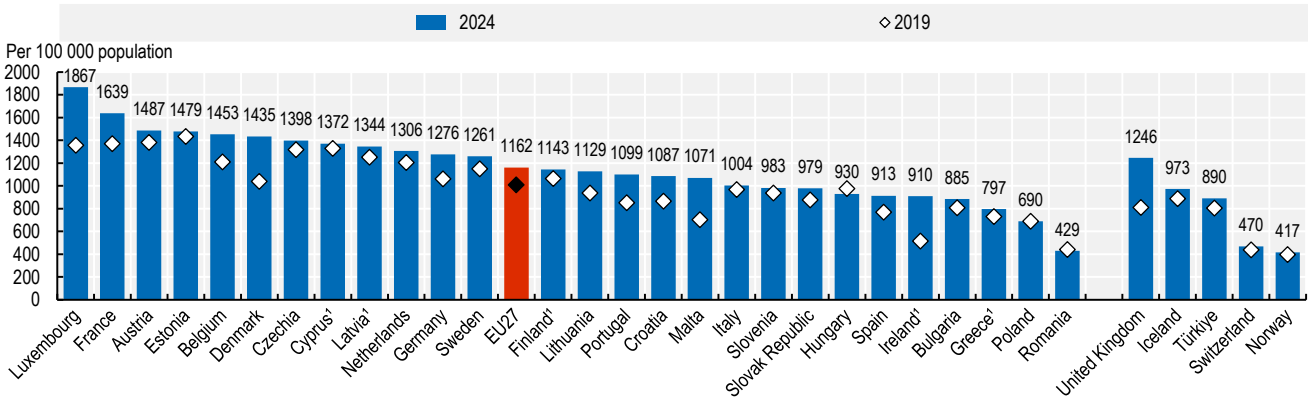
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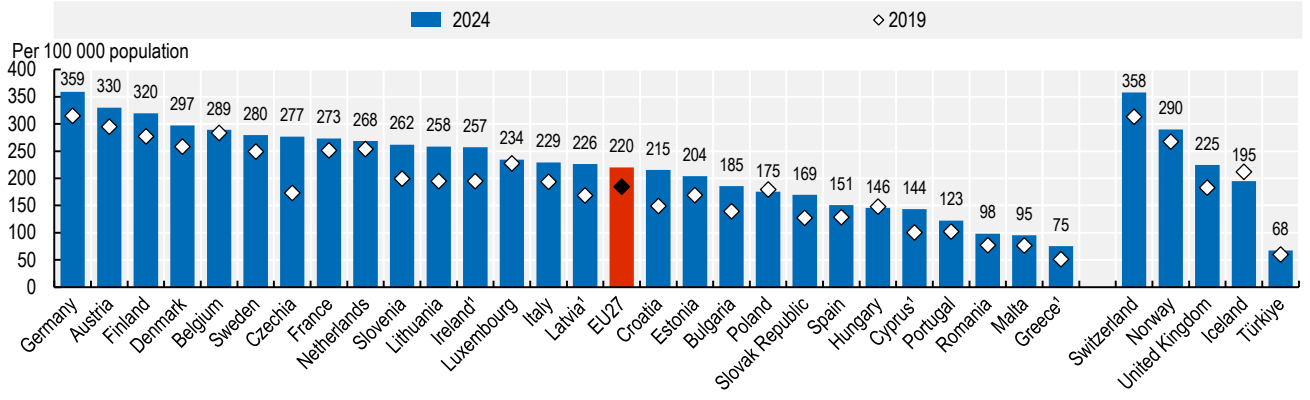
Figure 7.26. Cataract surgeries, 2019 and 2024 (or nearest year)



Note: The EU average is unweighted. 1. The baseline year for Latvia, Finland and Greece is 2017; for Cyprus and Ireland it is 2020 to avoid a series break.
Source: OECD, https://data-explorer.oecd.org/s/5kc; Eurostat, https://doi.org/10.2908/HLTH_CO_PROC3 (both accessed on 30 September 2026).

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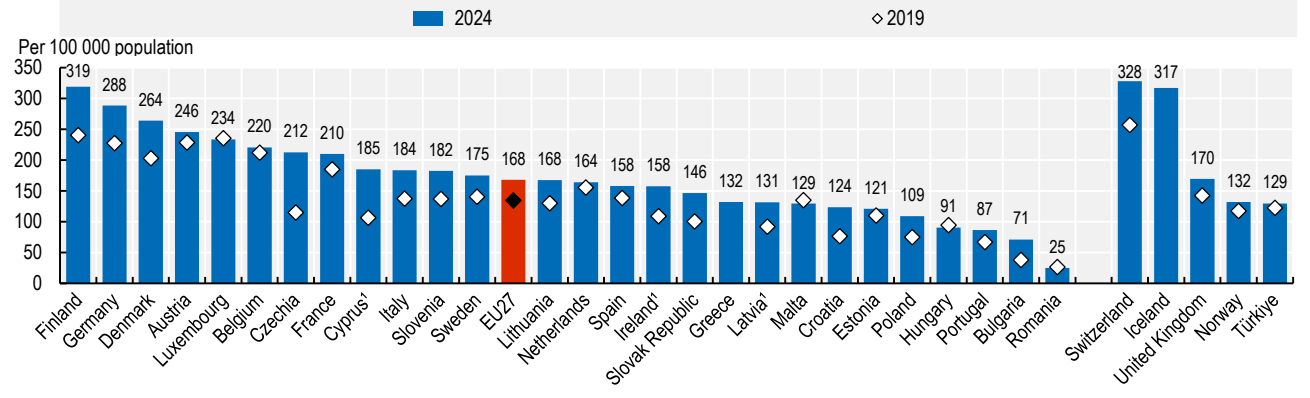
Figure 7.27. Hip replacements, 2019 and 2024 (or nearest year)



Note: The EU average is unweighted. 1. The baseline year for Greece is 2017, for Ireland and Latvia is 2020, and for Cyprus is 2021.
Source: OECD, https://data-explorer.oecd.org/s/5kd; Eurostat, https://doi.org/10.2908/HLTH_CO_PROC3 (both accessed on 30 September 2026).

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Figure 7.28. Knee replacements, 2019 and 2024 (or nearest year)



Note: The EU average is unweighted. 1. The baseline year for Ireland and Latvia is 2020, and for Cyprus is 2021.
Source: OECD, https://data-explorer.oecd.org/s/5kf; Eurostat, https://doi.org/10.2908/HLTH_CO_PROC3 (both accessed on 30 September 2026).

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Waiting times for elective surgery

Long waiting times for elective (non-urgent) surgery are a longstanding issue in many European countries. Long waiting times postpone the benefits of treatment for patients, who may experience pain and a reduction in their quality of life while waiting, and generate dissatisfaction (OECD, 2020[1]).

The data presented in this section focus on waiting times for three high volume surgical procedures: cataract surgery, hip replacement, and knee replacement. They document the experiences of patients from the time they were added to a waiting list by a specialist to the time they received the procedure, as well as the wait times of those still waiting. They compare waiting times before the pandemic in 2019 with its immediate aftermath (2022) and with the most recent available data (2025 or 2024).

Both the median waiting times for patients who have received a cataract surgery and the percentage of patients still on the waiting list over three months have fallen or remained stable in many countries since 2022 (Figure 7.29). Improvements in these two metrics were highest in the United Kingdom and Sweden, with a reduction in waiting times for patients treated by 28% between 2022 and 2024 in the United Kingdom and by 26% in Sweden. However, in countries such as Finland and Norway, the median waiting times for patients treated have increased since 2022 and are now the highest amongst countries with available data, although the measurement of waiting times in Norway is overestimated because it starts at an earlier stage in the care pathway. Iceland and Slovenia also saw increases in the percentage of patients on the waiting list for over three months since 2022, while this proportion fell at least slightly in other countries.

Compared to pre-pandemic waiting times for a cataract surgery in 2019, many countries had returned to or near their previous baseline by 2024 or 2025. In Poland, most of the reduction in waiting times occurred between 2019 and 2022, reflecting the priority of the Polish Government in reducing waiting times for high volume surgical procedures. A 2019 reform provided additional public financing for cataract surgeries, so that the National Health Fund would pay for all cataract operations.

Regarding hip replacements, there have been substantial reductions in waiting times since 2022 in some countries (e.g. Denmark, the Netherlands, Portugal) and substantial increases in others (e.g. Hungary and Finland) (Figure 7.30). Compared to 2019, only Poland and Portugal saw a decrease in waiting times for treated patients, while waiting times in other countries either remained stable (e.g. Italy, Spain) or increased (e.g. Finland, Norway). Following the pandemic, the percentage of patients on waiting lists for over three months initially increased in many countries, but then came down by 2024 and 2025 except in Hungary and Ireland.

The trends in waiting times for knee replacements in many countries are similar to those for hip replacements, although in most countries waiting times are longer (Figure 7.31). The median waiting times for patients treated have increased between 2019 and 2025 in Finland, Norway, Hungary and Lithuania, while only Portugal and Poland have seen significant decreases since 2019 (although in Poland waiting times for knee replacements have started to increase in recent years). Regarding patients still on waiting lists after more than three months, Iceland has registered significant improvement since 2019, while the percentage of patients on the lists for over three months has remained stable in other countries (e.g. Spain, Portugal, Slovenia) or has increased (e.g. Hungary).

Many countries are trying to reduce waiting times by increasing surgical supply. However, this may be offset by increased demand or lingering backlog. For example, Finland is still experiencing the consequences of reduced surgical activities during the pandemic. Waiting times in 2024 for all three interventions were not yet back to their pre-pandemic levels, despite the volume of surgical activities increasing between 2019 and 2024 (see indicator “Volume of cataract surgeries, hip and knee replacements”). In Norway, the government launched a new initiative in 2024 to bring down waiting times for certain types of hospital care, including elective surgeries (Norwegian Ministry of Health and Care Services, 2024[2]). However, while waiting times for hip and knee replacements have fallen between 2024 and 2025, waiting times for all three procedures remain elevated compared to pre-pandemic levels, suggesting persisting challenges in meeting surgical demand.

Definition and comparability

Two different measures of waiting times are presented in this section: 1) from the time that a specialist adds a patient to the waiting list for an operation to the time that the patient receives the operation; 2) the waiting times for patients who are still on the waiting lists following specialist assessment at a given point in time. Waiting times for the first measure are reported as the median number of days, while the second measure is reported as a proportion of those who have been waiting for over three months.

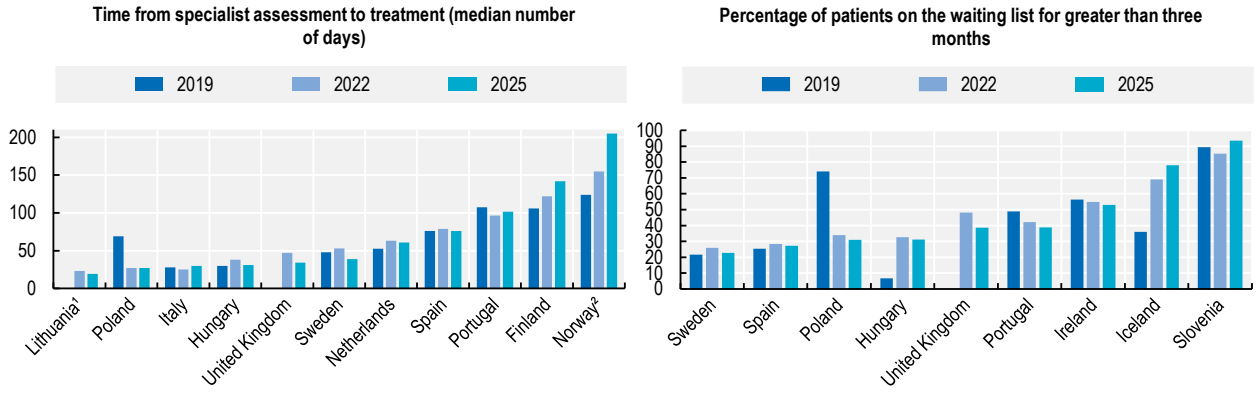
Waiting times are overestimated in Norway because they start from the date a doctor refers a patient for specialist assessment for the treatment, whereas in other countries they start only when a specialist has assessed the patient and decided to add them to the waiting list for the treatment.

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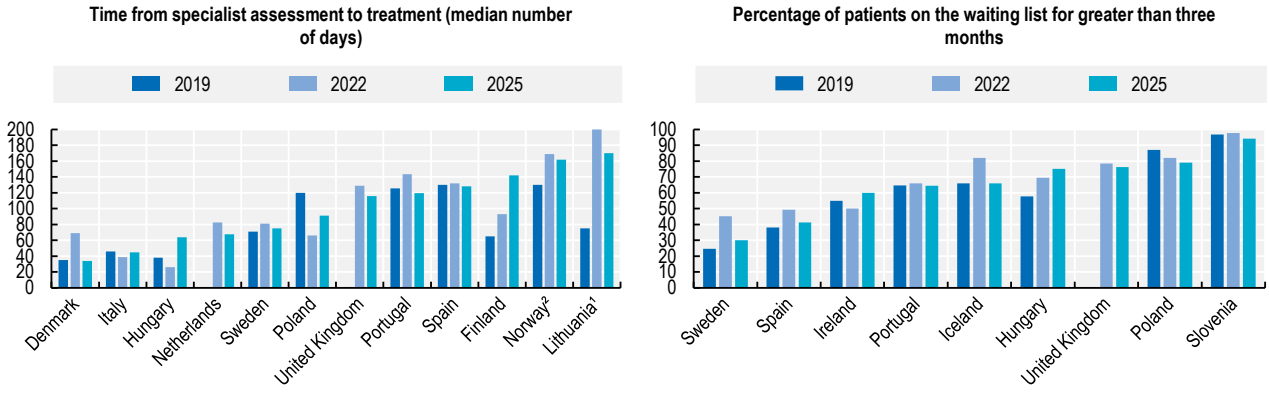
Figure 7.29. Waiting times for cataract surgery, 2019, 2022 and 2025 (or nearest year)



1. Lithuania collects the mean waiting times (which is usually longer than the median). 2. Waiting times are overestimated in Norway because they start from the date a doctor refers a patient for specialist assessment.
Source: OECD, https://data-explorer.oecd.org/s/5kg (accessed on 30 September 2026).

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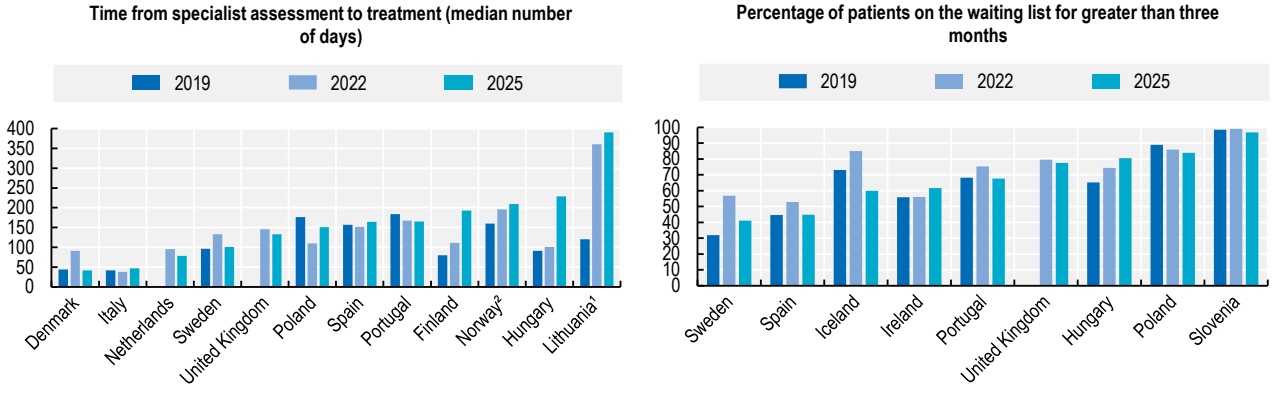
Figure 7.30. Waiting times for hip replacement, 2019, 2022 and 2025 (or nearest year)



1. Lithuania collects the mean waiting times (which is usually longer than the median). 2. Waiting times are overestimated in Norway because they start from the date a doctor refers a patient for specialist assessment.
Source: OECD, https://data-explorer.oecd.org/s/5kh (accessed on 30 September 2026).

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Figure 7.31. Waiting times for knee replacement, 2019, 2022 and 2025 (or nearest year)



1. Lithuania collects the mean waiting times (which is usually longer than the median). 2. Waiting times are overestimated in Norway because they start from the date a doctor refers a patient for specialist assessment.
Source: OECD, https://data-explorer.oecd.org/s/5ki (accessed on 30 September 2026).

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8 Resilience: Crisis preparedness, response capacity and fiscal sustainability

This chapter examines how prepared EU health systems are for shocks and how sustainable their workforce and financing are. In 2025, EU countries rated their core capacities under the International Health Regulations at 75 out of 100 on average. Public perceptions provide a complementary perspective: in most countries surveyed, fewer than half of respondents thought government institutions would be ready to protect lives in a large-scale emergency. Staff shortages are a recurring constraint on resilience, with human resources among the lowest-scoring preparedness capacities and trained staff often limiting intensive care provision during the pandemic. By 2024, the expansion in intensive care bed capacity had largely receded, while teleconsultations had become an established part of care delivery, although use varied widely across countries. Workforce ageing adds to replacement pressures: one-third of doctors and one-quarter of nurses were aged 55 or over in 2024. Over the preceding decade, medical graduate rates rose by around one-third, compared with 6% for nursing graduates. International recruitment has grown substantially, but recent declines in inflows to some countries illustrate the uncertainty of relying on it to sustain workforce growth. Maintaining investment is another challenge: recent growth was supported by the EU Recovery and Resilience Facility, which ends in 2026; sustaining this momentum will depend increasingly on national budgets and future EU programmes. Over the longer term, population ageing will increase spending pressures, particularly for long-term care. Under the EU Ageing Working Group baseline, public healthcare spending in the EU is projected to rise from 6.9% of GDP in 2022 to 7.4% in 2070, while long-term care spending rises from 1.7% to 2.6%.

Crisis preparedness and confidence in institutional readiness

The COVID-19 pandemic exposed vulnerabilities in European public health systems and put crisis preparedness at the centre of health system resilience. Climate and environmental change add to these pressures, shifting infectious and zoonotic risks and increasing the direct health effects of extreme weather.

The WHO International Health Regulations (IHR) provide the legal framework for developing capacities to detect, assess and respond to public health threats. Amendments adopted in June 2024 entered into force for most EU countries in September 2025, introducing a "pandemic emergency" alert level and strengthening provisions on equity, international co-operation and access to medical products and financing. Countries assess their capacities annually through the States Parties Self-Assessment Annual Reporting tool (SPAR). In 2025, the EU average SPAR score was 75 out of 100, unchanged from 2021.

Scores across capacities reveal more than the overall average: surveillance (87) and laboratory capacity (80) were the strongest areas, while human resources (65), risk communication (66), and legal and financing arrangements (67) scored lower and varied more widely across countries. Denmark, France and Sweden reported the highest national averages, at around 90 or above; Cyprus, the Slovak Republic and Romania reported the lowest, below 65 (Figure 8.1). Since 2021, Ireland and Belgium each reported increases of 11 points and Poland of 9 points, while Cyprus and the Slovak Republic reported declines of 12 and 9 points respectively. These changes may reflect changes in assessment practices as well as underlying preparedness.

EU/EEA countries also report every three years on prevention, preparedness, response and recovery planning under Regulation (EU) 2022/2371, using indicators covering 16 capacities. Drawing on this reporting, the European Commission issued recommendations in March 2026 on regularly tested preparedness plans, One Health co-ordination, scalable laboratory and surveillance systems, sustainable workforce and medical countermeasure capacities, continuity of essential services, and risk communication (European Commission, 2026[1]).

The European Centre for Disease Prevention and Control (ECDC) independently assesses these capacities every three years through Public Health Emergency Preparedness Assessments (PHEPAs). Each combines a desk review and country visit, covering 16 capacities and examining five in depth. The June 2026 interim synthesis of the first 15 countries assessed found that many countries had strengthened preparedness plans and incident-management arrangements after the pandemic, but implementation was uneven (ECDC, 2026[2]). Responsibilities across sectors and levels of government were not always formalised, only about half ran regular simulation exercises, and reviews after real events were not systematic. Structural constraints included staff shortages, fragmented or partly manual data systems, difficulty translating surveillance into timely decisions, and reliance on project funding rather than sustained budgets. These findings illustrate operational weaknesses that overall self-assessment scores may conceal.

Public perceptions offer a complementary perspective. Across the 23 EU countries covered by the 2025 OECD Survey on Drivers of Trust in Public Institutions (2026[3]), 45% of respondents thought it likely that government institutions would be ready to protect lives in a large-scale emergency, while 38% thought it unlikely (Figure 8.2). Perceived readiness was highest in Finland (78%), the Netherlands and Luxembourg, and lowest in Bulgaria (24%). Among the 17 EU countries surveyed in both 2023 and 2025, it fell by about 4 percentage points (p.p.) on average; some of the largest declines occurred in Germany, Denmark and France, despite high and stable self-reported preparedness scores. The two measures capture different aspects of readiness: high self-assessed public health capacity can coexist with declining confidence in government's ability to respond to emergencies.

Definition and comparability

The SPAR second edition covers 15 capacities and 35 indicators rated on a 1-5 scale and aggregated into capacity and national scores (0-100). Self-reporting can lead countries to over- or underestimate capacities. National scores give equal weight to each capacity and may conceal bottlenecks. The second edition was introduced for the 2021 reporting cycle; results are not comparable with the first-edition series up to 2020.

The institutional readiness indicator asks how likely government institutions would be to protect people's lives in a large-scale emergency. Responses of 6-10 on a 0-10 scale are classified as "likely", 5 as "neutral" and 0-4 as "unlikely". It measures perceived readiness, rather than general trust or health-specific preparedness, and may reflect recent experience.

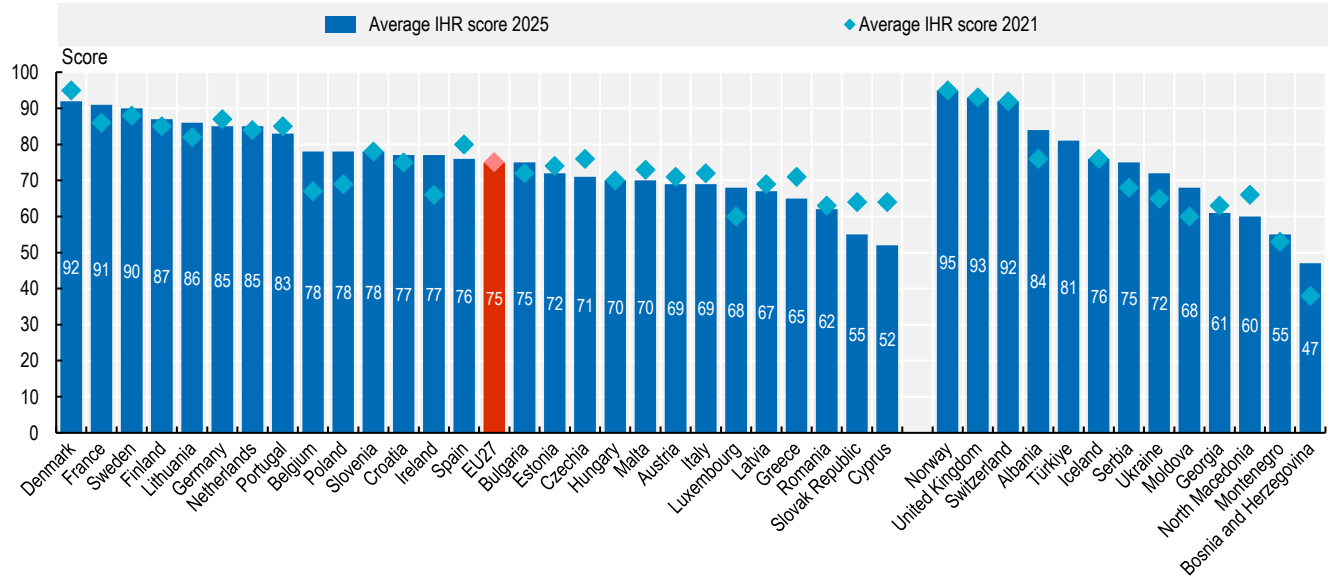
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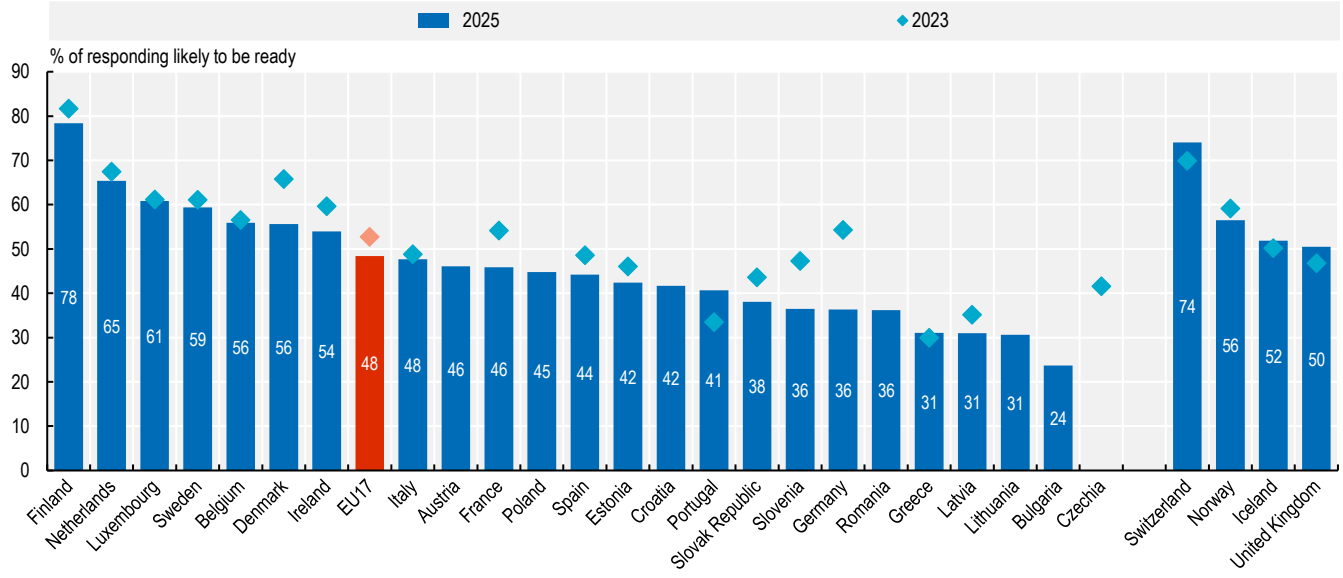
Figure 8.1. International Health Regulations (IHR) self-assessed capacity scores, 2021 and 2025



Note: The score is the unweighted average of a country's 15 self-assessed IHR core-capacity scores (0-100), reported through the WHO SPAR tool. The EU average is unweighted. Türkiye has no 2021 value.
Source: WHO International Health Regulations States Parties Self-Assessment Annual Reporting (SPAR) tool, 2nd edition.

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Figure 8.2. Perceived readiness of government to face large-scale emergencies, 2023 and 2025



Note: This figure is based on responses to the question: "How likely do you think government institutions would be ready to protect people's lives in a large-scale emergency?" Responses are categorised as "Likely" (scores 6-10), "Neutral" (score 5) and "Unlikely" (scores 0-4). The EU average is unweighted and is calculated across the 17 EU countries surveyed in both rounds. No 2023 value is available for countries that joined the survey after that round (Austria, Bulgaria, Croatia, Lithuania, Poland and Romania). Czechia participated in the survey in 2023 but not in 2025.
Source: OECD Survey on Drivers of Trust in Public Institutions (OECD, 2026[3]).

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Intensive care capacity and occupancy

Intensive care units (ICUs) are a core component of hospital capacity, particularly in response to unexpected shocks such as viral pandemics, natural disasters, and war-related injuries. Constraints on ICU care can have immediate consequences for the survival of severely ill patients. The COVID-19 pandemic tested, and in several countries exceeded, health systems' capacity to absorb sudden increases in demand for critical care. Two dimensions matter for resilience: the number of ICU beds available and their occupancy.

Reported ICU capacity varies widely across Europe. In 2024, adult ICU bed density ranged from fewer than 6 beds per 100 000 population in Ireland, Finland, the Netherlands and Sweden to more than 40 in Estonia and Czechia (Figure 8.3). This large variation reflects how countries organise acute care and where they draw the boundary between intensive, intermediate and ordinary ward care. For example, the Nordic countries report among the lowest number of ICU beds per population partly because many of their beds sit in intermediate acuity units that are counted separately (Rhodes et al., 2012[1]).

The expansion recorded during the pandemic had largely receded by 2024. Across EU countries, ICU bed density rose from 18.1 beds per 100 000 population in 2019 to 19.2 in 2020/21 before declining to 18.3 in 2024. The reversal is clearest where expansion was largest. In Hungary, density rose from 11.4 in 2019 to over 15 in 2020/21 before falling to 11.8 in 2024, with similar fluctuations in Greece, Italy and Lithuania. As annual averages, these figures understate the peaks reached during the pandemic through surge measures, including temporary facilities that operated for weeks or months rather than the full year.

ICU bed occupancy data, available for a smaller number of countries, show large differences in the routine pressure on reported capacity (Figure 8.4). Among the 15 EU countries reporting both measures, adult ICU beds were on average 66% occupied in 2024, at an average density of 18.5 beds per 100 000 population. Ireland combined one of the lowest bed densities with the highest average occupancy (92%), while France had a high number of ICU beds as well as a high occupancy rate (84%). Spain reported the lowest occupancy rate (51%) alongside above-average capacity, while Czechia, Estonia and Latvia paired high bed density with occupancy at or below the average.

Data on days above given occupancy thresholds reveal pressures that annual averages conceal. In 2024, Ireland's adult ICUs exceeded 80% occupancy on every reported day, including 38 days above 95%. By contrast, Sweden recorded only three days above 80%, while Czechia, Spain, Hungary and Lithuania recorded none. Sustained near-saturation reduces the buffer available for epidemics, mass-casualty events and natural disasters, and can force hospitals to postpone planned procedures when demand rises unexpectedly (OECD, 2023[2]).

Pressure on ICUs also depends on patient flow and staffing. Shortages of lower acuity beds can delay ICU discharge and prolong high occupancy states even when admissions are low. Additionally, whether an ICU bed can be utilised for patient care depends on more than availability of a physical bed. During the pandemic, the binding constraint was often the availability of ICU-trained physicians and nurses rather than registered beds or equipment. Therefore, the number of staffed and fully operational beds is a more meaningful measure of surge capacity than bed numbers alone.

Together, these factors mean there is no single benchmark against which ICU bed density or occupancy can be judged. High occupancy may reflect efficient use of an expensive resource, but it reduces the buffer for unexpected demand; keeping substantial capacity permanently idle preserves responsiveness but carries significant opportunity costs. The occupancy rate that can be sustained safely also varies with unit size, staffing, patient acuity, and turnover (Zajic et al., 2024[3]).

Definition and comparability

ICU beds are commonly classified into three levels of increasing intensity, from basic monitoring (Level 1) through high-dependency care with single-organ support (Level 2) to full intensive care with advanced respiratory or multi-organ support (Level 3). Taken together, Level 2 and Level 3 beds are often referred to in reporting as "critical care beds". Because countries draw the boundary between the Level 1 beds and lower acuity bed types (e.g. intermediate acuity, regular ward beds) differently, part of the cross-country variation in reported density reflects classification rather than true differences in capacity. Other differences in reporting limit data comparability. While most countries report adult ICU beds, Croatia and Estonia also include neonatal and paediatric beds. Italy reports Level 3 beds only. The occupancy rate is the annual average share of available beds occupied, using each country's reported bed concept as the denominator.

Breaks in series prevent consistent comparison over time of ICU beds for Latvia, the Netherlands and Spain (2021) and Cyprus (2024). Data for 2020/21 refer to 2021 only in Bulgaria, Latvia, Spain and Sweden; the latest year is 2022 for Belgium and 2023 for the Netherlands and Finland. Data for Ireland cover public hospitals only. Data for the United Kingdom refer to England only.

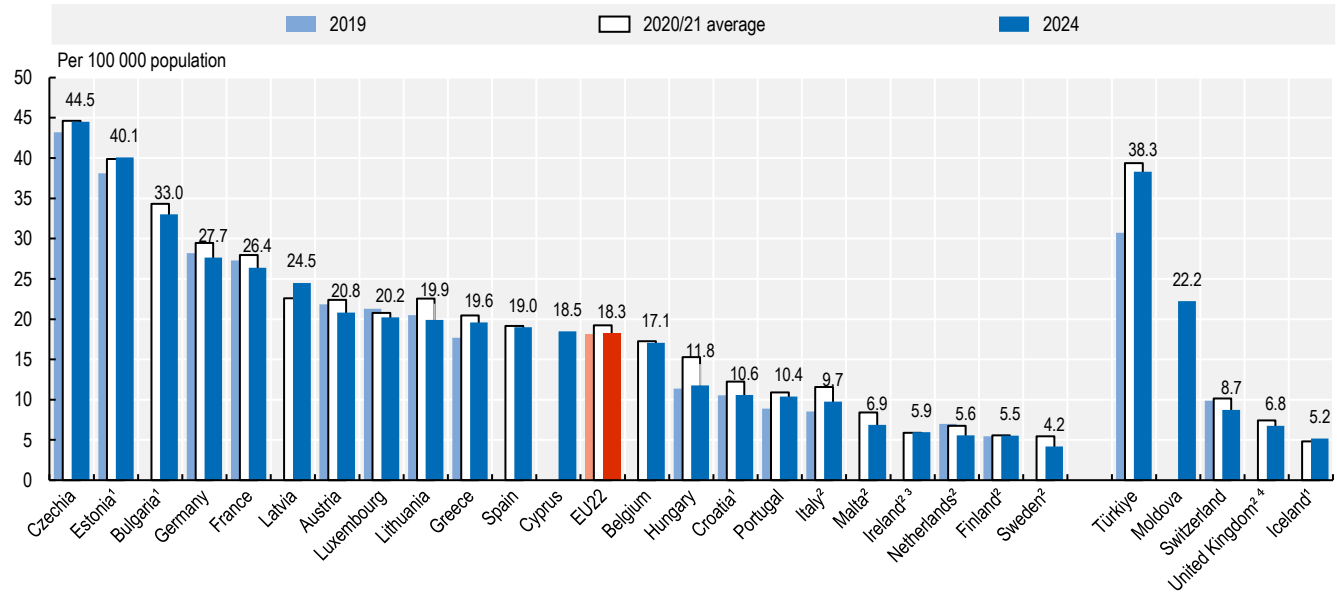
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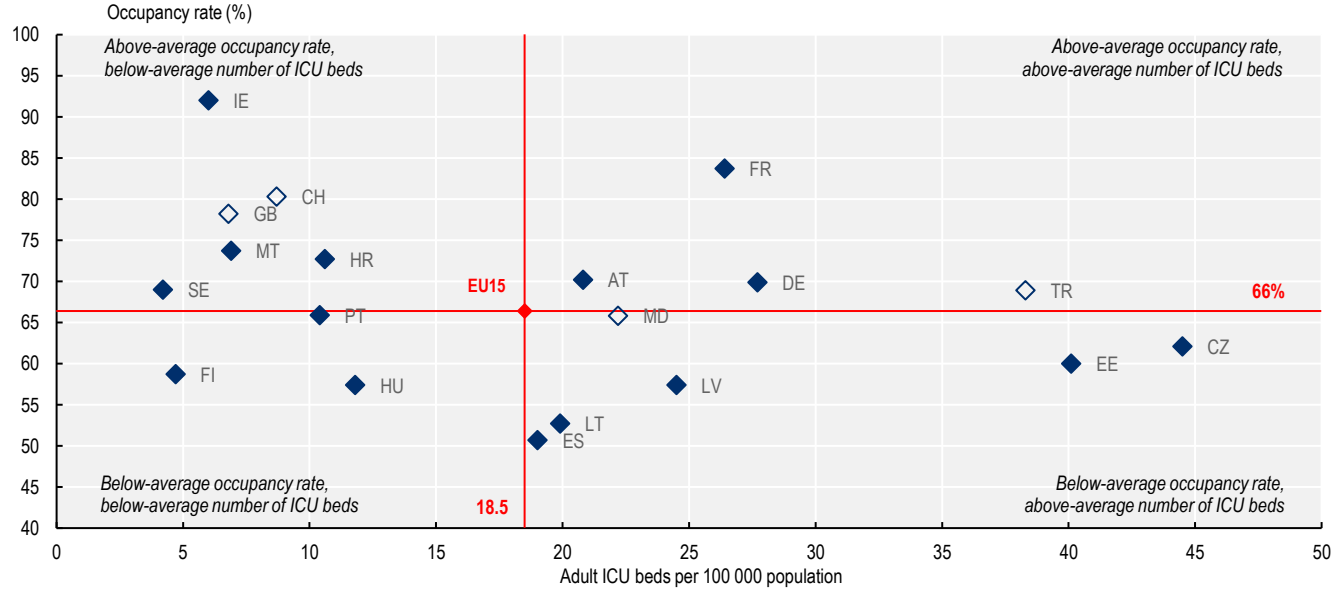
Figure 8.3. Adult intensive care beds, 2019, 2020/21 and 2024 (or nearest year)



Note: The EU average is unweighted. Breaks in data series prevent data reporting for 2019 or 2020/21 in some countries. 1. Total ICU beds including neonatal and paediatric. 2. Adult critical care beds. 3. Data for Ireland cover public hospitals only. 4. Data for the United Kingdom refer to England only.
Source: OECD, https://data-explorer.oecd.org/s/5l7; Eurostat, https://doi.org/10.2908/HLTH_RS_BDSICU (both accessed on 15 September 2026).

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Figure 8.4. Adult intensive care capacity and occupancy, 2024 (or nearest year)



Note: The EU average is unweighted. The occupancy rates follow each country's reported bed concept (critical care beds only for Finland, Ireland, Malta, Spain, Sweden and the United Kingdom). Data for Croatia and Estonia refer to all ICU beds, including neonatal and paediatric beds. Data for Ireland cover public hospitals only. Data for the United Kingdom refer to England only.
Source: OECD, https://data-explorer.oecd.org/s/5l7; Eurostat, https://doi.org/10.2908/HLTH_CO_ICUBEDOC (both accessed on 15 September 2026).

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Use of teleconsultations

Teleconsultations expanded rapidly during the COVID-19 pandemic and have since become a routine channel of care in several EU countries. They can improve access and continuity of care, particularly for people living far from services or with reduced mobility, and most patients who used them during the pandemic reported high satisfaction (OECD, 2023[1]). Whether these benefits carry over into routine care depends on how teleconsultations are financed and integrated into care pathways and into core digital services, such as shared records and ePrescription.

In 2024, consultations with doctors by phone or video accounted for around 15% of all doctor consultations on average across the 16 EU countries with available data (Figure 8.5). The share was highest in Estonia at 36%, followed by Portugal, Sweden, Denmark and Finland at around 25%, and lowest in France and Germany, at about 4% and 1%. These differences have narrowed since the pandemic peak, but changed little between 2023 and 2024, suggesting that teleconsultations are settling at country-specific levels rather than converging towards a common pattern of use. In some countries, these levels predate the pandemic: Denmark already conducted around one-third of doctor consultations remotely in 2015, although this share fell to around one-quarter by 2024. Norway, outside the EU, shows a similar pattern of durable but reduced use, with the share rising from 2% in 2019 to 19% in 2021 before easing to about 15% in 2024.

Teleconsultation volumes have also fallen from their pandemic peak, but the decline was concentrated in the countries that had expanded fastest, and has now largely stopped. Across EU countries with data for both years, teleconsultations averaged 1.3 per person in 2021 and 1.0 in 2024 (Figure 8.6). Spain, Lithuania and Poland retained less than half of their 2021 volumes whereas Estonia retained over 90%, but the ranking of countries changed little. In some countries, volumes are rising again: in Czechia, they increased from 0.7 per person in 2023 to 1.1 in 2024, and in Hungary they now exceed their 2021 level.

Over the longer term, the rise in teleconsultations has coincided with a fall in in-person consultations. Among the 11 EU countries with continuous data since 2019, teleconsultations doubled from 0.6 to 1.2 per person between 2019 and 2024, while in-person consultations fell from 6.5 to 6.1. Total consultations therefore rose only slightly, from 7.1 to 7.3 per person. This is consistent with most of the additional remote activity replacing in-person contacts, although aggregate data cannot establish one-for-one substitution.

Differences in how teleconsultations are financed and embedded in routine service delivery partly explain why national patterns persist. Payment rates, eligibility conditions and billing arrangements still vary considerably across countries, and can favour particular modes of consultation. An OECD review found that countries were still revising these arrangements in 2024, and that only five of the 16 participating countries had billing codes detailed enough to distinguish types and modes of telemedicine service. Without such codes, countries have limited means to assess whether teleconsultations are used appropriately or to align payment with policy objectives (Keelara, Sutherland and Almyranti, 2025[2]).

As use stabilises, the policy focus has shifted from expanding teleconsultation capacity to determining when teleconsultations are an appropriate and cost-effective alternative to in-person care. This requires evidence on whether remote care improves access without generating activity of limited clinical value or creating new barriers for people less able to use digital services. However, most countries do not yet collect consultation data at the level of detail needed, by modality, specialty and patient characteristics such as age, income and place of residence.

Definition and comparability

Data on doctor consultations cover generalists and specialists and are drawn mainly from administrative sources. In-person consultations include visits to a physician's office, hospital outpatient departments and ambulatory care centres as well as home visits. Teleconsultations cover remote consultations using any technology, notably telephone and video.

Coverage differs in several countries: Denmark includes nurse consultations but excludes hospital outpatient consultations. German data count cases of physician treatment as defined by social health insurance reimbursement rules, under which a first contact counts only once over a three-month period however often the patient consults, understating the number of consultations. Malta, Portugal and Spain exclude consultations at private physicians' offices, in whole or in part. Teleconsultations in Norway cover only GPs (while teleconsultations with medical specialists cannot be identified and are included within in-person consultations).

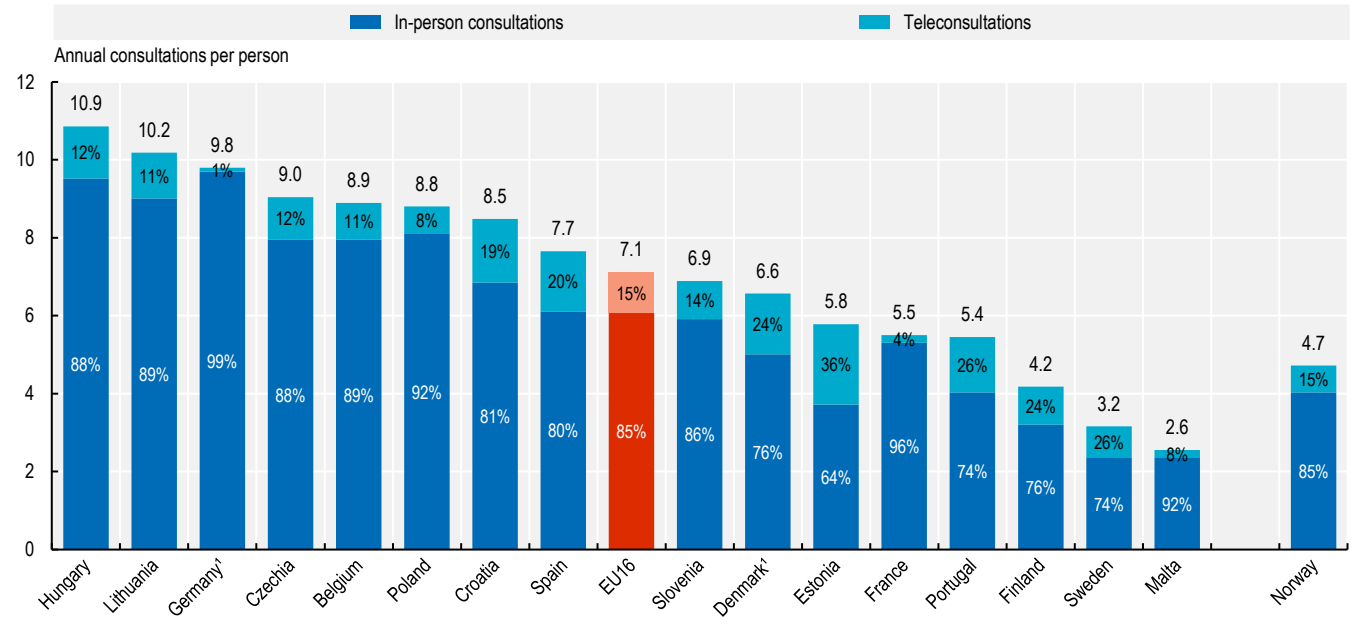
Comparability over time in Slovenia is affected by a break in series in 2023 following a change in its data collection system, so values before and after 2023 are not comparable. In Finland, a marked increase in recorded teleconsultations in 2023 coincided with the transfer of responsibility for health services to the well-being services counties and may partly reflect changes in registration practices.

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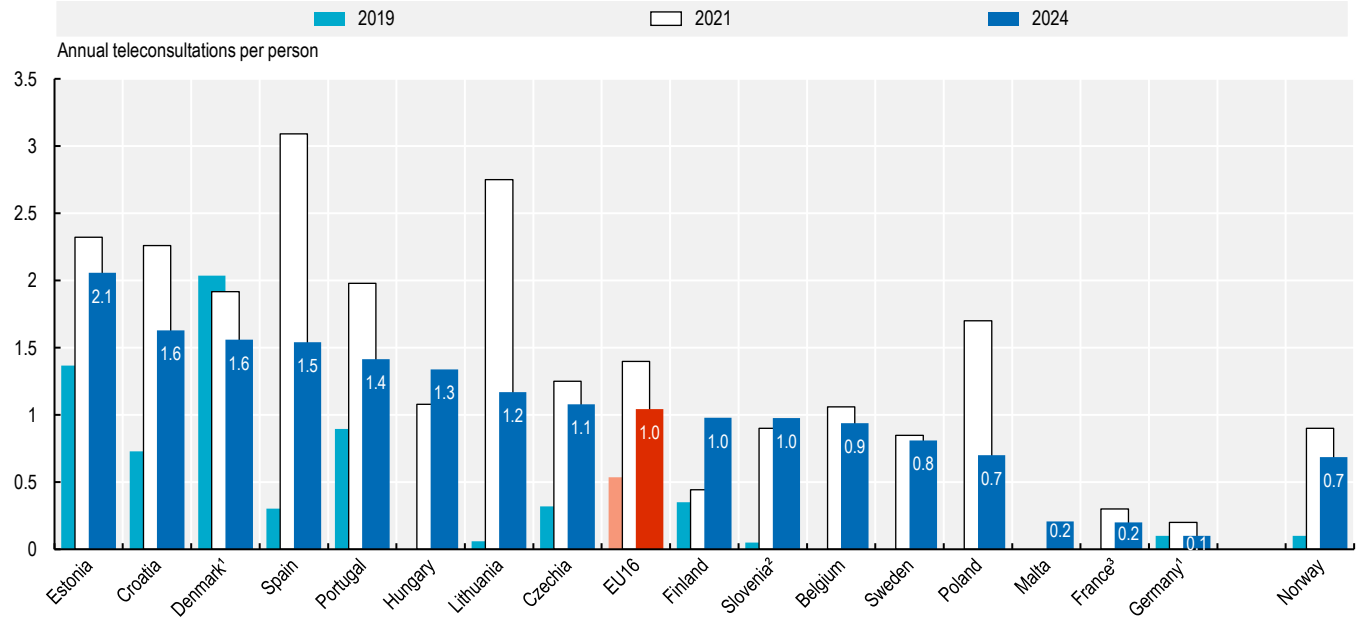
Figure 8.5. Doctor consultations, in-person and teleconsultations, 2024



Note: The EU average is unweighted. 1. Denmark and Germany use different definitions (see Definition and comparability).
Source: OECD, https://data-explorer.oecd.org/s/5l8; Eurostat, https://doi.org/10.2908/HLTH_HC_PHYS2 (both accessed on 15 September 2026).

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Figure 8.6. Annual doctor teleconsultations, 2019, 2021 and 2024



Note: The EU average is unweighted. 1. Denmark and Germany use different definitions (see Definition and comparability). 2. Data for Slovenia before and after 2023 are not comparable (break in series). 3. Data for 2021 refer to 2020.
Source: OECD, https://data-explorer.oecd.org/s/5l8; Eurostat, https://doi.org/10.2908/HLTH_HC_PHYS2 (both accessed on 15 September 2026).

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Medical and nursing graduates

Expanding education and training capacity is one of the main ways countries can increase the future supply of doctors and nurses. However, this lever operates with a long lag, as programmes take several years to complete. Graduate output also measures only the potential inflow; the eventual addition depends on how many enter practice and remain in the country.

Between 2014 and 2024, the rate of medical graduates across the 25 EU countries with consistent trend data rose by around one-third, from 11.7 to 15.5 per 100 000 population, or 2.9% per year. The rate of nursing graduates across 26 EU countries, by contrast, increased by about 6%, from 37.0 to 39.1 per 100 000 population, or 0.5% per year.

In 2024, the rate of new medical graduates ranged from 11.1 per 100 000 population in France to 35.9 in Cyprus (Figure 8.7). Over the decade, rates rose in nearly all EU countries, nearly tripling in Bulgaria and more than doubling in Latvia. High graduate output does not necessarily expand the domestic medical workforce, however. In Bulgaria, Cyprus and Romania, it partly reflects a role as centres for international medical education, supported by the automatic recognition of qualifications under the EU Professional Qualifications Directive. Cyprus established its first medical schools in 2013; expansion and international recruitment subsequently raised its graduate rate from 5.0 per 100 000 population in 2019, when the first cohort graduated, to 35.9 in 2024. In Romania, medical programmes accounted for 52% of foreign student enrolments in 2021-2022, and many of these students leave after graduating to train or work elsewhere (OECD/European Observatory on Health Systems and Policies, 2025[1]).

Nursing graduate rates varied more than tenfold in 2024, from fewer than 9 per 100 000 population in Bulgaria and Cyprus to around 100 in Greece and Romania (Figure 8.8). Much of this variation reflects the types of nursing programmes included: programmes for associate professional nurses, which fall below the Directive's minimum training requirements, accounted for 92% of nursing graduates in Romania, 89% in Slovenia, 85% in Greece, 58% in Czechia and around 40% in Croatia and Austria. Over the past decade, the nursing graduate rate rose in 13 of the 26 EU countries with consistent trend data and fell in the other 13. The rate more than doubled in Bulgaria, albeit from a very low base, and rose by 66% in the Netherlands and 56% in Lithuania.

The largest reported declines occurred in Cyprus, Latvia and Hungary. In Cyprus, university nursing programmes have struggled to fill places as working conditions, limited incentives and poor career prospects have weakened student interest (European Federation of Nurses, 2024[2]). In Latvia, most of the decline occurred after 2021, when a reform replaced three-year college programmes with four-year university bachelor's programmes; numbers are projected to rise once the first cohorts of the new programmes graduate after 2026. Hungary has raised nurses' pay considerably to improve attractiveness and retention (see indicator "Remuneration of nurses" in Chapter 7).

Declining interest is also a challenge in other countries. In Italy, applications to nursing education programmes fell below available places for the first time in 2025, after a 25% decline over the decade. In Belgium, foreign students, mostly from France, accounted for 35% of new nursing graduates in the French Community in 2021, up from 16% in 2010, and most leave after graduating. Women account for at least 80% of applicants and admitted students in most EU countries, reflecting stereotypes that narrow the recruitment pool (OECD, forthcoming[3]).

Definition and comparability

Medical graduates are students who have graduated from medical schools in a given year, including international students. Nursing graduates are students who have obtained a recognised qualification to practise as a nurse. They include graduates of programmes meeting the EU Professional Qualifications Directive's requirements for nurses responsible for general care and, where these exist, programmes leading to associate professional nurse qualifications. Graduates of master's and doctoral programmes are excluded to avoid double-counting. However, data for Belgium also include graduates of master's and doctoral programmes in nursing, and data for Latvia include graduates of master's programmes.

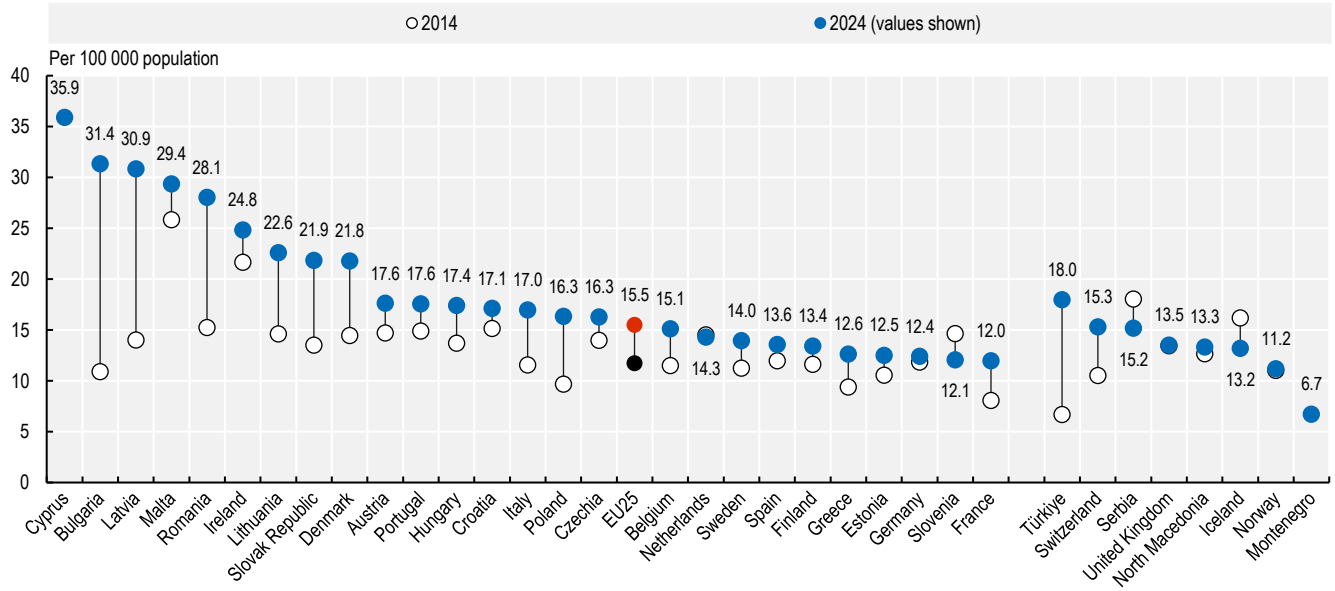
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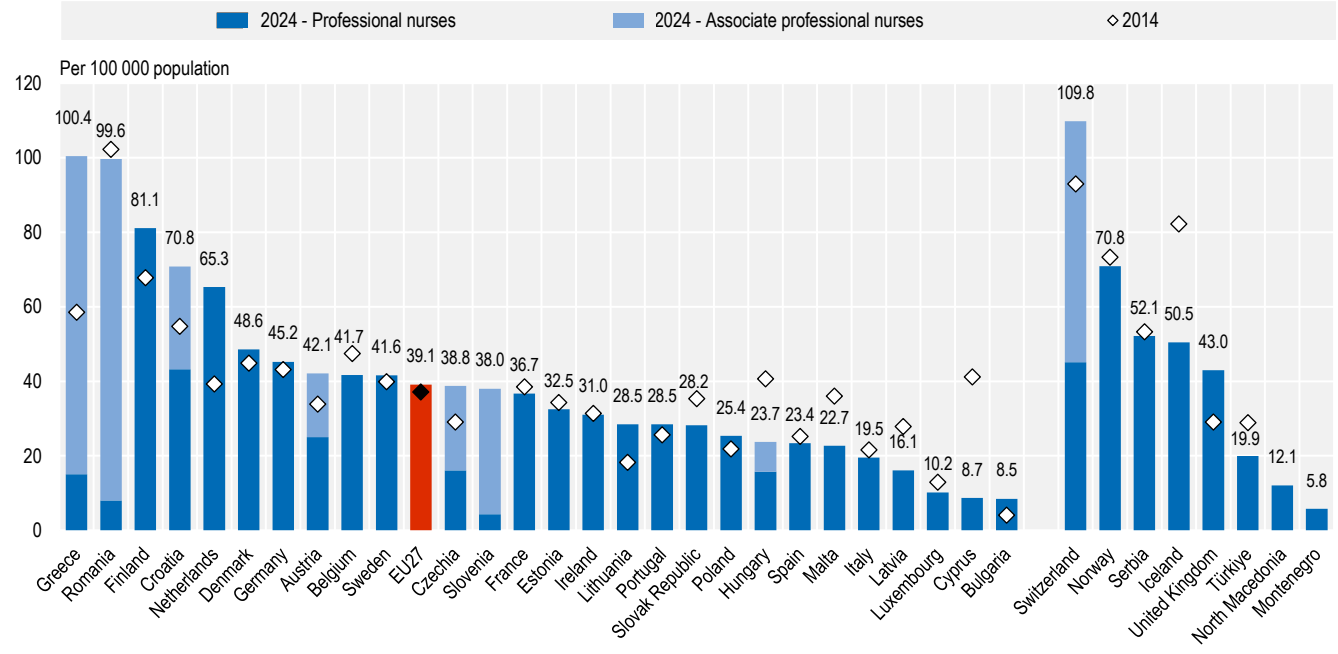
Figure 8.7. Medical graduates, 2014 and 2024 (or nearest year)



Note: The EU average is weighted. Data for Romania refer to 2013 and 2023; the latest data for France is the 2023-2024 average. A large share of medical graduates are international students in some countries, including Cyprus, Bulgaria, Romania, Ireland, the Slovak Republic, Czechia and Hungary.
Source: OECD, https://data-explorer.oecd.org/s/5l9; Eurostat, https://doi.org/10.2908/HLTH_RS_GRD2 (both accessed on 15 September 2026).

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Figure 8.8. Nursing graduates, 2014 and 2024 (or nearest year)



Note: The EU average is weighted. The 2024 bars distinguish graduates of professional and associate professional nursing programmes. Data for Romania refer to 2013 and 2023. Data for Czechia refer to 2017 instead of 2014 (break in series).
Source: OECD, https://data-explorer.oecd.org/s/5l9; Eurostat, https://doi.org/10.2908/HLTH_RS_GRD2 (both accessed on 15 September 2026).

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Age profile and training origin of doctors

Maintaining service capacity depends on how many professionals leave, how effectively training replaces them and whether countries can attract mobile workers. The age profile of practising doctors and their country of training provide two partial indicators of these replacement needs.

Across EU countries, one-third of doctors were aged 55 or over in 2024, broadly unchanged from 2014. However, this average conceals wide cross-country variations, from around 20% in Portugal, Ireland and Malta to 55% in Bulgaria (Figure 8.9). This share also understates the immediacy of replacement pressures in some countries: in Hungary, Bulgaria, Italy and Estonia, between 23% and 25% of doctors were aged 65 or over, so current capacity partly depends on doctors working beyond typical retirement ages. Among countries with comparable data, the share of doctors aged 55 and over rose most in Bulgaria over the past decade and fell by about 7 p.p. in Sweden. Breaks in series prevent comparisons for France, Italy, Belgium, Czechia and Hungary. In France, however, the consistent series since 2020 shows a fall of almost 5 p.p, as larger cohorts trained after earlier increases in medical school intakes entered practice.

The scale of the training pipeline provides a second indication of replacement capacity. In 2024, medical graduates ranged from fewer than 30 per 1 000 doctors in Greece, Germany, France, Spain and Italy to more than 90 in Latvia. Countries combining an older workforce with low graduate output relative to the size of their medical workforce, such as Estonia and Italy, may therefore face greater replacement pressures. In Bulgaria and Latvia, by contrast, medical workforces remain among the oldest in the EU despite high graduate output, as many graduates are international students who do not stay after graduating (see indicator “Medical and nursing graduates”).

International mobility can be an additional source of workforce renewal or of exit. Among the 19 EU countries with consistent trend data, foreign-trained doctors averaged 11% of the medical workforce in 2024, up from 9% in 2014 (Figure 8.10). The share ranged from around 1% in Lithuania and Italy to 31% in Sweden and 41% in Ireland, and reached 40% or more in the United Kingdom, Switzerland and Norway. More than half of foreign-trained doctors in Norway, however, are Norwegians who obtained their first medical degree abroad and then returned (OECD, 2025[1]).

Some of the fastest growth in foreign-trained shares occurred in central Europe. In Poland, the share more than doubled between 2020 and 2024, following the simplified licensing of doctors trained outside the EU introduced during the pandemic and, since 2022, a large inflow of Ukrainian doctors after Russia’s invasion of Ukraine. In Czechia, the share rose from 5% in 2014 to 9% in 2024, driven mainly by Slovak-trained doctors, whose qualifications are automatically recognised under EU law, and since 2022 by Ukrainian doctors (OECD, 2025[1]). Cyprus and Luxembourg relied entirely on foreign-trained doctors until they opened their own medical schools. In Cyprus, whose first medical schools opened in 2013 and produced their first graduates in 2019, only about 7% of doctors working in 2024 had been trained domestically. Luxembourg’s first medical graduates completed their studies in 2025, which should gradually reduce its reliance on foreign medical schools.

Together, age and training origin point to distinct replacement profiles. Germany has supplemented an ageing domestic workforce through international recruitment, with the foreign-trained share rising from just below 10% in 2014 to 16% in 2024. Ireland has a young medical workforce and high graduate output, but many graduates are international students who leave after graduating (OECD, 2025[1]). Italy, Latvia and Estonia combine some of the oldest medical workforces in the EU with low foreign-trained shares.

These profiles show that expanding medical school intake alone is not sufficient to secure workforce replacement. Policy also needs to ensure adequate postgraduate training capacity, support the retention of graduates in domestic practice, improve their distribution across regions and specialties, and make better use of existing staff through skill-mix changes, including advanced practice roles for nurses. International recruitment can also contribute, but should be supported by partnerships that benefit both destination and source countries. The WHO Global Code of Practice, amended in May 2026, strengthened provisions on internationally recruited care workers and investment in source countries (WHO, 2026[2]).

Definition and comparability

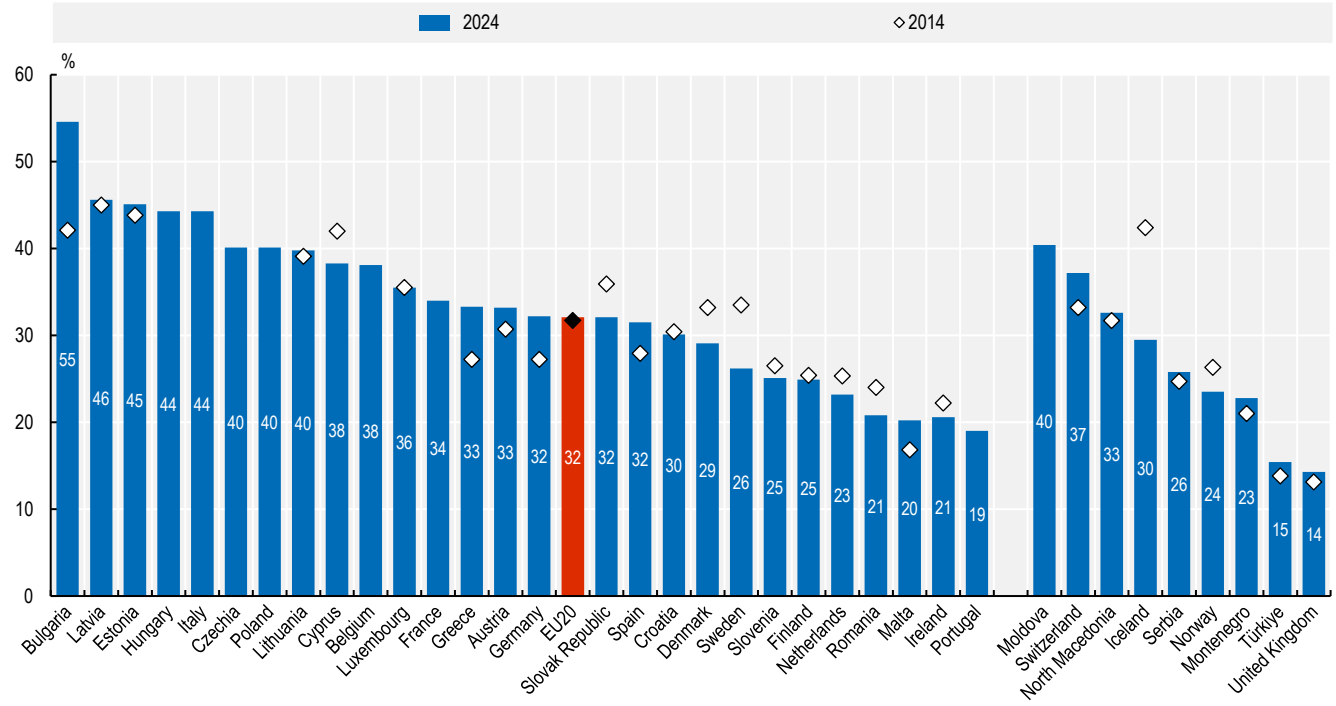
Data on the age of doctors refer to practising doctors, except in Greece, where they cover all doctors licensed to practise and probably overestimate the share aged 55 and over, as they may include many retired doctors. Foreign-trained doctors are classified by the country of their first medical degree, irrespective of nationality, and therefore include returning nationals and long-established migrants.

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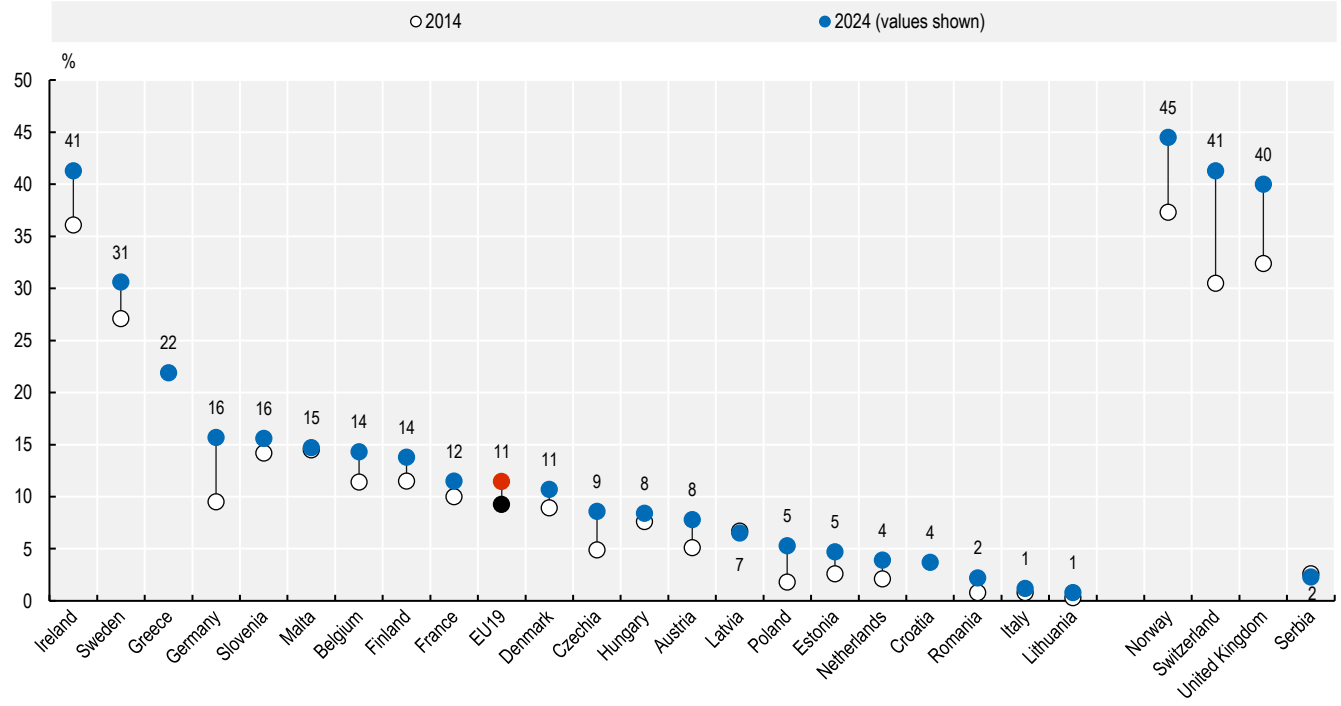
Figure 8.9. Share of doctors aged 55 and over, 2014 and 2024 (or nearest year)



Note: The EU average is unweighted and covers the 20 countries with comparable data for 2014 and 2024.
Source: OECD, https://data-explorer.oecd.org/s/5la; Eurostat, https://doi.org/10.2908/HLTH_RS_PHYS (both accessed on 15 September 2026).

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Figure 8.10. Share of foreign-trained doctors, 2014 and 2024 (or nearest year)



Note: The EU average is unweighted. Croatia and Greece have no comparable data for 2014.
Source: OECD, https://data-explorer.oecd.org/s/5lb; Eurostat, https://doi.org/10.2908/HLTH_RS_WKMG2 (both accessed on 15 September 2026).

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Age profile and training origin of nurses

Nurses are the largest health profession, so their supply has a greater bearing on service capacity. Sustaining this capacity depends both on retaining nurses and on replacing those who retire or leave early through domestic training and international recruitment. The age profile of nurses and the share trained abroad provide partial indications of retirement pressures and reliance on international recruitment.

In 2024, about one-quarter of nurses were aged 55 or over on average across 21 EU countries, ranging from 13% in Romania to 42% in Latvia and 48% in Lithuania, where more than one in ten were aged 65 or over (Figure 8.11). Although the nursing workforce is younger than the medical workforce, its share aged 55 and over has risen more quickly: across the eight EU countries with comparable data, it increased from 17% in 2014 to 23% in 2024, while the corresponding share among doctors remained broadly stable. The increase was particularly marked in Belgium, Germany, Hungary and the Slovak Republic, at 8 to 11 p.p., and in Italy, where the share rose by more than 3 p.p. in 2021-2024 alone.

Graduate numbers help indicate how far domestic training can offset retirements. In 2024, the number of nursing graduates in most EU countries were 1.5 to 3 times the annual number of nurses reaching 65, but only 1 to 1.3 times in Italy, Latvia and Lithuania. These three countries therefore have little margin for early exits, emigration or graduates who do not enter practice. Lithuania has expanded its training capacity: graduate numbers have risen by half since 2014.

International recruitment provides another source of new nurses. Foreign-trained nurses account for a much smaller workforce share than foreign-trained doctors, but this share has grown faster. Across 12 EU countries with consistent data, it rose by more than half, from 1.7% in 2014 to 2.6% in 2024, compared with about a quarter for doctors. Germany accounted for about two-fifths of this rise (Figure 8.12). Reliance varies widely: in 2024, the share was below 1% in six EU countries but reached 11% in Germany, 14% in Austria and 54% in Ireland. These countries and Italy employed four in five of the roughly 250 000 foreign-trained nurses in EU countries with available data.

Annual inflows have also risen substantially. Across 15 EU countries, inflows of foreign-trained nurses were almost 90% higher in 2024 than in 2019, compared with around 50% for doctors; excluding Ireland, which accounted for half the increase, the rise was three-quarters. Ireland's nursing workforce has grown almost entirely through international recruitment: foreign-trained nurses on the active register increased by 11 500 in 2021-2024, compared with fewer than 1 000 Irish-trained nurses.

Together, these indicators point to different degrees of exposure to shortages. Latvia shows the clearest strain: in 2019-2024, its nursing workforce shrank by 8% and graduate numbers fell by more than 40%. The decline in graduates partly reflects the move from three-year college to four-year bachelor programmes, after which numbers are expected to recover. Lithuania's workforce is older still, although its share aged 55 and over has fallen by 3 p.p. since 2021 as the number of younger nurses has grown. Hungary and Italy combine rapid ageing with little growth in foreign-trained nurses. Domestic training offers limited scope for replacement: graduate numbers in Hungary have fallen by 43% since 2014, while in Italy they barely exceed the number of nurses reaching 65.

Germany and Austria have expanded their nursing workforces through international recruitment, supported in Austria by a one-third increase in graduates. Such recruitment can contract rapidly, exposing countries that rely heavily on it, including Ireland and the United Kingdom, to sudden falls in inflows. In the year to May 2025, new registrants trained outside the EU fell by almost 40% in Ireland (NMBI, 2025[1]), while the number of internationally educated professionals joining the UK nursing and midwifery register halved year on year in April-September 2025 (NMC, 2025[2]).

Across the EU, nursing graduate rates have risen by only 6% since 2014, while population ageing increases demand for care. Expanding training will therefore need to be accompanied by action to reduce exits, including keeping nurses in practice for longer and lowering attrition among newly qualified nurses.

Definition and comparability

The age data cover professional nurses and, where they exist, associate professional nurses, and relate mostly to practising nurses. The number of nurses reaching 65 each year is approximated as one-tenth of those aged 55-64. Graduate data cover all nursing programmes, including those for associate professional nurses.

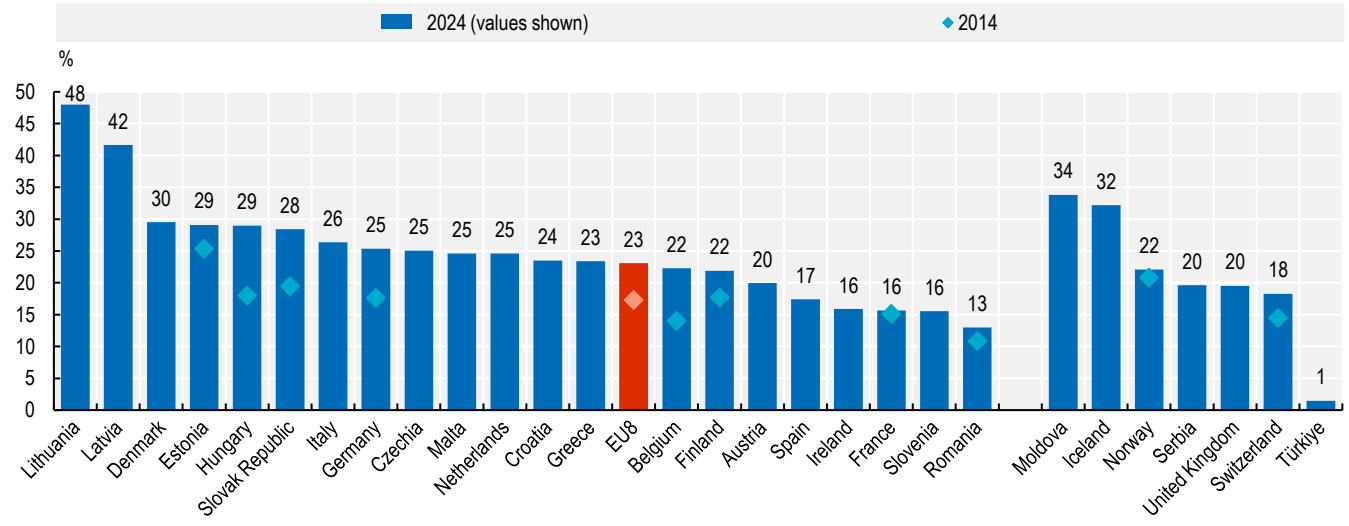
Foreign-trained nurses are classified by the country of their first nursing qualification, irrespective of nationality, and therefore include returning nationals. German data are survey-based and refer to the highest qualification obtained abroad. Figure 8.12 shows the total stock of foreign-trained nurses. Inflows are the number of foreign-trained nurses registered or practising for the first time in a given year (OECD Data Explorer provides data on annual inflows).

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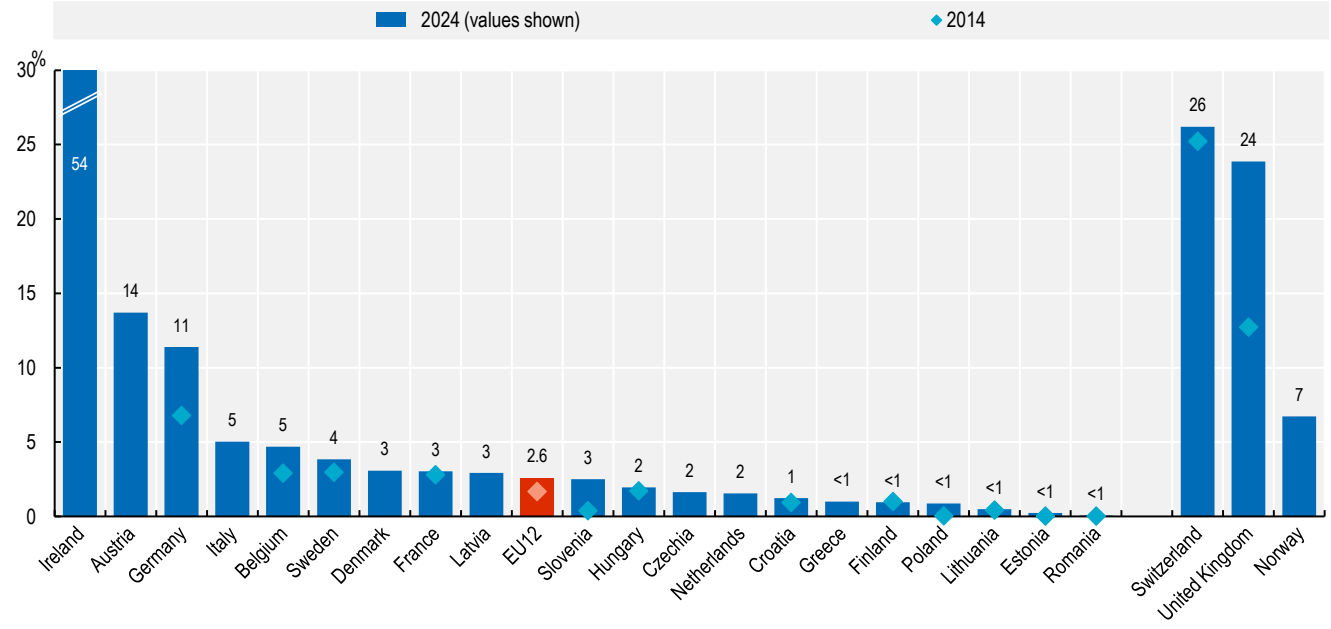
Figure 8.11. Share of nurses aged 55 and over, 2014 and 2024 (or nearest year)



Note: The EU8 average is unweighted and covers the eight countries with comparable data over the period (Belgium, Estonia, Finland, France, Germany, Hungary, Romania and the Slovak Republic); the unweighted average across the 21 EU countries shown is 25% in 2024. First-year data refer to 2016 for Norway and 2017 for Hungary; latest data refer to 2023 for Belgium, France and Greece. Breaks in series prevent the presentation of 2014 data for Denmark and Spain. Data for Austria, Germany, Lithuania, Malta and Spain are estimates. Data for Greece cover nurses in hospitals and health centres, data for Switzerland cover nurses in hospitals and nursing homes, and data for the United Kingdom cover NHS staff in England, Wales and Northern Ireland.
Source: OECD, https://data-explorer.oecd.org/s/5lc; Eurostat, https://doi.org/10.2908/HLTH_RS_NURSE (both accessed on 15 September 2026).

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Figure 8.12. Share of foreign-trained nurses, 2014 and 2024 (or nearest year)



Note: The EU12 average is unweighted and covers the 12 countries with comparable data over the period (Belgium, Croatia, Estonia, Finland, France, Germany, Hungary, Lithuania, Poland, Romania, Slovenia, Sweden). First-year data refer to 2015 for Sweden, 2016 for Lithuania and Poland, and 2017 for Croatia and Hungary; latest data refer to 2021 for France and 2023 for Czechia, Finland, Greece and Sweden. Breaks or inconsistencies in series prevent the presentation of 2014 data for Denmark, Italy, Latvia, the Netherlands and Norway. Data for Austria, Belgium, Croatia, Estonia, Italy, Lithuania and Romania cover nurses licensed or entitled to practise. Data for Germany are survey-based estimates.
Source: OECD, https://data-explorer.oecd.org/s/5lb; Eurostat, https://doi.org/10.2908/HLTH_RS_WKMG2 (both accessed on 15 September 2026).

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Capital expenditure in the health sector

The capacity of health systems to absorb shocks and sustain service delivery and productivity depends partly on the quality of their capital stock, including buildings, medical equipment, and digital and information technology (IT) infrastructure. Although there is no single optimal level of capital investment, capital budgets are particularly vulnerable during periods of fiscal constraint. Deferring investment generally has little immediate or visible effect on service delivery, making it an easier area to reduce than current expenditure; this helps explain why capital spending fluctuates much more from year to year than recurrent health expenditure (OECD, 2023[1]). The consequences of sustained underinvestment become apparent only gradually, through ageing facilities, obsolete equipment and inadequate digital infrastructure. However, these constraints become most acute when health systems must respond to sudden increases in demand, as demonstrated during the COVID-19 pandemic. Deferred investment also raises long-run costs, as remedial replacement and refurbishment are typically more expensive than steady renewal.

On average over 2022-2024, gross fixed capital formation in the human health and social work sector amounted to 1.0% of GDP across the EU (Figure 8.13). Investment reached 1.5% of GDP in Germany and 1.4% in Latvia, followed by 1.1-1.2% in Romania, Portugal, Belgium, Denmark, Luxembourg and the Netherlands, while the Slovak Republic and Bulgaria invested 0.5% or less. Where data are available, digital assets accounted for around 13% of total investment in health and social work; the digital share reached around one-third in the Netherlands and 20-25% in Austria, Portugal and Romania, indicating that in some countries, the composition of investment is shifting towards digital infrastructure well ahead of other countries (see Chapter 1).

In real terms, investment in the EU health and social work sector rose by around 10% between 2015 and 2019, was broadly flat through the pandemic years, then rose by a further 5% in 2023 alone, leaving it about 18% above its 2015 level (Figure 8.14). The timing of this acceleration is consistent with the disbursement profile of *NextGenerationEU* funds (European Court of Auditors, 2024[2]). Spain illustrates the pattern most clearly: capital investment stood around 70% above its 2015 level in 2023 before falling back in 2024 as exceptional funding unwound. Italy recorded growth of around 40% over the same period, though from a relatively low base. Germany, the highest spender in the EU, has followed a different path, with investment volumes drifting down since 2020, while in France investment only regained its 2015 level in 2023. Trajectories have been far more erratic in smaller countries, where single large, often EU-funded projects can move the national total: by 2023-2024, investment was around three times its 2015 level in Latvia and twice its 2015 level in Lithuania, whereas in Bulgaria it showed no sustained growth over the decade.

The EU plays an important role in supporting Member States' investment in health infrastructure through Cohesion Policy funds, which aim to reduce health inequalities and strengthen the effectiveness, accessibility and resilience of national health systems (European Commission, 2024[3]). This support has been reinforced by the NextGenerationEU recovery instrument, notably the *Recovery and Resilience Facility (*RRF), which has accelerated investment in healthcare facilities and digital infrastructure. The *EU4Health* programme also supports the resilience and resource efficiency of health systems. With the RRF's implementation period having ended in August 2026 and final disbursements scheduled to conclude by December 2026, sustaining the recent investment momentum will depend increasingly on national budgets and future EU funding programmes.

Definition and comparability

Capital expenditure, or gross fixed capital formation, measures the value of fixed assets acquired by health providers during the year, less disposals. It covers assets used in production for more than one year, including buildings, machinery and equipment, and software and databases.

Some countries report gross fixed capital formation in health under the System of Health Accounts (SHA). It is also included in National Accounts data, broken down by industrial sector according to the International Standard Industrial Classification (ISIC) Rev. 4. To estimate capital investment in health, section *Q: Human health and social work activities* is used. This typically covers a broader scope than the SHA. In Ireland and Luxembourg, where profits of multinational enterprises inflate GDP, ratios to GDP understate the investment effort relative to national income; GDP is nevertheless used for all countries for the sake of consistency.

Comparability of capital expenditure data can also be affected by variations in reporting coverage. While some countries include only public sector investments, others may have incomplete data on private sector spending, which can limit cross-country comparisons. For digital health, recurrent spending on operation, maintenance, software and cloud services, and cybersecurity is recorded as current expenditure and is not captured here.

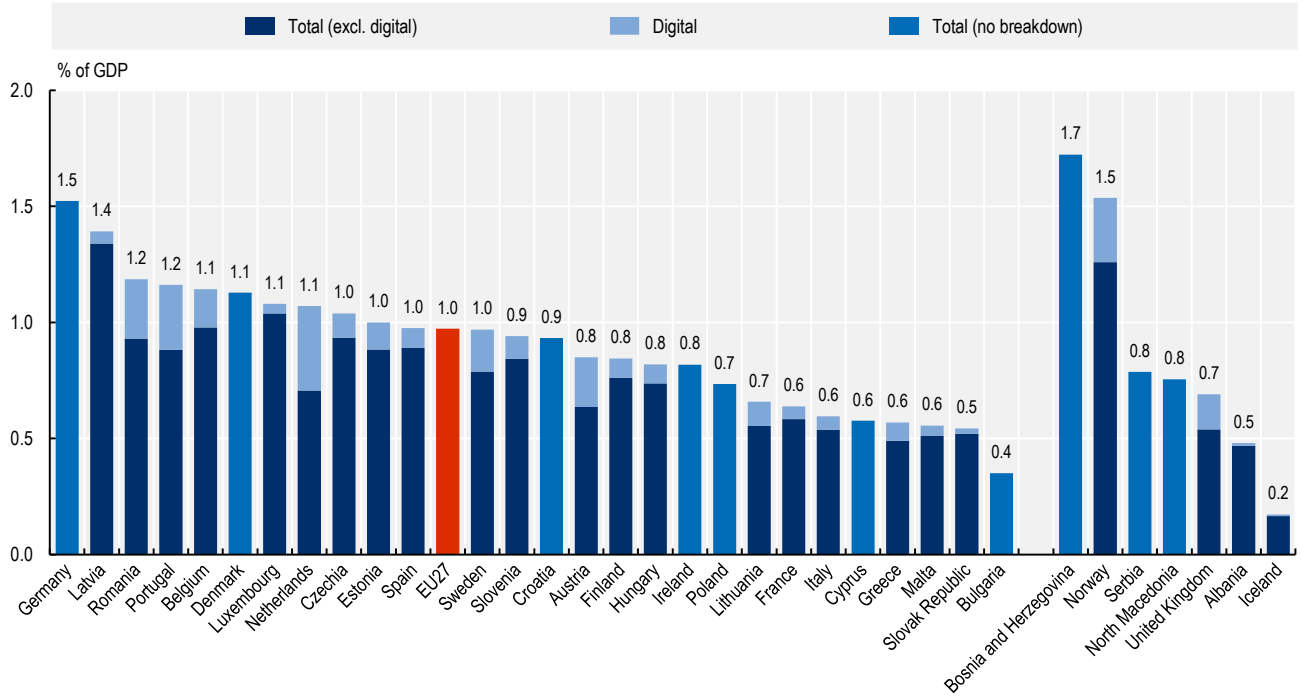
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OECD (2023), *Ready for the Next Crisis? Investing in Health System Resilience*, OECD Health Policy Studies, OECD Publishing, Paris, https://doi.org/10.1787/1e53cf80-en. [1]

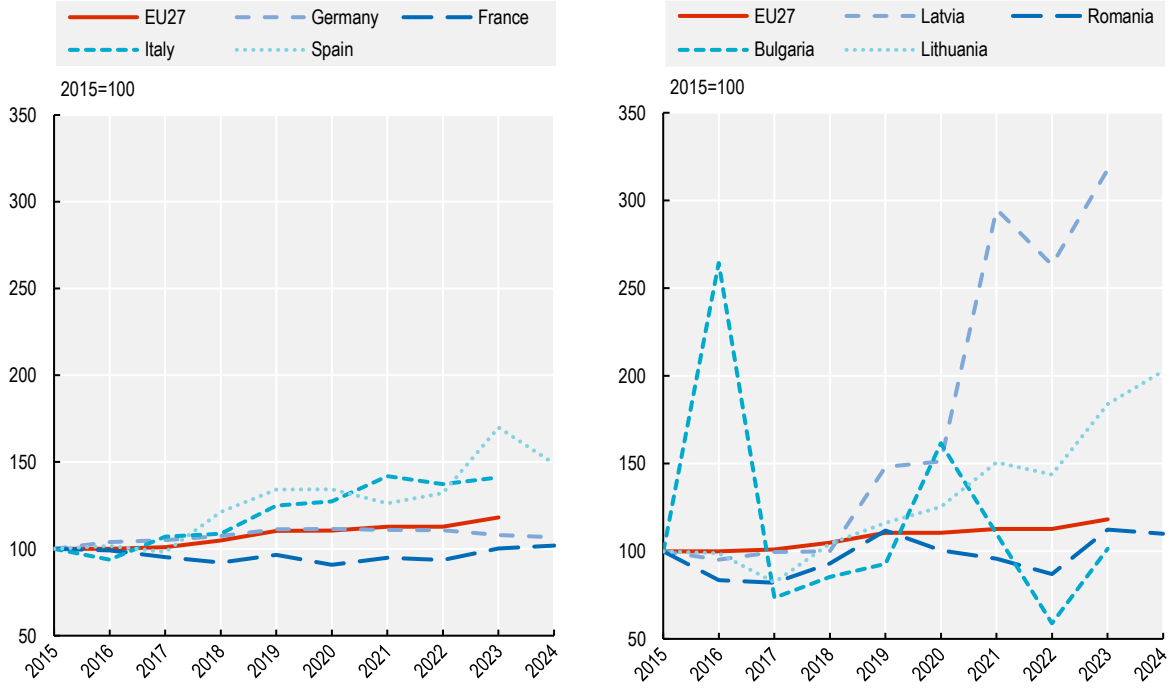
Figure 8.13. Annual capital expenditure in health and social work as a share of GDP, average 2022-2024 (or nearest year)



Note: The EU average is weighted. Refers to gross fixed capital formation in ISIC Q: Human health and social work activities (ISIC Rev. 4). "Digital" refers to gross fixed capital formation in "ICT equipment" and "Software and databases".
Source: OECD, https://data-explorer.oecd.org/s/5lg; Eurostat, https://doi.org/10.2908/NAMA_10_A64_P5 (both accessed on 15 September 2026).

StatLink https://stat.link/376vp8

Figure 8.14. Trends in real capital expenditure in health and social work, EU and selected countries, 2015-2024



Note: The EU average is weighted. The value in 2015 is set at 100.
Source: OECD, https://data-explorer.oecd.org/s/5lg; Eurostat, https://doi.org/10.2908/NAMA_10_A64_P5 (both accessed on 15 September 2026).

StatLink https://stat.link/rq8v5p

Public expenditure projections for health and long-term care

With 80% of health spending in the EU financed from public sources (see indicator "Financing of health expenditure" in Chapter 5), anticipating the scale and drivers of future expenditure is essential for ensuring the long-term fiscal sustainability of health systems. Population ageing in Europe remains a key driver of future expenditure, as it increases demand for health and long-term care (LTC) services, raises the prevalence of chronic conditions and multi-morbidity and reduces the relative size of the working-age population that finances health and LTC through taxation. Additionally, the high cost of innovative medications, particularly in areas such as oncology, exerts further pressures on healthcare budgets. While investing in more resilient health systems and embracing new technologies can improve the cost-effectiveness of healthcare services, they often require additional resources in the short to medium term.

Long-term expenditure projections serve as an important tool for decision makers to plan ahead and accommodate potential financial needs: the Economic Policy Committee's Ageing Working Group (AWG) regularly projects future public expenditure on health and LTC (European Commission and Economic Policy Committee, 2024[1]). Their 2024 projections assess how different demographic and economic developments could impact public health and LTC spending over the 2022-2070 period under a range of scenarios. Under the baseline scenario, public healthcare spending in the EU is projected to rise by 0.4 p.p. of GDP by 2070, from 6.9% to 7.3% (Figure 8.15). This relatively modest average increase masks a degree of convergence across countries: projected increases are generally largest where current spending is lowest, including in Malta (+2.1 p.p.), the Slovak Republic (+1.6), Ireland (+1.5), and Luxembourg and Spain (+1.2 each). By contrast, Germany and France, which recorded the highest levels of public health spending in the EU in 2022, at 8.0% and 8.8% of GDP respectively, are projected to experience increases of only 0.1 and 0.3 p.p. Spending is also projected to remain broadly stable in several countries facing population decline, including Italy (+0.1 p.p.) and Bulgaria (+0.2). Latvia is the only EU country where public health spending is projected to fall as a share of GDP, from 6.0% in 2022 to 5.8% in 2070.

Public spending on LTC is another area that is becoming increasingly crucial with population ageing. Under the same baseline scenario, public spending on LTC in the EU is projected to rise from 1.7% to 2.6% of GDP by 2070, an increase of almost half (48%) in relative terms, compared with about 5% for healthcare (Figure 8.16). The cross-country pattern differs markedly from that observed for health spending. Large increases are projected in countries with the most developed formal care systems, where coverage is broad and the cost of labour-intensive services is assumed to rise broadly in line with wages – Denmark (+3.3 p.p.), the Netherlands (+1.9), Finland (+1.8), Belgium (+1.7) and, outside the EU, Norway (+3.5). Malta (+2.3) is an exception: its large increase mainly reflects rapid population ageing. Conversely, the relatively small increases projected across much of southern and Central and Eastern Europe largely reflect the assumption of no major change in current policies and coverage, rather than limited future care needs. In countries where formal LTC provision remains underdeveloped, the baseline therefore provides only a partial indication of potential expenditure pressures. In Romania, for example, the projected increase of 0.4 p.p. of GDP would more than double spending from its 2022 level of 0.3%. Expanding access to formal care towards prevailing EU levels would imply substantially greater expenditure than indicated by the baseline projection.

These projections provide a useful indication of the potential budgetary implications of population ageing, but also show that future expenditure paths will depend heavily on policy choices. OECD projections similarly suggest that public health spending will grow faster than the economy over the next two decades, reflecting not only demographic change but also rising incomes, technological progress and relatively slow productivity growth in the health sector (OECD, 2025[2]). A healthy-ageing assumption embedded in the baseline scenario highlights the importance of ensuring that longer life expectancy translates into additional years in good health through effective investment in prevention and public health to contain healthcare and LTC expenditure growth.

Definition and comparability

The projections are taken from the 2024 Ageing Report, prepared jointly by the European Commission and the Economic Policy Committee Ageing Working Group; the underlying data, methodology and assumptions are set out in the accompanying 2023 assumptions volume. Figures refer to public expenditure under the baseline scenario, as a share of GDP. For Ireland, where profits of multinational enterprises inflate GDP, ratios to GDP understate spending relative to national income.

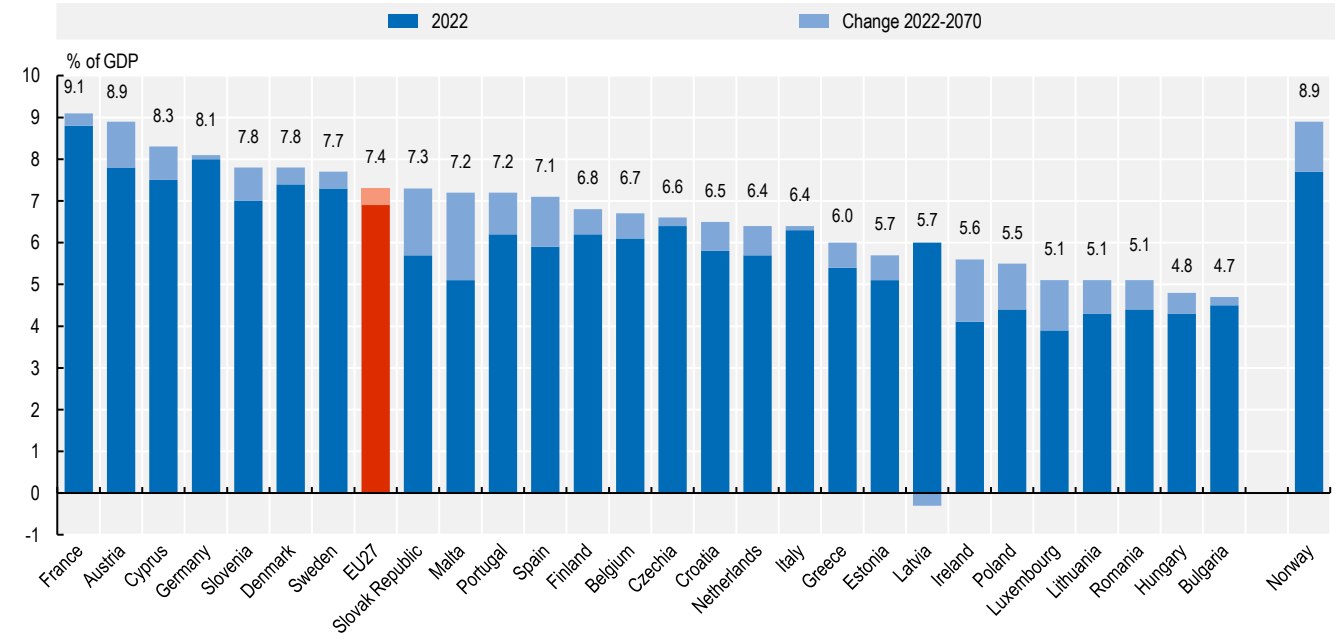
Healthcare covers public spending on curative and preventive services, while the medical component of long-term care is counted under long-term care together with social care services. Levels are not directly comparable with the health expenditure figures in Chapter 5, which follow the System of Health Accounts and also include private spending. Comparability of long-term care is further limited by differences in the boundary that countries draw between formal and informal care. EU averages are weighted by GDP.

References

European Commission and Economic Policy Committee (2024), *The 2024 Ageing Report: Economic and Budgetary Projections for EU Member States (2022–2070)*. [1]

OECD (2025), *Health at a Glance 2025: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/8f9e3f98-en. [2]

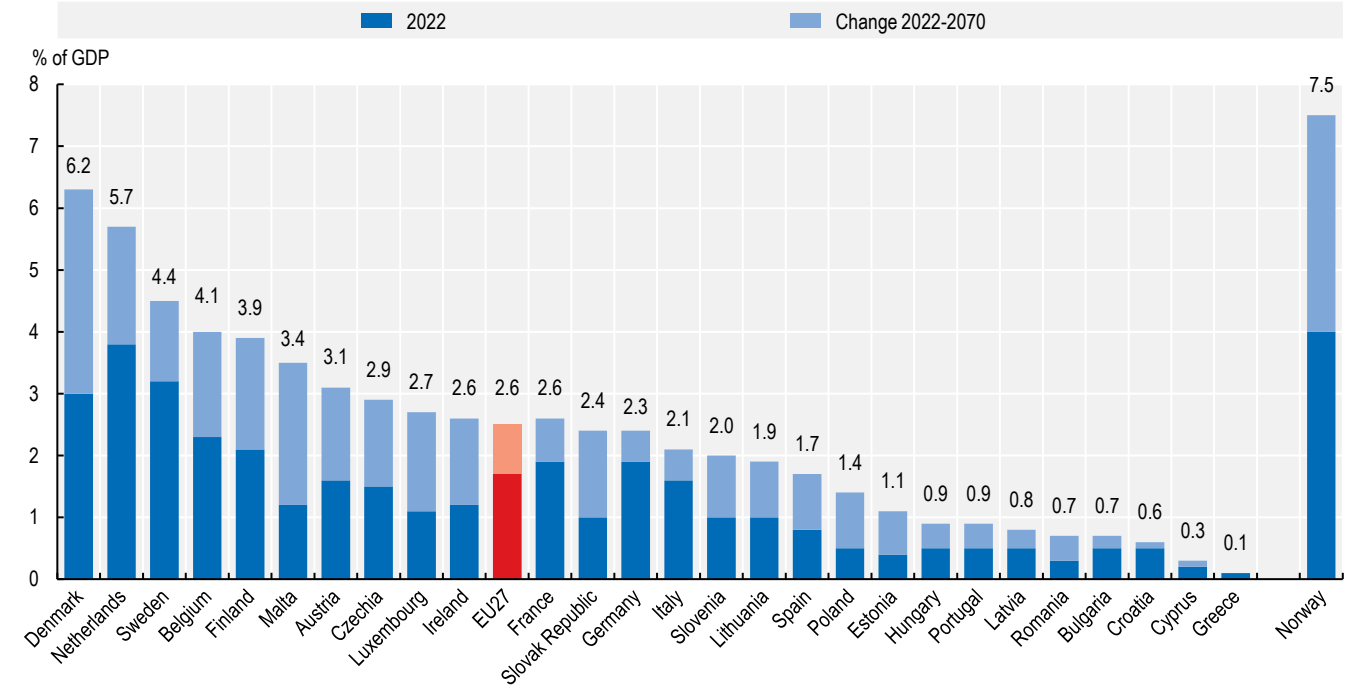
Figure 8.15. Public spending on healthcare as a share of GDP, 2022-2070, baseline scenario



Note: The EU average is weighted by GDP.
Source: European Commission and EPC-AWG (2024).

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Figure 8.16. Public spending on long-term care as a share of GDP, 2022-2070, baseline scenario



Note: The EU average is weighted by GDP.
Source: European Commission and EPC-AWG (2024).

StatLink https://stat.link/w0xg5k

Annex A. Statistical annex

Table A A.1. Total population on 1 January, thousands, 1960 to 2025

	1960	1970	1980	1990	2000	2010	2015	2020	2025
Austria	7 030	7 455	7 546	7 645	8 002	8 352	8 585	8 901	9 197
Belgium	9 129	9 660	9 855	9 948	10 239	10 840	11 237	11 522	11 883
Bulgaria	7 829	8 464	8 846	8 767	8 191	7 422	7 030	6 569	6 437
Croatia	4 127	4 403	4 598	4 773	4 498	4 303	4 181	3 934	3 874
Cyprus	572	612	506	573	690	819	861	902	983
Czechia	9 638	9 906	10 316	10 362	10 278	10 462	10 538	10 694	10 910
Denmark	4 565	4 907	5 122	5 135	5 330	5 535	5 660	5 823	5 993
Estonia	1 206	1 352	1 472	1 571	1 401	1 333	1 313	1 329	1 370
Finland	4 413	4 614	4 771	4 974	5 171	5 351	5 472	5 525	5 636
France	45 465	50 528	53 731	56 577	60 545	64 659	66 458	67 474	68 883
Germany	55 257	61 195	61 439	62 679	82 163	81 802	81 198	83 167	83 577
Greece	8 300	8 781	9 584	10 121	10 776	11 119	10 818	10 613	10 372
Hungary	9 961	10 322	10 709	10 375	10 222	10 014	9 816	9 689	9 540
Ireland	2 836	2 943	3 393	3 507	3 778	4 549	4 678	5 013	5 440
Italy	50 026	53 685	56 388	56 694	56 924	59 690	60 295	59 641	58 943
Latvia	2 104	2 352	2 509	2 668	2 382	2 121	1 986	1 908	1 861
Lithuania	2 756	3 119	3 404	3 694	3 512	3 142	2 927	2 810	2 891
Luxembourg	313	339	363	379	434	502	563	626	682
Malta	327	303	315	352	389	414	439	515	574
Netherlands	11 417	12 958	14 091	14 893	15 864	16 575	16 901	17 408	18 044
Poland	29 480	32 671	35 413	38 038	38 263	38 023	38 006	37 958	36 497
Portugal	8 826	8 698	9 714	9 996	10 249	10 573	10 395	10 375	11 387
Romania	18 319	20 140	22 133	23 211	22 455	20 295	19 871	19 329	19 043
Slovak Republic	3 970	4 537	4 963	5 288	5 399	5 390	5 421	5 458	5 419
Slovenia	1 581	1 718	1 893	1 996	1 988	2 047	2 063	2 096	2 131
Spain	30 327	33 588	37 347	38 853	40 470	46 487	46 426	47 318	49 128
Sweden	7 471	8 004	8 303	8 527	8 861	9 341	9 747	10 328	10 588
EU27 (total)	**354 532**	**384 327**	**405 467**	**418 031**	**428 474**	**440 660**	**442 883**	**446 924**	**451 285**
Albania	1 584	2 111	2 645	3 287	3 058	2 919	2 886	2 846	2 363
Iceland	174	204	227	254	279	318	329	364	389
Moldova	..	..	..	..	3 644	3 564	3 555	2 685	2 416
Montenegro	..	..	..	..	603	619	622	622	623
North Macedonia	1 384	1 617	1 878	1 873	2 022	2 053	2 069	2 076	1 823
Norway	3 568	3 863	4 079	4 233	4 478	4 858	5 166	5 368	5 594
Serbia	..	..	..	..	7 528	7 307	7 114	6 927	6 568
Switzerland	5 296	6 169	6 304	6 674	7 164	7 786	8 238	8 606	9 051
Türkiye	27 120	34 881	44 021	55 495	66 889	72 561	77 696	83 155	85 665
Ukraine	..	..	..	..	49 115	45 783	42 760	41 733	..
United Kingdom	52 449	55 711	56 330	57 237	58 886	62 759	65 087	66 740	69 502

Note: Population figures for Germany prior to 1991 refer to West Germany.
Source: Eurostat, https://doi.org/10.2908/TPS00001; data for the UK: OECD, https://data-explorer.oecd.org/s/5je (both accessed on 8 October 2026).

StatLink https://stat.link/yzchfk

Table A A.2. Share of the population aged 65 and over, 1 January, 1960 to 2025

	1960	1970	1980	1990	2000	2010	2015	2020	2025
Austria	12.1	14.0	15.5	14.9	15.4	17.6	18.5	19.0	20.2
Belgium	12.0	13.3	14.3	14.8	16.8	17.2	18.1	19.1	20.2
Bulgaria	7.4	9.4	11.8	13.0	16.2	18.2	20.5	22.9	24.0
Croatia	..	..	..	..	..	17.8	19.0	21.6	23.3
Cyprus	..	..	..	10.8	11.2	12.5	14.5	16.6	18.3
Czechia	9.5	11.9	13.6	12.5	13.8	15.3	17.8	19.9	20.7
Denmark	10.5	12.2	14.3	15.6	14.8	16.3	18.6	19.9	20.9
Estonia	10.5	11.7	12.5	11.6	14.9	17.4	18.8	20.0	20.9
Finland	7.2	9.0	11.9	13.3	14.8	17.0	19.9	22.3	23.6
France	11.6	12.8	14.0	13.9	16.0	16.8	18.4	20.4	21.9
Germany[1]	10.8	13.0	15.6	15.3	16.2	20.7	21.0	21.8	22.7
Greece	9.4	11.1	13.1	13.7	17.3	19.0	20.8	22.2	23.7
Hungary	8.9	11.5	13.5	13.2	15.0	16.6	17.8	19.8	20.9
Ireland	11.1	11.1	10.7	11.4	11.2	11.2	12.9	14.4	15.7
Italy	9.3	10.8	13.1	14.7	18.1	20.4	21.9	23.2	24.7
Latvia	..	11.9	13.0	11.8	14.8	18.1	19.4	20.5	21.9
Lithuania	..	10.0	11.3	10.8	13.7	17.3	18.7	19.8	20.9
Luxembourg	10.8	12.5	13.7	13.4	14.3	14.0	14.2	14.5	15.2
Malta	..	..	8.4	10.4	11.8	14.9	18.0	18.1	18.4
Netherlands	8.9	10.1	11.5	12.8	13.6	15.3	17.8	19.5	20.8
Poland	5.8	8.2	10.2	10.0	12.1	13.6	15.4	18.2	21.0
Portugal	7.8	9.2	11.2	13.2	16.0	18.3	20.4	22.7	24.3
Romania	..	8.5	10.3	10.3	13.2	16.1	17.0	18.9	20.3
Slovak Republic	6.8	9.1	10.6	10.3	11.4	12.4	14.0	16.6	18.8
Slovenia	..	..	..	10.6	13.9	16.5	17.9	20.2	22.1
Spain	8.2	9.5	11.1	13.4	16.5	16.8	18.4	19.5	20.7
Sweden	11.7	13.6	16.2	17.8	17.3	18.1	19.6	20.0	20.8
EU27 (total)	..	..	..	..	**16.0**	**17.6**	**19.1**	**20.6**	**22.0**
Albania	..	..	..	..	..	10.7	12.4	14.8	21.2
Iceland	8.0	8.8	9.8	10.6	11.6	12.0	13.5	14.4	15.9
Moldova	..	..	..	..	..	10.1	11.5	14.4	18.2
Montenegro	..	..	..	..	12.2	12.9	13.7	15.6	17.2
North Macedonia	..	..	..	..	9.8	11.6	12.7	14.5	18.6
Norway	10.9	12.8	14.7	16.3	15.3	14.9	16.2	17.5	19.0
Serbia	..	..	..	..	16.0	17.0	18.5	21.0	22.7
Switzerland	10.2	11.2	13.8	14.6	15.3	16.8	17.8	18.7	19.5
Türkiye	3.5	4.4	4.7	4.3	5.4	7.0	8.0	9.1	10.6
Ukraine	..	..	..	..	..	15.7	15.6	17.1	..
United Kingdom	11.7	12.8	15.0	15.7	15.8	16.4	17.8	18.5	19.3

Note: Population figures for Germany prior to 1991 refer to West Germany. The EU average for the year 2000 refers to 2001 data.
Source: Eurostat, https://doi.org/10.2908/DEMO_PJANBROAD; data for the UK: OECD, https://data-explorer.oecd.org/s/5je (both accessed on 8 October 2026).

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Table A A.3. Total fertility rate, number of children per woman aged 15-49, 1960 to 2024, or nearest year

	1960	1970	1980	1990	2000	2010	2015	2020	2024
Austria	2.69	2.29	1.65	1.46	1.36	1.44	1.49	1.44	1.31
Belgium	2.54	2.25	1.68	1.62	1.67	1.86	1.70	1.55	1.44
Bulgaria	2.31	2.17	2.05	1.82	1.26	1.57	1.64	1.77	1.72
Croatia	..	..	..	..	..	1.55	1.42	1.56	1.46
Cyprus	..	..	..	2.41	1.64	1.44	1.31	1.45	1.38
Czechia	2.09	1.92	2.08	1.90	1.15	1.51	1.57	1.74	1.36
Denmark	2.57	1.95	1.55	1.67	1.77	1.87	1.71	1.68	1.47
Estonia	1.98	2.17	2.02	2.05	1.36	1.72	1.58	1.58	1.18
Finland	2.72	1.83	1.63	1.78	1.73	1.87	1.65	1.37	1.25
France	2.73	2.47	1.95	1.78	1.87	2.02	1.96	1.82	1.61
Germany	..	..	..	..	1.38	1.39	1.50	1.53	1.36
Greece	2.23	2.40	2.23	1.39	1.25	1.48	1.33	1.39	1.24
Hungary	2.02	1.98	1.91	1.87	1.32	1.25	1.46	1.61	1.41
Ireland	3.78	3.85	3.21	2.11	1.89	2.05	1.85	1.60	1.47
Italy	2.40	2.38	1.64	1.33	1.26	1.44	1.36	1.24	1.18
Latvia	..	..	..	..	1.25	1.36	1.70	1.55	1.24
Lithuania		2.40	1.99	2.03	1.39	1.50	1.63	1.36	1.11
Luxembourg	2.29	1.97	1.50	1.60	1.76	1.63	1.47	1.36	1.25
Malta	..	..	1.99	2.02	1.68	1.36	1.37	1.14	1.01
Netherlands	3.12	2.57	1.60	1.62	1.72	1.79	1.66	1.54	1.43
Poland	..	..	..	2.06	1.37	1.41	1.32	1.39	1.14
Portugal	3.16	3.01	2.25	1.56	1.55	1.39	1.31	1.42	1.41
Romania	..	..	2.43	1.83	1.31	1.59	1.62	1.80	1.39
Slovak Republic	3.04	2.41	2.32	2.09	1.30	1.43	1.40	1.59	1.46
Slovenia	..	..	..	1.46	1.26	1.57	1.57	1.59	1.52
Spain	..	..	2.22	1.36	1.22	1.37	1.33	1.18	1.10
Sweden		..	1.68	2.13	1.54	1.98	1.85	1.67	1.43
EU27 (total)	..	..	..	..	**1.43**	**1.57**	**1.54**	**1.51**	**1.34**
Albania	..	..	..	..	..	1.63	1.59	1.34	1.64
Iceland	..	2.81	2.48	2.30	2.08	2.20	1.80	1.72	1.56
Moldova	..	..	..	..	..	1.30	1.54	1.69	1.78
Montenegro	..	..	..	..	..	1.70	1.74	1.75	1.75
North Macedonia	..	..	..	..	1.88	1.56	1.50	1.31	1.44
Norway	..	2.50	1.72	1.93	1.85	1.95	1.72	1.48	1.45
Serbia	..	..	..	..	1.48	1.40	1.46	1.48	1.64
Switzerland	2.44	2.10	1.55	1.58	1.50	1.52	1.54	1.46	1.29
Türkiye	..	..	..	..	..	2.04	2.14	1.88	1.48
Ukraine	..	..	..	..	..	1.43	1.36	..	..
United Kingdom	2.68	2.4	1.88	1.84	1.65	1.94	1.79	1.53	1.41

Source: Eurostat, https://doi.org/10.2908/DEMO_FIND; data for the UK: Births in England and Wales from the Office for National Statistics, https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/birthsummarytablesenglandandwales/2024refreshedpopulations (both accessed on 8 October 2026).

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Health at a Glance: Europe 2026

State of Health in the EU Cycle

The 2026 edition of *Health at a Glance: Europe* examines how European health systems are responding to population ageing, rising demand for care, and tight budgets. It provides policymakers, health professionals and researchers with comparable data and analysis to assess progress and persisting challenges across European countries. The first thematic chapter examines whether more than a decade of investment in digital health is translating into wider use, fairer access and better care. It also considers health systems' readiness to use artificial intelligence and maintain public trust in digital services. The second thematic chapter examines the health and economic burden of antimicrobial resistance (AMR) and assesses whether EU countries are on track to meet the 2030 targets for reducing antibiotic consumption and selected drug-resistant infections. The publication also presents the latest comparative indicators on population health, risk factors, health spending, access to care, quality of care and health system resilience. It covers EU Member States, EU candidate countries, European Free Trade Association countries and the United Kingdom.

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