World Health Organization

European Region

European health report 2024

Keeping health high on the agenda

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Abstract

The European Health Report is produced every 3 years as a flagship publication by the WHO Regional Office for Europe. This edition is based on the indicators included in the WHO European Programme of Work 2020–2025: United Action for Better Health measurement framework. This 2024 Report finds that the health of the people in the WHO European Region continues to be negatively affected by an accumulation of hard-to-tackle threats and new hazards that require our urgent attention in the aftermath of the coronavirus disease (COVID-19) pandemic. The new European Programme of Work, which will come into effect in 2026, will be the main policy tool for the Region, outlining how WHO and the Member States will address the challenges identified in this European Health Report 2024. How the findings of the Report can inform the new European Programme of Work will be further elaborated in an accompanying evidence-for-policy action brief.

Keywords

POPULATION HEALTH, NONCOMMUNICABLE DISEASES, COMMUNICABLE DISEASES, MENTAL HEALTH, DELIVERY OF HEALTH CARE, CLIMATE

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Foreword

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I am delighted to share the new edition of our flagship publication, the European health report 2024, which comes at a crucial juncture. It concludes the first European Programme of Work, covering 2020–2025. This has been an era marked by unprecedented challenges, including a global pandemic; an increasing number of geopolitical conflicts inflicting profound suffering upon millions and jeopardizing health systems and individual well-being; and the severe and mounting health impacts of climate change.

As we embark on a new chapter with the second European Programme of Work, which will encompass my second 5-year term as Regional Director of the WHO European Region, this is an important and opportune moment to take stock of our progress and celebrate our shared achievements. At the same time, we must acknowledge the daunting challenges ahead and reflect on the areas where we must strengthen and accelerate our efforts – both to achieve the Sustainable Development Goals, with the finish line barely 5 years away – and to safeguard health and well-being across our diverse Region of 53 Member States in the longer term.

I am pleased to see that the European health report 2024 highlights several positive developments. Premature mortality caused by noncommunicable diseases is declining in the WHO European Region, as is suicide mortality; the incidence of tuberculosis is also decreasing. These and many other achievements reflect the ongoing commitment of Member States to improving the health and well-being of the nearly 1 billion people across the Region.

However, we must also confront concerning trends where progress achieved over the past decades is stagnating or even reversing. Falling vaccination coverage, growing antimicrobial resistance, persistently high rates of premature deaths from cardiovascular diseases, increasing rates of violence against women and girls and a growing mental health crisis among young people are just some of the pressing issues where collective, transformative action is urgently needed.

More of the same will simply not be enough.

Health systems are under immense pressure, striving to meet their populations' growing needs and expectations while health and care workers endure unprecedented challenges. These pressures hinder progress towards universal health coverage, undermine overall health gains and leave more than 20% of households in some Member States facing catastrophic health expenditures, leading them to give up on other basic necessities such as housing, heating or education due to the cost of health care – highlighting the urgent need for action.

As we work to meet these challenges, we must address the persistent gap in timely, comprehensive and good-quality data across many areas of health. By implementing robust data governance, investing in advanced data infrastructures and adopting digital solutions, we must ensure that these systems generate a reliable evidence base to support informed decision-making by WHO and its Member States. Without robust data, our ability to drive meaningful action and measure progress is limited.

We are working towards a future where health security is built on a systematic, proactive approach, with strong primary health-care-oriented systems that address challenges before they become crises.

Building resilient health systems is crucial to tackling emerging threats, from climate change and antimicrobial resistance to global security risks. Strengthening early warning systems, integrating resilience into policies and investing in sustainable infrastructure will safeguard communities. Equipping the health workforce for crisis response, enhancing preparedness and leveraging technology are essential to ensuring long-term stability.

Simultaneously, to combat the rise of noncommunicable diseases, health systems must prioritize prevention, create healthier living environments and address social determinants of health. Tackling harmful commercial influences through effective regulation is also essential.

The digital revolution now offers powerful tools to improve care, from telemedicine and artificial intelligence-driven diagnostics to better health data integration.

However, technology alone is not the answer. Health systems lacking a strong foundation in primary health care will struggle to manage these challenges sustainably and in a fiscally responsible manner. Renewed health workforce strategies and adaptive health financing policies are essential to align with evolving service delivery realities and ensure affordable access to services for all. To fully harness these innovations, investments in equitable, people-centred solutions are essential to bridging the digital divide. Ultimately, building public trust is key; strong governance, privacy protections and transparency must guide the responsible use of digital health technologies.

This vision demands that we collectively prioritize health and well-being and resource it appropriately. Investing in health is not a luxury – it is an essential pillar of sustainable development, societal stability and security. To support this vision, an accompanying evidence-for-action brief to the European health report will be published to outline key policy directions that can help Member States and partners to address the challenges ahead and translate insights into transformative action.

The words of Arthur Schopenhauer resonate more than ever: "Health may not be everything, but without health, everything is nothing".

Let us continue to work together to keep health high on the agenda and ensure that everyone, everywhere, can attain their fundamental right to health – a right embedded in the WHO Constitution, which has guided us for over 75 years, a blueprint more relevant than ever.

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Abbreviations

AMR	antimicrobial resistance
APC	alcohol per capita
ART	antiretroviral therapy
AWaRe	Access, Watch and Reserve
BCI	behavioural and cultural insights
BMI	body mass index
CDR	crude death rate
CO_2eq	carbon dioxide equivalent
COP	Conference of the Parties to the United Nations Framework Convention on Climate Change
COPD	chronic obstructive pulmonary disease
COSI	WHO European Childhood Obesity Surveillance Initiative
COVID-19	coronavirus disease
CVD	cardiovascular diseases
DALY	disability-adjusted life-year
DHS	digital health strategies
DTP	diphtheria–tetanus–pertussis combined vaccine
DTP3	diphtheria–tetanus–pertussis combined vaccine, third dose
EAP	Action Plan for the Prevention and Control of Noncommunicable Diseases in the WHO European Region
ECDC	European Centre for Disease Prevention and Control
e-cigarettes	electronic cigarettes
EEA	European Economic Area
EHDS	European Health Data Space
EHS	essential health services
EPW	European Programme of Work 2020–2025: United Action for Better Health
EPW-MF	European Programme of Work 2020–2025: United Action for Better Health measurement framework
e-SPAR	electronic International Health Regulations (2005) States Parties Self-Assessment Annual Reporting (tool)

EU	European Union
EU-SILC	EU Statistics on Income and Living Conditions
GDP	gross domestic product
HBSC	Health Behaviour in School-aged Children (study)
HCV	hepatitis C virus
HFSS	high in saturated fat, salt and sugar (food and drinks)
HIS	health information systems
HPV	human papillomavirus
IHR (2005)	International Health Regulations (2005)
MCV	measles-containing vaccine
MCV2	measles-containing vaccine, second dose
MDR-TB	multidrug-resistant tuberculosis
NCD	noncommunicable disease
OOP	out-of-pocket (payment)
PCV	pneumococcal conjugate vaccine
PCVf	pneumococcal conjugate vaccine, final dose
PHA	public health authority
$PM_{2.5}$	fine particulate matter (< 2.5 µg in diameter)
RR-TB	rifampicin-resistant tuberculosis
SCI-SUD	Service Capacity Index for Substance Use Disorders
SDG	Sustainable Development Goal
SPAR	States Parties Self-Assessment Annual Reporting (tool)
TB	tuberculosis
UHC	universal health coverage
UI	uncertainty interval
UNICEF	United Nations Children's Fund
WASH	water, sanitation and hygiene

Executive summary

The European Health Report 2024[1] finds that the health of the people in the WHO European Region continues to be impacted by an accumulation of hard-to-tackle threats and new hazards that require urgent attention in the aftermath of the coronavirus disease (COVID-19) pandemic.

While acknowledging that Member States have made substantial achievements in addressing disease burdens and increasing life expectancy, this Report starkly shows that most are not on track to reach Regional and global targets in terms of reducing infectious disease and noncommunicable diseases. Furthermore, despite the impact and lessons learned from the COVID-19 pandemic and ongoing geopolitical crises in the Region, it highlights that gaps remain in Member States' capacities for emergency preparedness and response. Specific attention is needed to protect the health of children, older people and people on low incomes. Health systems have not bounced back since the COVID-19 pandemic. They are struggling with myriad challenges, health workforce shortages, demographic shifts and climate change, while having to adapt to rapid shifts in the technological landscape.

Cross-cutting key messages of the European Health Report 2024

There is a need for united action to:

- better protect the health of our children;
- address the preventable burden of noncommunicable diseases;
- tackle the emerging phenomenon of widespread poor mental health and well-being;
- tighten our grip on infectious diseases;
- transform health systems to be resilient and sustainable in the face of new health emergencies, climate change and demographic shifts; and
- ensure a solid evidence base for health policy-making.

Better protect the health of our children

Too many infants still die unnecessarily before the age of 5 years. Child mortality is an important indicator of the overall health status of a population, as well as a measure of access to essential health interventions. Neonatal mortality rates in the Region range between 0.7 and 23 deaths per 1000 live births, and under-5 mortality rates between 1.5 and 40.4 deaths per 1000 live births. Closing the gap between the Member States with the highest and lowest mortality rates remains a challenge, especially since some have recorded relatively higher rates over the past 5 years.

Mental health among young people is an area of concern. Mental well-being among 15-year-olds in the WHO European Region varies significantly across Member States, with mean scores ranging from 40 to 63 in girls and from 54 to 73 in boys on the WHO-5 Well-being Index (where 100 is the top score, indicating the best possible mental well-being). Girls consistently report lower levels of mental well-being compared with boys, and life satisfaction and self-rated health declined between 2017–2018 and 2021–2022, particularly among girls. Across the Region, 15% of adolescents have recently experienced cyber-bullying, and one in eight report cyber-bullying others.

Young people are consuming products that have devastating effects on their health. In 2022 in the Region, the percentage of adolescents aged 13–15 years using tobacco was 10.8%, and the percentage using e-cigarettes varied from 0.7% to 23.3%. Although a Region-wide overview is not yet at hand,

[1] The 2024 edition of the European health report provides the latest evidence on the status of population health across the 53 Member States of the WHO European Region. Reporting is based on the indicators included in the European Programme of Work 2020–2025: United Action for Better Health measurement framework (EPW-MF).

available data suggest declining trends for cigarette smoking among young people and increasing trends for e-cigarette use. E-cigarette use is surpassing cigarette smoking in many countries. There is an urgent need for decisive action to prevent the uptake of e-cigarette use, both because they are harmful to health and because the initial use of e-cigarettes is linked with subsequent smoking initiation in adolescents and young adults. The marketing of products high in salt, fat and sugar has a negative influence on children's and adolescents' consumption patterns, along with long-term ill health effects. WHO's best buy recommendations on the marketing of foods and non-alcoholic beverages have not yet been widely implemented in the Region. Among school-aged children, nearly one in three is overweight and one in eight is living with obesity.

Road traffic injury is a leading cause of death in children and young adults. Road-user behaviours contribute to road crashes, injuries and deaths. In 2021 the WHO European Region reported 6.7 road traffic deaths per 100 000 population, representing over 62 000 preventable deaths. The increasing mix of transport modalities also requires well-equipped infrastructures. Pedestrians and cyclists are particularly vulnerable road-user groups; these represent 25% and 6% of case fatalities, respectively. Fatalities among cyclists have increased alarmingly by 50% in the past decade, and close to 3800 cyclists were killed in 2021.

Address the preventable burden of noncommunicable diseases

Although the risk of dying prematurely from noncommunicable diseases is declining in the WHO European Region, they remain a major contributor to premature death and disability. Cardiovascular diseases account for 33.5% of premature deaths from noncommunicable diseases in the Region. The risk of premature death from cardiovascular diseases is nearly five times higher in eastern Europe and central Asia than in western Europe. Cancer causes 32.8% of premature deaths, whereas chronic respiratory diseases (3.3%) and diabetes (1.7%) have smaller but significant impacts.

Cancer is the second leading cause of premature mortality in the Region, with one in four people at risk of developing cancer and one in nine at risk of dying from it. Cancer incidence is increasing, largely driven by population ageing and population growth. Western and northern European countries have the highest numbers of estimated new cancer cases, but decreasing cancer mortality rates. In contrast, eastern European countries have fewer estimated cases but higher mortality rates, highlighting the need for targeted cancer control efforts to address these inequities.

Risk factors such as tobacco use, unhealthy diet, physical inactivity and harmful alcohol consumption significantly contribute to the noncommunicable disease burden. The WHO European Region has the world's highest alcohol intake, averaging 8.8 litres of pure alcohol per adult per year. Intake is highest in the European Union and lowest in the central Asian countries. While the Region is on track to achieve a 10% reduction in total alcohol consumption per capita by 2025 from a 2010 baseline, 15 of the 53 Member States saw an increase from 2010 to 2019. Tobacco use among adults remains unacceptably high at 25.3% overall. The Region is not on track to meet the milestone of a 30% reduction by 2025, with a projected decline of only 17% from 2010 to 2025. Obesity rates are rising, with 22.6% of adults now living with obesity. The Region is not on track to achieve the 2025 milestone to halt the increase.

Environmental determinants such as air pollution also play an important role in the occurrence of noncommunicable diseases. In 2019 in the WHO European Region, 35.3 per 100 000 deaths could be attributed to ambient air pollution, with rates ranging from 7.4 to 159.1 per 100 000 across Member States. Specific causes of death that can be attributed to ambient air pollution include ischaemic heart disease, stroke, certain types of cancer, and respiratory diseases. Although average concentrations of fine particulate matter (a key indicator of air pollution) have decreased, disparities among Member States persist.

Women's and men's health challenges require tailored responses. Although women in the Region generally live longer (79.3 years) than men (73.3 years), they spend a smaller proportion of those years in good health (84.9% compared with 88.1% for men). Maternal mortality rates in the Region have stagnated over the past decade. There are wide disparities in rates and some Member States have experienced a substantial reversal of progress. For women, twice as many years of healthy life are

lost due to dementia compared with men. Furthermore, more than one in four women and girls in the Region experience violence in their lifetime; and one in 10 women in the European Union has reported experiencing cyber-harassment since the age of 15 years. Any form of violence against women and children constitutes a severe human rights violation. By comparison, 22% of men in the Region are likely to die from cardiovascular diseases, cancer, chronic respiratory diseases or diabetes before their 70th birthday, compared with 11% of women. Sex-based patterns in exposure to risk factors, in particular tobacco and alcohol, are reflected in the different rates of noncommunicable diseases for men and women.

Tackle widespread poor mental health and well-being

The burden of mental health conditions remains high. Specifically, mental health among young people is an area of concern. In addition, the prevalence of depressive disorders has increased in the WHO European Region, and the COVID-19 pandemic contributed to this. Despite a declining trend, suicide remains a serious public health problem, accounting for one in 100 deaths across all age groups in the Region. Suicide is the leading cause of death among people aged 15–29 years, and the rate is four times higher in men than in women.

Mental health is one of the flagship initiative areas of the European Programme of Work 2020–2025: United Action for Better Health (EPW). Most Member States in the Region have established national mental health policies, plans and strategies with comprehensive frameworks. However, policy areas that need further strengthening include addressing mental health stigma and services for older adults.

Tighten our grip on infectious diseases

Inadequate water, sanitation and hygiene services contribute to illness and death. In the WHO European Region, approximately 33 500 deaths from acute respiratory and diarrhoeal diseases each year are linked to this. Among Member States, coverage of safely managed drinking-water ranges from 55% to 100% (Regional average: 92%) and coverage of safely managed sanitation services ranges from 11% to 100% (Regional average: 78%). There are also persistent inequities in service coverage between urban and rural settings, with better coverage in urban settings.

Suboptimal vaccination rates have led to a resurgence in preventable diseases. In 2023 there were 58 000 measles cases across 41 Member States of the WHO European Region, with continued transmission in 2024 threatening millions of children. Coverage was 95% for the third dose of the diphtheria–tetanus–pertussis vaccine, 91% for the second dose of the measles-containing vaccine and 86% for the final dose of the pneumococcal conjugate vaccine. Human papillomavirus vaccination has been introduced in 85% of the Member States of the Region, and meets the EPW-MF's 2025 milestone; however, last-dose coverage among girls rose from 21% in 2013 to only 35% in 2023, marking slow progress over the decade and falling significantly below WHO's target of 90% coverage by 2030.

Closing these vaccination gaps requires strong policies. Progress measured under the European Immunization Agenda 2030, one of the flagship initiatives of the EPW, shows that 85% of Member States have legislation in place that supports immunization services covering the population across the life-course. Yet only two thirds have a national policy outlining the integration of immunization service delivery for all age groups into primary health-care services and a functional national immunization technical advisory group.

Further work is needed to reach the targets for infectious disease treatment. Despite a 25% reduction in tuberculosis incidence and a 32% decrease in tuberculosis deaths between 2015 and 2022, drug-resistant tuberculosis remains a problem. Drug-resistant tuberculosis accounts for 24% of new cases and 54% of previously treated cases, and the treatment success rate of 61.3% is well below the EPW-MF's milestone of 80%. Chronic hepatitis C infection affects over 8.6 million people in the Region, but only 9% of patients receive treatment. Around 3 million people are living with HIV. Although the rate of diagnosed HIV infection decreased from 16.4 to 12.4 per 100 000 from 2013 to 2022 across the Region, only 72% of those infected are aware of their status and only 63% receive antiretroviral therapy,

far from the target of 95% diagnosed, 90% on treatment and 86% virally suppressed of all people living with HIV as set by the Joint United Nations Programme on HIV/AIDS. Only five Member States in the Region meet the second target.

Antimicrobial resistance remains a critical threat to global public health. Optimizing antibiotic use is an important element of addressing antimicrobial resistance, which requires a One Health response across human health, food production, animal health and environmental sectors. So-called Access antibiotics are recommended as the first or second choice for empirical treatment due to their lower resistance potential. In 2022 only half of reporting Member States met the target that at least 60% of its total antibiotic consumption should be Access group antibiotics.

Transform health systems to be resilient and sustainable

Health systems are not sufficiently prepared for future health emergencies, which undermines national security and implementation of the International Health Regulations (2005). Capacity scores have failed to improve in the aftermath of the COVID-19 pandemic: the average score was 73% in 2023. Areas such as policy, legal and normative instruments for implementation of the International Health Regulations (2005), human resources, and risk communication and community engagement lag behind. There are very large differences in the scores for continuity of essential health services (range: 0–100%) and planning for health emergencies (range: 20–100%) across Member States. In early 2023 essential health services had not yet fully returned to pre-pandemic levels.

Health and social care systems are struggling to meet the health-care needs of older people. In 2019 nearly half of people aged 65 years and over and with severe difficulties in basic self-care tasks reported lacking the necessary assistance for personal care or household activities. Utilization of home care services is uneven: only 6.7% of people with moderate disabilities and 24.8% with severe disabilities access these services. As the population of the WHO European Region ages, the demand for health care is expected to increase. In 2024, for the first time, there are more people aged over 65 years than under 15 years in the Region. In the Region, dementia is one of the leading causes of dependency and disability among older people. Since 2000 there has been a stark increase in the proportion of deaths caused by Alzheimer's disease and other dementias. In 2019 dementia affected more than 14 million people in the Region, and the prevalence is expected to double by 2030. Preventive action to reduce the disease burden throughout the life-course is an important tool to ensure healthy ageing and reduce health-care demands.

The impact of climate change on health is becoming increasingly significant. Exposure to heatwaves in vulnerable groups such as infants and older people has increased significantly over many decades. In 2022 more than 61 000 heat-related deaths were estimated to have occurred in 35 Member States. Additionally, it is important to recognize the impact of the health sector itself on the environment. In 2020 the global health-care sector was responsible for approximately 5% of greenhouse gas emissions, with some countries in the Region with available data having higher shares, up to 8%.

Data on affordable access to health care (financial protection) show the damage caused by out-of-pocket payments for health care, particularly for people with a low income. Catastrophic health spending is when the amount a household pays out of pocket hinders it from meeting its other basic needs. Across Member States, the proportion of households experiencing catastrophic health spending ranges from under 1% to over 21%, with values being over 5% in 25 Member States. Unmet need due to cost, distance or waiting time (health system factors) affects up to 13% of the population for health care and 16% for dental care. Households in the poorest quintile are consistently the most affected by catastrophic health spending and unmet need. Financial hardship is mainly driven by spending on outpatient medicines, especially in households with low incomes.

Despite having more health and care workers than ever in history, almost all Member States of the Region are facing a health workforce crisis, with shortages and maldistribution across different health-care sectors. The growing demand for health services is outpacing the supply of health workers. Several factors are contributing to the reduction in the supply of health workers, such as the ageing of health workers; increased internal mobility from rural to urban areas and from the public to the private

sector; international migration from lower- to higher-income countries; and increased attrition due to poor working conditions and poor mental health. Improving the supply and retention of health and care workers, optimizing their performance and improving health workforce planning and investment are the critical actions needed to strengthen the health workforce in the Region. Actions will also have to be taken globally to reduce the predicted global shortage of 10 million health workers by 2030.

Digital health can accelerate progress towards universal health coverage, but its full potential is not being achieved. Digital health is one of the flagship initiatives of the EPW, and 83% of Member States in the Region have a digital health strategy. However, only 56% of reporting Member States have developed digital inclusion plans or strategies and only half either have developed or are in the process of developing digital health education action plans, policies and strategies. Building interoperable infrastructure, establishing strong data governance frameworks and improving digital health literacy are among the key requirements for bringing digital innovations and strategies to transform health systems.

Using behavioural and cultural insights offers an opportunity to apply more effective and evidence-informed approaches to health behaviour. As a flagship of the EPW, behavioural and cultural insights are recognized as important and, since a baseline measurement has been made, are increasingly being adopted and utilized among public health authorities in Member States of the WHO European Region. Of the 48 public health authorities that provided data for this baseline measurement, in 2021–2022 79% had conducted behavioural and cultural insights-related research and 73% had used the insights gained to inform the development of health policies, services and communication. Since then, Member States have scaled up their engagement and collaboration, and the WHO Regional Office for Europe has established an active platform for Member States to share learning and support, with active engagement of ministerially nominated focal points from across the Region.

Provide comprehensive, timely information to support health policy-making

Although solid health information is needed for evidence-informed policy-making, this Report shows crucial data gaps for key topics. Areas for which timely data are lacking include child development, violence against children, intersectoral action for health, mental health, non-fatal injuries, the health effects of climate change, health emergency preparedness and response, long-term care, and primary health care. However, even for regular data collections there are still substantial gaps. For example, for mortality data, only 24 of the 53 WHO European Region Member States (45%) at the time of writing can report data from 2022 or more recently, with the latest reported cause of death data predating the COVID-19 pandemic in nine (17%) Member States. Disaggregated data, which are necessary for the analysis of health inequities, are only available to a limited extent. This hampers policy-makers in implementing targeted interventions aimed at the most vulnerable populations.

Keeping health high on the agenda: moving towards the European Programme of Work version 2.0

The findings from this Report make clear that decision-makers in the WHO European Region cannot be complacent and must keep health high on the agenda to ensure that everyone can attain their fundamental right to health. The new European Programme of Work, which will come into effect in 2026, will be the main policy tool for the Region. It will outline how WHO together with the Member States will address the challenges identified in this Report. The Programme will focus on four main areas of innovation: national health security; the unfinished noncommunicable diseases and mental health agenda; the climate change crisis; and ageing in good health. In addition, it will include two special initiatives, which will address violence against women and girls and strengthening primary health care. How the findings of the European Health Report 2024 can inform the new European Programme of Work will be elaborated in a forthcoming evidence-for-policy action brief.

1

Introduction

The European health report is produced every 3 years as a flagship publication by the WHO Regional Office for Europe. The reports provide an overview of the health status of the population of the WHO European Region and analyse the Region's progress towards its health policy goals and targets to identify priority areas for action and further improvement.

While previous European health reports mainly focused on developments at Regional level, this 2024 edition places more emphasis on data at Member State level. In this way, the current Report aims to support Member States in strategic priority-setting and to better inform biennial collaborative agreements and country cooperation strategies *(1)* with Member States.

The WHO European Programme of Work 2020–2025: United Action for Better Health (EPW) set three priorities: (i) moving towards universal health coverage, (ii) protecting against health emergencies and (iii) promoting health and well-being *(2)*. These strategic priorities are accompanied by four flagship initiatives: (i) the Mental Health Coalition *(3)*, (ii) Empowerment through Digital Health *(4)*, (iii) the European Immunization Agenda 20230 *(5)* and (iv) Healthier Behaviours: incorporating behavioural and cultural insights *(6)*. These initiatives are intended to accelerate change by mobilizing around critical issues that feature prominently on the agendas of Member States and can be transformed by high visibility and political commitment.

To measure progress towards implementing the EPW, a measurement framework was developed by the WHO Regional Office for Europe in consultation with Member States *(7)* and used in the creation of the European Health Report 2024. The EPW measurement framework is aligned with the Sustainable Development Goal targets *(8)* and the outcome indicators included in the Results Framework of the Thirteenth General Programme of Work, 2019–2023 *(9,10)*. It contains additional indicators and specific milestones to be achieved by 2025 to ensure relevance to the WHO European Region context *(2,7)*.

The EPW measurement framework includes a main set of indicators and a development list. The main set comprises 26 indicators that are already part of established international data collections. This approach was chosen to limit the reporting burden for Member States. It should be noted that the main set of indicators is not exhaustive; rather, it reflects a selection of topics that Member States of the WHO European Region have deemed most relevant and important for monitoring under the EPW.

The development list reflects topics that are highly relevant for the Region but for which no well-developed measures exist in international databases, or for which data are only available for a limited number of Member States. Topics such as climate change, long-term care, intersectoral action for health, healthy ageing and primary health care constitute a priority list for the WHO Regional Office for Europe and Member States to improve indicator definitions and data collection for the Region *(7)*.

This Report uses both the main set of indicators and the EPW measurement framework's development list. The indicators selected to operationalize the development list highlight specific aspects of essential topics. In addition, fundamental population health indicators such as life expectancy, causes of death and child mortality are included to provide a comprehensive picture of population health in the WHO European Region. Lastly, additional information related to the four EPW flagship initiatives and policy progress in Member States has been incorporated. Note that Netherlands (Kingdom of the) comprises six overseas countries and territories and the European mainland area; only the last is part of the WHO European Region. As data for this Report refer only to the European territory, the Report refers to it as the Netherlands throughout. Annex 1 provides an overview of the indicators used for the Report, and Annex 2 an overview of the underlying data and data sources.

The Report is structured into eight thematic chapters. In line with the strong focus of the EPW on leaving no one behind *(2)*, health inequalities have been highlighted when presenting the indicators, data permitting. Health inequalities can be between Member States, between different population groups (such as between men and women or between various age groups) or between urban and rural areas. In acknowledgement of the profound and sustained impact of the coronavirus disease (COVID-19) pandemic on population health, as described in the *European health report 2021: taking stock of the health-related Sustainable Development Goals in the COVID-19 era with a focus on leaving no one behind (11)*, the effects of the pandemic is another recurrent theme in the Report.

A short publication of highlights from the Report is also available, containing an illustrated overview of key messages and main findings *(12)*. To facilitate action by Member States, a separate evidence-for-policy action brief will be published outlining which main policy actions are underpinned by the evidence emerging from this Report.

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2

Life expectancy and main causes of death

This chapter looks at life expectancy measures and the main causes of death. Life expectancy reflects the overall mortality level of a population: it is a measure of how healthy the population is and how effective the health system is *(1)*. While life expectancy gives an indication of how long people might live, it provides no information about the quality of life. Healthy life expectancy estimates how much of the expected life will be lived in full health by adjusting for time spent in poor health *(2)*. Data on causes of death provide information on mortality patterns and are essential input for targeting health interventions and allocating resources *(3)*.[2]

The data presented in this Report show that while both life expectancy and healthy life expectancy have been steadily increasing since 2000, the coronavirus disease (COVID-19) pandemic significantly reversed the progress made, with levels returning to those last seen a decade ago *(2)*. Women have a higher life expectancy and healthy life expectancy than men, with gender disparities more pronounced in eastern European countries *(1)*. The healthy life expectancy at 60 years is the average number of years a 60-year-old person can expect to live in good health; it focuses on later life quality and reflects the impacts of illness and health care for older adults *(4)*. Here, the data also show an effect of the pandemic, with healthy life expectancy at 60 years of age decreasing to 15.7 years in 2021 from 16.9 years in 2019.

Related to causes of death, until 2020 the proportion of deaths caused by noncommunicable diseases (NCDs) had steadily increased, accounting for 89.6% in 2019 *(5)*. Again, the COVID-19 pandemic significantly disrupted this trend, with COVID-19 emerging as the second leading cause of death in 2020 and 2021. In 2021 NCDs accounted for eight of the top 10 leading causes of death, with cardiovascular diseases (CVD) causing 35% of all deaths. Recent trends in mortality patterns have been remarkable, with Alzheimer's disease and other dementias rising from the 10th leading cause of death in 2000 to the fourth in 2021, and deaths caused by diabetes increasing by 53% since 2000. Self-harm significantly decreased in ranking, from the seventh leading cause of death in 2000 to the 18th in 2021.

Chapters 3 (maternal, newborn and child mortality), 5 (premature mortality from NCDs), 6 (suicide mortality) and 9 (mortality from environmental impacts, including air pollution and road traffic injury) provide more information on different causes of mortality.

[2] The mortality rate estimates presented here are from the fifth round of WHO Global Health Estimates. At the time of writing, these latest estimates were yet to be made available online in the Global Health Observatory. More methodological details are available in Annex 1 and Annex 2.

2.1 Life expectancy and healthy life expectancy

Main findings

- In 2021 healthy life expectancy at birth was estimated at 67.3 years for women and 64.6 years for men, accounting for approximately 84.9% (life expectancy: 79.3 years) and 88.1% (life expectancy: 73.3 years) of total life expectancy, respectively.
- In the WHO European Region, women typically live 6 years longer than men, although this gap is even larger in eastern European countries.
- From 2000 to 2019 (before the COVID-19 pandemic), life expectancy and healthy life expectancy steadily increased across the Region – life expectancy increased by 5.7 years and healthy life expectancy by 4.7 years. However, the COVID-19 pandemic significantly reversed a decade of progress, resulting in losses of 2 years in life expectancy and 2.4 years in healthy life expectancy.
- From 2000 to 2019 healthy life expectancy at 60 years of age increased from 14.8 years to 16.9 years, but the pandemic caused a decline of 1.2 years (to 15.7 years) in 2021, significantly impacting quality of life for older adults.

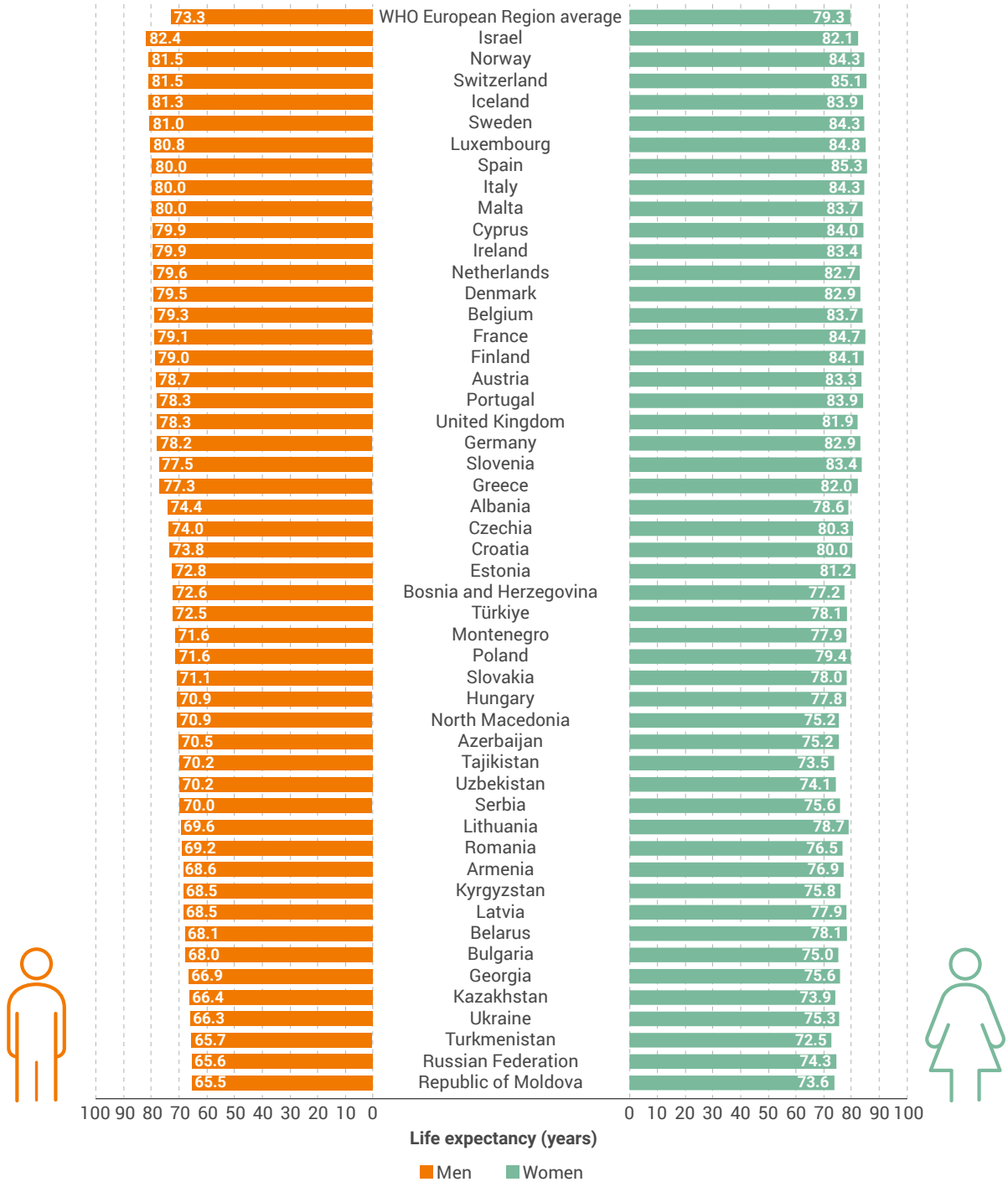
Life expectancy at birth is the average number of years a newborn is expected to live based on sex- and age-specific death rates for a given year and geographical location. It shows the overall mortality level of a population; that is, how long people might live but not how well. Healthy life expectancy at birth goes further by estimating how many of those years will be lived in full health by adjusting for time spent in poor health due to disease or injury across various demographics in the population *(2)*.

In 2021 in the WHO European Region, women had an average life expectancy at birth of 79.3 years (ranging from 72.5 years in Turkmenistan to 85.3 years in Spain) compared with 73.3 years for men (ranging from 65.5 years in the Republic of Moldova to 82.4 years in Israel). The magnitude of the gender gap varied significantly, with the largest differences (9–10 years) observed in Belarus, Latvia, Lithuania, the Russian Federation and Ukraine (Fig. 2.1).

Healthy life expectancy at birth also varied by sex, although to a lesser extent. In 2021 women lived an average of 67.3 years in full health (ranging from 62.8 years in Turkmenistan to 71.8 years in Spain), compared with 64.6 years for men (ranging from 58.2 years in the Russian Federation to 72.1 years in Israel) *(2)*.

From 2000 to 2019 the WHO European Region made only modest annual gains in life expectancy and healthy life expectancy at birth, likely reflecting the increasing burden of NCDs *(6)*. Life expectancy at birth improved by 7.9% overall, from 72.4 years in 2000 to 78.1 years in 2019, with annual increases of 0.3 years. In men, life expectancy rose by 6.7 years (from 68.3 to 75.0 years), while gains were lower at 4.6 years (from 76.6 to 81.1 years) in women. Over the same period, healthy life expectancy at birth for both sexes also improved by 7.5%, from 62.9 years in 2000 to 67.6 years in 2019, with annual increases of 0.2 years. In men, healthy life expectancy increased by 5.7 years (from 60.3 to 66.1 years), whereas the gain for women was 3.6 years (from 65.4 to 69.0 years).

Fig. 2.1. Life expectancy at birth by sex, WHO European Region, 2021



Note: see additional methodological considerations in Annex 1.

Source: WHO *(1)*.

However, the COVID-19 pandemic reversed the upward trends in both life expectancy at birth and healthy life expectancy at birth in the WHO European Region. Between 2019 and 2021 life expectancy and healthy life expectancy fell by 1.8 years and 1.6 years, respectively (to 76.3 years and 66.0 years, respectively), bringing the values down to levels seen a decade before. Life expectancy declined from 81.1 years to 79.3 years for women (decline of 1.8 years) and from 75.0 years to 73.3 years for men (decline of 1.7 years), while healthy life expectancy declined from 69.0 years to 67.3 years for women (decline of 1.7 years) and from 66.1 years to 64.6 years for men (decline of 1.5 years). The pandemic's impact was uneven across the Region, with some Member States (e.g. Armenia, Bulgaria, Kazakhstan, Poland, Republic of Moldova, Russian Federation, Serbia and Türkiye) experiencing declines of 3–4 years in both life expectancy at birth and healthy life expectancy at birth in 2021 compared with 2019.

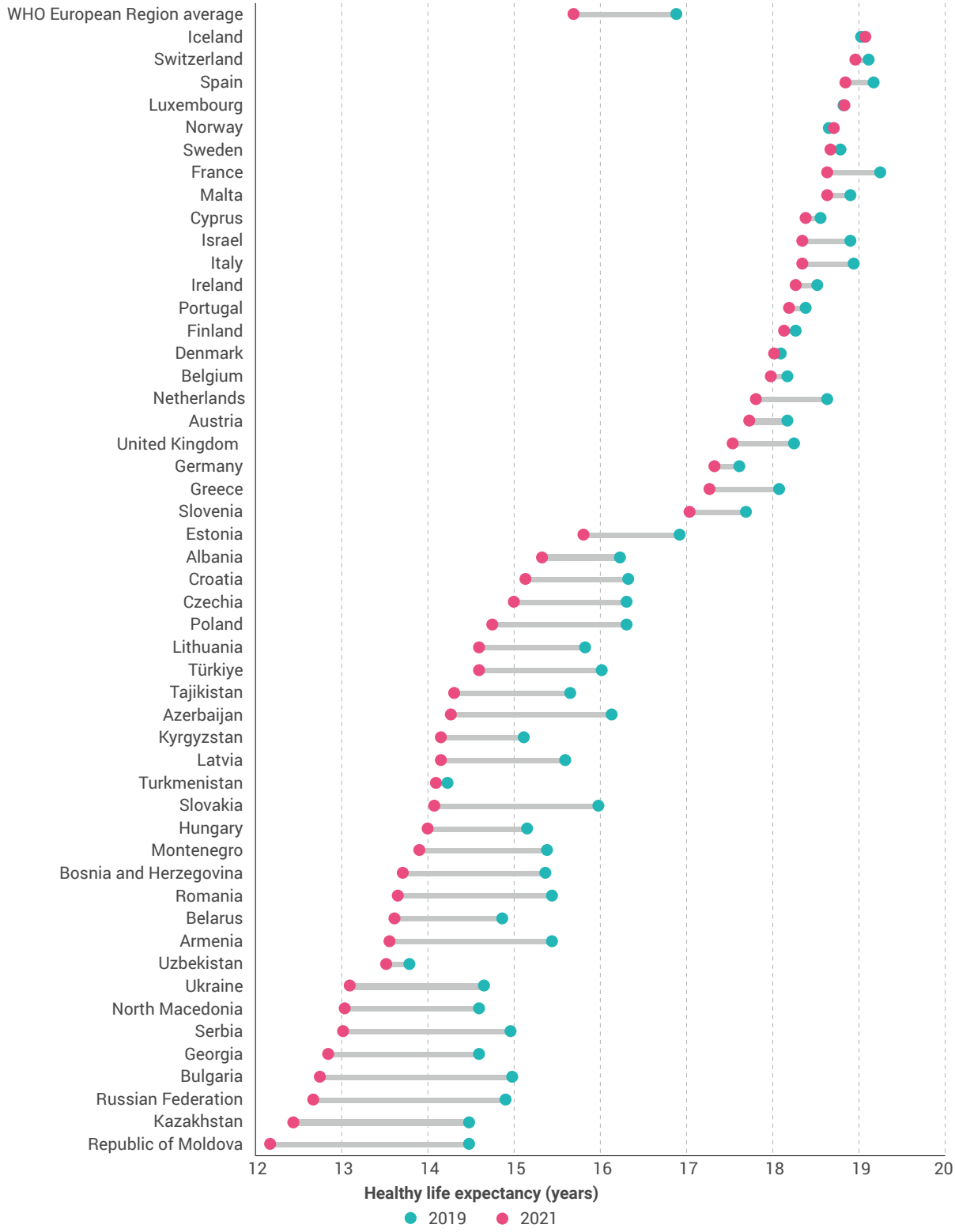
The distinct indicator healthy life expectancy at 60 years of age shows the average number of years a 60-year-old person can expect to live in good health; it focuses on later life quality and reflects the impact of illness and health care for older adults *(4)*. Healthy life expectancy at 60 years of age improved steadily from 2000 to 2019, rising from 14.8 years to 16.9 years across the Region. The increase was from 16.1 years to 18.0 years for women and from 13.3 years to 15.7 years for men.

However, due to the COVID-19 pandemic, healthy life expectancy at 60 years of age dropped by 1.2 years, from 16.9 years in 2019 to 15.7 years in 2021 *(4)*. This reflects the greater impact of the pandemic on older adults, who faced not only increased mortality, but also more health issues compared with younger age groups.

Member States with the longest healthy life expectancy at 60 years of age for both sexes in 2021 were Iceland (19.1 years), Switzerland (19.0 years) and Spain (18.9 years), while those with the shortest were the Russian Federation (12.7 years), Kazakhstan (12.5 years) and Republic of Moldova (12.2 years). The largest declines in healthy life expectancy at 60 years of age from 2019 to 2021 occurred in the Republic of Moldova (decline of 2.3 years), Bulgaria (decline of 2.2 years) and Kazakhstan (decline of 2.0 years) (Fig. 2.2).

In 2023 27% of Europe's population was aged 60 years or older, representing nearly six times the number of children aged under 5 years *(7)*. Therefore, targeted interventions are increasingly necessary to improve the health and well-being of older people. Moreover, the accelerating pace of population ageing is creating new challenges for health and social systems *(8)*. In response to population ageing, the United Nations declared the Decade of Healthy Ageing (2021–2030) *(8)*, which was endorsed by the Seventy-third World Health Assembly in resolution WHO73(12) in November 2020 *(9)*, to improve the lives of older people and their families and communities. The initiative focuses on four key areas: changing attitudes towards age and reducing ageism, fostering age-friendly communities, delivering person-centred integrated care, and providing quality long-term care for those in need *(10)*. It also calls for innovative and accelerated efforts to restore and improve healthy life expectancy for older adults through using the lessons learned from the pandemic to better prepare for future challenges.

Fig 2.2. Comparison of healthy life expectancy at 60 years of age in WHO European Region Member States, 2019 and 2021



Note: see additional methodological considerations in Annex 1.

Source: WHO *(2)*.

2.2 Main causes of death

Main findings

- Until 2020 the proportion of deaths caused by NCDs steadily increased in the WHO European Region, rising from 86.4% in 2000 to 89.6% in 2019. The COVID-19 pandemic significantly disrupted this trend, with COVID-19 emerging as the second leading cause of death in 2020 and 2021.
- Based on the latest available data (from 2021), NCDs accounted for eight of the top 10 causes of death in the Region, with CVD causing 35% of all deaths. Ischaemic heart disease was the leading cause of death (19% of all deaths), and stroke was the third leading cause (9.2%); both were major contributors to CVD mortality.
- The contribution of Alzheimer's disease and other dementias to overall mortality nearly tripled, rising from the 10th leading cause of death in 2000 to the fourth in 2021.
- Diabetes mellitus entered the top 10 causes of death, with a 53% increase since 2000.
- One of the most significant decreases was observed for self-harm, which fell from the seventh leading cause of death in 2000 to the 18th in 2021.
- Stratifying by gender shows that ischaemic heart disease and stroke have a greater impact on women, whereas COVID-19 is more deadly for men. Women are more than twice as likely to die from Alzheimer's disease, whereas men have higher death rates from lung cancer and chronic obstructive pulmonary disease (COPD). Breast cancer and ovarian cancer are major concerns for women, whereas men are more prone to injury-related deaths.

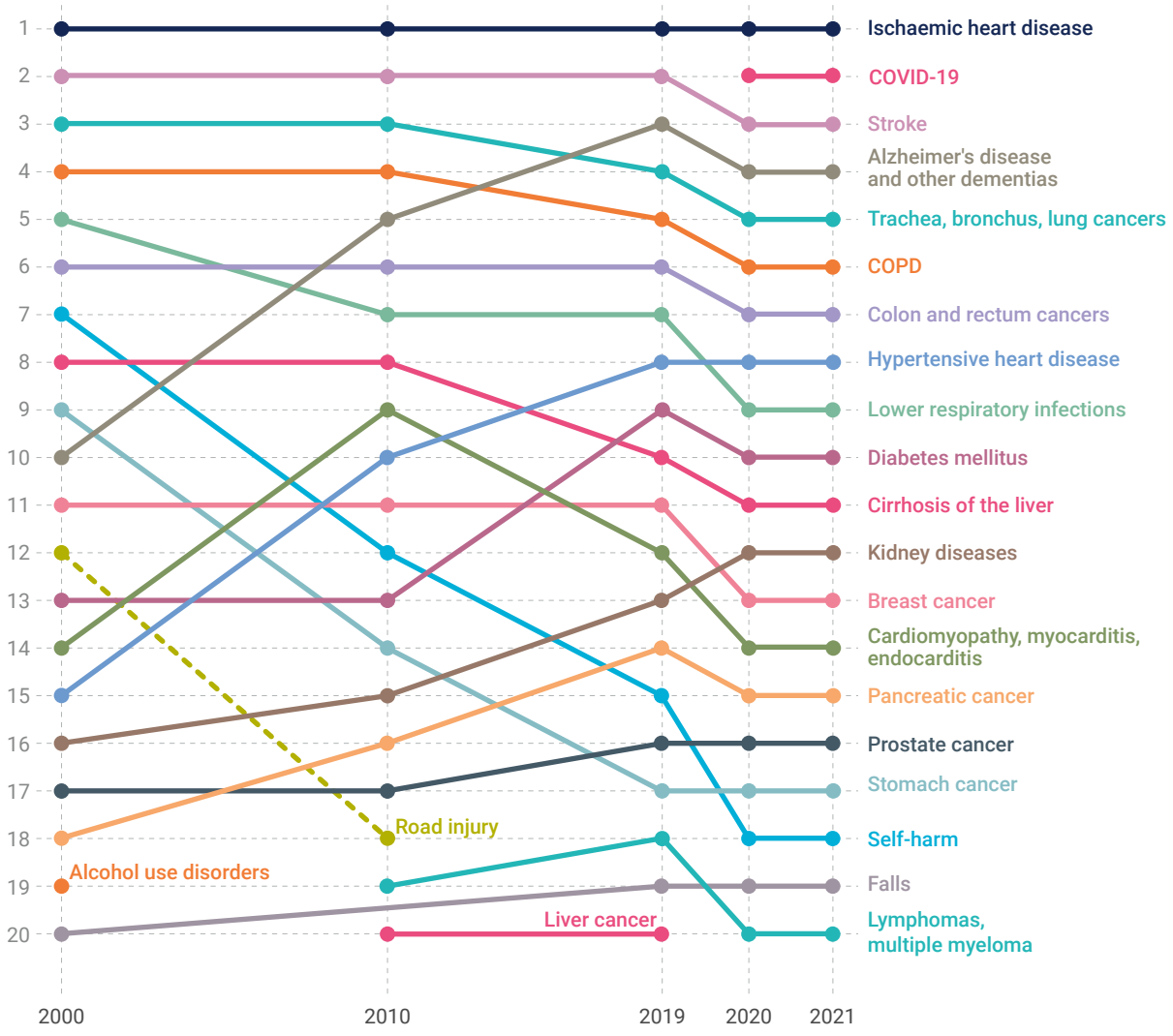
Understanding mortality patterns is essential for evaluating the effectiveness of health systems and informing targeted interventions to ensure that resources are optimally allocated. Ranking the causes of death is a well-established method for presenting mortality statistics, which typically involves categorizing causes into broader or more specific groups. This Report uses WHO's Global Health Estimates as the primary data source *(5)*. At the time of writing, this provided comprehensive mortality data from 2000 to 2021 for over 160 diseases and injuries globally, employing standardized methods to ensure cross-country comparability.

Until 2020 the global burden of NCDs had steadily increased, from 86.4% in 2000 to 89.6% in 2019 *(5)*. In contrast, deaths from infectious diseases had decreased from 6.9% in 2000 to 5.3% in 2019, reflecting the epidemiological transition model *(11)*. However, the COVID-19 pandemic disrupted this trend, emerging as the second leading cause of death in 2020 and accounting for 15.5% of total deaths in 2021 (1.7 million lives) *(5)*. Consequently, the share of deaths from NCDs dropped to 73.8% in 2021, while communicable diseases nearly quadrupled to 19.6% from 5.3% in 2019.

When grouped into broader categories, CVD (including ischaemic heart disease and stroke) remained the leading cause of death into 2021, accounting for 35% of all deaths *(5)*. Malignant cancers followed at 19%, respiratory infections at 17.5% and neurological conditions at 5.9%. Within these broader categories, ischaemic heart disease and stroke are specific causes within CVD, while trachea, bronchus and lung cancers are classified under malignant cancers. The top five specific causes of death in 2021 were ischaemic heart disease (18.9%), COVID-19 (15.4%), stroke (9.2%), Alzheimer's disease and other dementias (4.3%), and trachea, bronchus and lung cancers (3.7%).

The leading causes of death in the WHO European Region have changed in recent years. Although the emergence of COVID-19 affected the attributed shares of other causes of death, the shifts observed from 2000 to 2021 reflect underlying health trends that remain relevant beyond the pandemic's influence. Ischaemic heart disease, which remains the leading cause of death, declined in both absolute numbers and its proportion of total deaths, dropping from 27.3% in 2000 to 18.9% in 2021 *(12,13)*. Similarly, stroke was the second leading cause of death in 2000, accounting for 15.2%, but by 2021 it had dropped to the third leading cause, causing 9.2% of all deaths. Overall, the crude death rate (CDR)[3] from CVD in the WHO European Region declined from 521.3 per 100 000 population in 2000 to 417.1 per 100 000 population in 2021. This trend has been attributed to improved primary prevention, risk factor management and care (Fig. 2.3) *(5)*.

Fig. 2.3. Top 20 causes of death in the WHO European Region in 2000, 2010, 2019, 2020 and 2021



Note: see additional methodological considerations in Annex 1.

Source: WHO *(5)*.

Specific cancers showed varying trends in mortality. Whereas deaths from prostate cancer and pancreatic cancers increased, the CDR for stomach cancer declined significantly (from 19.2 to 12.7 per 100 000 population). The CDR for all malignant cancers increased slightly from approximately 219.0 per 100 000 population in 2000 to 226.2 per 100 000 population in 2021 *(5)*.

[3] CDR measures the total deaths relative to the Region's population.

The contribution of Alzheimer's disease and other dementias to total deaths nearly tripled, rising from 1.7% in 2000 to 4.3% in 2021, with the CDR increasing from 18.3 to 51.0 per 100 000 population over the same period. The ranking of other NCDs, such as COPD and other cancers, remained stable. In contrast, kidney diseases rose from the 16th leading cause of death in 2000 to the 12th in 2021 (Fig. 2.3). Over the same period, there was an increased number of deaths from diabetes mellitus and hypertensive heart disease.

By comparison, the proportion of deaths from injuries decreased from 7.6% in 2000 to 4.1% in 2021, and deaths from self-harm decreased from 2.0% in 2000 to 1.0% in 2021. Falls continued to be a significant cause of death, ranking 19th and accounting for 0.9% of all deaths, with 75% of these occurring among people aged 70 years and older. Road injuries and alcohol use disorders, which ranked as the 12th and 19th causes of death in 2000, had fallen out of the top 20 causes by 2021 (Fig. 2.3).

The mortality data in the WHO European Region reveal distinct gender differences. While ischaemic heart disease, COVID-19 and stroke were the top three causes of death for both sexes in 2021 (Table 2.1), more women died from CVD, accounting for 38.2% of female deaths compared with 31.6% of male deaths (445.9 versus 387.3 per 100 000). Despite a 20% decline in CVD rates for both sexes from 2000 to 2021, the gender gap remained stable at approximately 60 deaths per 100 000.

Between 2000 and 2021 mortality rates for Alzheimer's disease dramatically increased by 3.2-fold in men and 2.6-fold in women. Across all ages, women were more than twice as likely as men to die from Alzheimer's disease and other dementias (68 versus 33 per 100 000 in 2021). Among individuals aged 70 years and older, the rate for women was 477.1 per 100 000 women and for men was 323.5 per 100 000 men (Table 2.1).

Breast cancer declined in rank as a cause of death for women from third in 2000 to fifth in 2021, representing 3% of all female deaths. Ovarian cancer mortality remained relatively stable at 10 deaths per 100 000 women. For men, prostate cancer increased by 20%, moving up the ranks from 11th in 2000 to eighth in 2021.

Diabetes mellitus mortality increased by 52% in men (from 12.5 to 19.0 per 100 000) and 36% in women (from 17.6 to 23.9 per 100 000), with women consistently exhibiting a higher rate. Men, by comparison, bore a higher burden from respiratory diseases, with COVID-19 accounting for 15.9% of all male deaths. Men also accounted for a larger proportion of deaths from trachea, bronchus and lung cancers (69.3%) and COPD (57.1%).

From 2000 to 2021 mortality from intentional injuries (e.g. violence and self-harm) decreased by 51.8% in males and 42.9% in females, while mortality from unintentional injuries (e.g. falls, road traffic fatalities) declined by 42.6% in males and 14.2% in females. Males experienced 3.3 times more deaths from intentional injuries and 1.7 times more deaths from unintentional injuries than females in 2021. These differences highlight the need for gender-specific public health interventions.

Table 2.1. Top five leading causes of death by age group and gender, and deaths per 100 000 population, in the WHO European Region, 2021

Age group (years)	Cause of death (deaths per 100 000 population)				
	1st	2nd	3rd	4th	5th
Males					
< 5	Preterm birth complications (41.8)	Congenital heart anomalies (21.7)	Birth asphyxia and birth trauma (14.9)	Lower respiratory infections (14.1)	Neonatal sepsis and infections (4.9)
5–14	Road injury (1.9)	Drowning (1.3)	Brain and nervous system cancers (1.0)	Leukaemia (1.0)	Lower respiratory infections (1.0)

Table 2.1. contd

Age group (years)	Cause of death (deaths per 100 000 population)				
	1st	2nd	3rd	4th	5th
15–29	Self-harm (13.1)	Road injury (12.4)	COVID-19 (5.2)	Interpersonal violence (4.7)	Drug use disorders (2.9)
30–69	COVID-19 (150.1)	Ischaemic heart disease (147.4)	Trachea, bronchus, lung cancers (60.6)	Stroke (54.1)	Cirrhosis of the liver (37.0)
≥ 70	Ischaemic heart disease (1467.5)	COVID-19 (1187.1)	Stroke (657.8)	Trachea, bronchus, lung cancers (329)	Alzheimer's disease and other dementias (323.5)
All ages	Ischaemic heart disease (219.4)	COVID-19 (194.7)	Stroke (92.1)	Trachea, bronchus, lung cancers (63.7)	Chronic obstructive pulmonary disease (39.1)
Females					
< 5	Preterm birth complications (33.5)	Congenital heart anomalies (16.3)	Birth asphyxia and birth trauma (11.7)	Lower respiratory infections (11.1)	Neonatal sepsis and infections (4.0)
5–14	Road injury (1.1)	COVID-19 (1.0)	Lower respiratory infections (0.9)	Brain and nervous system cancers (0.8)	Leukaemia (0.8)
15–29	Self-harm (4.1)	COVID-19 (3.8)	Road injury (2.9)	HIV/AIDS (1.4)	Interpersonal violence (1.3)
30–69	COVID-19 (87.8)	Ischaemic heart disease (55.6)	Stroke (31.2)	Breast cancer (29.1)	Trachea, bronchus, lung cancers (21.9)
≥ 70	Ischaemic heart disease (1464.1)	COVID-19 (927.8)	Stroke (793.2)	Alzheimer's disease and other dementias (477.1)	Hypertensive heart disease (207.4)
All ages	Ischaemic heart disease (231.9)	COVID-19 (175.3)	Stroke (126.3)	Alzheimer's disease and other dementias (68.0)	Breast cancer (34.0)

Note: see additional methodological considerations in Annex 1.

Source: WHO *(5)*.

When age-standardized mortality rates (per 100 000 population) for the top five causes of death in the WHO European Region were compared across Member States, ischaemic heart disease remained a leading cause of mortality (Table 2.2): particularly high death rates were observed in Uzbekistan (364.3), Ukraine (303.2), Republic of Moldova (300.0) and Turkmenistan (271.7), and much lower death rates in Spain (33.6), Israel (33.3), Luxembourg (33.1) and France (30.2). COVID-19 also remained a major contributor to mortality across the Region in 2021, particularly in Kazakhstan (234.7), the Russian Federation (224.7), North Macedonia (222.8) and Georgia (201.6). Stroke mortality was also significantly high in certain countries, notably Georgia (168.9), Bulgaria (134.5) and Turkmenistan (131.7).

Alzheimer's disease and other dementias showed significant variability in age-standardized mortality rates (per 100 000 population), with the United Kingdom (38.4), Iceland (33.5), Finland (32.6) and

Norway (29.1) recording the highest rates and Georgia (3.5), Armenia (1.3), Bulgaria (0.6) and Republic of Moldova (0.1) the lowest (Table 2.2). For trachea, bronchus and lung cancer mortality (per 100 000 population), Türkiye (41.0), Hungary (39.1), Serbia (35.3) and Montenegro (33.2) had the highest rates, whereas Kyrgyzstan (13.5), Turkmenistan (9.0), Uzbekistan (7.9) and Tajikistan (6.1) had the lowest.

Table 2.2 Age-standardized mortality rates per 100 000 population for the top five causes of death in 50 Member States of the WHO European Region shown as a heat map, 2021

Member State	Age-standardized mortality rate (per 100 000 population)				
	Ischaemic heart disease	COVID-19	Stroke	Alzheimer's disease and other dementias	Trachea, bronchus, lung cancers
Albania	116.9	140.3	114.7	16.1	22.6
Armenia	255.6	171.6	58.5	1.3	29.7
Austria	62.6	33.9	18.7	13.5	22.4
Azerbaijan	178.9	188.6	62.3	10.8	15.8
Belarus	267.7	116.1	77.0	13.8	22.3
Belgium	34.4	28.6	19.3	18.5	24.4
Bosnia and Herzegovina	124.2	152.5	103.4	16.4	31.9
Bulgaria	237.8	195.7	134.5	0.6	24.0
Croatia	82.7	80.7	42.7	10.5	30.8
Cyprus	43.7	28.3	19.9	18.1	18.1
Czechia	118.5	106.2	29.4	14.2	21.6
Denmark	34.2	10.4	22.0	28.7	28.9
Estonia	78.3	51.1	30.9	5.8	21.4
Finland	58.4	6.9	25.8	32.6	17.8
France	30.2	27.2	17.5	15.3	24.8
Georgia	115.8	201.6	168.9	3.5	19.8
Germany	60.3	29.4	20.9	18.4	24.0
Greece	72.1	57.3	38.6	11.8	27.9
Hungary	156.6	120.9	48.1	15.4	39.1
Iceland	46.9	1.0	17.2	33.5	20.2
Ireland	52.1	31.7	17.0	22.2	22.8
Israel	33.3	44.0	17.1	19.8	15.3
Italy	37.0	32.5	23.7	14.7	21.6
Kazakhstan	173.2	234.7	122.4	12.6	18.0
Kyrgyzstan	215.2	145.7	76.7	13.9	13.5
Latvia	153.2	92.0	97.0	10.0	23.5
Lithuania	177.5	101.5	66.3	7.4	18.3
Luxembourg	33.1	32.7	16.1	21.2	19.1
Malta	61.3	17.8	17.6	24.5	17.8

Table 2.2. contd

Member State	Age-standardized mortality rate (per 100 000 population)				
	Ischaemic heart disease	COVID-19	Stroke	Alzheimer's disease and other dementias	Trachea, bronchus, lung cancers
Montenegro	110.2	189.1	117.6	9.1	33.2
Netherlands	35.3	44.4	20.7	28.5	28.1
North Macedonia	98.7	222.8	120.5	18.2	24.6
Norway	35.8	6.8	16.5	29.1	20.1
Poland	131.6	122.0	40.4	5.4	29.7
Portugal	36.4	34.6	32.1	19.5	19.1
Republic of Moldova	300.0	197.0	120.7	0.1	18.1
Romania	158.5	155.0	104.8	5.8	28.6
Russian Federation	179.2	224.7	107.8	15.9	21.1
Serbia	114.8	186.1	87.3	12.8	35.3
Slovakia	168.6	175.8	45.0	6.9	20.0
Slovenia	51.7	52.8	29.8	5.4	26.9
Spain	33.6	29.8	17.8	18.2	22.5
Sweden	43.7	19.7	18.1	25.8	14.7
Switzerland	36.5	25.3	14.5	20.7	18.7
Tajikistan	211.1	111.6	114.5	17.3	6.1
Türkiye	106.0	128.8	57.8	20.1	41.0
Turkmenistan	271.7	20.0	131.7	14.3	9.0
Ukraine	303.2	136.7	87.0	13.7	18.0
United Kingdom	43.0	39.5	19.8	38.4	24.0
Uzbekistan	364.3	53.2	113.0	21.3	7.9

Note: the heatmap shows varying rates per 100 000 population: □ indicates low (< 10), □ indicates medium (> 10 to 80), ■ indicates high (> 80 to 150), and ■ indicates very high (> 150), with a midpoint of 182 per 100 000; see additional methodological considerations in Annex 1 and more detailed country-level data in Table A2.9 of Annex 2.

Source: WHO *(5)*.

The WHO Global Health Estimates, updated in December 2024, provide standardized mortality data from 2000 to 2021 to ensure comparability across countries *(5)*. These estimates may differ from national statistics and raw data provided by Member States to WHO. Discrepancies are likely to arise in countries with weak vital registration systems, where data quality may be poor, sparse or biased. Improving primary data collection is crucial to addressing these issues. Strengthening health information systems, including vital registration, is essential to provide a more robust basis for monitoring health trends and guiding interventions.

WHO has actively supported these efforts by establishing global standards and best practices for data collection, processing and analysis, particularly through the 11th revision of the International Classification of Diseases *(14)*. This digital platform enables timely and accurate data reporting of causes of death by helping countries to routinely generate and use health information that aligns with international standards. Countries are strongly encouraged to invest in robust civil registration and vital statistics systems and to prepare for the effective implementation of the International Classification of Diseases. This includes integrating it into electronic medical records, databases and digital systems to allow for precise and timely health data reporting.

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3

Reproductive, maternal, newborn and child health

Maternal health plays a vital role in ensuring the health and well-being of both mother and child. Each stage should be a positive experience to ensure that women and their babies reach their full potential for health and well-being. Early childhood is a critical period that sets the stage for lifelong thriving, and every child deserves a healthy start in life. This chapter brings together the European Programme of Work 2020–2025: United Action for Better Health (EPW) measurement framework indicators related to reproductive, maternal, newborn and child health, along with additional indicators on child mortality *(1,2)*.

Maternal mortality is a key indicator of women's health. The data presented in this Report show that the maternal mortality ratio differs widely among Member States. The WHO European Region has made significant progress in reducing the maternal mortality ratio over the past 20 years; however, progress has stalled since 2015 *(1)*.

Modern methods of contraception play a critical role in reducing poor obstetrical outcomes associated with complications from unintended pregnancies and childbirth *(3,4)*. They also advance human rights by promoting freedom of choice, gender equity and access to education and employment opportunities. The demand for family planning satisfied with modern methods is an essential indicator of a health system's commitment to promoting sexual and reproductive health. In the WHO European Region, the demand is met at an average of 77% *(5)*. However, significant disparities persist, with coverage rates ranging from 31% to 92% across Member States, underscoring inequities in access and utilization.

Child mortality is another important indicator that reflects a population's overall health status and access to essential health interventions. Closing the gap between countries with the highest and lowest child mortality rates is a significant public health challenge in the Region. For Member States across the Region, the highest neonatal mortality rate is 28 times higher than the lowest *(6,7)*, and the highest under-5 mortality rate is 21 times higher than the lowest *(8)*.

Only 13 out of 53 Member States in the Region have data on the proportion of children under 5 years reaching their developmental milestones in motor development, learning and psychosocial well-being *(9)*. Rates for this indicator range from 72% to 97% across countries.

Overweight and obesity have a significant and long-term impact on children's physical and mental health. In the Region, 29% of school-aged children are living with overweight and 12% with obesity based on data from the fifth round of the WHO European Childhood Obesity Surveillance Initiative (COSI) *(10)*.

Across all Member States of the WHO European Region, women and children have the right to be safe. Any form of violence against women and children constitutes a severe human rights violation. However, more than one in four women and one in three children experience some form of violence in their lifetime *(11,12)*. The percentage of women who experienced intimate partner violence ranges between 10% and 32% across Member States, and almost 10% of children in the Region have experienced sexual abuse *(12)*. Around 15% of adolescents have recently experienced cyber-bullying *(13)*.

More information on adolescent mental health can be found in Chapter 6.

3.1 Maternal mortality

Main findings

- In the WHO European Region, the overall maternal mortality ratio is relatively low at 13 deaths per 100 000 live births compared with the global average, which is estimated at 223 maternal deaths per 100 000 live births.
- Nevertheless, there are vast disparities among Member States, with values ranging between 1 and 68 deaths per 100 000 live births in 2020.
- Over the past two decades, the Region has made significant progress in reducing maternal mortality; however, the ratio has stagnated since 2015.

Maternal mortality is a key indicator of women's health and a measure of a health system's efforts to promote sexual and reproductive health. In 2020 around 1000 women in the WHO European Region died from complications related to pregnancy or childbirth *(1)*. Each of these deaths represents a tragic loss that disrupts both families and society as a whole. Sustainable Development Goal (SDG) Target 3.1 is to reduce maternal mortality to less than 70 deaths per 100 000 live births by 2030 *(14)*.

The United Nations Maternal Mortality Estimation Inter-agency Group[5] has compiled a new round of estimates covering 2000 to 2020 *(1)*. The maternal mortality ratio is the number of women who die from pregnancy-related causes while pregnant or within 42 days of pregnancy termination per 100 000 live births *(1)*.[6]

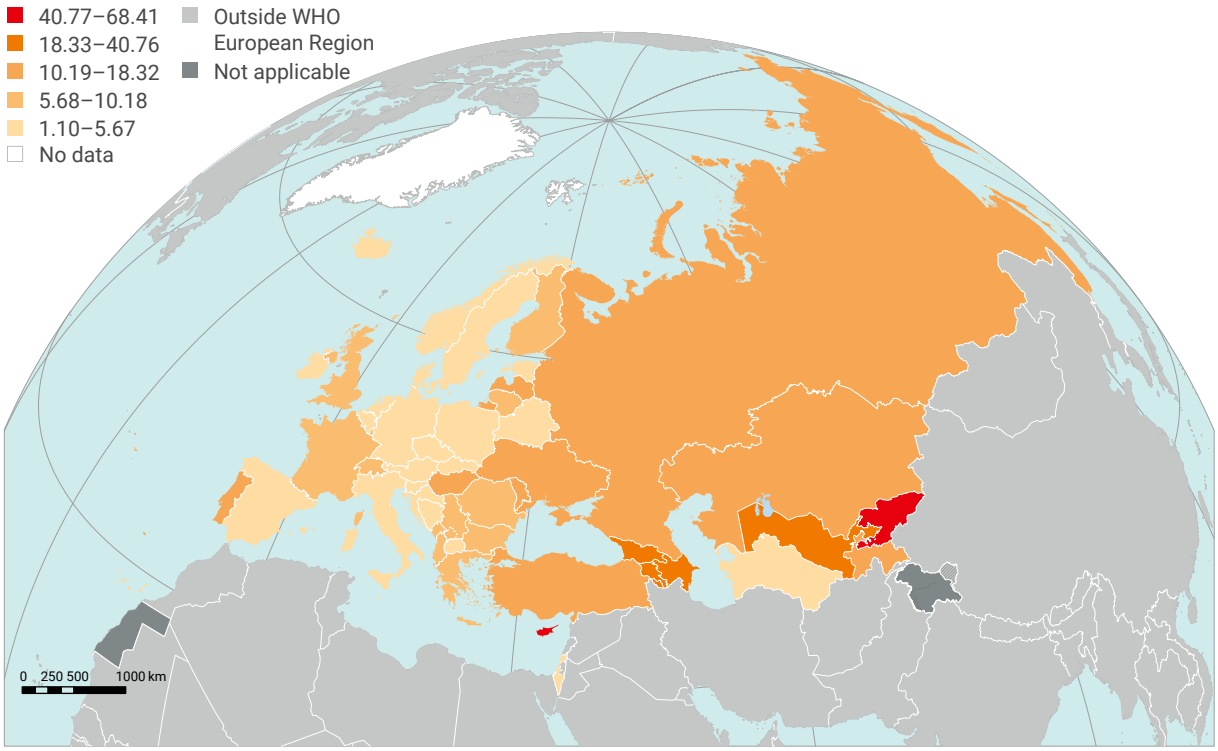
In 2020 the WHO European Region had one of the lowest maternal mortality ratios globally at 13 deaths per 100 000 live births; in comparison, the global maternal mortality ratio was estimated at 223 deaths per 100 000 live births. However, maternal mortality ratios in the Region in 2020 ranged between one per 100 000 live births in Belarus to 68 per 100 000 live births in Cyprus (Fig. 3.1). The highest maternal mortality ratios (deaths per 100 000 live births) were found in Cyprus (68), Kyrgyzstan (50), Azerbaijan (41), Uzbekistan (30), Georgia (28) and Armenia (27). In contrast, the lowest were found in Norway (2), Poland (2) and Belarus (1).

Unfortunately, maternal mortality ratios in the Region have stagnated since 2015 (Fig. 3.2) *(1)*. Compared with 2015 data, of the 50 Member States with data for 2020, estimates were the same (i.e. a relative change in maternal mortality ratio of ≤ 10%) or higher in 29. In several Member States, the relative increase in maternal mortality ratio between 2015 and 2020 was particularly high (> 30%): Cyprus (+62%), Ukraine (+49%), Greece (+42%), Azerbaijan (+38%) and Russian Federation (+31%). Increased maternal mortality is an unacceptable indicator that threatens any progress made in women's health. This situation requires close attention and concerted efforts to identify the underlying causes, contributing factors and appropriate responses.

[5] The United Nations Maternal Mortality Estimation Inter-agency Group comprises the United Nations Children's Fund; the United Nations Department of Economic and Social Affairs, Population Division; the United Nations Population Fund; WHO; and the World Bank Group.

[6] See additional methodological considerations in Annex 1.

Fig. 3.1. Maternal mortality ratios in the WHO European Region, 2020

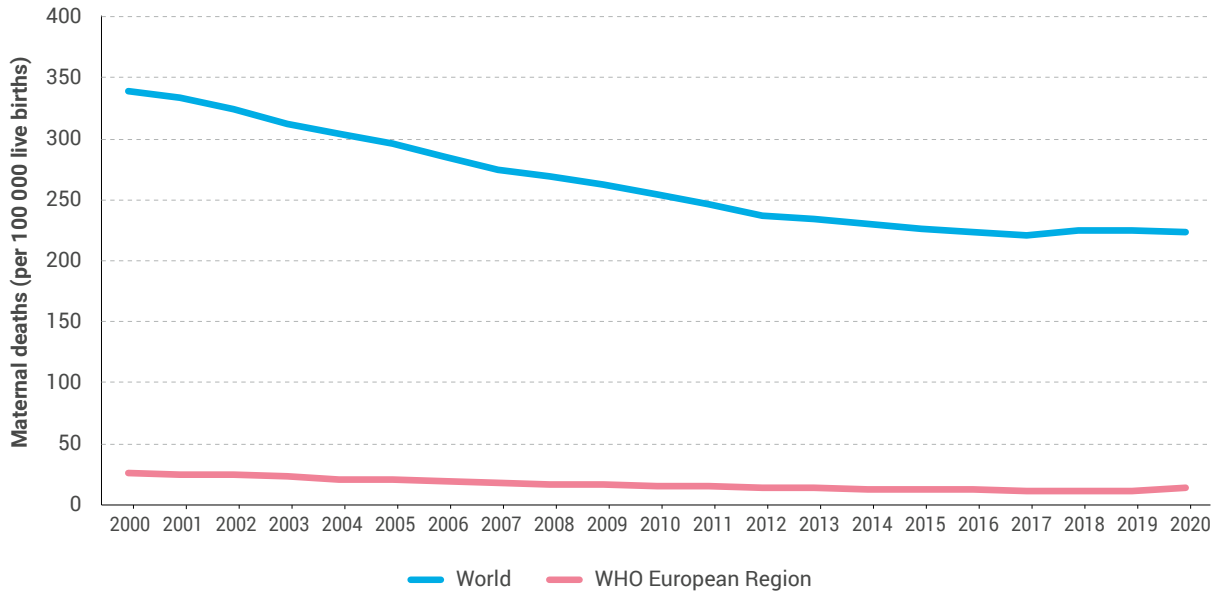


Notes: maternal mortality ratios as percentages; data not available for Andorra, Monaco and San Marino. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

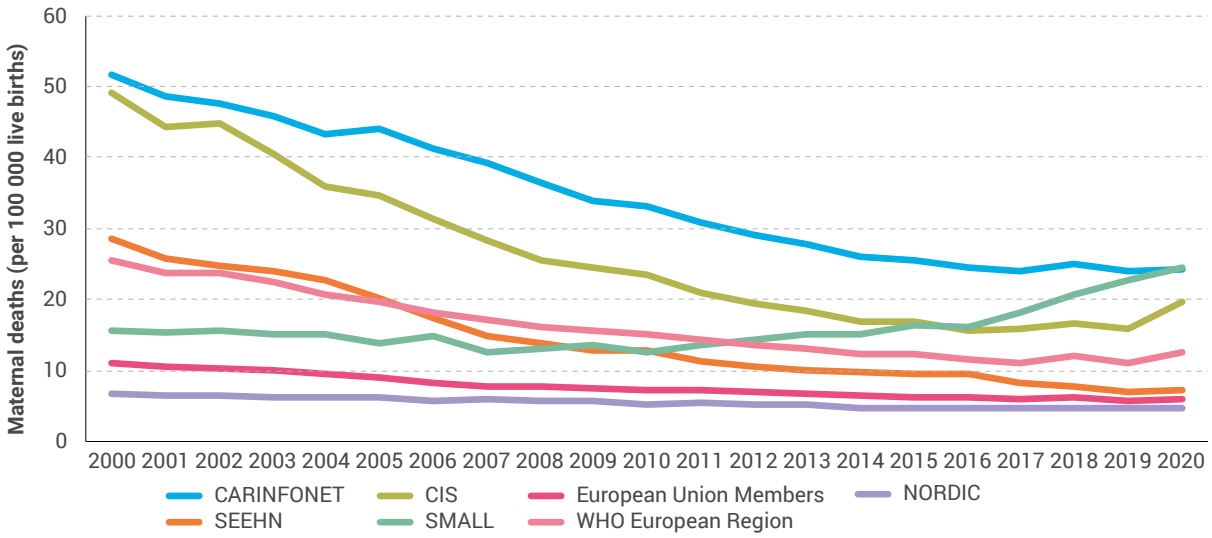
Source: created by the WHO GIS Centre for Health DNA/DDI based on data in WHO *(1)*. © WHO 2025; Licence: CC BY-NC-SA 3.0 IGO.

Fig. 3.2. Trends in maternal mortality at global level and in the WHO European Region (a) and in subregions of the WHO European Region (b), 2000–2020

(a) Global and Regional maternal mortality



(b) Subregional maternal mortality



Notes: CARINFONET: WHO Central Asian Republics Information Network; CIS: Commonwealth of Independent States; NORDIC: Denmark, Norway, Sweden, Finland and Iceland; SSEEHN: South-Eastern Europe Health Network; SMALL: Cyprus, Iceland, Luxembourg, Malta and Montenegro (no data for the small countries of Andorra, Monaco and San Marino).

Source: adapted from data in WHO *(1)*.

However, there are some limitations when interpreting these figures. Maternal mortality ratios are particularly sensitive to fluctuations in countries with small numbers of events. Moreover, when data come from household surveys, recall bias can impact the monitoring of deaths, and even in countries with reliable vital registration systems, misclassification of causes of death can lead to underestimation *(1)*. Lastly, countries with comprehensive maternal mortality surveillance systems tend to have higher rates due to better reporting.

For the WHO Regional Office for Europe, improving maternal health is a priority, particularly given the large disparities in the Region and the stagnating maternal mortality ratios in some Member States. The main causes of maternal death are severe haemorrhage, (pre)-eclampsia, pre-existing medical disorders, infections related to pregnancy and complications of unsafe abortions *(15)*. Most of these complications are preventable or treatable. Additionally, these are all direct deaths, which indicates a substandard quality of care.

One of the most important levers for reducing maternal and infant deaths is care by skilled health professionals during pregnancy, during childbirth and after delivery. Therefore, further investigations into differences in the quality of care and health system performance are needed to specifically reduce maternal mortality in vulnerable populations *(15,16)*. Data gaps hinder gaining a complete understanding of the coronavirus disease (COVID-19) pandemic's impact on maternal mortality *(1,15–17)*, which could be used to strengthen health system emergency preparedness.

Decisive action is imperative across all domains of maternal health and well-being; however, the agenda in this realm remains incomplete. The time has come to further enhance intercountry policy dialogue, cooperation and collaboration. This would accelerate the development and implementation of regional and national policy frameworks for maternal and newborn health, in line with the 2030 Agenda for Sustainable Development's principle of leaving no one behind *(18)*.

3.2 Child mortality

Main findings

- The neonatal mortality rate in the WHO European Region is estimated at 2.2 deaths per 1000 live births, according to the latest available data (for 2022). Neonatal mortality rates increased in six Member States between 2018 and 2022 and plateaued in eight with a mortality rate above the median value for the WHO European Region.
- The under-5 mortality rate in the Region is estimated at 4.0 deaths per 1000 live births, according to the latest available data (for 2022). Under-5 mortality rates increased in four Member States between 2018 and 2022 and plateaued in six with rates above the Regional median.
- Significant inequality in neonatal and child mortality persists between countries in the Region.
- There are persistent differences between boys and girls, with under-5 mortality rates generally being 20% higher in boys; however, in some Member States rates in boys are reaching nearly 30% higher.

Child mortality is an important indicator of a population's overall health status and access to essential health interventions such as vaccination, treatment for infectious diseases and proper nutrition. More generally, it reflects the level of socioeconomic development within a country. SDG Target 3.2 to end preventable deaths of newborns and children under 5 years of age sets the targets to reduce by 2030 (i) neonatal mortality to at least as low as 12 per 1000 live births in all countries and (ii) under-5 mortality to at least as low as 25 per 1000 live births *(19)*.

Neonatal mortality, defined as infant death within the first 28 days of life, remains a significant public health challenge in the WHO European Region. Improving newborn health is one of WHO's key priorities, in line with the third core priority of the EPW *(1)*.

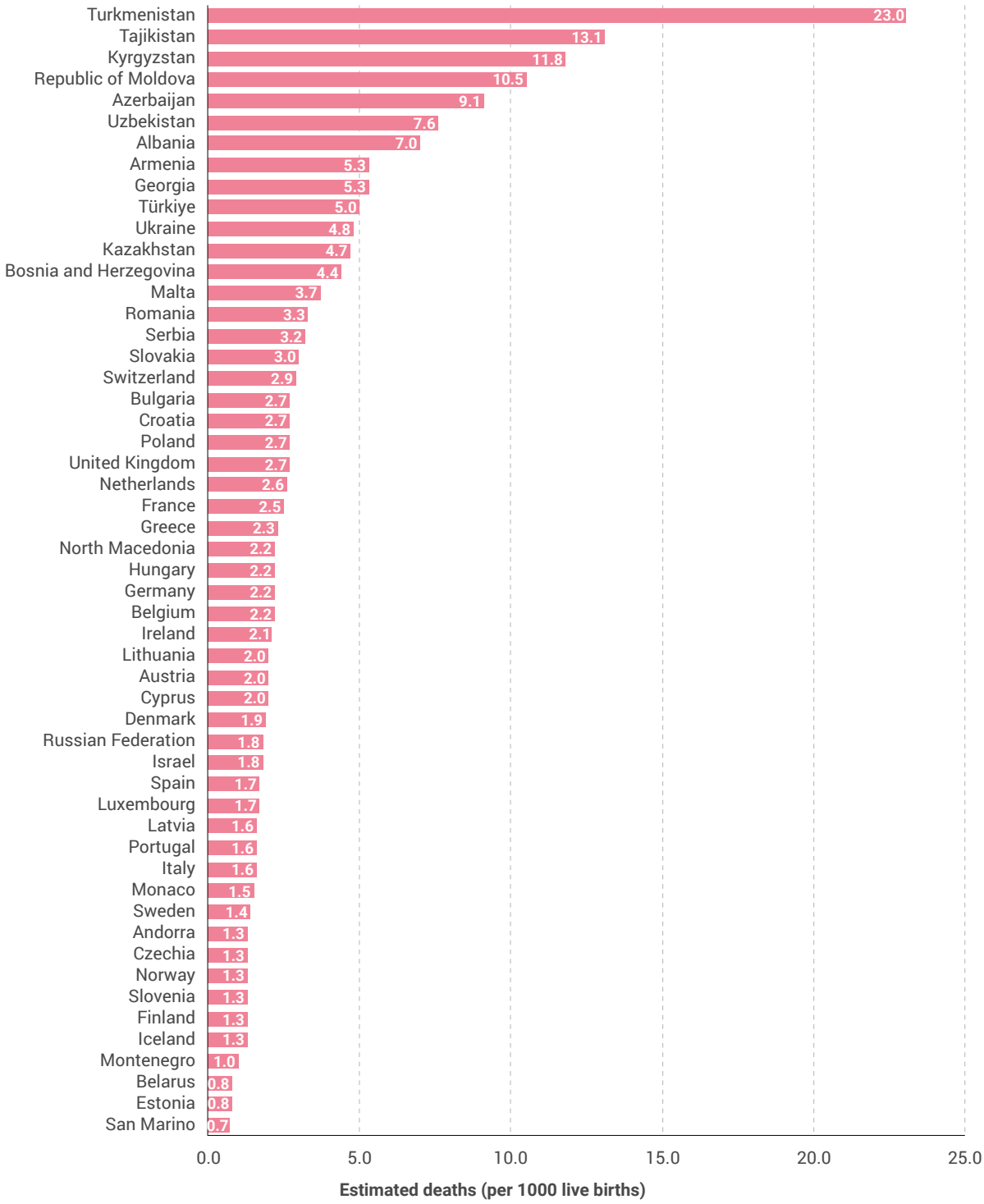
According to the latest available data from the United Nations Children's Fund (UNICEF) and the United Nations Inter-agency Group for Child Mortality Estimations, the median neonatal mortality rate in the WHO European Region in 2022 was estimated at 2.2 deaths per 1000 live births.[7] Neonatal mortality rates are below SDG Target 3.2 in many countries *(14)*, but broad disparities across the Region indicate that sustained efforts are needed.

In 2022 neonatal mortality rates per 1000 live births varied between 0.7 in San Marino and 23 in Turkmenistan (Fig. 3.3) *(6)*. Countries in central Asia and parts of eastern Europe tend to have higher neonatal mortality rates compared with those in western Europe. When comparing Member States across the WHO European Region, the highest neonatal mortality rate is 10 times higher than the median value for the Region and is 28 times higher than the lowest rate *(7)*.[8]

[7] See additional methodological considerations in Annex 1.

[8] Estonia's neonatal mortality rate (0.83 deaths per 1000 live births) was used as a more stable reference point rather than the actual lowest rate for San Marino (0.66), to minimize potential inaccuracies caused by the relatively small number of births in San Marino.

Fig. 3.3. Neonatal mortality rates in the WHO European Region, 2022



Note: estimates are rounded to the nearest tenth; data available for all 53 Member States.

Source: United Nations Inter-Agency Group for Child Mortality Estimation *(8)*.

Neonatal mortality rates increased in six countries between 2018 and 2022: Cyprus (+11.1%), Switzerland (+3.4%), Albania (+1.4%), Luxembourg (+1.4%), Slovakia (+1.4%) and Kazakhstan (+0.8%). Rates plateaued (defined as a decrease of < 5%) in eight countries with a mortality rate above the median value for the WHO European Region: Bosnia and Herzegovina, France, Georgia, Netherlands, Poland, Romania, Turkmenistan and the United Kingdom *(6,7)*. In countries with a small number of events, rates are particularly susceptible to fluctuations.

The leading causes of neonatal mortality include preterm birth complications (42% of all neonatal deaths), congenital anomalies (23.7%), intrapartum-related events such as birth asphyxia and birth trauma (14.4%), neonatal infections (5.5%) and conditions related to inadequate prenatal care. These conditions are particularly high in areas with limited access to specialized neonatal care *(20–22)*.

The Every Newborn action plan provides a roadmap to end preventable newborn mortality, reduce disability and end preventable stillbirths by 2030 *(23)*. Key strategies include ensuring equitable access to quality antenatal and postnatal care and promoting safe deliveries assisted by skilled health personnel. The promotion of breastfeeding, kangaroo mother care (a method of care for preterm and low-birth-weight infants that involves prolonged skin-to-skin contact) and infection prevention measures, as well as improving access to life-saving interventions such as corticosteroids for mothers at risk of preterm birth, could further reduce the neonatal mortality rate across the Region. The key mechanism for quality improvement is the regular use of a perinatal death audit at all levels of the health system.

Under-5 mortality refers to a child's death before reaching their fifth birthday. The median under-5 mortality rate in the WHO European Region is estimated at 4.0 deaths per 1000 live births *(8)*. Across the Region, the lowest under-5 mortality rate is 1.5 per 1000 live births, whereas in parts of central Asia it can exceed 13 per 1000 live births (Fig. 3.4). Mortality rates are generally 20% higher in boys than in girls; however, in Tajikistan and Turkmenistan, the difference is even higher, at nearly 30%.

When comparing Member States across the WHO European Region, the highest under-5 mortality rate is 10 times higher than the median for the Region and 21 times higher than the lowest rate *(8)*.[9] In Tajikistan and Turkmenistan, the under-5 mortality rate exceeds the SDG Target 3.2 of 25 deaths per 1000 live births *(14)*.

Under-5 mortality rates increased in four countries between 2018 and 2022: Cyprus (+11%), Romania (+3.5%), Ukraine (+2%) and Albania (+1%). The under-5 mortality rate plateaued in six countries with rates above the Regional median: Bosnia and Herzegovina, Croatia, France, Poland, Slovakia and Switzerland *(7)*.

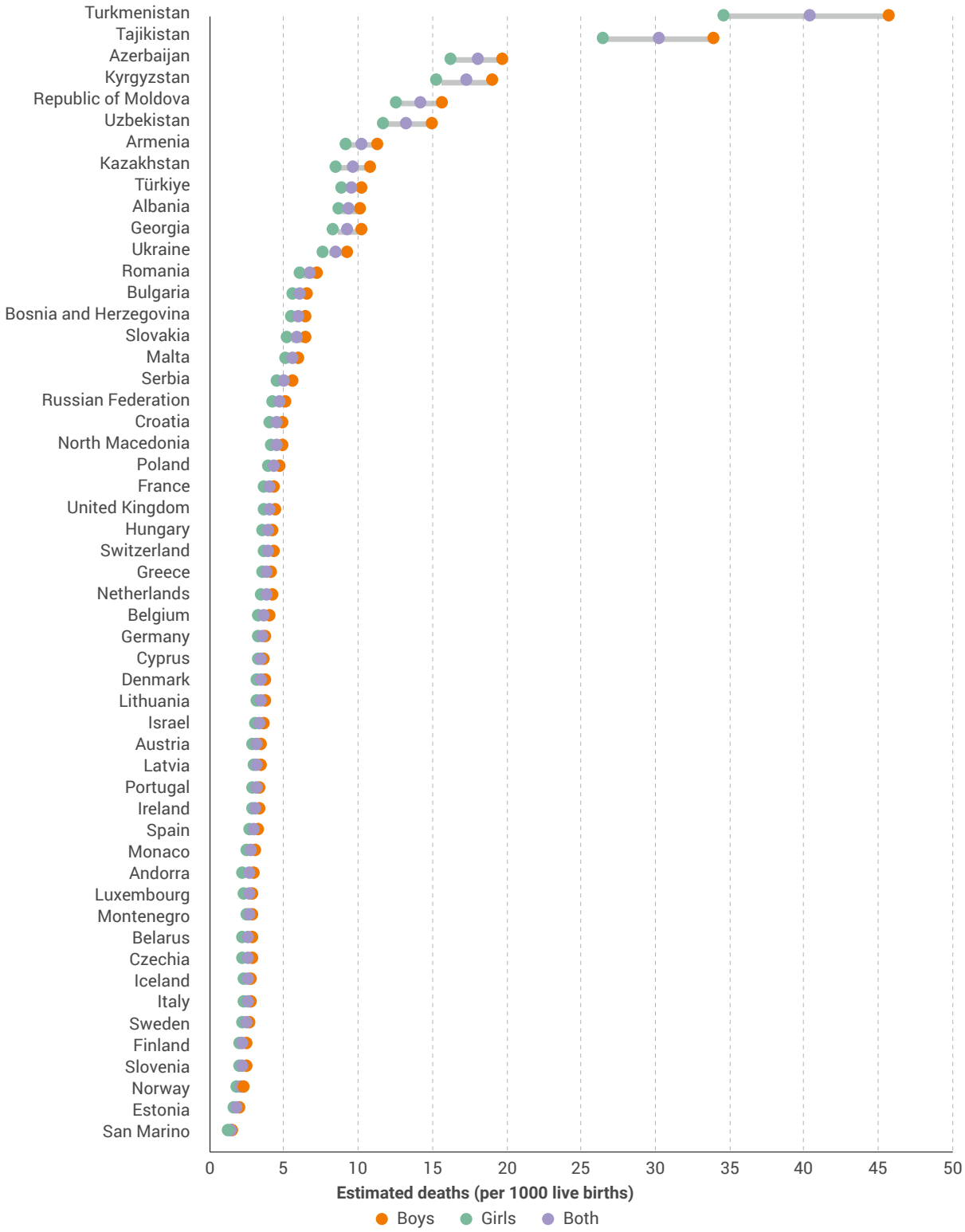
The leading causes of death for children aged under 5 years in the WHO European Region are mostly preventable or treatable with appropriate interventions during pregnancy, childbirth and the neonatal period *(24)*. They include neonatal conditions (41.4%), congenital anomalies (25.6%), lower respiratory infections (9.8%), other infectious and parasitic diseases (8.0%), and unintentional injuries (5.4%) *(22)*.

Sometimes, simple measures can save children's lives, such as improving access to skilled birth attendance, promoting immunization coverage, ensuring good nutrition and enhancing child health services *(25)*. Improving breastfeeding practices, early diagnosis of congenital conditions and access to quality health care are key to reducing child mortality. Immunization programmes are also essential, particularly for preventable diseases such as diphtheria, measles and pneumococcal infections. Improving the quality of care for children and adolescents is the key challenge for countries in the WHO European Region. WHO supports Member States in this effort by adapting the *Pocket book of primary care for children and adolescents (26)* to country context.

Although survival rates for children are at an all-time high, significant challenges remain. Inequities in health-care access and quality and the effects of conflict and displacement remain obstacles to closing the gap between countries with the highest and lowest mortality rates *(27)*.

[9] Estonia's mortality rate for children under aged 5 years (1.88 deaths per 1000 live births) was used as a more stable reference point, rather than the actual lowest rate in San Marino (1.46) to minimize potential inaccuracies caused by the small number of births in San Marino.

Fig. 3.4. Under-5 mortality rates in the WHO European Region, 2022



Note: estimates are rounded to the nearest tenth; data available for all 53 Member States.

Source: based on data from United Nations Inter-agency Group for Child Mortality Estimation *(8)*.

3.3 Demand for family planning satisfied with modern methods

Main findings

- Overall, the WHO European Regional estimate of the demand for family planning satisfied with modern contraceptive methods stands at 77%, which is close to the global average of 78%.
- Nevertheless, there are very large variations across the Region, with projected coverage ranging between 31% and 92% in 2024. The breadth of inequities in access and use of modern contraceptives across Member States shows that substantial challenges persist in the Region.

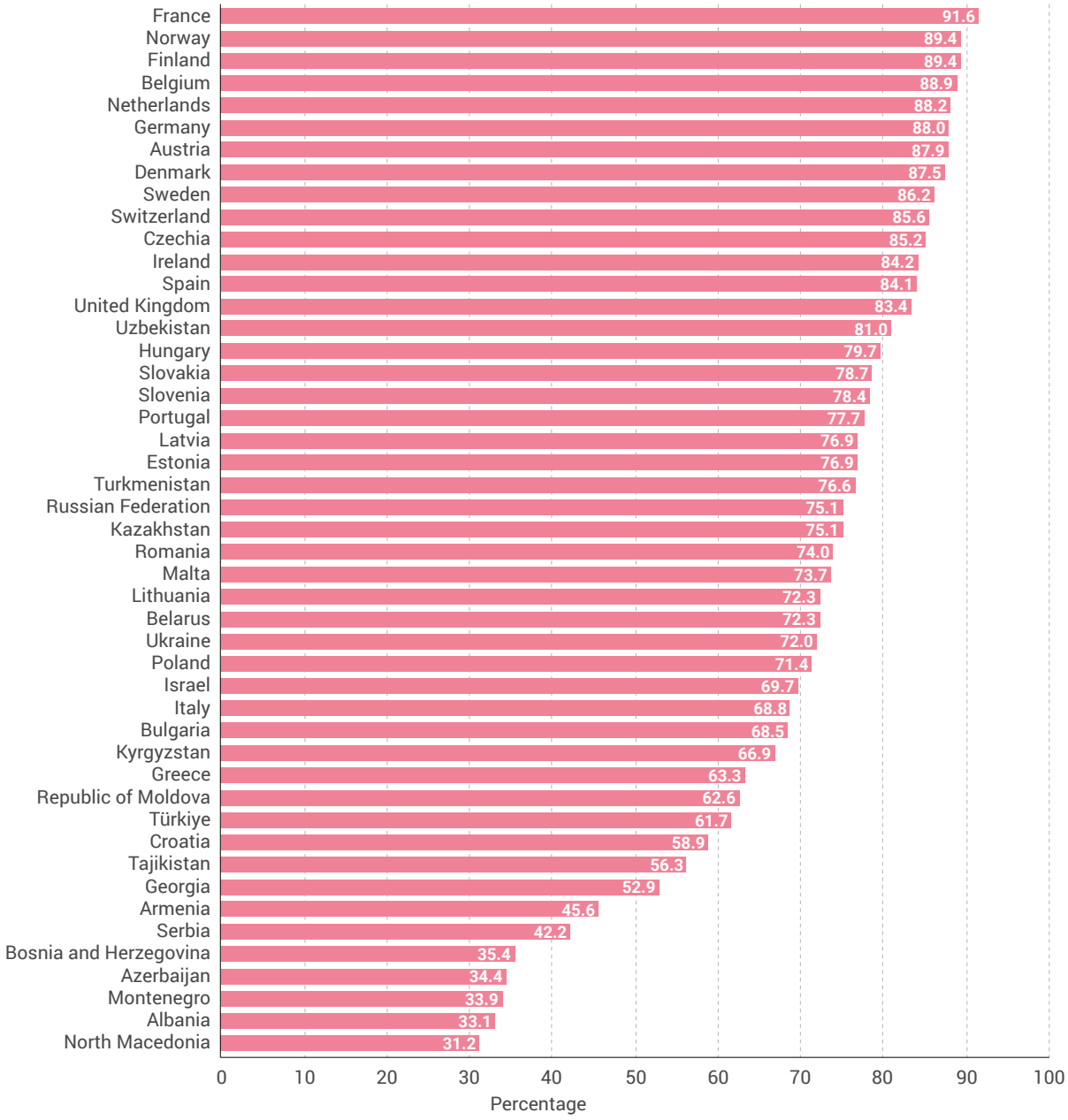
Access to effective means of contraception allows women and their partners to determine how many children they wish to have and the spacing of pregnancies. Modern methods of contraception[10] reduce poor obstetrical outcomes linked to complications of (unintended) pregnancy and childbirth (*16,19)*; more importantly, they can advance human rights such as freedom of expression and choice and achieve better equity in the right to work and education *(3)*. Family planning also contributes to sustainable population growth and economic development for countries.

SDG Target 3.7 aims to ensure universal access to sexual and reproductive health-care services, including for family planning, by 2030 *(28)*. Progress across countries is measured based on the percentage of women of reproductive age (15–49 years) who desire either to have no (additional) children or to postpone the next child and are currently using a modern method of contraception. This indicator is useful in assessing overall levels of coverage for family planning programmes and services. Global estimates are produced by the Population Division of the Department of Economic and Social Affairs, United Nations, in collaboration with the United Nations Population Fund *(29)*. These are calculated based on nationally representative household surveys conducted every 3–5 years. Differences in particular surveys over time or across Member States may affect these estimates.

According to the latest report, *World Health Statistics 2024*, the proportion of demand for family planning satisfied with modern contraceptives is 77% in the WHO European Region, which is close to the global average of 78% *(30)*. However, there are very wide disparities across Member States. Projections for 2024 vary between 31.2% in North Macedonia and 92.2% in France (Fig. 3.5) *(5)*. Moreover, seven out of 46 countries have what the United Nations Population Fund considers to be low coverage, with rates of below 50% (despite percentage point increases from +5.6% to +17.3% in these countries from 2020 to 2024).

[10] Modern methods of contraception include female and male sterilization; the intra-uterine device; implant, injectable and oral contraceptive pills; male and female condoms; vaginal barrier methods (including the diaphragm, cervical cap and spermicidal foam, jelly, cream and sponge); lactational amenorrhoea method; emergency contraception; and other modern methods not reported separately (e.g. the contraceptive patch and vaginal ring).

Fig. 3.5. Women of reproductive age (15–49 years) who are married or in a union and have their need for family planning satisfied with modern methods, 2024



Notes: projections available for 47 Member States (data missing from Andorra, Cyprus, Iceland, Luxembourg, Monaco and San Marino); estimates based on all women of reproductive age who are married or in a union.

Source: UN Population Division data portal: family planning indicators estimates and projections of family planning indicators (https://population.un.org/dataportal/home?df=99c98265-93bd-4825-9aa1-b623a9ba2562). © 2024 United Nations. Reprinted with the permission of the United Nations.

Differences in the levels of demand for family planning that are satisfied with modern methods across Member States highlight substantial challenges in the Region. The *Action plan for sexual and reproductive health: towards achieving the 2030 Agenda for Sustainable Development in Europe – leaving no one behind* serves as the Region's primary guiding document on sexual and reproductive health and rights *(31)*. A 2022 progress report identified several obstacles and setbacks to reaching the 2030 SDG Targets 3.7 and 5.6 and SDG 10 *(18)*. For example, based on a survey conducted in 39 Member States, the percentage of Member States that reported having national guidelines on family planning and contraception fell from 74% in 2019 to 59% in 2022. In addition, sexual and reproductive health services were some of the services most affected by the COVID-19 pandemic *(18)*. As of 2022 only 21% of Member States provided condoms free of charge and 13 Member States provided intrauterine devices free of charge, whereas 22% of Member States provide hormonal contraceptives over the counter.

At societal level, gender biases, fear of side effects, and religious and cultural beliefs can restrict the uptake of some methods of contraception compared with others. These barriers are especially relevant to overcome among young, poorer and unmarried women *(3)*. For example, despite the high contraception use in the Region, the adolescent fertility rate is above 30 births per 1000 women aged 15–19 years in some Member States (Regional average: 13.1) *(32)*. Twenty Member States have set an age limit (14–18 years) for accessing contraceptive services and for testing and receiving treatment for sexually transmitted infections without third-party authorization.

More efforts are needed to improve sexual and reproductive health in the Region to ensure universal access to family planning and contraception services for women and men; provide individualized care for women before conception; update national protocols on antenatal and postnatal care; and provide age-appropriate, evidence-informed sexuality information and counselling *(18)*.

3.4 Early childhood development

Main findings

- Very few data are available in the WHO European Region on the proportion of children under 5 years who have reached their developmental milestones in motor development, learning and psychosocial well-being.
- In the 13 Member States of the Region for which data for 2012–2022 are available, between 72% and 97% of children were developmentally on track.

The importance of building human capital for healthy and resilient communities is recognized in SDG Target 4.2: to ensure by 2030 that all girls and boys have access to quality early childhood development care and pre-primary education so that they are ready for primary education *(33,34)*. Early childhood is a critical period that sets the stage for lifelong thriving. The health sector's capacity to reach women and children from conception to early childhood provides an opportunity to help to improve the health and well-being of young children and also their caregiver(s).

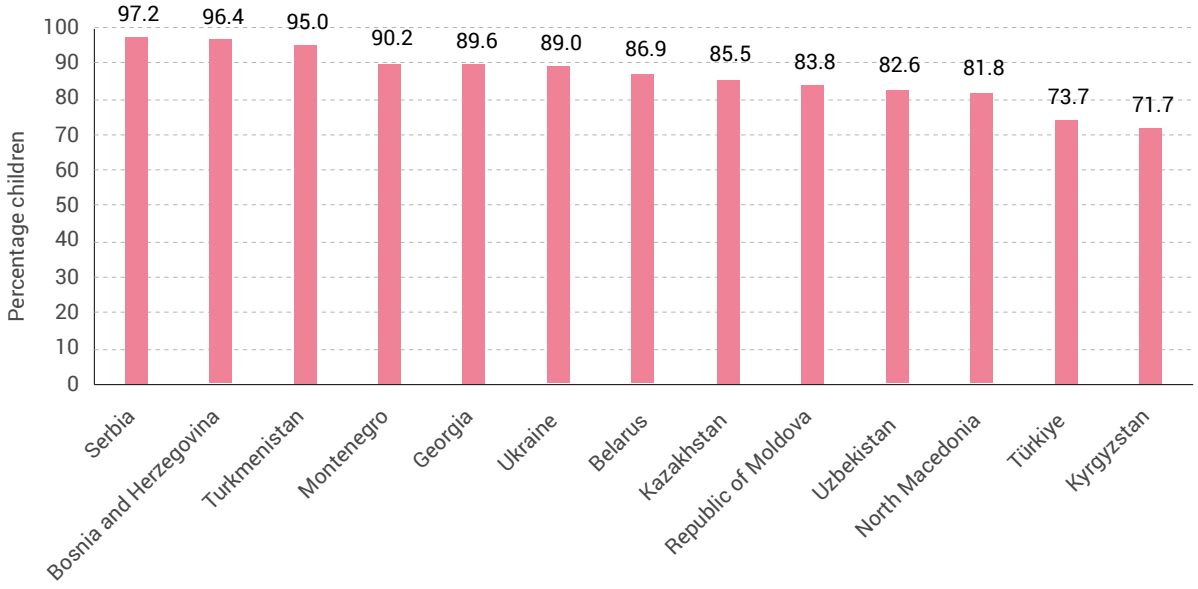
Many countries are collecting data on early childhood development but are not doing so consistently. Therefore, UNICEF, the custodian agency for SDG Target 4.2 *(34)*, is leading the implementation of a new measurement tool, the Early Childhood Development Index 2030 *(35)*. The Index is a module that can be integrated into population-based surveys. It consists of a 20-item instrument to measure developmental outcomes among children. Mothers or primary caregivers are asked to report how their children behave in everyday situations and the milestones they have reached in:

- health – gross motor development, fine motor development and self-care;
- learning – expressive language, literacy, numeracy, pre-writing and executive function; and
- psychosocial well-being – emotional skills, social skills, internalizing behaviour and externalizing behaviour.

Very few countries have data available for children aged 24–59 months. Therefore, a proxy indicator informed by household and multiple indicator cluster surveys is also used, covering children aged 36–59 months. Data were available for only 13 of the 53 Member States in the WHO European Region (Fig. 3.6). According to the latest available data, the proportion of children developmentally on track ranges from 72% to 97% across the 13 countries *(9)*.

Girls appear to fare better than boys developmentally in all Member States of the Region except for Georgia (Fig. 3.7). Absolute differences between boys and girls range from 0.6 percentage points in Turkmenistan and Ukraine to 13.4 percentage points in North Macedonia.

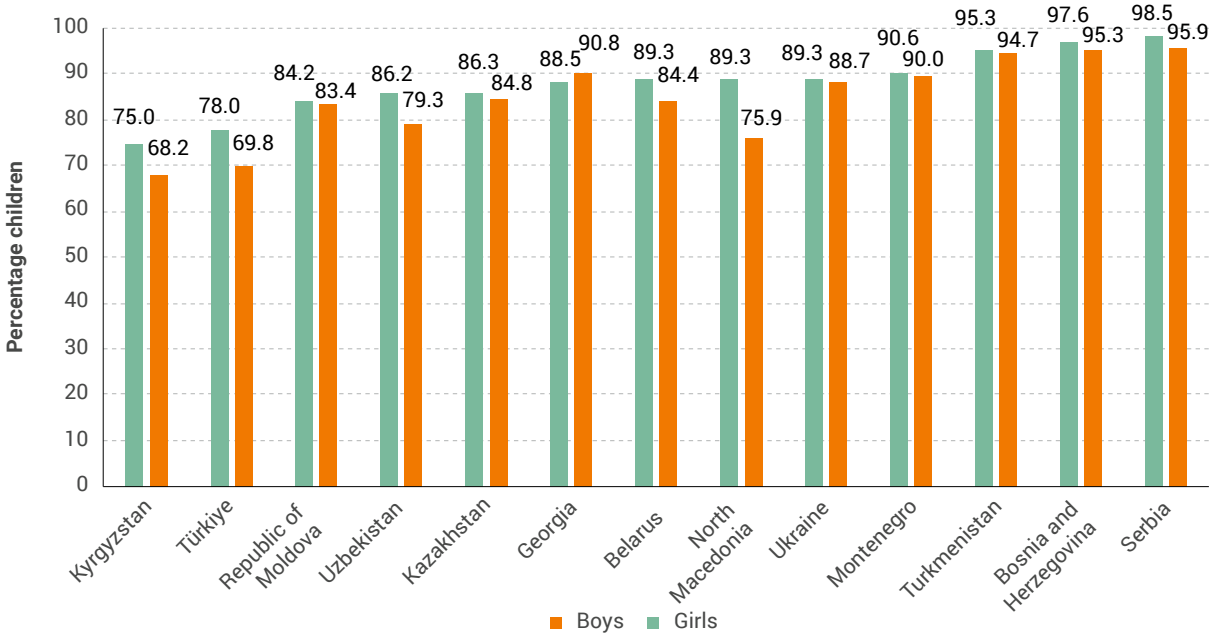
Fig. 3.6. Proportion of children aged 36–59 months (as a proxy for under-5 years) developmentally on track in at least three of the four domains, literacy–numeracy, physical, social-emotional and learning, in 13 Member States of the WHO European Region, latest available year



Notes: latest year of available data is 2012 for Bosnia and Herzegovina, Republic of Moldova and Ukraine; 2015 for Kazakhstan; 2018 for Georgia, Kyrgyzstan, Montenegro and Türkiye; 2019 for Belarus, North Macedonia, Serbia and Turkmenistan; and 2022 for Uzbekistan. Because data for SDG indicator 4.2.1 (proportion of children aged 24–59 months of age who are developmentally on track in health, learning and psychosocial well-being by sex) are unavailable in most Member States, a proxy indicator is used here.

Source: based on data in UNICEF *(9)*.

Fig. 3.7. Proportion of boys and girls aged 36–59 months (as a proxy for under 5 years) developmentally on track in at least three of the four domains, literacy-numeracy, physical, social-emotional and learning, in 13 Member States of the WHO European Region, latest available year



Notes: latest year of available data is 2012 for Bosnia and Herzegovina, Republic of Moldova and Ukraine; 2015 for Kazakhstan; 2018 for Georgia, Kyrgyzstan, Montenegro and Türkiye; 2019 for Belarus, North Macedonia, Serbia and Turkmenistan; and 2022 for Uzbekistan. Because data for SDG indicator 4.2.1 (proportion of children aged 24–59 months of age who are developmentally on track in health, learning and psychosocial well-being by sex) are unavailable in most Member States, a proxy indicator is used here.

Source: based on data in UNICEF *(9)*.

Early childhood development interventions that support health and psychosocial well-being are worthwhile investments for countries *(9,33)*. Whereas the Early Childhood Development Index 2030 addresses the need for nationally representative and internationally comparable data on early childhood development *(35)*, further work is needed in the Region to address information gaps and monitor SDG indicator 4.2.1 *(36)*. In 2022 the WHO Regional Office for Europe launched the *Framework on early childhood development (33)*. The Framework provides recommendations for public policies, programmes and services from conception to age 3 years to enable young children to thrive. It highlights three areas for early childhood development that can support the reduction of lifelong disparities and inequities in health and well-being in the Region: (i) young children's needs, (ii) monitoring a child's development and responding to developmental concerns, and (iii) the social and environmental risks to development *(33)*. The Framework is being integrated into a new European child and adolescent health strategy, which should help countries to improve their early childhood development interventions and their outcomes.

3.5 Overweight and obesity in school-aged children

Main findings

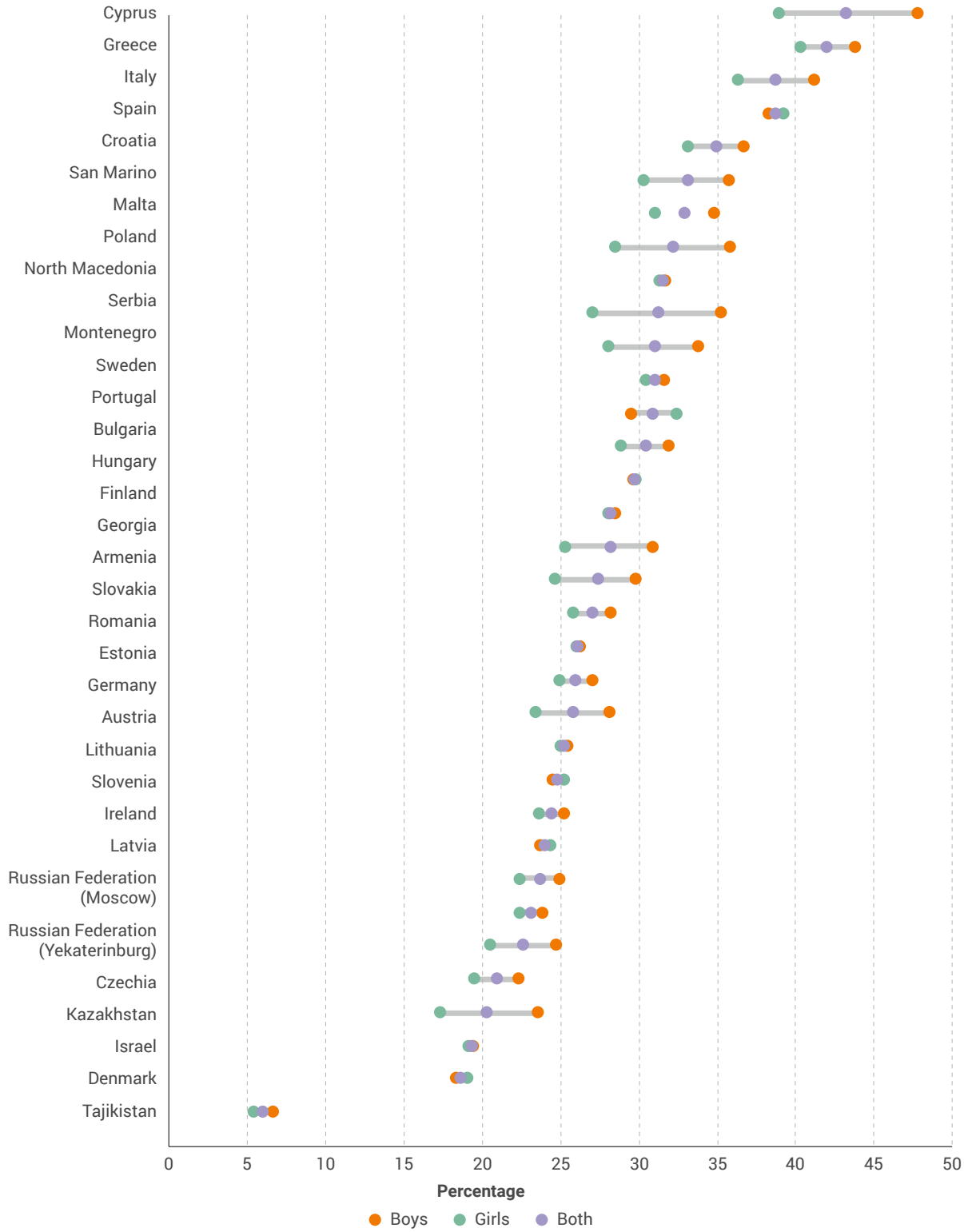
- In 33 Member States of the WHO European Region, 29% of children aged 7–9 years are living with overweight and 12% are living with obesity.
- The prevalence of overweight (including obesity) is higher in boys (31%) than in girls (28%), with large differences across Member States.

WHO defines overweight and obesity in children based on child growth standards and considering factors such as age and sex *(37,38)*. Overweight and obesity contribute significantly to noncommunicable diseases such as diabetes, cardiovascular diseases, musculoskeletal disorders, chronic kidney disease and certain cancers *(37)*. Children with excess weight can also experience increased breathing difficulties, fractures, reproductive disorders and hypertension *(39,40)*. If left untreated, the prognosis for children and adolescents living with obesity worsens over time, and the risks of adverse outcomes can extend throughout the life-course *(39–41)*. Mental health needs are also a particular concern for children living with obesity: a higher body mass index is associated with increased risks of depression, anxiety and social stigmatization *(41–43)*.

Estimates for children are sourced from the fifth round of COSI data collection (Annex 1 contains details of the methods used to collect data), which took place in 2018–2020 in 33 countries in the Region *(44)*. Overall, 29% of school-aged children aged 7–9 years were found to be living with overweight, including obesity *(10)*. The highest prevalences of overweight were reported in Cyprus, Greece, Italy and Spain (Fig. 3.8) *(10)*. In general, the prevalence of overweight is higher in boys than in girls: the prevalence of overweight (including obesity) ranged between 7% and 48% (average: 31%) in boys and between 5% and 40% (average: 28%) in girls.

Overall, 12% of school-aged children were living with obesity in the 33 participating countries (Fig. 3.9). The prevalence of obesity was higher in boys (mean: 14%; range: 2–24%) than in girls (mean: 10%; range: 1–15%) *(21)*. There were no statistically significant increases in the prevalence of overweight among school-aged children in the fifth round of COSI data collection (2018–2020) compared with the previous round (2015–2017).

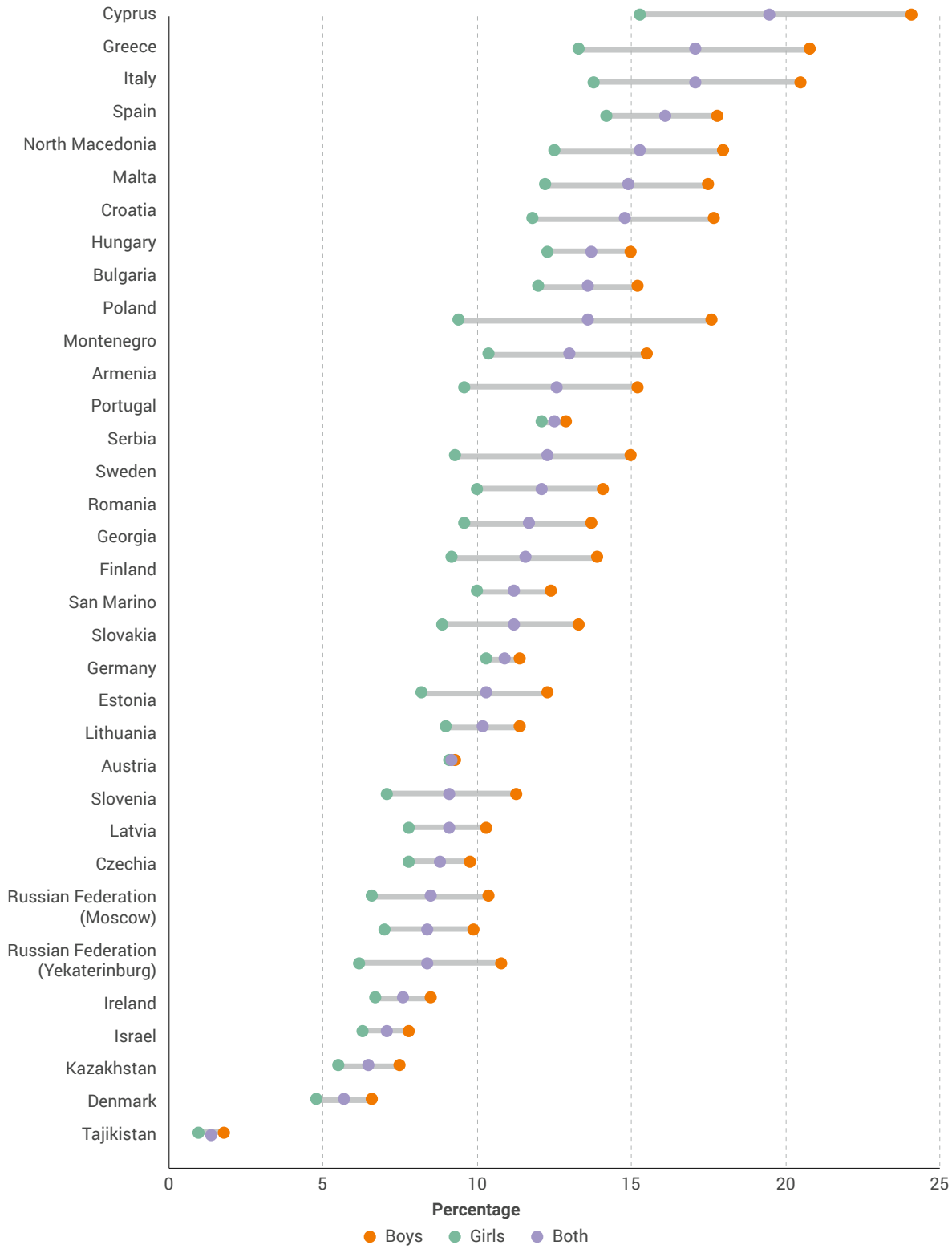
Fig. 3.8. Prevalence of overweight in boys and girls aged 7–9 years, and difference between the sexes (percentage points), in the WHO European Region in the fifth round of the COSI survey of 2018–2020



Notes: data available for 33 Member States; prevalence of overweight presented including obesity as defined by WHO and growth references; estimates refer to the following age groups: (i) 7-year-old children in Armenia, Bulgaria, Czechia, Denmark, Estonia, Finland, Germany (State of Bremen only), Georgia, Greece, Hungary, Ireland, Israel, Kazakhstan Latvia, Lithuania, Malta, Montenegro, North Macedonia, Portugal, Romania, Russian Federation (Moscow and Yekaterinburg), Serbia, Slovakia, Slovenia, Spain, Tajikistan; (ii) 8-year-old children in Austria, Croatia, Italy, Poland, San Marino and Sweden; and (iii) 9-year-old children in Cyprus.

Source: based on data from WHO Regional Office for Europe *(10)*.

Fig. 3.9. Prevalence of obesity in boys and girls aged 7–9 years, and difference between the sexes (percentage points), in the WHO European Region in the fifth round of the COSI survey of 2018–2020



Notes: data available in 33 Member States; estimates refer to the following age groups: (i) 7-year-old children in Armenia, Bulgaria, Czechia, Denmark, Estonia, Finland, Germany (State of Bremen only), Georgia, Greece, Hungary, Ireland, Israel, Kazakhstan Latvia, Lithuania, Malta, Montenegro, North Macedonia, Portugal, Romania, Russian Federation (Moscow and Yekaterinburg), Serbia, Slovakia, Slovenia, Spain, Tajikistan; (ii) 8-year-old children in Austria, Croatia, Italy, Poland, San Marino and Sweden; and (iii) 9-year-old children in Cyprus.

Source: based on data from WHO Regional Office for Europe *(10)*.

The sixth round of the COSI data collection covered 2022–2024 but these data were not available at the time of drafting this Report. A brief review of results, however, has been published since *(45)*, showing that childhood overweight and obesity remain a major public health challenge in the Region. The sixth round of COSI data collection is the first estimate following the COVID-19 pandemic, providing initial insights into how the burden of overweight and obesity among children has changed in the post-pandemic period in the Region. Comparisons with estimates from the fifth data collection round show different patterns of change in the 28 Member States with available data. Despite stability in both overweight and obesity prevalence in several Member States, where changes occurred they were more likely to be increases rather than decreases, suggesting that the COVID-19 pandemic may have further exacerbated the problem in some Member States. Ongoing analyses, including the findings from all COSI rounds of data collection, will provide a more comprehensive picture.

Overweight and obesity contribute significantly to the burden of noncommunicable diseases, accounting for 7% of total years lived with disability *(41)*. Without interventions, the prevalence of childhood obesity could lead to even more significant health challenges throughout the life-course *(37,46,47)*. In 2022 Member States endorsed the *WHO acceleration plan to stop obesity (48)*, emphasizing the need for a whole-of-society approach to promote healthy diets and physical activity *(37)*.

The determinants of childhood overweight and obesity are multifactorial, involving genetic, environmental and socioeconomic factors. Importantly, rates of overweight and obesity tend to be higher in children from lower socioeconomic households, and these trends are linked to lower education levels in parents *(40,41,46)*. Bespoke interventions targeting children and adolescents from low socioeconomic backgrounds can reduce social disparities in activity levels and food consumption. Governments can implement policies such as taxes on sugary drinks and foods high in saturated fat, salt and sugar (HFSS), enforce regulations to reduce unhealthy ingredients in processed foods and promote clear front-of-pack food labels *(49–51)*. Additionally, restricting the marketing of HFSS foods to children is a critical best-buy intervention but has been insufficiently adopted across the Region *(52)*. The CLICK monitoring framework[11] provides a tool to objectively assess children's exposure to the digital marketing of HFSS products *(53,54)*. Marketing of HFSS products can negatively influence children's and adolescents' eating and snacking behaviour, as well as their consumption patterns, all of which can lead to a higher calorie intake.

Interventions must also focus on creating environments that facilitate healthy lifestyle choices, and these changes must be sustained to be effective. Promoting a patient-centred approach that moves beyond mere weight-loss targets towards fostering overall well-being may be especially beneficial for at-risk children and adolescents *(40,41)*. A whole-of-society and whole-of-life approach is crucial to halt the increase in obesity in the Region, thereby ensuring a healthier future for all.

[11] The CLICK acronym describes five steps for monitoring children's online exposure to marketing of unhealthy food: (i) comprehend the digital ecosystem, (ii) landscape of campaigns, (iii) investigate exposure, (iv) capture on screen, and (v) knowledge sharing *(53)*.

3.6 Violence against women and girls, and violence against children

Main findings

- More than one in four women and one in every three children in the WHO European Region experience some form of violence during their lifetime.
- The prevalence of intimate partner violence against women and girls ranges between 10% and 32% across 46 Member States.
- Data on the prevalence of violence against children in the Region are limited. In 11 Member States, the prevalence ranges between 44.5% and 74.3%, with higher rates in boys than in girls.
- In the Region, 9.6% of all children (5.7% of boys and 13.4% of girls) experience sexual abuse. Rates of sexual violence, including child sexual abuse, are highly underreported due to delayed reporting, stigma and shame.
- The Health Behaviour in School-aged Children survey found that 16% of adolescent girls and 15% of adolescent boys reported being cyber-bullied at least once or twice in the previous couple of months.

Across all Member States in the WHO European Region, women and children have the right to safety and security, as reflected in the objectives of the EPW *(1,55)* and the United Nations strategy, *The global strategy for women's, children's and adolescents' health (2016–2030) (56)*. Any form of violence against women and children constitutes a severe human rights violation. Sexual violence and intimate partner violence may result in death and can have serious health impacts, such as mental, physical, sexual and reproductive health consequences that can last a lifetime *(57,58)*.[12] Violence against children can cause long-term health issues, including injuries, disabilities, gastrointestinal disorders, and unwanted pregnancy for girls. Maltreatment can affect academic performance and is linked to substance abuse, self-harm and risk-taking behaviours *(59,60)*. Boys witnessing abuse may be at a higher risk of future violence perpetration, whereas girls may face increased risks of victimization *(59–61)*. Costs to society include health and productivity losses and legal and judiciary service costs. The failure to prevent adverse childhood experiences was estimated to cost economies in 28 Member States in the Region between 1.1% and 6.0% of gross domestic product in 2019 *(62)*.

The EPW measurement framework aims to monitor (i) the SDG indicator 5.2.1 on violence against women in the Region, as defined as the "proportion of women aged 15 years and older subjected to physical and/or sexual violence by a current or former intimate partner in the past 12 months (or in their lifetime – since 15 years old)" and (ii) violence against children, as defined by the "proportion of children aged 1–17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month" *(2,63)*.[13]

Accurate estimates of the prevalence of violence against women and violence against children and generating more evidence on the links between these measures are crucial for shaping preventive policies and monitoring progress *(61)*.

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[12] Such as unintended and adolescent pregnancies, sexually transmitted infections and the aggravation of chronic disorders.

[13] Currently available data do not capture the full age range specified. Data are not collected for adolescents aged 15–17 years and further methodological work is needed to identify additional items on disciplinary practices relevant for older adolescents.

3.6.1 Violence against women and girls

The United Nations defines violence against women as "any act of gender-based violence that results in, or is likely to result in, physical, sexual or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life" *(64)*. According to the WHO Global Database on the Prevalence of Violence against Women *(65)*, 38 million to 45 million women are estimated to have experienced intimate partner violence in the WHO European Region in 2018 *(11)*.[14] In the Region, intimate partner/family-related homicides constitute 51% of all female homicides and 18% of all male homicides. Between 2010 and 2022, Europe saw a reduction in the number of female intimate partner/family-related homicides (21%); however, no improvement was recorded in western Europe *(66)*.

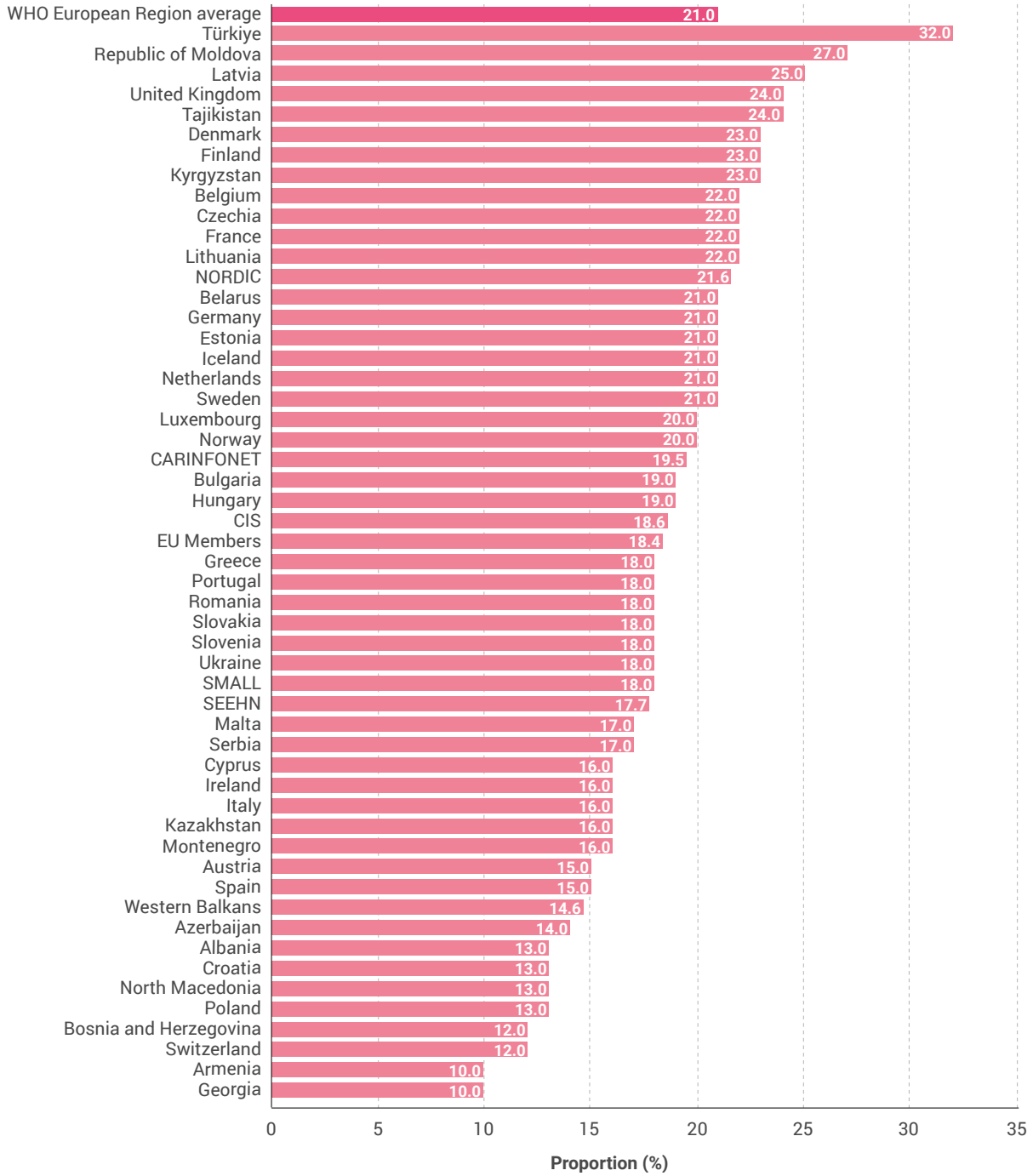
In the WHO European Region, 21% of women aged 15–49 years have been subjected to violence (physical and/or sexual) by a current or former intimate partner *(11)* at least once in their lifetime since age 15 years (this indicator is used in the WHO EPW measurement framework *(2)*) and 26% of women have been subjected to either or both intimate partner and non-partner sexual violence at least once in their lifetime according to 2018 estimates. WHO is developing new estimates, which are expected for release in 2025. Significant disparities in the prevalence of violence against women across Member States highlight the need for further progress to ensure women's safety (Fig. 3.10). Based on latest available data from surveys and studies conducted between 2000 and 2018 *(58)*, the estimated prevalence is lowest in Armenia and Georgia (both 10%) and highest in the Republic of Moldova and Türkiye (27% and 32%, respectively). Although data are limited on the prevalence of violence against women in humanitarian contexts, the research shows an increased exposure to violence for displaced populations in complex humanitarian settings. Barriers to survivors' disclosure and access to services mean that actual prevalence is likely to be higher *(67)*.

Furthermore, in the European Union in 2023, one in 10 women also report having experienced cyber-harassment since the age of 15 years *(68)*. Emerging forms and modalities of violence against women and girls, such as digitally facilitated violence, warrant further monitoring and targeted interventions.

The normalization and proliferation of violence against women in pornography are also highly problematic, particularly for children and adolescents. A range of studies have emphasized links between exposure to violent and non-violent pornography and attitudes that support aggression against women and children *(69)*. Rape, including gang rape, is also linked to increased male consumption of pornography *(69)*.

[14] See additional methodological considerations in Annex 1.

Fig. 3.10. Country lifetime prevalence estimates of intimate partner violence in the WHO European Region



Notes: estimates based on data from surveys and studies conducted between 2000 and 2018 among ever-married/partnered women aged 15–49 years subject to physical and/or sexual violence by a current or former intimate partner since the age of 15 (no data for Andorra, Israel, Monaco, Russian Federation, San Marino, Turkmenistan and Uzbekistan); CARINFONET: WHO Central Asian Republics Information Network; CIS: Commonwealth of Independent States; NORDIC: Denmark, Norway, Sweden, Finland and Iceland; SEEHN: South-Eastern Europe Health Network; SMALL: Cyprus, Iceland, Luxembourg, Malta, Monaco and Montenegro; western Balkans: Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia.

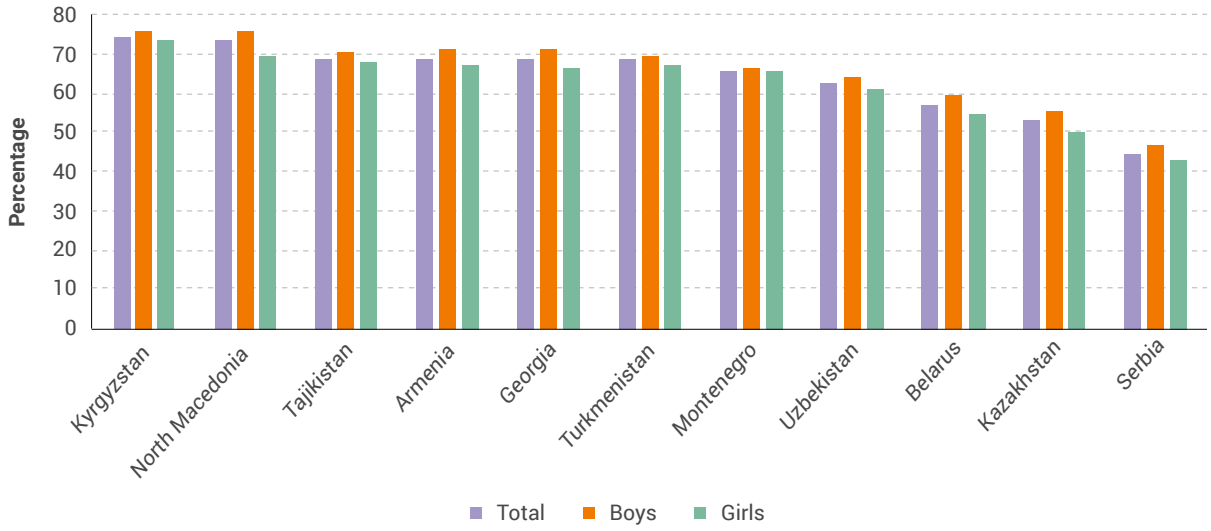
Source: based on data in WHO *(58)*.

3.6.2 Violence against children

Although all 53 Member States of the WHO European Region have ratified the United Nations Convention on the Rights of the Child *(70)*, at the time of writing, only 36 have banned corporal punishment and only 34 have national violence prevention plans, with only half of these funded *(12)*. In the Region, an overwhelming 55 million children experience some form of violence in their lifetime, whether it be physical, sexual or emotional abuse, which may also involve neglect or deprivation *(12)*. Corporal punishment at the hands of caregivers is the most common form of violence against children.

The overall prevalence of violence against children in 11 Member States of the Region ranges from 44.5% in Serbia to 74.3% in Kyrgyzstan (Fig. 3.11); on average, boys are 3.6% more likely than girls to experience violent discipline *(71)*. WHO estimates that 9.6% of all children (5.7% of boys and 13.4% of girls) in the Region experience sexual abuse, 22.9% experience physical abuse and 29.1% experience emotional abuse, and that 700 children are murdered annually *(12)*. Delayed disclosure is common with child sexual abuse and contributes to underreporting *(72)*. Adult survivors of child sexual abuse may seek health services for conditions related to experiences of violence without necessarily disclosing these experiences *(72)*. This reinforces the need for health professionals to be trained to recognize the signs and symptoms of child sexual abuse in both adults and children. Across the Region, total annual costs from the effects of adverse childhood experiences on life-course health outcomes were estimated to be US$ 581 billion *(12)*.

Fig. 3.11. The proportion of children 1–14 years of age experiencing violent discipline (psychological aggression and/or physical punishment) by caregivers in the past month



Note: latest survey data available for 11 Member States in the WHO European Region, with latest year of available data 2015 for Kazakhstan; 2016 for Armenia; 2017 for Tajikistan; 2018 for Georgia, Kyrgyzstan and Montenegro; 2019 for Belarus, North Macedonia, Serbia and Turkmenistan; and 2022 for Uzbekistan.

Source: UNICEF *(71)* .

During the COVID-19 pandemic, helplines, police forces and other service providers across the Region received increased reports of intimate partner violence and violence against children *(12,58,73)*. Despite a need to ascertain the overall impact of the pandemic from population-based surveys, these data are still lacking. Gaps in data availability impede effective monitoring of trends and progress towards Regional milestones.

Children are spending more time online than ever before *(74)*. Increased access to the Internet at a young age offers learning possibilities but also exposes children to potential mental and physical harm. Research conducted by WHO in Europe, central Asia and Canada on adolescent peer violence and bullying showed gender-based patterns of peer violence, with increased cyber-bullying of younger girls potentially linked to increased mental health conditions in adolescence *(13)*. The 2021–2022 Health Behaviour in School-aged Children survey found that 16% of adolescent girls and 15% of adolescent boys[15] were cyber-bullied at least once or twice in the past couple of months and that one in eight adolescents reported cyber-bullying others at least once or twice in the past couple of months *(13)*.

3.6.3 Addressing violence against women and children

Violence against women and girls is rooted in gender inequality and unequal power relations between men and women. Key risk factors include discriminatory social norms, socioeconomic disparities and inadequate legal rights *(12,58,61)*. Both intimate partner violence and violence against children can also have shared drivers and risk factors *(61,75)*. Whereas strong legal frameworks, awareness campaigns and school-based prevention programmes can address the root causes of gender-based violence, multisectoral support services[16] are needed to help women and children to escape abuse *(68)*.

Global collaboration is crucial to ending all forms of violence *(12)*. WHO's INSPIRE programme outlines key strategies to prevent and respond to violence against children *(76,77)* and RESPECT Women key strategies to prevent and respond to violence against women *(78)*. WHO has also developed guidance for health professionals to address child maltreatment *(79,80)*, and UNICEF offers additional recommendations specifically for online violence prevention, sexual exploitation and abuse *(79)*. Across Member States, policies and services must be developed in a participatory, gender-transformative way to address the specific needs of all subpopulations, many of whom have been left behind *(61)*.

[15] Adolescents aged 11, 13 and 15 years across 44 countries and regions in Europe, central Asia and Canada.

[16] Such services include health care, counselling, legal aid and survivor-centred services. Multisectoral cooperation is needed among the police, health and social services.

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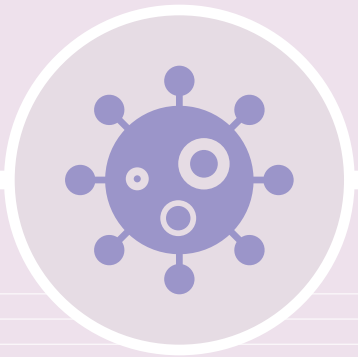


Infectious diseases

This chapter combines the indicators from the European Programme of Work, 2020–2025: United Action for Better Health (EPW) measurement framework (EPW-MF) related to the prevention and treatment of infectious diseases *(1,2)*. These indicators underline the vital role of immunization as one of the most cost-effective measures to promote health and well-being. Nevertheless, numerous factors that influence the spread of diseases, such as sanitation, climate change, education, agriculture, trade, transport, industrial development and housing, remain outside the scope and control of the health sector. This framework and its associated challenges clearly indicate the ongoing need for integrated approaches to health security.

Infectious disease outbreaks can have serious global repercussions, as evidenced by the coronavirus disease (COVID-19) pandemic. In the WHO European Region, infectious diseases were estimated to account for 19.6% of the total disease burden in 2021 *(3)*. The data presented in this chapter show that, although the Region maintains a high coverage for safely managed drinking-water and sanitation services, significant disparities persist among Member States and between urban and rural settings, with urban areas generally having better services.

The WHO European Region maintains a relatively high average vaccination coverage: 95% for the third dose of diphtheria–tetanus–pertussis vaccine (DTP3), 91% for the second dose of measles-containing vaccine (MCV2) and 86% for the final dose of pneumococcal conjugate vaccine (PCVf). However, significant challenges persist, with subnational data revealing worrying inequities. For example, less than 90% of districts in 60% of Member States achieved the target coverage, which creates pockets of susceptibility that increase the risk of vaccine-preventable diseases *(4)*. Although human papillomavirus (HPV) vaccination has been successfully introduced across 85% of Member States in the Region, coverage rates remain low at 35% *(5)*.

Disruption of routine immunization services during the COVID-19 pandemic has resulted in a significant immunity gap, leading to a resurgence of vaccine-preventable diseases. In 2023 over 58 000 cases of measles and 87 000 cases of pertussis (whooping cough) were reported – the latter representing the highest level in a decade. In response, 18 Member States within the Region have implemented comprehensive catch-up vaccination campaigns that have led to the successful immunization of more than 16.5 million children. Efforts are ongoing to address the backlog of missed vaccinations in the Region.

Antimicrobial resistance (AMR) poses a growing threat to the effectiveness of existing treatments. WHO has classified antibiotics for use depending on their resistance potential (the Access, Watch and Reserve (AWaRe) classification system; see section 4.3) *(6)*. Antibiotics in the Access group are recommended due to their lower resistance potential; however, the share of Member States of the Region meeting the 60% target as a proportion of total antibiotic consumption has stagnated at around 50% in recent years *(7,8)*. In 2024 the Political Declaration of the United Nations General Assembly High-level Meeting on Antimicrobial Resistance set a more ambitious target of 70% for the use of Access group antibiotics globally by 2030 *(9)*. The impact of rising drug resistance is particularly evident for tuberculosis (TB). Despite an overall decline in TB cases, drug-resistant strains are becoming increasingly common. In 2022 forms of *Mycobacterium tuberculosis* resistant to some drugs – specifically rifampicin-resistant TB (RR-TB) and multidrug-resistant TB (MDR-TB, resistant against the two first-line drugs rifampicin and isoniazid) – accounted for 24% of new infections and 54% of previously treated infections, making drug resistance a major obstacle to TB control efforts.

The data also highlight persistent challenges in treating HIV and hepatitis C within the Region. In 2022 only 63% of people living with HIV were receiving antiretroviral therapy (ART), and only five Member States had reached the 90% ART coverage target set by the EPW-MF *(2)*. Additionally, despite over 8.6 million people in the Region living with chronic hepatitis C virus (HCV) infections (accounting for nearly 1% of the population), at the end of 2022 only 9% of these had received treatment.

All Member States of the WHO European Region have demonstrated strong support for immunization by adopting the European Immunization Agenda 2030 *(10)*, one of the four flagship initiatives of the EPW. The Agenda aims to maximize immunization benefits across the Region for the 2020–2030 decade. By the end of 2024, 85% of Member States had established legislation supporting life-course immunization services *(11)*. In addition, about two thirds had integrated immunization services for all age groups into primary health care through national policies and maintain national immunization technical advisory groups.

These commitments have yielded significant results in controlling and eliminating vaccine-preventable diseases *(11)*. For 2022 the European Region was certified as having sustained its polio-free status; 91% of Member States were verified as having eliminated rubella and 62% were verified as having eliminated measles.

4.1 Safely managed drinking-water and sanitation

Main findings

- Inadequate water, sanitation and hygiene (WASH) conditions and services remain a persistent health challenge in the WHO European Region. Acute respiratory and diarrhoeal diseases caused by unsafe WASH are estimated to kill 33 500 people each year. Unsafe WASH continues to cause outbreaks of infectious disease throughout the Region. It also jeopardizes the quality of health care.
- A central public health prevention measure is to ensure universal and equitable access to safe drinking-water and sanitation. Coverage of safely managed drinking-water remained high at 92% in the Region 2022, while coverage of safely managed sanitation increased slightly to 78%.
- The Regional averages mask stark disparities between Member States, with coverage of safe drinking-water ranging from as low as 55% up to 100%, and coverage of safe sanitation from 11% to 100%. Within Member States, there are also inequalities in access to safely managed services, with populations living in rural areas and on low incomes often disadvantaged and, therefore, most vulnerable to waterborne disease.

Access to water and sanitation is a human right and is fundamental to everyone's health, dignity and prosperity. Safe WASH are essential for ensuring both quality of care and infection prevention and control in health-care settings.

Contaminated drinking-water, poorly managed sanitation and inadequate hygiene practices can cause severe outbreaks of water-related diseases, which remain frequently reported in the WHO European Region *(12)*. Lack of access to basic WASH services contributes to death and illness, especially in children. An estimated 33 500 acute respiratory and diarrhoea-related deaths per year within the Region can be attributed to inadequate WASH conditions and services *(13)*.

Sustainable Development Goal (SDG) Target 6.1 promotes universal and equitable access to safe drinking-water; Target 6.2 calls for adequate and equitable sanitation and hygiene for all; and Target 3.3 strives to combat waterborne diseases *(14,15)*.

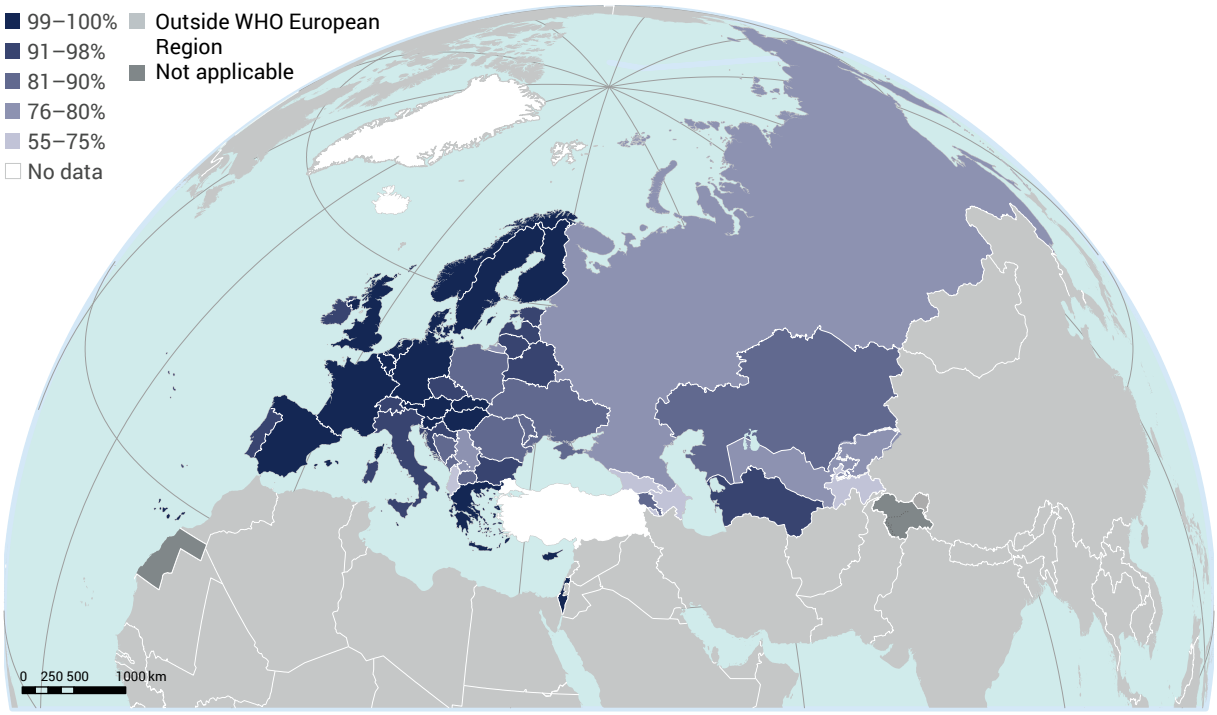
In the Declaration of the Seventh Ministerial Conference on Environment and Health, adopted in Budapest in July 2023, Member States of the WHO European Region committed to providing universal and equitable access to safe WASH for all in all settings *(16)*. Member States also committed to leveraging the United Nations Economic Commission for Europe/WHO Regional Office for Europe Protocol on Water and Health as a Regional policy instrument to advance the implementation of global and Regional commitments at national level *(17)*.

The WHO/United Nations Children's Fund (UNICEF) Joint Monitoring Programme for Water Supply, Sanitation and Hygiene monitors the population using "safely managed drinking-water services" and the "population using safely managed sanitation services" *(18)*.[18] Both are core indicators of the EPW-MF *(2)*.

[18] The Joint Monitoring Programme defines a "safely managed drinking-water service" as drinking-water from an improved water source that is accessible on the premises, available when needed, and free from faecal and priority chemical contamination. It defines a "safely managed sanitation service" as the use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or removed and treated off site.

Overall levels of access to safely managed drinking-water services in the WHO European Region are high and have been stable since 2015, with 92% of the population in the Region using safely managed drinking-water services in 2022. There are, however, marked differences between Member States, with access to safely managed services as low as 55% (in Tajikistan) to universal access (> 99%) in 18 Member States (Fig. 4.1).

Fig. 4.1. Safely managed drinking-water services coverage in the WHO European Region, 2022

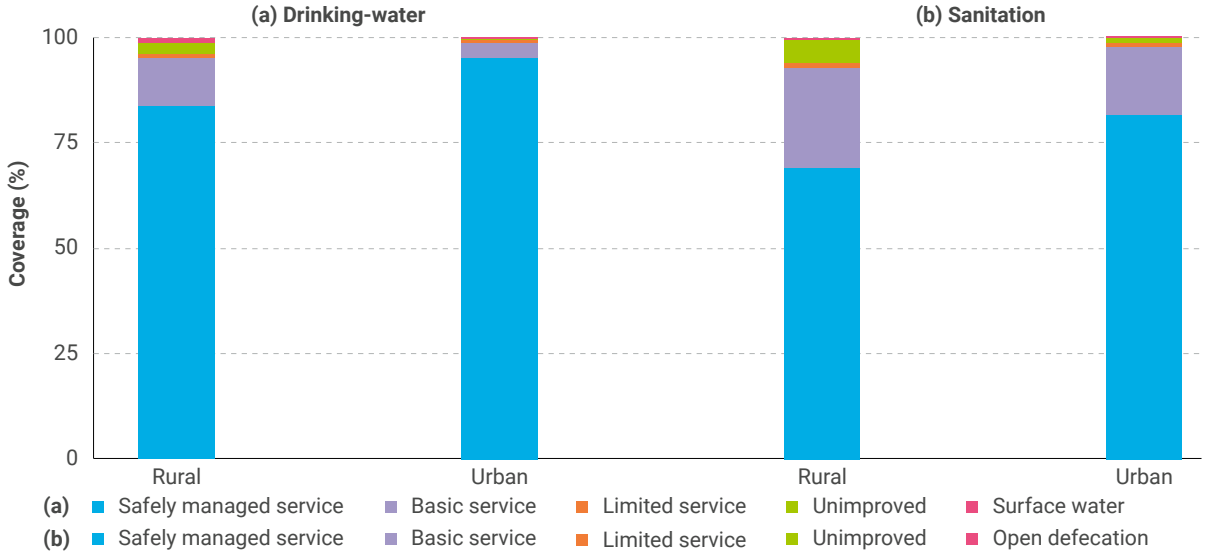


Notes: estimates are from 2022 for 50 Member States. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

Source: created by the WHO GIS Centre for Health DNA/DDI based on data in WHO/UNICEF Joint Monitoring Programme *(18)*

WHO/UNICEF Joint Monitoring Programme service ladders can be used to benchmark and compare service levels in urban and rural settings in the Region (Fig. 4.2). There are persistent inequities in safely managed drinking-water services between urban (95%) and rural (84%) areas, notwithstanding that only 17 Member States could provide disaggregated estimates for both rural and urban areas.

Fig. 4.2. Rural and urban service levels in the WHO European Region for drinking-water (a) and sanitation services (b), 2022

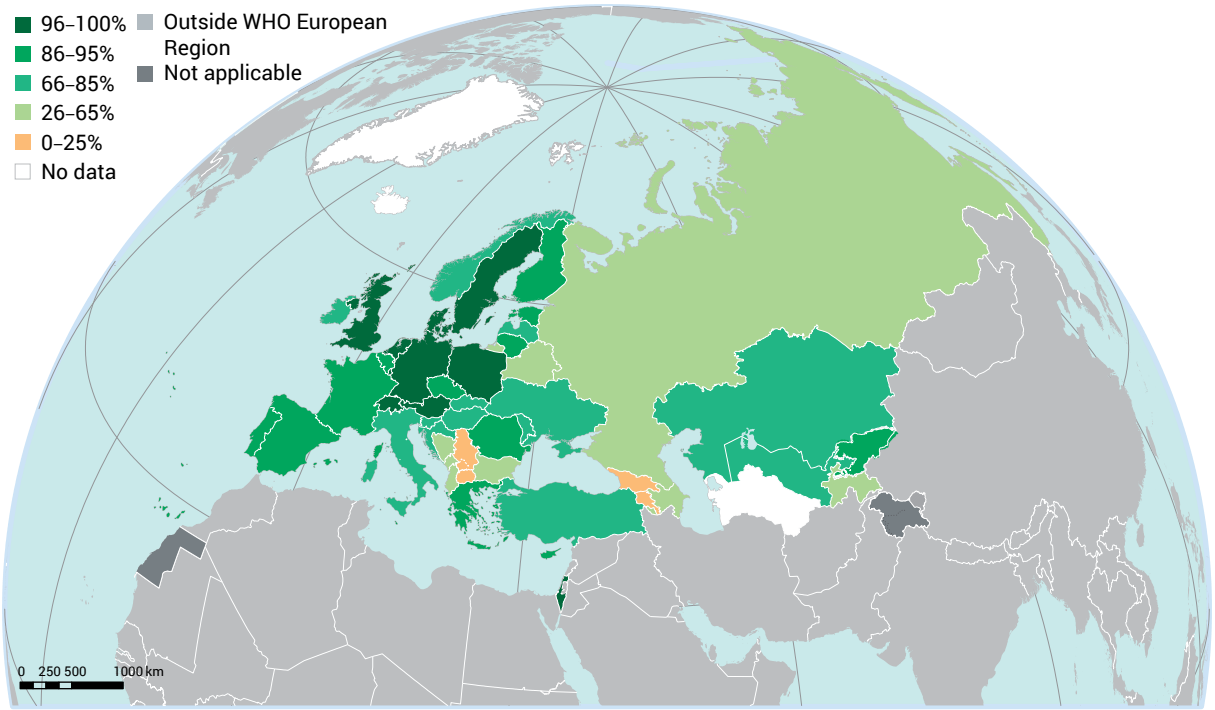


Note: disaggregated data by type of setting (urban/rural) available for 17 Member States for drinking-water (a) and 24 Member States for sanitation (b).

Source: WHO/UNICEF Joint Monitoring Programme *(18)*.

In 2022 78% of the population in the WHO European Region used safely managed sanitation services, representing a marginal increase from 2015 (76%). Rates ranged from 11% in Armenia to 100% in Andorra, Austria, Monaco and Switzerland (Fig. 4.3). Disaggregated data were provided from 24 countries, showing large geographical inequities between urban (82%) and rural areas (69%; Fig. 4.2).

Fig. 4.3. Safely managed sanitation services coverage in the WHO European Region, 2022



Notes: estimates are for 44 Member States in 2022, except for Bosnia and Herzegovina (2018), Azerbaijan (2019), Croatia (2021) and Latvia (2021). National level estimates are not available for Kazakhstan and Republic of Moldova (urban areas only) or for Tajikistan (rural areas only). The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

Source: created by the WHO GIS Centre for Health DNA/DDI based on data in WHO/UNICEF Joint Monitoring Programme *(18)*

In the WHO European Region overall, population coverage rates of sanitation and drinking-water services are high. Nevertheless, 29 million people still do not have access to even basic sanitation, and 16 million lack access to basic drinking-water supplies *(17)*. These people are more vulnerable to infectious disease outbreaks. The Region is not on track to achieve universal coverage by 2030 Sustainable Development Goal (SDG) Targets 6.1 and 6.2 *(14)*), and across Member States persistent inequities remain, both between urban and rural areas and between high- and low-income segments of the population *(13,17)*.

4.2 Vaccination coverage

Main findings

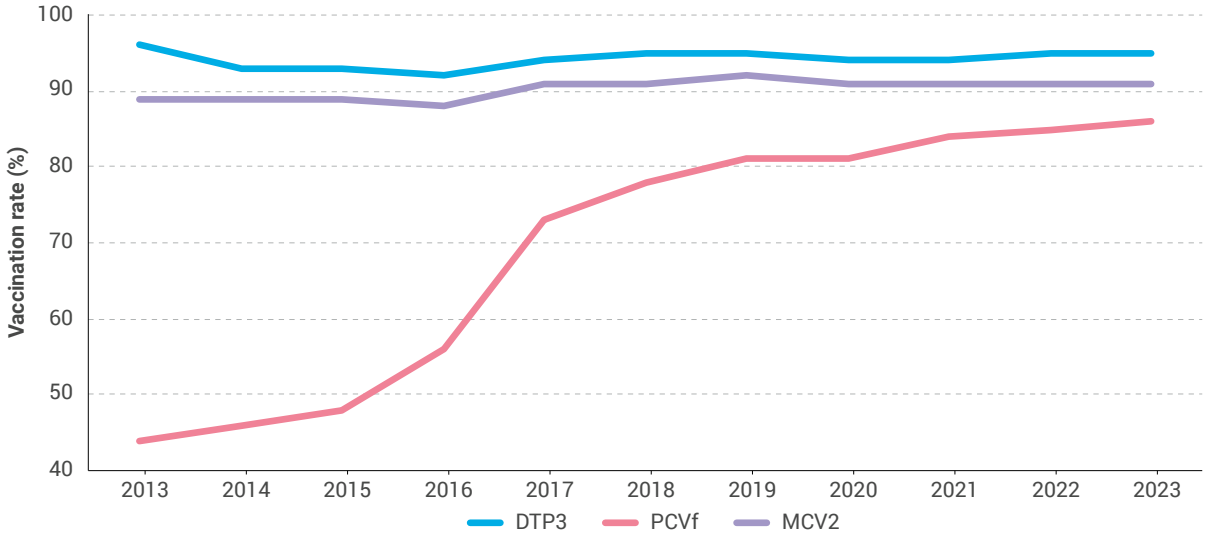
- In 2023 vaccine coverage in the WHO European Region averaged 95% for DTP3, 91% for MCV2 and 86% for PCVf.
- Only seven Member States (13%) achieved the EPW-MF's 2025 target of ≥ 95% coverage across all specified vaccines, far below the 60% target. Individual coverage rates of ≥ 95% were achieved for DTP3 in 25 Member States (47%), MCV2 in 12 (23%) and PCVf in 14 (26%), with notable disparities in national coverage across Member States.
- Subnational data reveal significant inequities, with pockets of susceptibility that increase the risk of transmission of vaccine-preventable diseases. In 2023 in 60% of Member States, less than 90% of districts had achieved ≥ 95% DTP3 coverage; across the Region as a whole, DTP3 coverage of ≥ 95% was achieved in only 55% of districts.
- Disruptions related to the COVID-19 pandemic led to backsliding in immunization coverage compared with 2019, particularly in middle-income countries, and the trend has not reverted yet to pre-pandemic levels. As countries struggle to resume high routine coverage as well as conduct large-scale catch-up activities to address missed vaccinations, the accumulated immunity gap has contributed to 58 000 reported measles cases across 41 Member States in 2023. Continued transmission in 2024 threatens millions of children and highlights the urgency for action to strengthen the immunization programmes.
- By 2023 HPV vaccination had been introduced in 85% of Member States, meeting the EPW-MF's target. However, last-dose coverage among girls remained low, at 35%.

Immunization is one of the most cost-effective public health strategies and is essential to primary health care and human rights. Worldwide, vaccination has made the single most significant contribution to mortality reduction among all health interventions in the last 50 years. Since the inception of the Expanded Programme on Immunization *(19)*, vaccinations have saved 7.2 million lives across the WHO European Region *(20)*. The European Immunization Agenda 2030 *(10)* builds on the successes and lessons of the European Vaccine Action Plan 2015–2020 *(21)* by aiming to strengthen immunization systems and achieve high, equitable vaccine coverage across the Region. The commitment to immunization in the Region supports, directly or indirectly, 14 of the 17 SDGs but in particular SDG 3, which targets the provision of affordable essential medicines and vaccines *(15)*. Recent achievements in the Region include maintaining its polio-free status, eliminating measles and rubella in multiple countries, achieving hepatitis B control targets, and increasing the introduction of WHO-recommended vaccines into national immunization schedules in several Member States *(10,22)*. As part of the monitoring, evaluation and accountability framework of the European Immunization Agenda 2030, progress towards its targets and goals is being monitored using a standard set of indicators and presented in annual technical progress reports *(23)*. In addition, the European Technical Advisory Group of Experts on Immunization issues ongoing recommendations for countries to enable accelerated progress towards these goals *(24)*.

WHO and UNICEF's annual estimates of national immunization coverage provide comprehensive datasets on global immunization trends for 14 vaccines across 194 Member States *(5,25)*. This enables the tracking of progress towards SDG Target 3.b *(15)* and the EPW-MF's targets *(2)*, particularly in the proportion of children who have received DTP3, MCV2 and PCVf.

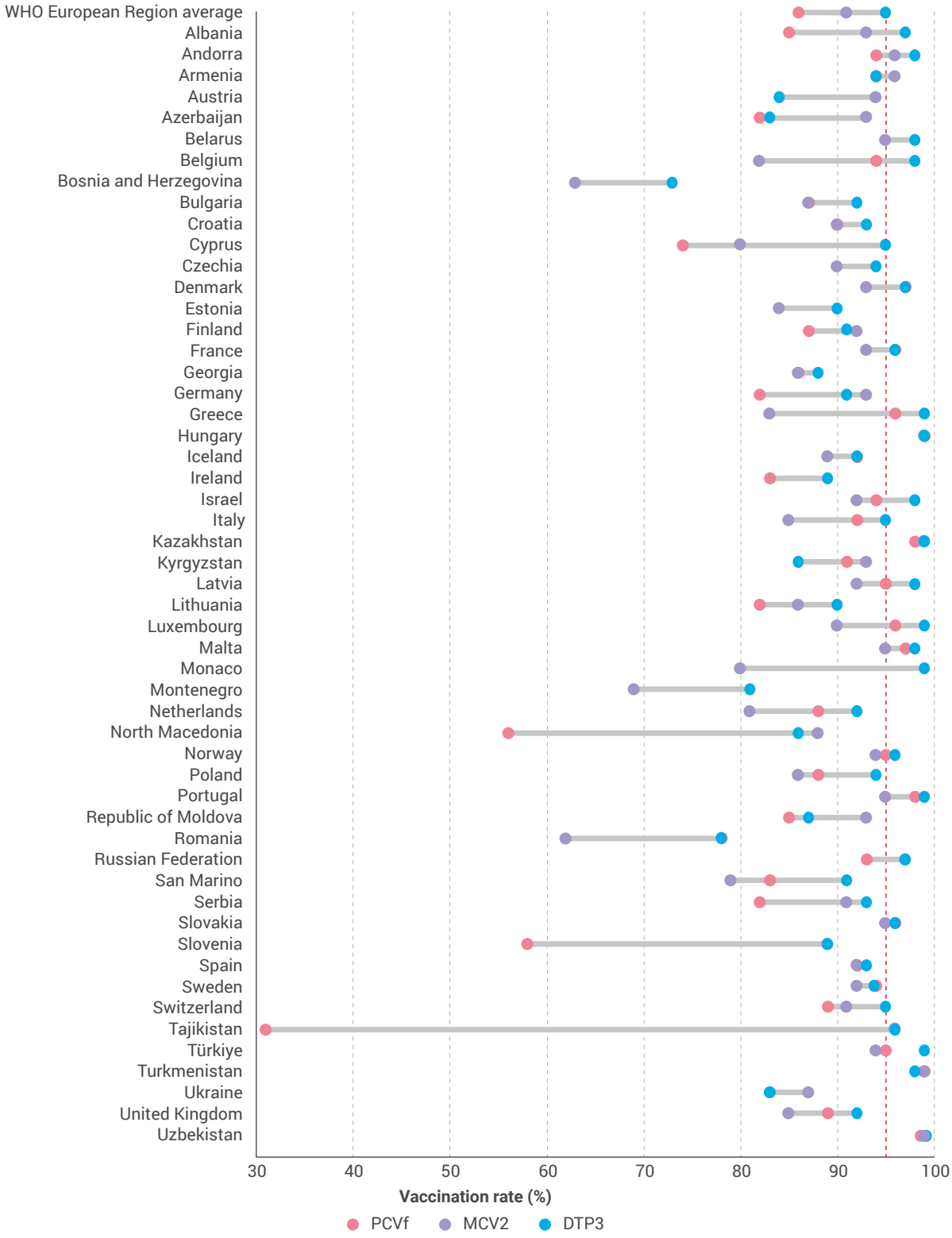
In 2023 the WHO European Region reported immunization coverage for DTP3 of 95% (range: 73–99%), for MCV2 of 91% (range: 62–99%) and for PCVf of 86% (range: 31–99%; Figs 4.4 and 4.5). Four Member States have not yet introduced the pneumococcal conjugate vaccine, and two limit it to high-risk groups. Only 25 (47%) Member States achieved ≥ 95% coverage for DTP3, 12 (23%) for MCV2 and 14 (26%) for PCVf *(5)*. Therefore, meeting the EPW-MF's target of 60% of Member States achieving at least 95% coverage for DTP3, MCV2 and PCVf by 2025 remains a significant challenge *(2)*. In 2023 only seven Member States had met this target (Hungary, Kazakhstan, Malta, Portugal, Slovakia, Turkmenistan and Uzbekistan) (Fig. 4.5) *(2)*.

Fig. 4.4. Percentage of annual target population vaccinated with DTP3, MCV2 and PCVf in the WHO European Region, 2013–2023



Source: WHO *(5)*.

Fig. 4.5. Percentage of children vaccinated with DTP3, MCV2 and PCVf in the WHO European Region, 2023



Note: the red dotted line indicates the EPW-MF's 2025 EPW-MF's 2025 target of 95% vaccination coverage *(2)*.

Source: WHO *(5)*.

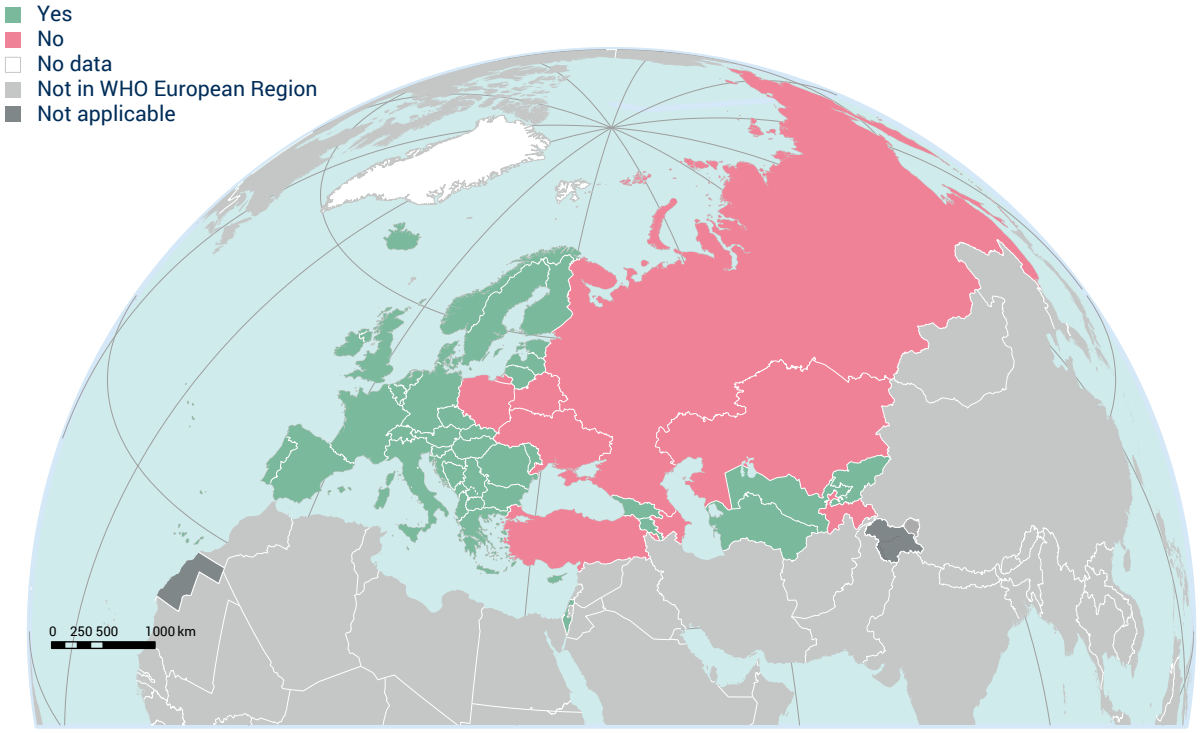
The variability of national coverage among Member States does not convey the full extent of the immunity gaps that exist in the Region. Even within Member States with high national coverage, subnational coverage is unevenly distributed, revealing inequities in immunization. Subnational coverage for DTP3 is used as an index of inequity in immunization, despite lower subnational coverage for other vaccines than for DTP3 in some Member States *(4)*. In 2023 in 29 (60%) of the 48 Member States with

subnational data, less than 90% of districts achieved ≥ 95% coverage. At district level across the Region, DTP3 coverage was ≥ 95% in only 55% of districts, 90–94% in 24% of districts and < 90% in 21% of districts. Notably, measles outbreaks occurred in four Member States (8%) despite high DTP3 coverage (> 90%) in most districts, indicating that pockets of undervaccinated populations exist in areas with high overall immunization coverage. Addressing these geographical and population-based immunization inequities is essential for the sustainable control and elimination of vaccine-preventable diseases *(4)*.

HPV is the leading viral infection of the reproductive tract, causing cervical cancer in women and other cancers and genital warts in both sexes *(26)*. In 2018 an estimated 110 000 new cancer cases were attributable to HPV in the WHO European Region, in both men and women *(27)*. The *Global strategy to accelerate the elimination of cervical cancer as a public health problem* emphasizes that HPV vaccination is crucial to reduce cervical cancer rates, with a target of 90% immunization coverage by 2030 among girls by 15 years of age *(26,28)*. Although vaccination primarily targets pre-sexually active girls, it is also recommended for secondary groups where feasible, including boys, older girls and women, men who have sex with men, immunocompromised individuals and people living with HIV *(29)*.

By 2023, 45 Member States (85%) of the Region had integrated HPV vaccination into their national immunization programmes (Fig. 4.6) *(25)*, thereby achieving the 2025 EPW-MF's target *(2)*.

Fig. 4.6. HPV vaccine introduction in the WHO European Region, 2023



Note: the designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

Source: created by the WHO GIS Centre for Health DNA/DDI based on data in WHO *(5,25)*.

Despite this progress, last-dose HPV vaccination coverage among girls in the WHO European Region increased from 21% in 2013 to only 35% in 2023: higher than the global average of 20% but lower than the coverage of 55% reported in the WHO Region of the Americas *(25)*. HPV vaccination coverage also remains uneven. Despite 40% of Member States reporting coverage of between 50% and 89%, only 6% have achieved 90% coverage of the annual targeted population. Four Member States that had introduced HPV vaccination did not report coverage data.

The COVID-19 pandemic disrupted routine immunization services in the Region, causing a decline in immunization coverage across many Member States *(10)*. The disruption was primarily due to the pandemic's overwhelming impact on the health system and the challenges associated with rolling out the COVID-19 vaccine. While 1.8 billion COVID-19 vaccine doses were administered, the average MCV2 coverage in the Region decreased by only one percentage point, and DTP3 coverage remained stable between 2019 and 2023. However, fewer Member States achieved the European Immunization Agenda 2030's national vaccination target of 95% coverage. By 2023 DTP3 coverage of ≥ 95% had been achieved in 25 (47%) of the 53 Member States, down from 32 (60%) in 2019. Similarly, MCV2 coverage of ≥ 95% declined to 12 of 52 Member States (23%) from 22 (42%). The most significant decreases in coverage during 2020–2021 occurred in Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan and North Macedonia. Despite some recovery in 2022–2023, vaccination rates in most Member States remain below pre-pandemic levels *(10,25)*.

The consequent immunity gap contributed to a resurgence of vaccine-preventable diseases across the Region. In 2023 over 58 000 measles cases were reported across 41 Member States, resulting in thousands of hospitalizations and 10 deaths *(30)*. Additionally, 87 000 pertussis cases were reported, the highest number in the last decade (2013–2023) *(31)*. In response, affected Member States strengthened surveillance and immunization services. Targeted catch-up campaigns in 18 Member States vaccinated over 16.5 million children, with particularly high numbers in Armenia, Kazakhstan, Kyrgyzstan, Romania, Tajikistan and Uzbekistan *(22,32)*. Despite these efforts, measles transmission persists, with 56 634 cases and four deaths reported across 45 Member States in the first quarter of 2024 *(30)*.

These coverage trends underscore the fragility of health systems and the need for resilient immunization services. WHO, UNICEF and the Gavi Alliance launched the Big Catch-Up recovery plan for 2023 and beyond, which sets out a pathway to getting immunization back on track through three key approaches – catch-up, restore and strengthen *(32)*. The plan emphasizes the importance of tracking vaccination status beyond early childhood and of integrating unvaccinated older children into routine schedules. The WHO Regional Office for Europe's operational guidance adapts this global framework to the Regional context, and several Member States have already institutionalized immunization recovery plans within their routine immunization services *(33)*. Lessons learned from the COVID-19 vaccine rollout are being applied to strengthen routine immunization through the following measures/strategies: the digitalization of immunization information systems; innovative approaches to address vaccine demand, drivers and barriers; and promotion of life-course vaccination beyond childhood.

4.3 AMR

Main findings

- AMR continues to pose a critical threat to global public health, with bacterial AMR being associated with over half a million deaths in the WHO European Region in 2019 and projected to cause three deaths every minute between 2025 and 2050 globally.
- Combating AMR requires a One Health response across human health, food production, animal health and environmental sectors. Optimizing antibiotic use in patients is a key element in this. An important recommendation is to use so-called Access antibiotics as the first or second choice for empirical treatment due to their lower resistance potential.
- In 2022 only half of reporting Member States met the target that at least 60% of its total antibiotic consumption should be Access group antibiotics. Despite periodic fluctuations, no further improvement overall has been achieved since 2014, highlighting the need for strengthened stewardship programmes to reduce inappropriate antibiotic use.
- The new *Roadmap on antimicrobial resistance for the WHO European Region 2023–2030*, which builds on the *Global action plan on antimicrobial resistance*, will contribute to improving antibiotics consumption patterns and support other critical high-impact interventions to tackle AMR effectively. In addition, the AMR accountability index will be a key lever in driving action on AMR in the WHO European Region.

AMR is one of the top 10 global public health threats today, putting modern medicine, food supplies and economies at risk and undermining progress towards achieving the SDGs. In 2019 bacterial AMR was associated with over half a million deaths in the WHO European Region *(34)*. Each year, increased health expenditure and reduced workforce productivity due to AMR are costing countries of the European Union (EU)/European Economic Area (EEA) nearly €11.7 billion *(35)*. Bacterial AMR is projected to cause 39 million deaths globally between 2025 and 2050, equivalent to three deaths every minute *(36)*. Addressing AMR necessitates a multifaceted response and coordinated efforts across the human health, food production, animal health and environmental sectors.

The WHO European Region has led the effort against AMR through the adoption of the *European strategic action plan on antibiotic resistance* (2011–2020) *(37)* and the European Commission's *Action plan against the rising threats from antimicrobial resistance* (2011–2016) *(38)*. These were followed by the adoption of a *Global action plan on antimicrobial resistance* in May 2015 at the Sixty-eighth World Health Assembly to combat AMR, which focuses on reducing inappropriate antibiotic use and improving stewardship to preserve the efficacy of existing treatments *(39)*. AMR surveillance in the WHO European Region is covered by two networks: the Central Asian and European Surveillance of Antimicrobial Resistance network *(40)* and the European Antimicrobial Resistance Surveillance Network *(41)*. Results from these networks clearly show that AMR remains widespread in the Region. AMR development and spread directly correlate with the use of antimicrobial medicines *(42)*.

The latest AMR surveillance data from 2023 highlight worrying resistance trends across key bacterial species in the WHO European Region *(43)*. For example, third-generation cephalosporin resistance in *Klebsiella pneumoniae* was at or above 50% in 19 (43%) Member States, with particularly high rates observed in southern and eastern parts of the Region. Similarly, carbapenem resistance in *Acinetobacter* spp. exceeded 50% in 18 (43%) Member States, mainly in the south and east of the Region. High resistance rates in pathogens such as *K. pneumoniae* and *Acinetobacter* spp. underscore a worrying reliance on broad-spectrum (Watch and Reserve) antibiotics over Access antibiotics. This trend is driven

by several challenges, including limited diagnostic testing and a lack of susceptibility data. These issues often compel clinicians to use broad-spectrum antibiotics for empirical treatment but without the ability to transition to narrow-spectrum options once a diagnosis is confirmed, thus reinforcing a cycle of increasing resistance.

In 2017 the WHO Expert Committee on Selection and Use of Essential Medicines introduced the AWaRe classification to optimize and monitor global antibiotic use *(44)*. This system classifies antibiotics into three categories: Access, Watch and Reserve. Access group antibiotics are recommended as the first or second choice for empirical treatment due to their lower resistance potential. Watch antibiotics, with a higher resistance potential, should be used for a limited number of specific infections. Reserve antibiotics are reserved for severe, multidrug-resistant infections *(44)*.

The EPW-MF *(2)* followed the WHO Thirteenth General Programme of Work, 2019–2023 *(45,46)* in setting a target that at least 60% of total antibiotic consumption should be Access group antibiotics. The Political Declaration of the United Nations General Assembly High-level Meeting on Antimicrobial Resistance of 2024 sets a more ambitious target of 70% Access antibiotic use by 2030 through strengthened stewardship programmes *(9)*. Progress towards the proposed targets is monitored by the European Surveillance of Antimicrobial Consumption Network *(7)* (based on data provided by the European Centre for Disease Prevention and Control (ECDC))[19] and the WHO Antimicrobial Medicines Consumption Network *(6)*.

In 2022, 44 Member States of the WHO European Region reported antibiotic consumption data; however, only 21 of these met the 60% target (Table 4.1) *(6,7)*. Within the Antimicrobial Medicines Consumption Network, only four Member States achieved this goal: Belarus (68%), Kyrgyzstan (67%), Switzerland (66%) and Bosnia and Herzegovina (62%) *(6)*. During 2014–2022, the proportion of Member States meeting the 60% target for Access antibiotic consumption showed no sustained improvement (with 50.0% consumption in both 2014 and 2022). A peak of 56.5% was reached in 2019, followed by a drop to 48.9% during the first year of the COVID-19 pandemic in 2020, before a temporary recovery to 54.5% in 2021. Although countries have shown a capacity for improvement, as seen in 2019 and the post-pandemic recovery, the inability to maintain these gains suggests a need for more robust and sustainable antibiotic stewardship programmes.

Table 4.1. Member States achieving the WHO target of 60% of total consumption being Access agents, 2014–2022

Member State	2014	2015	2016	2017	2018	2019	2020	2021	2022
Access agents as a percentage of total consumption									
Albania	61	48	51	44	40	37	45	–	39
Andorra	–	–	–	–	–	–	–	–	–
Armenia	67	68	57	66	63	57	47	50	50
Austria	–	–	–	–	–	58	61	60	59
Azerbaijan	58	61	50	56	62	71	46	40	50
Belarus	57	60	56	62	61	67	47	66	68
Belgium	62	62	63	63	66	68	67	68	69
Bosnia and Herzegovina	69	69	70	68	66	63	53	58	62

[19] Data on antimicrobial consumption for EU/EEA Member States are provided by ECDC, as sourced from national sales, reimbursement records or national drug registers. ECDC is not responsible for the accuracy, completeness, timeliness or management of the data or for any processing operations. ECDC disclaims liability for any analysis, conclusions or misapplications of the data (updated July 2023).

Table 4.1. contd

Member State	2014	2015	2016	2017	2018	2019	2020	2021	2022
Access agents as a percentage of total consumption									
Bulgaria	49	46	44	45	45	45	41	38	41
Croatia	61	63	65	63	62	63	61	60	60
Cyprus	55	52	48	49	49	49	44	48	55
Czechia	–	–	–	–	–	60	62	61	59
Denmark	78	79	78	78	78	78	79	79	80
Estonia	59	58	60	59	61	61	61	64	64
Finland	71	72	72	72	72	73	70	70	72
France	67	68	70	71	71	72	70	72	71
Georgia	32	46	60	64	43	54	53	36	42
Germany[a]	52	50	52	54	56	60	63	65	64
Greece	40	44	47	46	47	47	49	52	43
Hungary	50	48	48	48	48	51	51	49	49
Iceland	–	–	–	82	81	83	83	83	84
Ireland	62	66	65	64	68	70	71	74	74
Israel	–	–	–	–	–	–	–	–	–
Italy	46	47	48	48	47	49	47	48	47
Kazakhstan		63	60	57	53	–	–	–	–
Kyrgyzstan	53	72	56	50	34	54	54	61	67
Latvia	70	67	69	69	68	69	69	71	71
Lithuania	70	69	69	69	68	68	68	71	71
Luxembourg	54	54	53	48	58	60	60	61	61
Malta	43	43	46	49	46	50	55	58	55
Monaco	–	–	–	–	–	–	–	–	–
Montenegro	61	56	58	59	57	60	48	46	51
Netherlands	71	71	71	71	72	71	70	70	71
North Macedonia[a]	53	49	50	48	47	46	41	42	48
Norway	62	62	62	61	61	64	59	59	62
Poland	64	64	61	60	56	60	63	61	57
Portugal	60	59	60	63	63	61	62	62	61
Republic of Moldova	49	56	47	49	51	–	–	–	–
Romania	56	58	56	54	53	53	50	49	50
Russian Federation	51	51	51	51	50	50	41	43	45
San Marino	–	–	–	–	–	–	–	–	–
Serbia	68	65	63	60	51	58	45	42	49
Slovakia	47	43	46	42	39	42	44	40	38

Table 4.1. contd

Member State	2014	2015	2016	2017	2018	2019	2020	2021	2022
Access agents as a percentage of total consumption									
Slovenia	60	63	63	61	61	62	63	64	62
Spain	–	–	63	63	63	63	62	62	61
Sweden	71	70	70	71	71	71	68	68	–
Switzerland[b]	55	56	58	58	60	61	63	64	66
Tajikistan	65	58	62	46	43	55	41	49	48
Türkiye	45	45	47	48	51	51	53	56	54
Turkmenistan	–	–	–	–	–	–	–	–	–
Ukraine	46	37	51	42	40	34	19	35	40
United Kingdom	64	65	65	67	67	68	68	69	71
Uzbekistan	–	–	31	42	30	35	–	–	–
Member States meeting the EPW-MF target of 60%									
Percentage of reporting Member States	50.0	48.8	48.9	47.8	47.8	55.5	48.9	54.5	50.0
Member States where data are unavailable									
No.	11	10	8	7	7	8	8	9	9

Notes: green cells indicate that a country has met the 60% target for Access agents (those recommended as first or second choice for empirical treatment due to their lower resistance potential); data include both community and hospital sector consumption (apart from Germany and North Macedonia), with all country estimates rounded up; total consumption of antibiotics for this calculation included J01 antibacterials, neomycin (A07AA01), streptomycin (A07AA04), polymyxin B (A07AA05), kanamycin (A07AA08), vancomycin (A07AA09), colistin (A07AA10), rifaximin (A07AA11), fidaxomicin (A07AA12), rifamycin oral (A07AA13), rifampicin (J04AB02), rifamycin intravenous (J04AB03), rifabutin (J04AB04), metronidazole (P01AB01), tinidazole (P01AB02), ornidazole (P01AB03) and secnidazole (P01AB07); see also additional methodological considerations in Annex 1.

[a] Data for Germany and North Macedonia refer to antimicrobial consumption in the community sector only.

[b] Data for Switzerland include consumption data for Liechtenstein.

Sources: WHO Regional Office for Europe *(6)*, ECDC *(7)* and WHO *(8)*.

Results of the Tracking Antimicrobial Resistance Country Self-assessment Survey (better known by the acronym TrACSS) revealed that 38% of Member States lack standardized national AMR data collection, with surveillance limited to local level *(47)*. This gap in reliable resistance pattern data hampers informed prescribing decisions and stewardship efforts. Without robust national data on pathogen prevalence and susceptibility, prescribers often default to broad-spectrum Watch or Reserve antibiotics rather than to Access group options. Thus, countries with stronger surveillance and diagnostic systems are better positioned to promote the use of Access group antibiotics. In contrast, those with weaker systems tend to rely more heavily on broad-spectrum options.

Two additional surveys, the AMR Eurobarometer in EU/EEA countries *(48)* and the WHO Regional Office for Europe's Knowledge, Attitudes and Behaviours survey in non-EU Member States *(49)*, revealed notable differences in antibiotic access and use. Self-reported antibiotic consumption was 50% in non-EU States and 23% in EU/EEA countries (the lowest since 2009). Non-prescription antibiotic use was also higher in non-EU States (22% vs 8% in EU/EEA countries). However, misconceptions about antibiotics were equally prevalent in non-EU and EU/EEA countries, with 50% of respondents in both surveys believing that antibiotics are effective against viruses or colds.

The *Roadmap on antimicrobial resistance for the WHO European Region 2023– 2030 (34)* builds on the *Global action plan on antimicrobial resistance (39)*, providing a robust framework for nations to identify, prioritize, implement and monitor high-impact interventions to tackle AMR effectively. Key areas of focus in the Roadmap include improving infection prevention and control, stewardship programmes to optimize antibiotic use, measures for surgical antibiotic prophylaxis, and diagnostic stewardship. Further interventions involve addressing environmental and social determinants, enhancing laboratory capabilities, developing workforce competencies and leveraging research and digital technologies to innovate and improve surveillance and treatment regimes. These strategies are also integral to achieving universal health coverage, working towards the SDGs, strengthening primary health care and enhancing pandemic preparedness and response *(34)*.

Creating accountability is a key factor in successfully achieving WHO and United Nations goals and targets. Therefore, as part of the AMR roadmap, the 53 Member States of the WHO European Region agreed that the WHO Regional Office should develop a monitoring, evaluation and accountability framework. With this mandate, the WHO Regional Office is leading the development and piloting of the first AMR accountability index in Europe and central Asia. This index will help countries to benchmark and measure their progress in controlling AMR and drive action on AMR in the WHO European Region.

4.4 MDR/RR-TB treatment success rate

Main findings

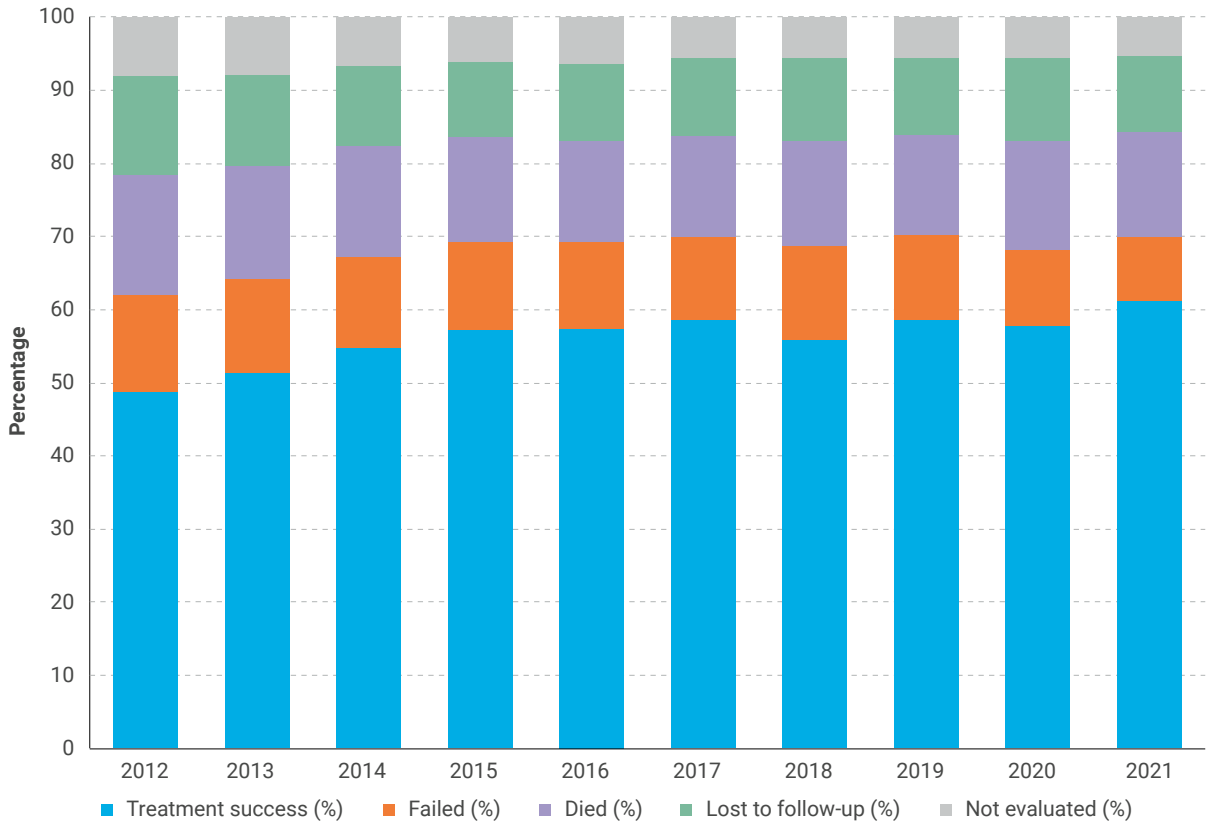
- Between 2015 and 2022 the WHO European Region experienced a net reduction of 25% in TB incidence and a 32% reduction in TB deaths, indicating partial progress towards WHO End TB Strategy 2025 targets.
- Drug resistance continues to be a major obstacle to ending TB. While the prevalence of MDR-TB (resistant to rifampicin and isoniazid) and RR-TB (resistant to rifampicin) among previously treated patients decreased from 60% in 2015 to 54% in 2022, among newly diagnosed patients it increased from 21% in 2015 to 24% in 2022.
- The treatment success rate for patients with MDR/RR-TB enrolled in 2021 reached 61.3% for the Region, substantially below the EPW-MF's milestone of 80% for 2025 (with considerable variation also across Member States).
- WHO and partners are working with Member States to improve access to TB and MDR/RR-TB medicines by focusing on incentivizing manufacturers, developing paediatric formulations and overcoming financial barriers to ensure sustained availability.

The WHO End TB Strategy aims for ambitious reductions in TB incidence and mortality by 2025 compared with 2015 levels: of 50% and 75%, respectively *(50)*. In 2022 the WHO European Region recorded an estimated 229 000 TB cases, representing a 25% reduction since 2015, with an incidence rate of 25 per 100 000 population (95% uncertainty interval (UI)[20]: 21–28) *(51,52)*. The estimated mortality rate also declined to 1.9 deaths per 100 000 population (95% UI: 1.8–2.0), representing a 32% reduction compared with 2015 and indicating some progress towards the 2025 goals. However, drug-resistant *M. tuberculosis* continues to be a major obstacle to TB elimination. Drug-resistant strains arise when antibiotics for treating TB are misused – once a drug-resistant strain has developed, it can be transmitted among people. The standard treatment for drug-susceptible TB is a 6-month regimen consisting of first-line drugs: ethambutol, isoniazid, pyrazinamide and rifampicin. However, RR-TB (resistant to rifampicin) and MDR-TB (resistant to rifampicin and isoniazid) require more complex and expensive treatments involving drugs such as bedaquiline and fluoroquinolones, which are harder to access and often associated with more severe side-effects. The treatment success rate for MDR/RR-TB is a critical indicator of progress towards universal health coverage, as outlined by the EPW-MF *(2)*. The MDR/RR-TB treatment success rate is the proportion of patients with MDR/RR-TB who achieve a successful treatment outcome out of those who initiated MDR/RR-TB treatment within a reporting period.

In 2022 the WHO European Region, which has only 2.2% of the global TB burden, accounted for 16.3% of all incident MDR/RR-TB cases worldwide *(51)*. Across the Region, an estimated 67 000 people had incident MDR/RR-TB, accounting for 24% (95% UI: 17–31) of all new TB cases, an increase from 21% (95% UI: 14–28) in 2015. In 2022 54% (95% UI: 26–81) of those with previously treated TB had MDR/RR-TB, an improvement from the 60% (95% UI: 25–95) estimated in 2015 *(52,53)*. Coverage for rifampicin resistance testing has improved considerably, reaching 94% in 2022 *(54)*. For patients enrolled between 2012 and 2021, the Regional MDR/RR-TB treatment success rate improved modestly from 48.8% to 61.3% (Fig. 4.7) *(55)*. Despite this progress, the rate remains well below the EPW-MF's 2025 milestone of 80% *(2)*, underscoring persistent challenges in achieving optimal treatment outcomes in the Region.

[20] Uncertainty interval is also known as the confidence interval.

Fig. 4.7. Treatment outcomes for MDR-TB and RR-TB in the WHO European Region, 2012–2021



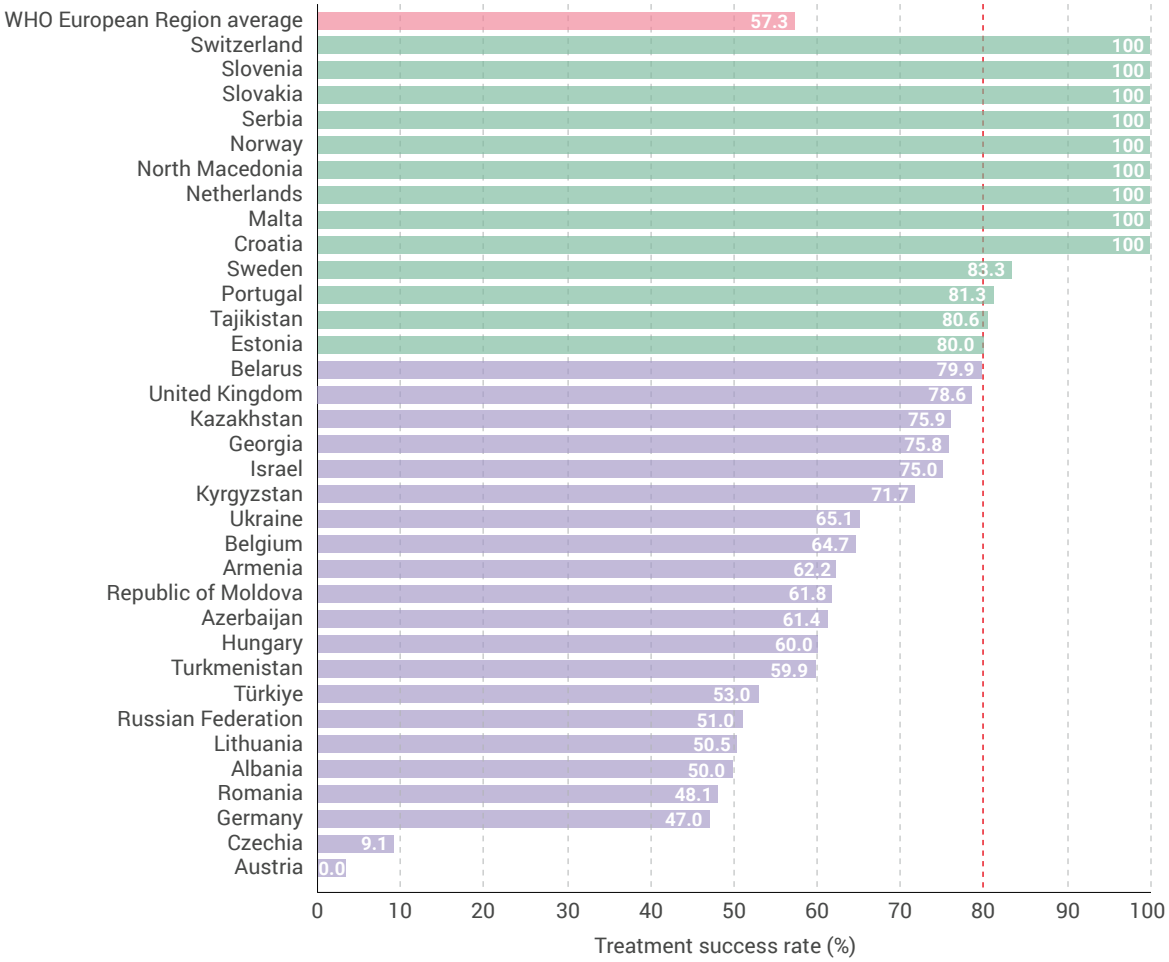
Sources: data from WHO *(54)*; ECDC, WHO Regional Office for Europe *(55)*.

At the time of writing, data at Member State level were only available for the 2020 cohort. These data showed significant variation in MDR/RR-TB treatment success rates, ranging from 0% to 100%. In the 2020 cohort, 13 Member States achieved MDR/RR-TB treatment success rates of 80% or more (Fig. 4.8) *(55)*.

Adoption of the 6-month all-oral MDR-TB treatment regimens, as recommended by WHO in its December 2022 update on treatment guidelines *(56)*, is hindered by high costs and limited market sustainability due to the small number of MDR/RR-TB cases in some EU/EEA countries. Furthermore, financial responsibility for treatment is often unclear, particularly for those needing outpatient or preventive care and migrants *(57)*.

The Russian Federation, which has the highest MDR/RR-TB burden in the Region (representing 46.3% of all incident cases), has not adopted the 6-month regimen for drug-resistant TB because one of its components, pretomanid, has not obtained regulatory approval *(58)*. Ukraine, which has the second-highest MDR/RR-TB burden in the Region *(55)*, used to have broader access to MDR/RR-TB treatment. However, the ongoing war and humanitarian crisis has disrupted treatment for many displaced Ukrainians, who struggled to access treatment in their new host countries *(59)*. WHO and its partners are actively working with Member States to address access and availability issues for TB and MDR/RR-TB medicines in the WHO European Region. Discussions are ongoing on how to incentivize manufacturers, develop paediatric formulations and address financial obstacles to new patented drugs to enhance access to and sustain the availability of TB medicines. As Member States with low incidence progress towards TB elimination, collaborative and coordinated efforts are essential *(57)*.

Fig. 4.8. MDR/RR-TB treatment success rates for those who started treatment in 2020 as reported by 34 Member States of the WHO European Region



Note: the red dotted line indicates the EPW-MF's 2025 milestone of 80% treatment success rate *(14)*.

Source: ECDC, WHO Regional Office for Europe *(55)*.

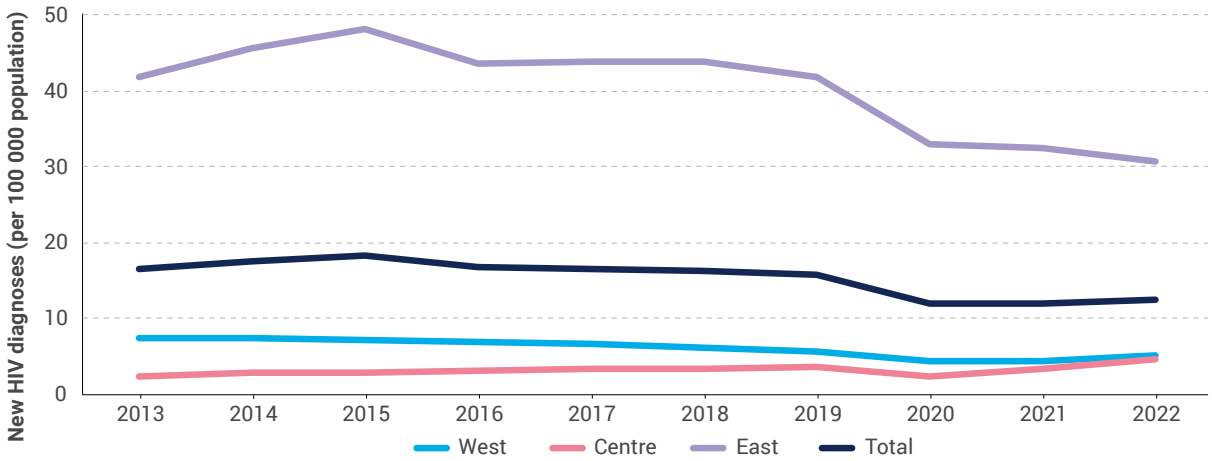
4.5 HIV: ART coverage

Main findings

- In 2022 about 63% (95% UI: 55–70) of people living with HIV received ART. In eastern Europe and central Asia, coverage was lower, at 51%. These figures demonstrate significant progress from 2015, when coverage was 45% across the WHO European Region and 25% in eastern Europe and central Asia.
- Only five Member States in the WHO European Region have reached the EPW-MF target of 90% ART coverage.
- The Region faces substantial funding gaps in HIV prevention, particularly in eastern Europe and central Asia, where infections are rising. To meet the 2030 targets, it is critical to eliminate discriminatory laws, close treatment gaps, improve access to affordable medicines and increase domestic funding.

At the end of 2022 an estimated 3 million people were living with HIV in the WHO European Region (95% UI: 2.6–3.3), and only 72% of people were aware of their HIV status *(60)*. The number of HIV infections diagnosed in the Region decreased from 16.4 to 12.4 per 100 000 population from 2013 to 2022. Data for 2022 indicated that most HIV programmes were recovering from the COVID-19 pandemic and were improving their testing strategies. There was a 1.3% increase in diagnoses of HIV infection between 2021 and 2022, with 37 out of 49 Member States reporting rising numbers. Several countries recorded their highest-ever annual number of diagnoses. Substantial subregional differences were observed: eastern Europe recorded the highest rates at 30.7 per 100 000 population (accounting for 72% of the 110 486 people diagnosed with HIV infection), whereas western and central Europe reported much lower rates of 5.1 and 4.5 per 100 000 population, respectively (Fig. 4.9) *(61)*. The highest rates (per 100 000 population) were reported in the Russian Federation (38.4), Ukraine (29.8), the Republic of Moldova (28.4) and Cyprus (24.1). The Russian Federation alone accounted for over half of the Region's diagnoses of HIV infection in 2022 (50.3%) and for 70.2% of HIV infections in eastern Europe, significantly influencing the epidemic's pattern across the Region.

Fig. 4.9. Trends in new HIV diagnosis rates by area in the WHO European Region, 2013–2022



Notes: data from Andorra, Monaco, Turkmenistan and Uzbekistan were excluded due to inconsistent reporting during the period. Centre (15 countries): Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Hungary, North Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Türkiye; east (13 countries): Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Republic of Moldova, Russian Federation, Tajikistan, Ukraine; west (21 countries): Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, San Marino, Spain, Sweden, Switzerland, United Kingdom.

Source: ECDC, WHO Regional Office for Europe *(61)*.

HIV infection rates among men were nearly double those in women, with the main reported modes of transmission being heterosexual sex (53%), sex between men (26%) and injecting drug use (17%) *(61)*. There was also an increase in undiagnosed HIV infections, underscoring the need for enhanced testing and diagnosis across the Region.

Early initiation of ART is crucial for reducing HIV-related morbidity and mortality and preventing further HIV transmission *(61)*. Globally, HIV treatment has averted almost 20.8 million AIDS-related deaths since the early 1990s *(62)*. However, in 2022 about 9.2 million people living with HIV globally did not receive HIV treatment, primarily due to accessibility issues and cost *(60)*.

In 2021 WHO Member States adopted the 95–95–95 targets: 95% of people living with HIV to be diagnosed, 95% of those diagnosed with HIV to receive ART and 95% of all those receiving ART to achieve viral suppression *(63)*. These targets are also presented as cascade-of-care targets, with percentages calculated based on the total number of people living with HIV, which remains a constant denominator, such that the targets are expressed as 95–90–86 *(63)*. ART coverage is one of the 14 tracer indicators included in the UHC Service Coverage Index (SDG 3.8.1) *(64)*. The EPW-MF also includes this indicator, where it is measured as the percentage of all people living with HIV receiving ART, with a target of achieving 90% coverage by 2025 *(2)*.

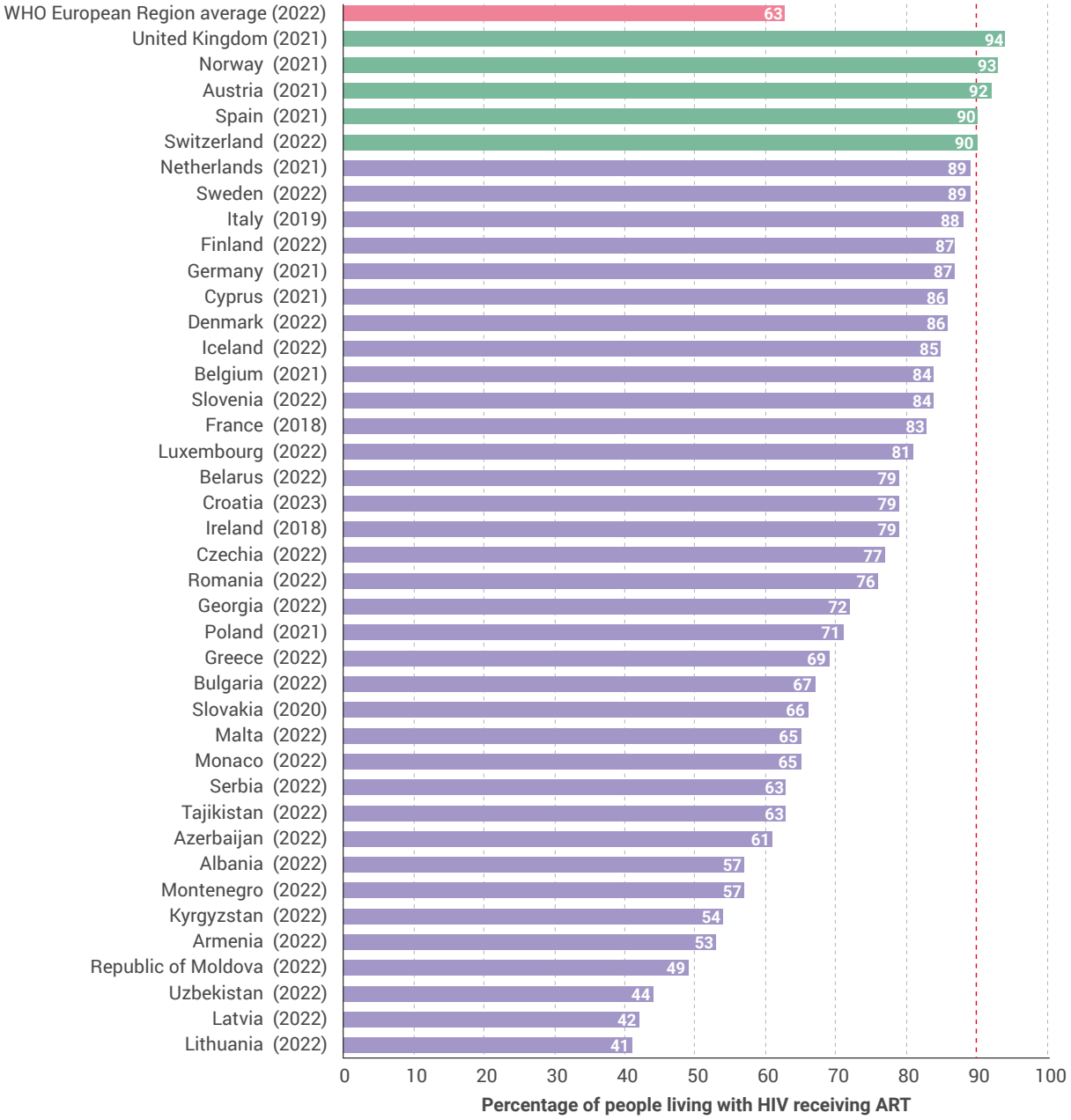
The average regional coverage improved from 45% (95% UI: 40–50) in 2015 to 63% (95% UI: 55–70) in 2022 *(65,66)*; eastern Europe and central Asia reported a lower ART coverage, with only 51% of people living with HIV receiving ART, although this was an improvement from 25% in 2015 *(67)*. ART coverage estimates varied widely, ranging from 41% in Lithuania to 94% in the United Kingdom. Based on the latest available data in 2022, only five Member States have achieved the EPW-MF's target of 90% ART coverage: Austria, Norway, Spain, Switzerland and the United Kingdom (Fig. 4.10).

The full-scale invasion in Ukraine has led to severe disruptions in critical health services, including HIV service delivery. The crisis has forced millions of Ukrainians to flee to other countries. Member States in the WHO European Region hosting these refugees must ensure that they have access to necessary health services, including ART. As of May 2023 an estimated 6519 Ukrainian refugees were receiving ART in host countries *(68)*.

The WHO European Region has not achieved effective control of the AIDS epidemic, with both new HIV infections and AIDS-related deaths increasing since 2010. The Region is behind schedule to reach the 95–95–95 targets. Progress is uneven: although EU/EEA countries were close in 2022, reaching percentages of 91–93–92 *(69)*, the eastern part of the Region had reached percentages of 62–82–94 *(60)*. Unsafe injecting practices, inadequate prevention services for marginalized groups and the obstacles created by punitive laws and social stigma have further exacerbated the epidemic *(60,67)*. Moreover, substantial funding gaps remain in HIV prevention, particularly in eastern Europe and central Asia *(60)*. Achieving the 2030 targets Region-wide will require maintaining strong commitments and adequate funding to reduce new HIV infections. Innovating and modernizing HIV programmes with new tools are also essential, as is expanding full-set programmes for key populations to create safe, stigma-free spaces where people can access services and share their experiences. Therefore, public health policies should prioritize key populations and people living with HIV by eliminating laws that criminalize behaviours and, thus, hinder service utilization. Lastly, encouraging regular HIV testing and early treatment will help to normalize HIV testing and reduce stigma *(60)*.

To this end, the WHO European Region has focused on high-level political commitment. The Spanish Presidency of the Council of the European Union prioritized eliminating HIV-related stigma and discrimination, highlighted in a high-level meeting on 15 September 2023. The outcomes were documented in a policy brief adopted on World AIDS Day, 1 December 2023. The WHO Regional Office for Europe and the Spanish Ministry of Health led regional meetings in Seville to promote the integration of WHO HIV guidelines into national responses *(70)*. The Keeping the Promise ministerial event, organized by the WHO Regional Office for Europe and the German Federal Ministry of Health, gathered 300 participants to discuss ending AIDS and other epidemics in eastern Europe and central Asia. WHO Regional Director Dr Hans Henri P. Kluge and the Parliamentary State Secretary of the Federal Ministry of Health of Germany highlighted the urgency of meeting these commitments. The event concluded with reflections on progress and future ambitions, emphasizing the need to bridge gaps in combating these diseases *(71)*.

Fig. 4.10. Percentage of people living with HIV receiving antiretroviral treatment in WHO European Member States



Note: the latest year for data is given in parentheses; the red dotted line indicates the EPW-MF's 2025 milestone of 90% coverage with ART *(2)*.

Source: adapted from ECDC data *(61)* for EU/EEA Member States, excluding Malta and Latvia, and from WHO *(65)* and Joint United Nations Programme on HIV and AIDS *(67)* for all other countries.

4.6 Treatment coverage for HCV

Main findings

- Over 8.6 million people in the WHO European Region live with a chronic HCV infection, accounting for nearly 1% of the population.
- HCV infection can be effectively treated orally with direct-acting antiviral drugs, which clears the infection in over 95% of patients. Despite this, by the end of 2022, only 9% of people living with HCV in the Region had received treatment.
- The cost of treatment with direct-acting antiviral drugs remains high. Member States of the Region – including middle-income countries –continue to pay higher prices for hepatitis medicines than the global benchmark of US$ 60 for a 12-week course.

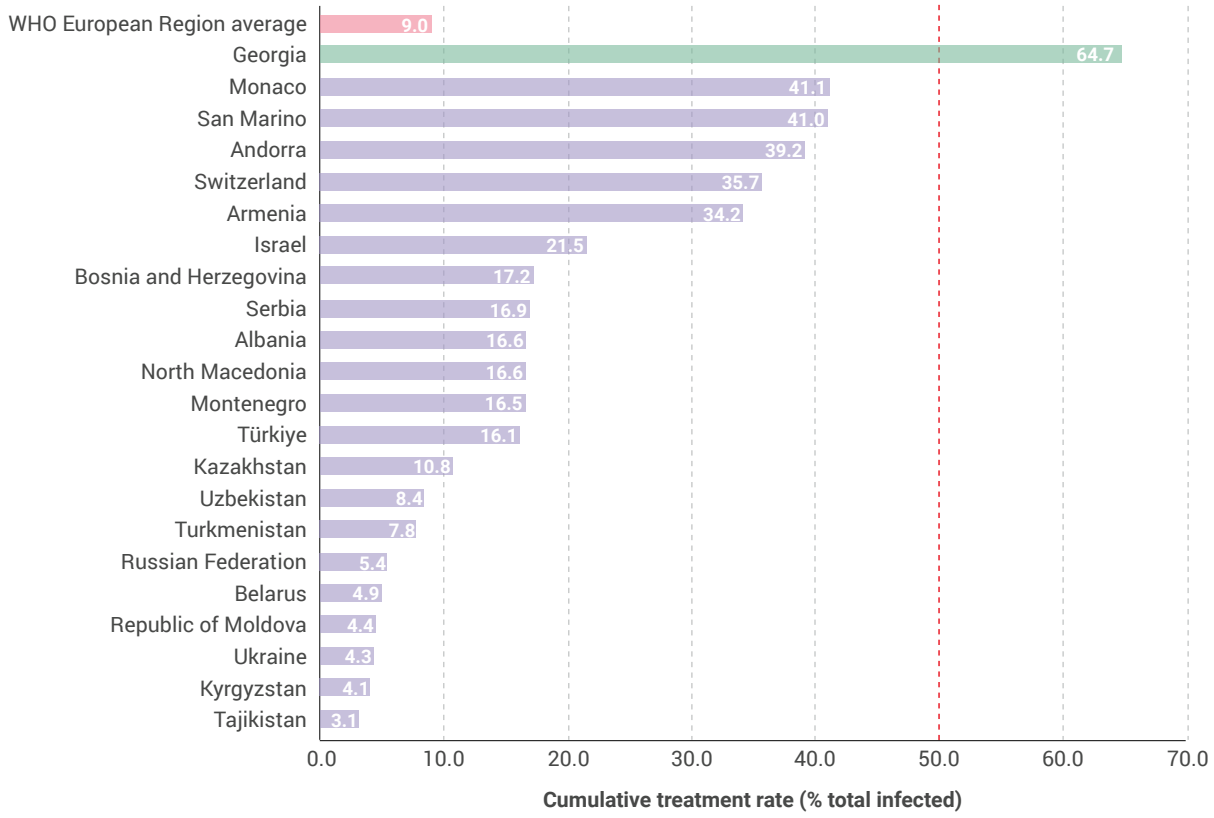
Viral hepatitis is a major public health threat of the current decade. It leads to liver inflammation and is caused by five main hepatitis viruses: A, B, C, D and E. Hepatitis B virus and HCV are the primary causes of chronic infections, which can lead to cirrhosis and liver cancer *(72)*.

In the WHO European Region, over 8.6 million people, including those who have been cured of acute HCV infection, are estimated to be living with chronic HCV infection. Estimates range from 4.7 million to 17 million, representing nearly 1% of the population. Member States that are particularly affected include Azerbaijan, Belarus, Germany, Italy, Kazakhstan, Romania, Russian Federation, Tajikistan, Türkiye, Ukraine and Uzbekistan. The Russian Federation alone accounts for nearly a third of the total cases (at 2.7 million), followed by Ukraine and Uzbekistan (at 1.2 million and 1 million cases, respectively) *(72)*. WHO estimates that approximately 126 000 new HCV infections occurred in 2022. Research published by WHO and utilizing data from 1995–2020 indicates that most new infections are transmitted via unsafe injection drug use (approximately 73%), with unsafe medical injections contributing to about 18% *(72)*.

If left untreated, HCV infection can lead to severe liver diseases and fatalities. In 2022 hepatitis C was estimated to be responsible for over 21 000 deaths in the Region. WHO recommends treatment with pan-genotypic direct-acting antiviral drugs, which can cure over 95% of HCV-infected people within 12 weeks *(73)*. The treatment can be decentralized and integrated with primary health care and low-threshold services. The most used low-cost pangenotypic direct-acting antiviral regimen comprises sofosbuvir and daclatasvir.

The EPW-MF indicator, which tracks the cumulative treatment rate of chronic HCV infection as a percentage of the estimated infected population, is linked to SDG Target 3.3 *(15)* and has a target of 50% coverage by 2025 *(2)*. However, by the end of 2022, only 9% of people living with hepatitis C in the WHO European Region had received curative treatment *(72)*. There were significant differences in treatment coverage between Member States of the Region – ranging from 64.7% in Georgia to just 3.1% in Tajikistan *(74)*. Data on treatment coverage for chronic HCV infection were reported by 22 non-EU/EEA Member States to WHO (Fig. 4.11) *(74)* and by five EU/EEA countries to the ECDC (Fig. 4.12) *(75)*.

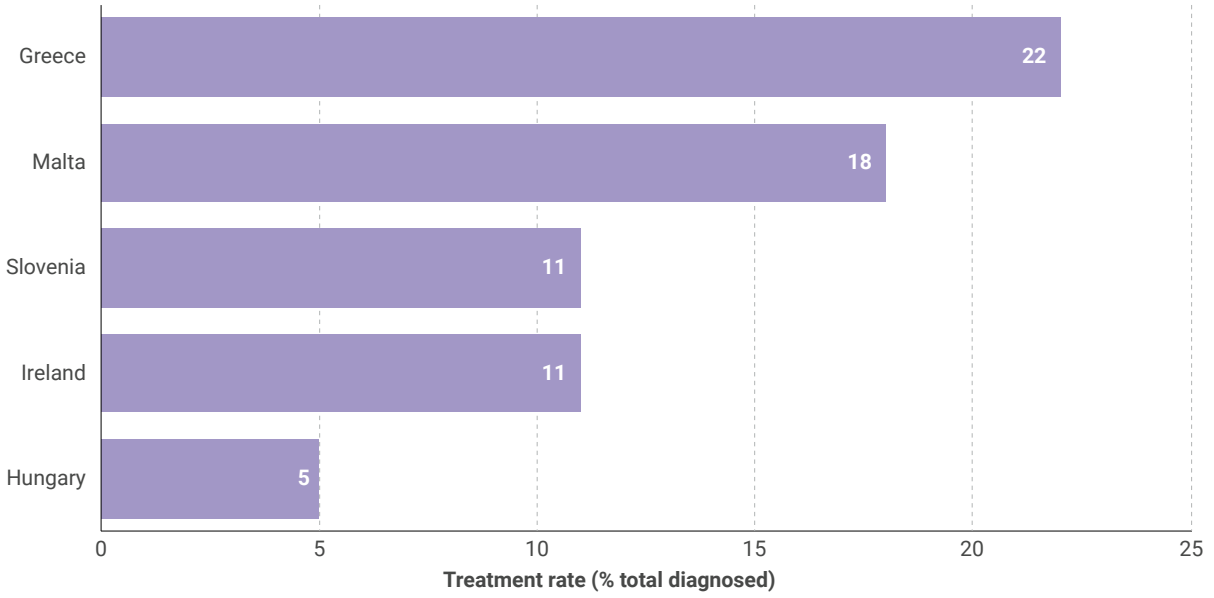
Fig. 4.11. Cumulative treatment rate for chronic HCV infection as a percentage of total infected, including cured, in 22 reporting non-EU/EEA Member States, 2022



Note: the red dotted line indicates the EPW-MF's 2025 milestone of 50% cumulative treatment rate *(2)*.

Source: WHO *(72,74)*.

Fig. 4.12. Treatment rate for chronic HCV infection as a percentage of total diagnosed (excluding cured and deceased) across five reporting EU/EEA Member States, 2022



Note: EU/EEA Member States report treatment coverage data for chronic HCV to the ECDC; these rates correspond to the proportion of those ever diagnosed with chronic HCV (excluding those with resolved infection (cured or naturally cleared) and those who have died); this indicator differs from the WHO definition used for non-EU/EEA countries, which tracks the cumulative treatment rate of chronic HCV as a percentage of the estimated infected population, including cured and deceased. The WHO indicator is essential for measuring EPW targets on the path to elimination of HCV as a public health threat by 2025.

Source: ECDC *(75)*.

The cost of direct-acting antiviral drugs remains a significant barrier, despite price reductions in lower-income countries due to the availability of generic drugs. This cost varies widely in the WHO European Region, often exceeding the global benchmark of US$ 60 for a 12-week treatment, as negotiated by the Hepatitis Fund *(76)* and the Clinton Health Access Initiative *(77)*. Ukraine has the lowest price for generic direct-acting antiviral drugs at US$ 46.20 for sofosbuvir and US$ 14.20 for daclatasvir; in contrast, the Russian Federation reported the highest prices in the Region, at US$ 1543.00 for a 12-week supply of branded sofosbuvir and US$ 1508.60 for a 28-day supply of daclatasvir *(72)*.

WHO's support has enhanced the visibility of viral hepatitis as a major public health concern; strengthened national responses through improved strategic planning and information systems, encompassing surveillance, prevention, testing and treatment guidance; and fostered Regional partnerships *(78)*. Regional priorities for 2030 focus on collecting and using strategic information for equity across the continuum of care; preventing viral hepatitis transmission, especially among key populations; increasing the testing and early diagnosis of viral hepatitis; ensuring early access to treatment and rapid linkage to effective care; and sustaining gains in financing and planning.

4.7 EPW's flagship European Immunization Agenda 2030: immunization policies in Member States

Main findings

- The European Immunization Agenda 2030 is one of the EPW's flagship initiatives. Measures show significant progress towards its goals and strategic priorities. As of 2022 the WHO European Region maintained its polio-free status; 92% of the Member States were verified as having eliminated rubella, paving the way to a Region free of rubella, and 62% were verified as having eliminated measles. In all, 85% of Member States had introduced HPV vaccination as part of the Roadmap to eliminate cervical cancer.
- Despite significant achievements, gaps remain in immunization programme performance. In 2022 risk for polio outbreaks was high in two Member States and intermediate in 14, and gains in measles elimination could be halted or reversed by the declining measles vaccine coverage trend after the COVID-19 pandemic. Addressing gaps requires strategies and policies aligned to the European Immunization Agenda 2030 and strengthened implementation.
- Commitment from Member States to achieve high immunization coverage among the eligible population through the life-course with routine and newly introduced vaccines is reflected in national policies and decision-making mechanisms. In 2023 85% of Member States reported having legislation in place to support immunization services, 66% reported having a national policy outlining the integration of immunization services with primary health-care services to prevent missed opportunities, and 68% reported having functional national immunization technical advisory groups to provide evidence-informed recommendations to shape national immunization policies.

In 2024 the 50th anniversary of the establishment of the Expanded Programme on Immunization was celebrated *(19)*. Establishing the Expanded Programme was a pivotal moment in public health history and has helped to shape national immunization programmes and their guiding policies globally. In 1974 only 5% of the world's children had been vaccinated against diphtheria, tetanus and pertussis *(20)*. Today, that figure has increased to nearly 85% of children worldwide and 94% in the WHO European Region. An estimated over 7.2 million deaths have been averted thanks to vaccination. Following the achievement of smallpox eradication, Member States in the WHO European Region have endorsed resolutions to eradicate polio, eliminate measles and rubella, and eliminate cervical cancer by providing access to vaccination, screening and treatment. The resolutions have shaped immunization strategies and policies across Member States.

These resolutions are also reflected in the European Immunization Agenda 2030 *(10)*, which provides a vision and strategy for Member States to achieve the full benefits of immunization in the WHO European Region for the 2020–2030 decade. The Agenda is one of the EPW's flagship initiatives and was adopted by the 70th session of the Regional Committee for Europe in September 2020 *(79)*. The goals of the Agenda are (i) disease control (control, eliminate or eradicate specific vaccine-preventable diseases; reduce vaccine-preventable disease outbreaks) and (ii) ensure equity and strengthening

of primary health care (equitable access – leave no one behind; strengthen primary health-care – immunization delivery across the life-course).

The European Regional Commission for the Certification of Poliomyelitis Eradication has confirmed that polio-free status is sustained in the WHO European Region and, therefore, in all Member States of the Region *(80)*. Despite this achievement, there is no room for complacency. Between 2020 and 2022, outbreaks of circulating vaccine-derived poliovirus were reported in Israel, Tajikistan, Ukraine and the United Kingdom; and for 2022 two Member States were classified as being at high risk and 14 as being at intermediate risk of the spread of poliovirus following the importation or emergence of circulating vaccine-derived poliovirus *(80)*. In 2022 the European Regional Verification Commission for Measles and Rubella Elimination verified that 33 (62%) Member States had eliminated measles and 49 (92%) had eliminated rubella (Table 4.2) *(81)*. While the achievements for rubella elimination have been consolidated, progress in measles elimination is stagnating, and there is a risk of backsliding due to large outbreaks reported in the Region in 2023–2024. As of 2023, HPV vaccination has been introduced by 85% of Member States and is planned in two additional Member States *(82)*; however, coverage in most Member States remains below the 90% target (described in section 4.2).

Table 4.2. Progress in elimination and control of vaccine-preventable diseases in the WHO European Region, status in 2022

Member State	Measles elimination	Rubella elimination	Polio risk assessment	Polio free (Regional certification)
Albania	✗	✓	Low	✓
Andorra	✓	✓	Low	✓
Armenia	✓	✓	Intermediate	✓
Austria	✓	✓	Intermediate	✓
Azerbaijan	✓	✓	Intermediate	✓
Belgium	✓	✓	Intermediate	✓
Bulgaria	✗	✓	Low	✓
Bosnia and Herzegovina	✗	✗	High	✓
Belarus	✓	✓	Low	✓
Switzerland	✓	✓	Low	✓
Cyprus	✓	✓	Low	✓
Czechia	✓	✓	Low	✓
Germany	✗	✓	Low	✓
Denmark	✓	✓	Low	✓
Spain	✓	✓	Low	✓
Estonia	✓	✓	Intermediate	✓
Finland	✓	✓	Low	✓
France	✗	✓	Low	✓
United Kingdom	✓	✓	Low	✓
Georgia	✗	✓	Intermediate	✓

Table 4.2. contd

Member State	Measles elimination	Rubella elimination	Polio risk assessment	Polio free (Regional certification)
Greece	✓	✓	Low	✓
Croatia	✓	✓	Low	✓
Hungary	✓	✓	Low	✓
Ireland	✓	✓	Low	✓
Iceland	✓	✓	Low	✓
Israel	✗	✗	Low	✓
Italy	✗	✓	Low	✓
Kazakhstan	✗	✓	Low	✓
Kyrgyzstan	✗	✓	Intermediate	✓
Lithuania	✗	✓	Low	✓
Luxembourg	✓	✓	Low	✓
Latvia	✓	✓	Low	✓
Monaco	✓	✓	Low	✓
North Macedonia	✓	✓	Intermediate	✓
Malta	✓	✓	Low	✓
Montenegro	✓	✓	Intermediate	✓
Netherlands	✓	✓	Low	✓
Norway	✓	✓	Low	✓
Poland	✗	✗	Intermediate	✓
Portugal	✓	✓	Low	✓
Republic of Moldova	✓	✓	Intermediate	✓
Romania	✗	✓	Intermediate	✓
Russian Federation	✗	✓	Low	✓
San Marino	✓	✓	Low	✓
Serbia	✗	✓	Intermediate	✓
Slovakia	✗	✓	Low	✓
Slovenia	✓	✓	Intermediate	✓
Sweden	✓	✓	Low	✓
Tajikistan	✗	✓	Low	✓
Turkmenistan	✓	✓	Low	✓
Türkiye	✗	✓	Low	✓
Ukraine	✗	✓	High	✓

Table 4.2. contd

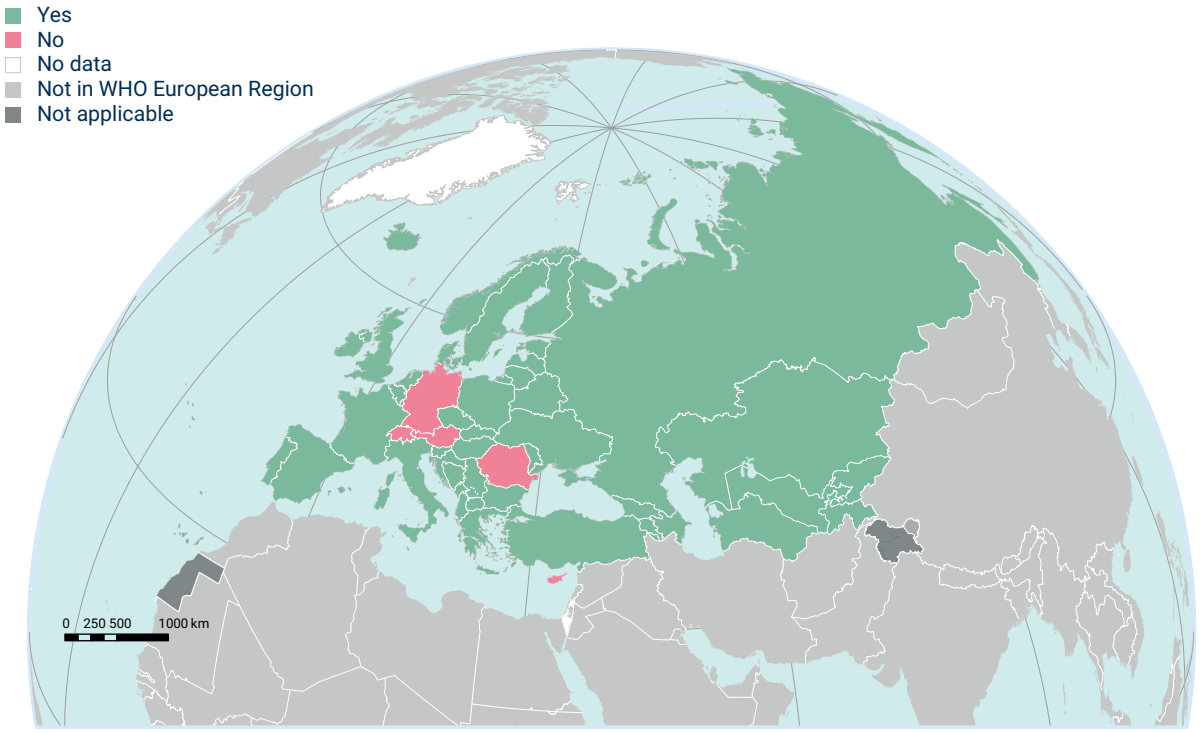
Member State	Measles elimination	Rubella elimination	Polio risk assessment	Polio free (Regional certification)
Uzbekistan	✗	✓	Low	✓

Note: green tick indicates achievement of elimination target, and red cross indicates that this still has to be achieved.

Source: data from WHO Regional Office for Europe *(80,81)*.

To ensure the implementation of the national immunization programme and ensure access to vaccination for all, 85% of Member States in the WHO European Region will have legislation in place in 2023 that supports the delivery of immunization services to eligible populations across the life-course (Fig. 4.13).[21]

Fig. 4.13. Member States reporting having legislation supportive of immunization, 2023



Note: The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

Source: created by WHO GIS Centre for Health DNA/DDI based on data in WHO Joint Reporting Form on Immunization *(11)*.

Eligibility for vaccination and the definition of national vaccination schedules (type of vaccines and timing of administration) are determined through national vaccination policies based on recommendations from national immunization technical advisory groups. In 2023 87% of Member States had established national immunization technical advisory groups, but the six WHO criteria for a functioning advisory group (agenda and background documents distributed at least 1 week before meetings; mandatory disclosure of conflicts of interest; a legislative or administrative basis; at least one meeting per year; formal terms of reference; at least five areas of expertise represented among its membership) were met by only 68% of them *(11)*.

[21] Such legislation includes written laws (acts, statutes), regulations, orders or decrees established by a public authority and enforceable by law. It may specifically address immunization or be part of broader public health laws and should include provisions that ensure sustainability of the national immunization programme at all levels.

Delivery of immunization services is being increasingly integrated into primary health care throughout the life-course. In 2023, 35 (66%) Member States reported having national policies or standard operating procedures in place to strengthen the integrated delivery of immunization and primary health-care services to infants, children, adolescents, adults and older adults. This includes formal engagement with health and other sectors to enable the provision of vaccination as part of antenatal care, delivery services, well-baby clinics, municipal health services, schools, occupational health services, family medicine, long-term health facilities, private health-care providers and relevant others *(11)*.

These results show the high-level commitment of Member States of the WHO European Region towards immunization, which is being translated into policies and national strategies to achieve regional targets for vaccine-preventable disease control and elimination, as well as the overall targets and goals of the European Immunization Agenda 2030. Illustrative case studies from Member States to highlight best practices and emerging challenges were published in an annual technical progress report on the implementation of the Agenda. The first publication in this series is entitled *European Immunization Agenda 2030: technical progress report 2023 (83)*.

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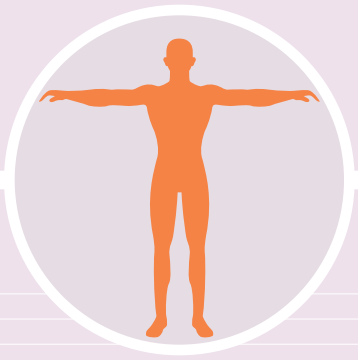


Noncommunicable diseases

This chapter brings the indicators from the WHO European Programme of Work 2020–2025: United Action for Better Health (EPW) measurement framework (EPW-MF) related to noncommunicable diseases (NCDs) and their risk factors *(1,2)*. NCDs are the leading cause of premature mortality in the WHO European Region, accounting for 87% of all deaths among people aged 30–70 years in 2019 *(3)*. NCDs can have long-term consequences that often require ongoing treatment and care. Their impact goes beyond the individual as they also affect families and communities and put a great strain on health systems. NCDs are largely preventable by addressing the major risk factors such as tobacco use, physical inactivity, harmful use of alcohol, unhealthy diet and air pollution. Metabolic risk factors such as raised blood pressure, raised blood glucose, and overweight and obesity also contribute considerably to the occurrence of NCDs.

This Report shows that, despite a decline in premature mortality from NCDs, one in six people in the Region die before the age of 70 years due to cardiovascular diseases (CVD), cancer, diabetes or chronic respiratory diseases. Cancer is the second leading cause of premature death, with one in four people at risk of developing cancer before the age of 70 years. Despite a higher cancer incidence[23] in western and northern Member States of the WHO European Region, cancer mortality is higher in eastern Member States *(4)*. High body mass index (BMI) is a leading risk factor for disability. In some Member States, obesity may surpass smoking as the leading risk factor for preventable cancers *(5–8)*. The prevalence[24] of obesity has steadily increased for the past 50 years; by 2020, nearly a quarter of adults in the Region were obese.

Over one in three adults aged 30–79 years in the Region have hypertension, and most people in the Region consume more than the recommended maximum of 5 g salt per day. Trans-fats are another unhealthy component of people's diets and are responsible for more than 278 000 deaths globally each year *(9)*. Yet only 35 out of 53 Member States in the Region have implemented best practice policies for eliminating industrially produced trans-fats *(10)*.

The WHO European Region has the highest intake of alcohol in the world, and men drink four times more than women *(11)*. There are stark differences between Member States and, despite consumption decreasing in most Member States over the last decade (2012–2022), 15 Member States saw an increase in alcohol intake. The Region also has one of the highest prevalence rates for tobacco use: in some Member States, nearly half of the men use tobacco, and the prevalence in women is decreasing at a very slow rate. Tobacco use has been declining since 2010, but the Region is not on track to reach the WHO NCD Global Monitoring Framework target of a 30% relative reduction by 2030 *(12)*.

Information on overweight and obesity in school-aged children can be found in section 3.5.

[23] Incidence is defined as the number of new cases of a disease or condition that occur in a specific population over a certain period of time.

[24] Prevalence is the proportion of a population with a specific characteristic in a given time period.

5.1 Premature mortality from NCDs

Main findings

- In the WHO European Region, about one in six people dies prematurely (at ages 30–70 years) from one of four major global NCDs: CVD, cancer, diabetes and chronic respiratory diseases. Premature mortality from these conditions is twice as likely for men than for women (22% vs 11%): the leading cause is CVD, which is primarily driven by high blood pressure.
- Between 2010 and 2019 the risk of premature mortality from NCDs in the Region fell by 14.6% (from 19.1% to 16.3%).

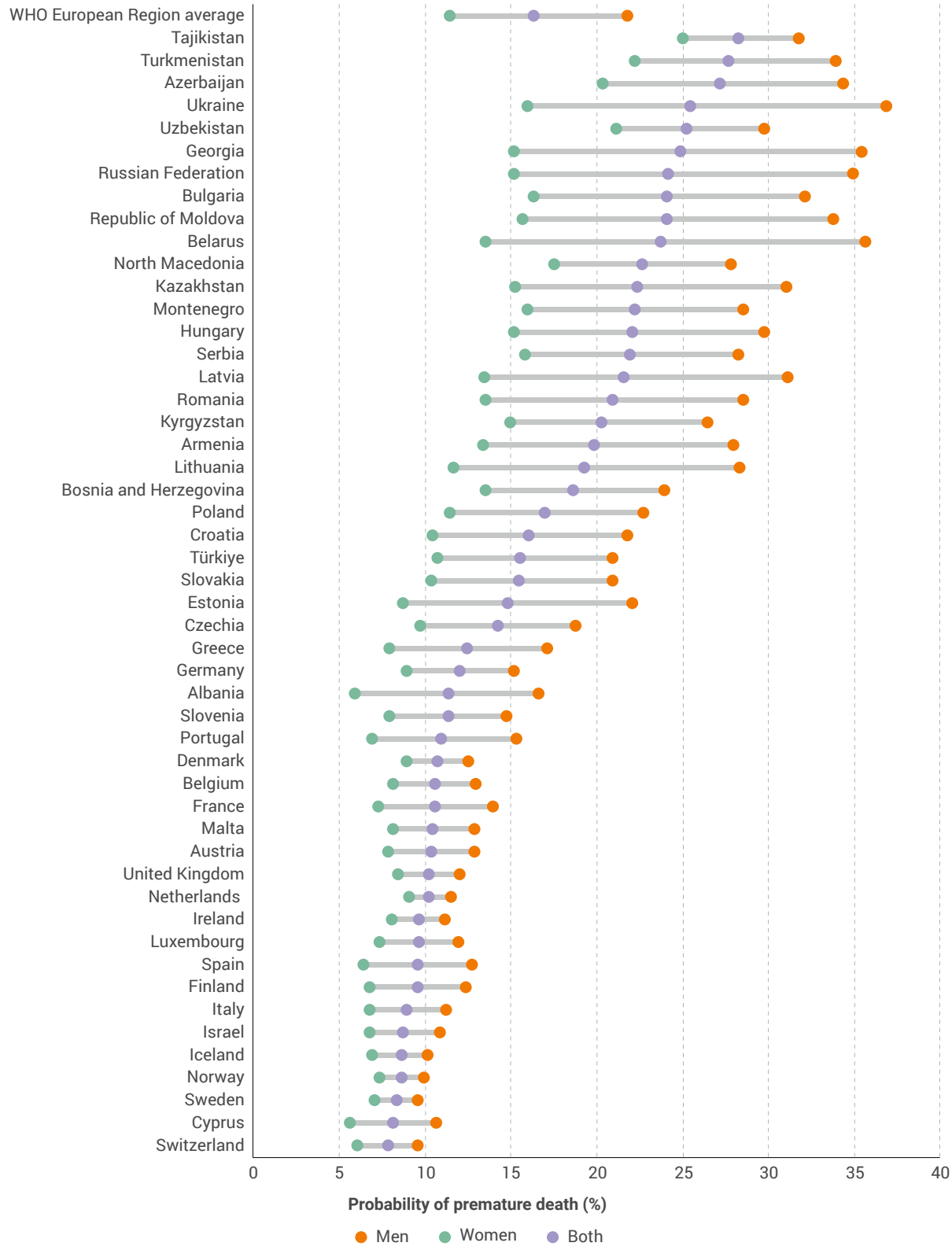
NCDs are a group of conditions that are not caused by an acute infection and have long-term consequences that often require ongoing treatment and care. In the WHO European Region, NCDs are the leading cause of premature mortality; they were responsible for 87% of all deaths among people aged 30–70 years in 2019 *(3)*. WHO focuses on four major NCDs worldwide: CVD, cancer, diabetes and chronic respiratory diseases. WHO leads the global effort to combat NCDs through Sustainable Development Goal (SDG) Target 3.4 *(13)*, which aims to reduce premature mortality (at ages 30–70 years) from these four major global NCDs by one third by 2030. The EPW-MF's milestone supports SDG Target 3.4 by aiming for a 25% relative reduction in overall mortality from a 2010 baseline by 2025 *(1)*. These efforts are aligned with both the Action Plan for the Prevention and Control of Noncommunicable Diseases in the WHO European Region (EAP) *(14)* and the NCD Global Monitoring Framework *(12)*.

Based on the latest available standardized estimates (for 2019), which are used for cross-country comparisons in line with the EPW-MF indicator, 22% of men and 11% of women aged 30 years or older are likely to die from one of four main global NCDs before their 70th birthday *(15)*. However, there are considerable differences across the Region, with the overall risk ranging from as low as 7.9% in Switzerland to 28.3% in Tajikistan. Gender disparities are also notable. In Albania, Belarus and Estonia the risk is nearly three times higher for men than for women. Tajikistan, where the overall risk is highest for both men and women, has the smallest gender disparity, with a 1.27 times higher risk for men than for women. For women, the risk of premature death is five times higher (25.1%) in Tajikistan (highest) compared with Cyprus (5.7%; lowest), whereas the risk is highest for Ukrainian men, who have an almost four times greater risk of premature death compared with Swiss men (36.9% vs 9.6%). The risk of premature mortality is generally higher in eastern Europe and central Asia and lower in western and southern Europe (Fig. 5.1).

Raised blood pressure (hypertension)[25] is the leading risk factor for CVD, such as ischaemic heart disease and stroke. These conditions are the primary drivers of NCD premature mortality in the Region, accounting for 33.5% of all premature deaths from NCDs. The risk of CVD-related premature mortality is nearly five times higher in eastern Europe (15.1%) and central Asia (14.8%) than in western Europe (2.9%) *(17)*. Cancer is the second leading cause, accounting for 32.8% of premature deaths, whereas chronic respiratory diseases (3.3%) and diabetes (1.7%) have much smaller impacts *(3)*. Variability among Member States is smaller for premature mortality from cancer than for premature mortality from CVD.

[25] Raised blood pressure/hypertension is defined as systolic blood pressure of ≥ 140 mmHg or diastolic blood pressure of ≥ 90 mmHg.

Fig. 5.1. Probability of premature death from the four main NCDs in the WHO European Region, 2019



Note: see additional methodological considerations in Annex 1.

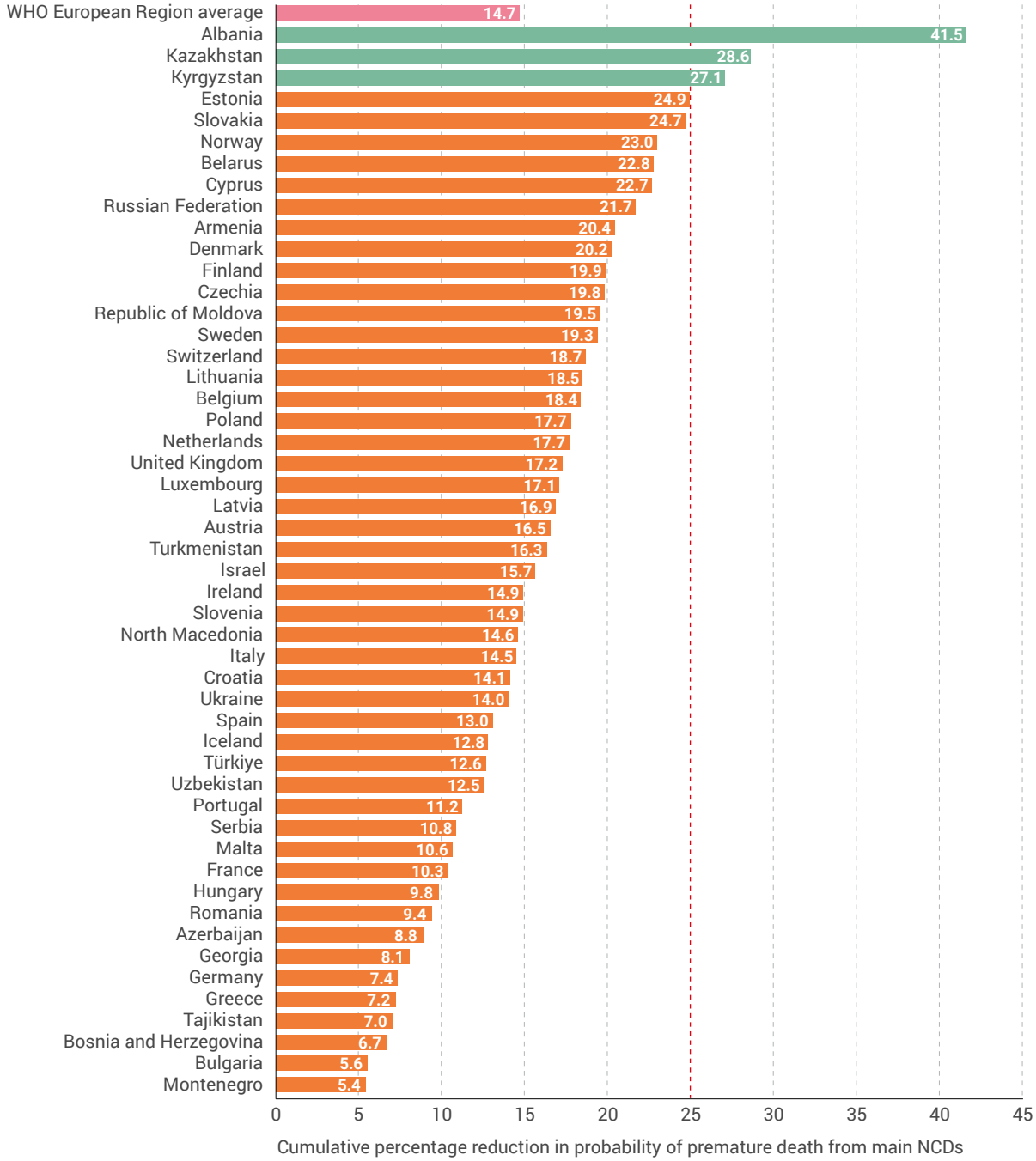
Source: calculations from the Special Initiative on NCDs and Innovation based on WHO *(16)*.

From 2010 to 2019 the WHO European Region saw a favourable trend in reducing premature mortality from NCDs from 19.1% (uncertainty interval (UI):[26] 16.9–21.4) in 2010 to 16.3% (UI: 12.7–20.4) in 2019 for both sexes, representing a 14.6% reduction. Had this trends continued, the Region would have met

[26] Uncertainty interval is also known as the confidence interval.

the EPW-MF's target of a 25% reduction by 2025 *(18)*. However, the coronavirus disease (COVID-19) pandemic severely disrupted preventive, diagnostic and treatment services for NCDs and probably slowed progress overall *(19)*. Reductions in premature deaths from NCDs varied across Member States: Albania had the largest at 41.5%; Kazakhstan and Kyrgyzstan made significant progress at 28.6% and 27.1%, respectively; and Bosnia and Herzegovina, Bulgaria, and Montenegro had the smallest, at less than 7% (Fig. 5.2) *(20)*. Disparities in premature cancer mortality trends across Member States correlate with national income levels, with high-income countries achieving greater reductions than lower-middle-income countries *(20)*.

Fig. 5.2. Progress towards EPW-MF target (SDG 3.4) for premature death from major NCDs in the WHO European Region from 2010 to 2019



Notes: red dotted line indicates the EPW-MF target of a 25% reduction by 2025; orange indicates Member States yet to reach the target and green those that have passed it; see additional methodological considerations in Annex 1.

Source: calculations from the Special Initiative on NCDs and Innovation based on WHO *(16)*.

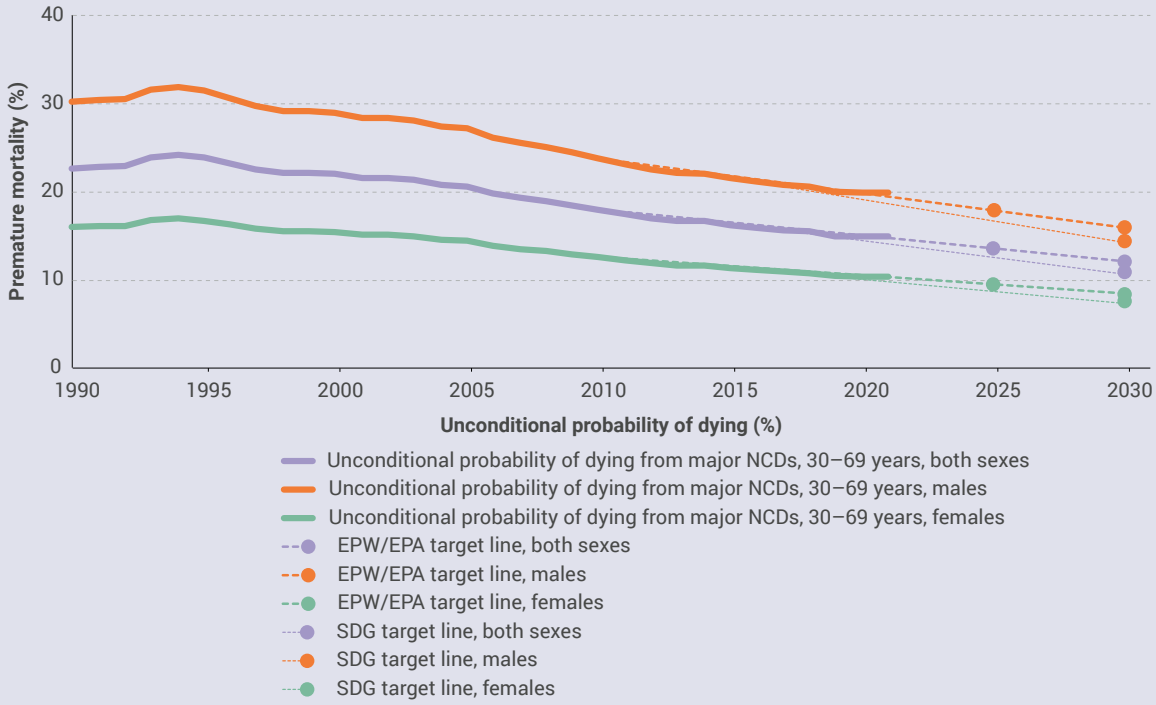
Box 5.1 presents complementary results produced by WHO based on country-reported data through 2021, which provide additional insights into progress toward NCD targets and the impact of the COVID-19 pandemic.

Box 5.1. Monitoring NCD commitments in the WHO European Region

During preparation of the European health report 2024, the WHO Regional Office for Europe also prepared an update of the 2021 report, *Monitoring noncommunicable disease commitments in Europe 2021: are we on track to reach targets 10 years after the Moscow Declaration and First United Nations High Level Meeting (21)*, which will be published in the next few months and assesses progress towards the WHO EAP *(14)*, Global Action Plan for the Prevention and Control of NCDs 2023–2030 *(22)*, EPW *(2)*, NCD-related SDGs and other international NCD commitments.[a] The monitoring report used country-reported mortality data to assess progress towards premature mortality, whereas the European Health Report 2024 uses estimates, in line with the indicator on premature mortality included in the EPW-MF. To complement the EPW-MF indicator, preliminary findings from the report on NCD commitments, which are more current than the latest available estimates, are presented here. Due to the use of different data sources, there are slight differences between results in both reports.

A key finding of the report is that during the COVID-19 pandemic the trend of decreasing premature mortality from NCDs stalled and the WHO European Region lost progress towards achieving the EPW target of 25% reduction by 2025 and the EAP target of a third reduction by 2030 from a 2010 baseline (Fig. 5.3). However, the gap between the observed data and the target line in year 2021 (last available data) is relatively small (equivalent to a lag of only 0.7 years). Based on their latest available data, 26 Member States (55% of Member States with data since 2010) were on track to reach these targets. The lag to reaching the more ambitious SDG target is 2.1 years.

Fig. 5.3. Premature mortality from four major NCDs for men and women in the WHO European Region and the Regional and global targets



Note: targets are set in the EPW, SDGs and EAP.

Source: calculations based on WHO *(16)*.

Box 5.1. contd

The report also focuses on preventable and treatable mortality from NCDs, which were reported by WHO for the first time and can be used as indicators of the effectiveness of NCD prevention and treatment policies and systems, respectively. These indicators build on previously developed, widely used and internationally agreed indicators of preventable and treatable causes of death, which were endorsed by Eurostat and the Organisation for Economic Co-operation and Development *(23)*. The reported indicators are a subset of the agreed Eurostat/Organisation for Economic Co-operation and Development list, in which causes of death are limited to NCD causes (ICD chapters II–XIV *(24)*) and standardized to the WHO European Region's population, with age limits from 0 to 74 years *(25)*. Preventable deaths account for 59% of avoidable deaths caused by NCDs: 64% for men and 51% for women. Since 2010 the rates of preventable and treatable deaths from NCDs have reduced by a similar extent, by 15.2% and 14.5%, respectively. The reduction in preventable deaths has been greater in men than in women (16.8% vs 12.4%), whereas reductions in treatable mortality have been similar for both men and women (14.0% vs 15.1%). However, both indicators increased during the COVID-19 pandemic. The cost of productivity loss due to deaths from preventable and treatable NCDs at ages 30–74 years in the WHO European Region has been estimated at US$ 514.5 billion.

Although the levels of tobacco and alcohol use and of insufficient physical activity have reduced since 2010, sufficient progress was achieved to reach the target only for reducing alcohol use; this target has been achieved ahead of the 2030 deadline. However, this reduction was partly due to the COVID-19 pandemic, when alcohol use dropped markedly, so this may be a temporary effect. Despite this success, the WHO European Region remains the WHO region with the highest alcohol use.

The prevalences of obesity and diabetes are increasing (section 5.4) but, more positively, for the first time some Member States such as France and Spain have been able to halt the rise. Hypertension prevalence is reducing, but not fast enough to reach the target of 25% reduction by 2025.

The implementation of policies to prevent and control NCDs also stalled during the COVID-19 pandemic, with no marked change between 2019 and 2023 in the overall implementation of Progress Monitor Indicators, which measure the implementation of WHO-recommended policies at Member State level *(26)*.

In this context, it is encouraging that 10 Member States (Belgium, Denmark, Estonia, Israel, Kazakhstan, Luxembourg, Netherlands (Kingdom of the) WHO European Region only, Norway, Sweden and Switzerland) have already reached the EPW target of a 25% reduction in premature mortality from the four major NCDs ahead of the 2025 deadline. All 10 Member States have simultaneously (i) reduced premature mortality from both CVD and cancers, (ii) reduced preventable and treatable mortality from NCDs, (iii) reduced or slowed down the increase in several risk factors and (iv) implemented a comprehensive set of policies. This demonstrates that achievement of these ambitious targets is possible with intensified implementation of the WHO best buys and other recommended interventions to tackle both prevention and treatment of NCDs. As the lag to the EAP target line is relatively small (only 0.7 years), it should still be possible to reach it by 2030 if efforts are intensified to prevent and control NCDs. The lag to the SDG target line is larger (at 2.1 years) and only a strong push to implement WHO best buys (i.e. the most cost-effective policy measures and interventions *(27)*) can get the WHO European Region back on track to achieve this target.

[a] The forthcoming update for the referenced report is the source for all information presented in the box except for the Eurostat/Organisation for Economic Co-operation and Development definitions.

A significant proportion of NCD deaths in the WHO European Region can be prevented by addressing key risk factors such as unhealthy diet, physical inactivity, and alcohol and tobacco consumption, whereas others can be avoided through appropriate treatment. These risk factors were historically viewed as personal choices but are now recognized as being influenced by commercial/private sector actions such as marketing strategies and lobbying that prioritize corporate profits over public health goals *(28)*. Addressing these commercial influences demands a whole-of-government and whole-of-society, multifaceted approach. The WHO report, *Commercial determinants of noncommunicable diseases in the WHO European Region*, calls for stricter regulations on industry practices, including marketing restrictions, control of monopolistic practices, oversight of lobbying activities, and appropriate taxation of multinational corporations *(28)*. The report particularly emphasizes the need to limit industry power in health care and highlights how practices of the pharmaceutical and medical device industry can impact health equity and care quality.

To counter these commercial influences and reduce NCD mortality, WHO has identified best buys *(27,29)*. For CVD, key interventions include lowering blood pressure through salt reduction; ensuring an adequate intake of fruit and vegetables; addressing obesity and physical inactivity; improving the detection, treatment and control of hypertension; and enhancing acute care for stroke and myocardial infarction to prevent deaths and recurrences. Cancer prevention includes primary prevention methods such as eliminating tobacco and alcohol use, vaccinating against human papillomavirus, and routinely screening for breast, cervical and other detectable cancers. Diabetes control combines promoting a healthy diet and physical activity with measures such as banning trans-fats and increasing taxes on sugar-sweetened beverages. Key strategies to prevent chronic respiratory diseases include reducing tobacco use by raising tobacco taxes, banning tobacco advertising and enforcing smoking bans in public spaces *(27,29)*.

Health inequities within countries are acknowledged, and a link between socioeconomic factors (e.g. household income, risk of poverty and level of education) and premature mortality and major risk factors for NCDs has been consistently documented *(30,31)*. Research into premature mortality among people with disabilities remains limited; however, the available evidence suggests that this population group is at higher risk of dying prematurely *(32)*. Several factors contribute to the higher mortality rate, including poor quality health services, the national income level, inadequate care planning, social determinants and lifestyle risks. These inequities were exacerbated during the COVID-19 pandemic, when people with disabilities were more than twice as likely to die from COVID-19 than those without disabilities. In particular, the risk of COVID-19-related mortality was nearly six times higher for people with intellectual impairment *(33,34)*. During the pandemic, people living with NCDs faced a much higher risk of dying from COVID-19 or other causes, including major NCDs. Therefore, it is imperative not only to prevent and control NCDs but also to include NCDs in emergency plans, preparedness and response *(35)*.

Member States in the WHO European Region have substantial room to improve the implementation of these evidence-informed interventions *(18)*. The WHO Regional Office for Europe supports policy-makers to address both the commercial determinants and strengthening health systems to reduce the NCD burden while ensuring that the interventions reach all population groups *(28)*.

5.2 Cancer

Main findings

- In WHO European Region 14.8 million individuals were living with cancer in 2022, and 4.9 million new cases were diagnosed.
- Approximately one in four people is at risk of developing cancer and one in nine is at risk of dying from cancer. The number of new cases is projected to continue increasing, largely driven by population ageing and population growth.
- Cancer affects men more than women. Lung, breast, colorectal and prostate cancers are the most commonly diagnosed cancers, collectively accounting for nearly half of all new cases in the Region. The most common childhood cancers are leukaemia, brain and central nervous system tumours, and lymphomas.
- The three most common cancer sites in descending order are prostate, lung and colorectum in men and breast, colorectum and lung in women.
- Inequities remain significant across countries. Western and northern European Member States have the highest estimated numbers of cases, but mortality levels are decreasing; in eastern European Member States, the incidence is lower, but mortality is higher.

The WHO European Region has about one quarter of the global cancer burden, with malignant cancers ranking as the second leading cause of death in the Region – after CVD (see section 2.2) *(3)*. WHO's EPW emphasizes the importance of cancer control by aiming to reduce both incidence and mortality *(2)*. These efforts align with SDG Target 3.4 *(13)* to reduce premature mortality from NCDs through prevention and treatment by 2030 *(1)*.

In 2022 in the Region, 14.8 million people were living with cancer[27] and 4.9 million new cases were diagnosed *(4)*. Non-melanoma skin cancers are often excluded from cancer statistics due to their high prevalence, low lethality, ease of treatment and frequent underreporting. After excluding non-melanoma skin cancers, the number of people living with cancer was 13.6 million and there were 4.5 million new cases in the same year (numbers rounded to one decimal place). The number of new cases (excluding non-melanoma skin cancers) varied between 1663 in Iceland and 614 275 in the Russian Federation.

In the Region, the cumulative risk of developing cancer before the age of 75 years is 26% for both sexes: 30% for men and 23% for women (Fig. 5.4) *(4)*. The risk varies by nearly fourfold (3.6) across the Region and is the highest in western European Union (EU) countries: Denmark (34%), Norway (33%), Hungary (32%), Croatia (31%), France (metropolitan) (31%) and the Netherlands (31%).[28]

From 2022 to 2030 the estimated number of new cancer cases (excluding non-melanoma skin cancers) in the Region is projected to increase from 4.5 million to 5.0 million (2.7 million in men, 2.3 million in women), when taking into account only population ageing (Fig. 5.5). Additional factors such as lifestyle changes and decreasing mortality from other diseases such as CVD in eastern European countries will influence these trends by contributing to the growing cancer burden across the Region. The latest estimates in the Global Cancer Observatory from the International Agency for Research on Cancer projects that the number of new cases will increase by 12% in men and 8% in women by 2030 *(36)*.

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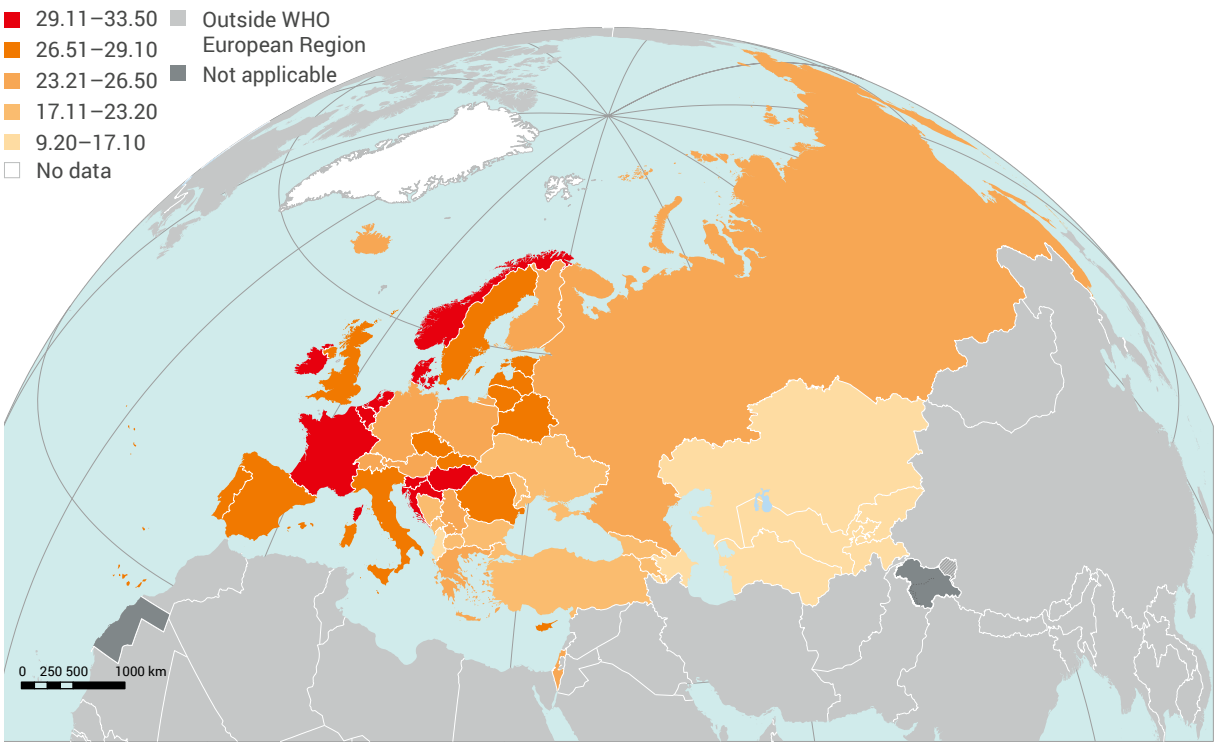
[27] Based on the 5-year prevalence, which can be defined as the number of persons in a defined population who have been diagnosed with that type of cancer in the previous 5 years and who are still alive at the end of a given year.

[28] Estimates are rounded to the nearest integer.

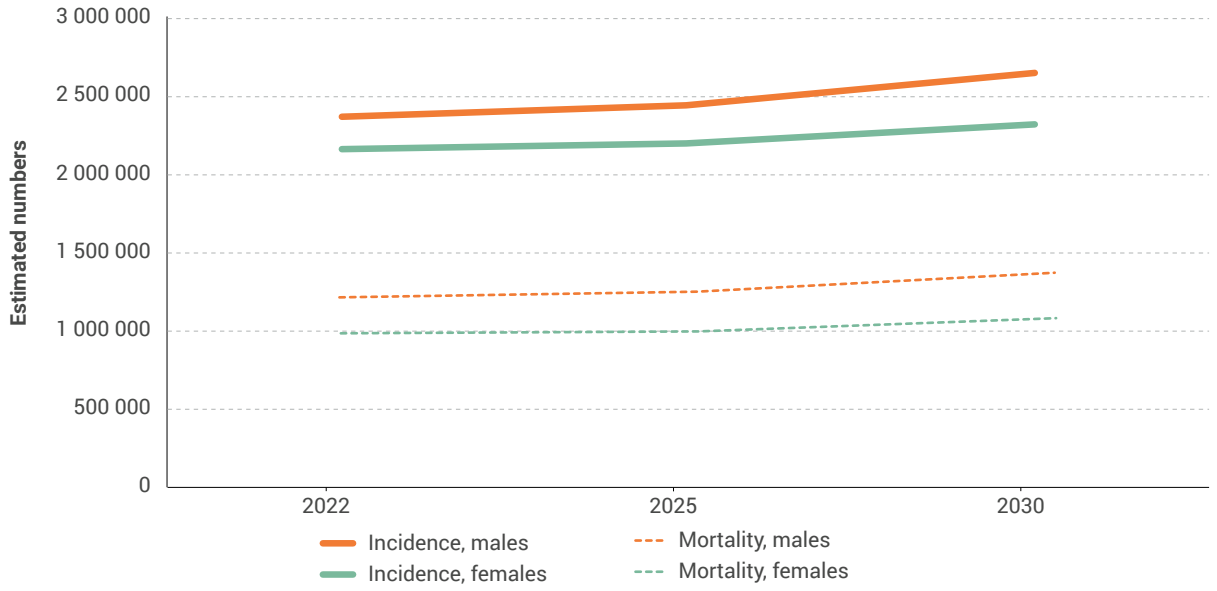
Fig. 5.4. Cumulative risk of developing cancer in the WHO European Region, 2022



Notes: based on cumulative risk (%) data for all cancers excluding non-melanoma skin cancer for both sexes and aged 0–74 years; estimates available for 50 Member States (no data for Andorra, Monaco and San Marino). The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

Source: created by the WHO GIS Centre for Health DNA/DDI based on data in Ferlay et al. *(4)*.

Fig. 5.5. Estimated absolute numbers of new cancer cases and deaths from 2022 to 2030 in the WHO European Region as result of demographic changes, by sex

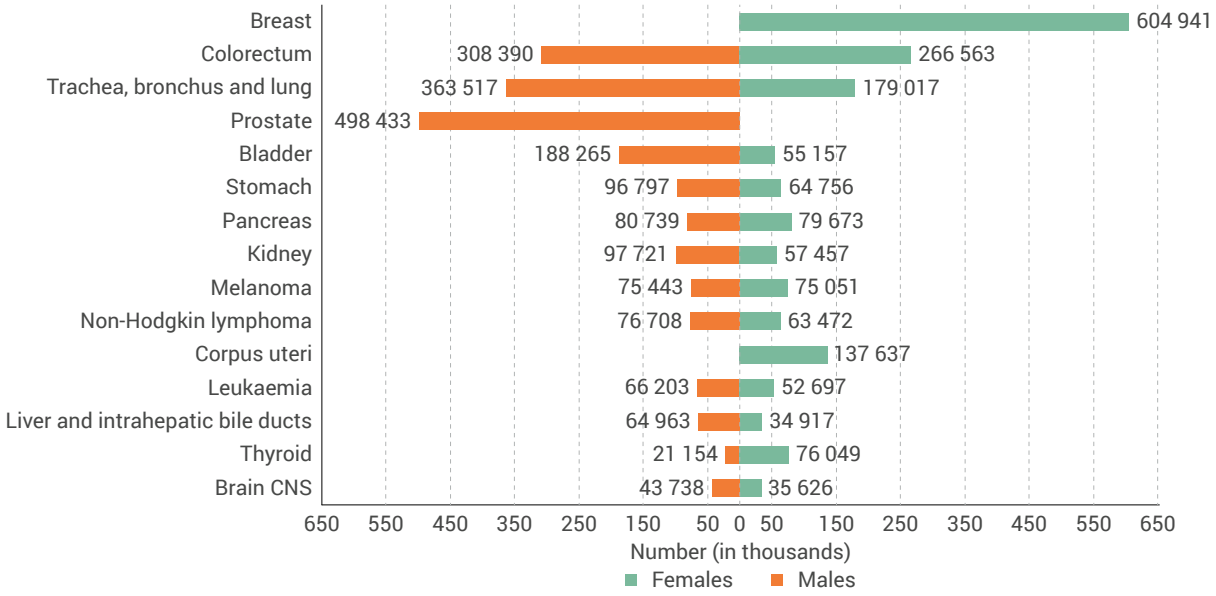


Notes: based on data for all cancers excluding non-melanoma skin cancer; estimates available for 50 Member States (no data for Andorra, Monaco and San Marino).

Source: Ferlay et al. *(36)*.

Lung, breast, colorectal and prostate cancers are the most commonly diagnosed cancers, collectively accounting for nearly half of all new cancer cases in the Region, although the patterns differ by sex (Fig. 5.6). Although some of the differences are a consequence of sex characteristics (e.g. prostate cancer and gynaecological cancers), others reflect a varying exposure to risk factors. For example, the incidence of lung and liver cancers is nearly twice as high in men than in women, reflecting historical patterns of tobacco and alcohol consumption. Breast cancer incidence is expected to continue to increase because it is closely linked to the changes in reproductive lifestyle (having fewer children, having children later in life and breastfeeding for shorter duration all increase the risk of breast cancer). A better/richer diet (which advances the age of menarche and delays menopause) and alcohol consumption are also important risk factors *(37)*.

Fig. 5.6. Absolute numbers of new cancer cases by cancer site in the WHO European Region, 2022



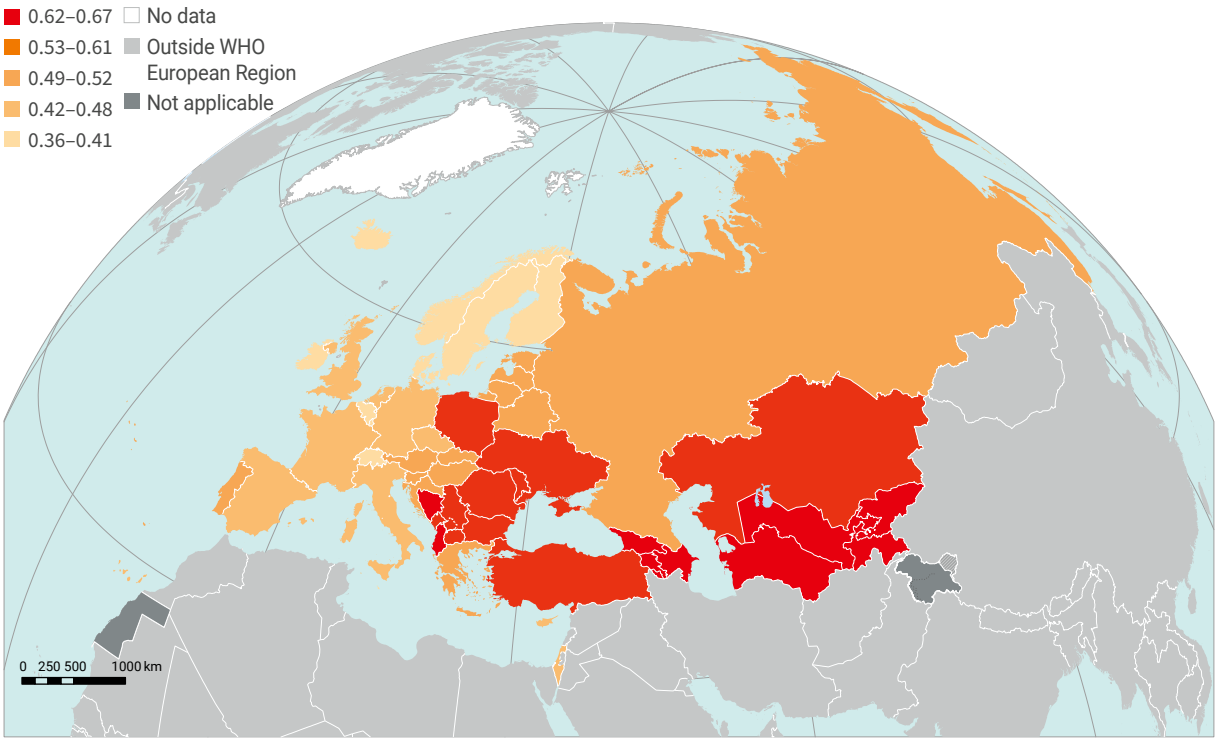
Notes: data for the 15 most frequent cancer sites; estimates available for 50 Member States (no data for Andorra, Monaco and San Marino).

Source: Ferlay et al. *(4)*.

In 2022, 2.2 million people died from cancer: 1.2 million men and over 980 000 women *(4)*. Demographics-based predictions indicate that the number of annual cancer deaths could reach 2.5 million by 2030: 1.4 million in men and 1.1 million in women *(36)*.

The mortality-to-incidence ratio (ratio of the number of deaths caused by a disease to the number of new cases diagnosed) is a proxy for survival data but is not readily available in the Region *(38)* overall; it is better in western and Nordic EU countries than in the rest of the Region, most notably central Asia (Fig. 5.7). The mortality-to-incidence ratio reflects cancer survival disparities, with higher values indicating poorer outcomes. In Nordic EU countries while cancer incidence is increasing (as everywhere else), cancer mortality is decreasing thanks to earlier detection and better treatment (Fig. 5.8). This decreasing mortality trend is visible in the richest Member States of the Region, but in many Member States progress in treatment and early detection is not yet a reality.

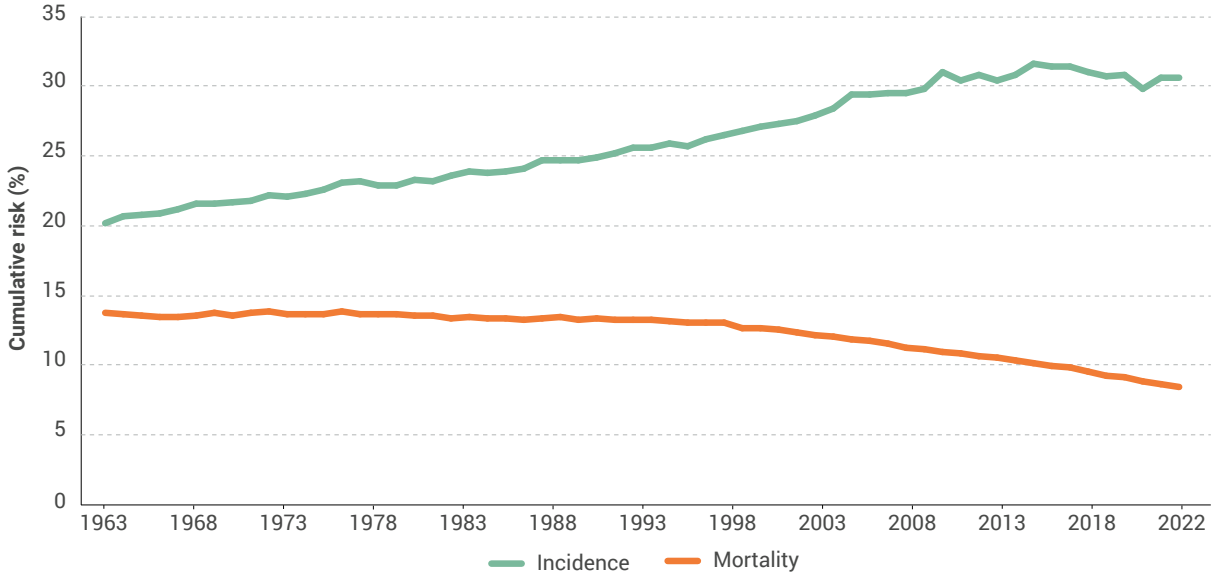
Fig. 5.7. Mortality-to-incidence ratio in the WHO European Region, 2022



Notes: calculations include all cancers excluding non-melanoma skin cancers and for both sexes; based on data for the mortality-to-incidence ratio from 50 Member States (no data for Andorra, Monaco and San Marino). The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

Source: created by the WHO GIS Centre for Health DNA/DDI based on data in Ferlay et al. *(4)*. © WHO 2025; Licence: CC BY-NC-SA 3.0 IGO.

Fig. 5.8. Cumulative risk of developing cancer (incidence) and dying from cancer (mortality) in Nordic countries, 1963 to 2022

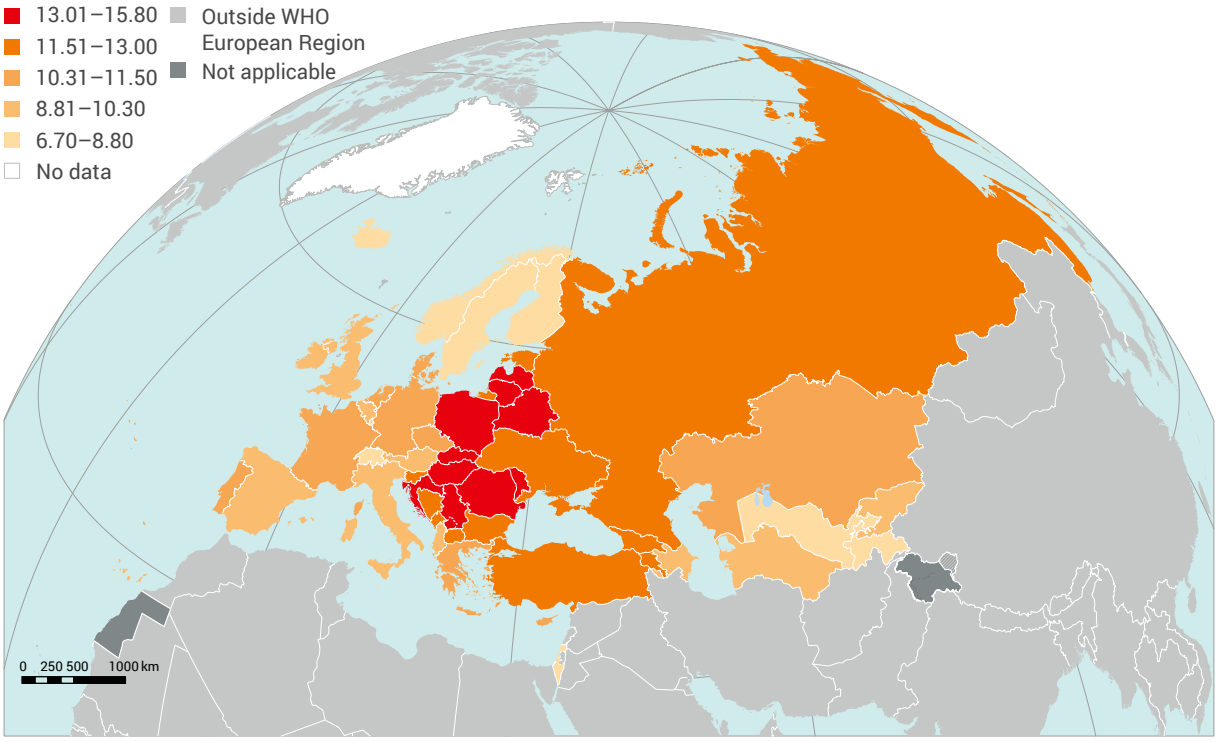


Note: based on data for all cancer sites, both sexes and aged 0–74 years from Denmark, Finland, Iceland, Norway and Sweden.

Source: International Agency for Research on Cancer, WHO *(39)*.

In the WHO European Region, the cumulative risk of dying from cancer before the age of 75 years is 11%: 14% for men and 9% for women (Fig. 5.9). The cancer mortality risk varies by twofold (2.4) across the Region and is highest in eastern Europe: Hungary (16%), Poland (15%), Romania (15%), Belarus (14%), Republic of Moldova (14%) and Serbia (14%) *(4)*.[29]

Fig. 5.9. Cumulative risk of dying from cancer in the WHO European Region, 2022



Notes: based on cumulative risk (%) data for all cancers excluding non-melanoma skin cancer in those aged 0–74 years; estimates available for 50 Member States (no data for Andorra, Monaco and San Marino). The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

Source: created by the WHO GIS Centre for Health DNA/DDI based on data in Ferlay et al. *(4)*. © WHO 2025; Licence: CC BY-NC-SA 3.0 IGO.

Patterns of mortality by cancer site highlight where specific investments in research, prevention and treatment are needed; the mortality-to-incidence ratio is highest for pancreas and liver cancer and lowest for testis and thyroid cancer (Fig. 5.10).

Patterns of new cases and deaths differ for childhood cancers. In 2022 the commonest childhood cancers[30] in the WHO European Region were leukaemia, brain and central nervous system tumours, and lymphomas. The cumulative risk of developing cancer by age 19 years is 0.30% and the risk of dying by the same age is 0.06% *(4)*. However, an estimated 40% of childhood cancers worldwide are currently undiagnosed, particularly in regions with limited health-care resources. There is evidence of underdiagnosis and underreporting of childhood and adolescent cancer cases in central Asia *(40)*.

Although the overall cancer burden is increasing, 30–40% of cancers would be preventable if the WHO NCD best buys were implemented *(27)*. National cancer control plans or strategies[31] are also key to improving cancer outcome, and 47 of the 53 Member States in the Region have established such plans *(41)*.

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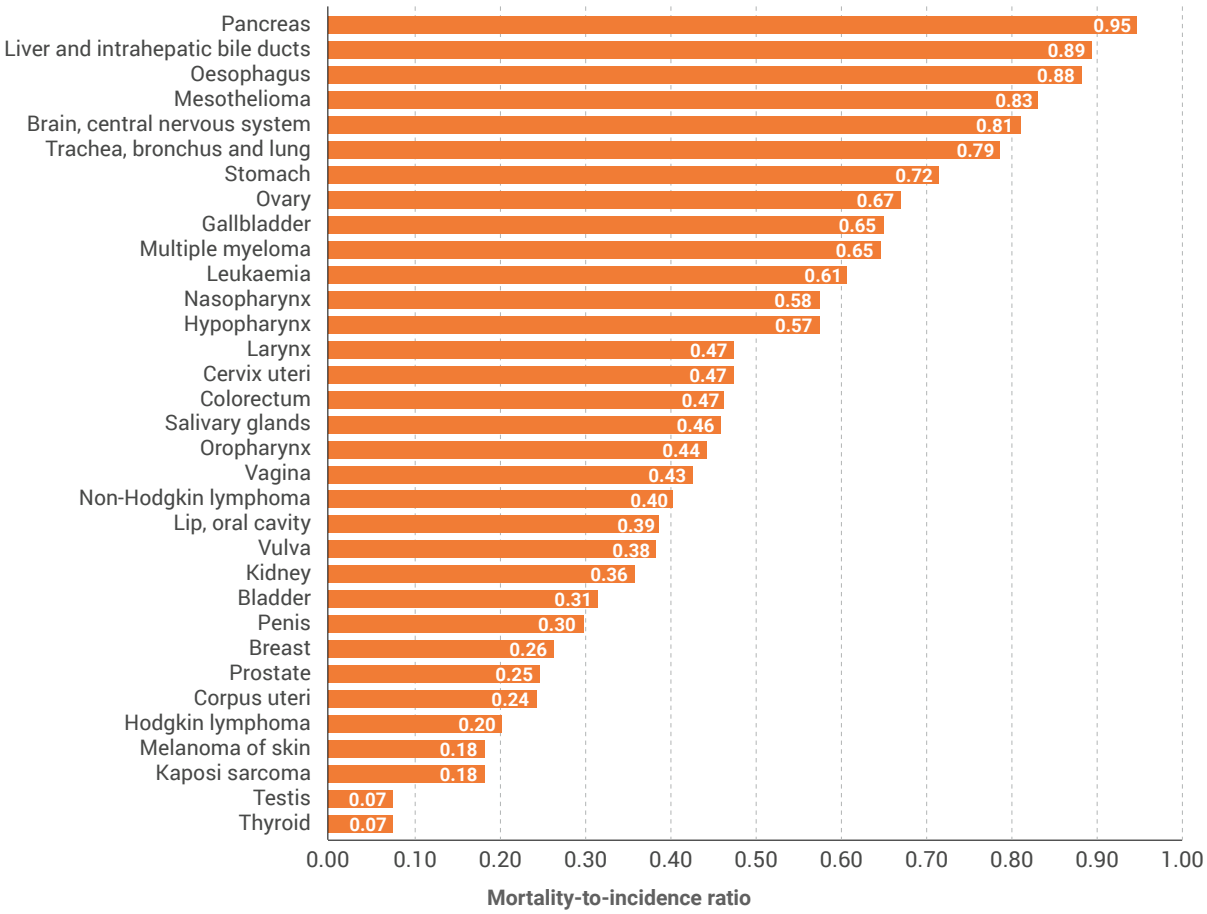
[29] Estimates are rounded to the nearest integer.

[30] The age ranges for the classification of childhood cancer can vary, commonly between birth and age 14 years but can extend to ages 18, 19 or 21 years.

[31] Either a cancer-specific policy, strategy or action plan (on one or more cancers specifically or cancer in general) or the inclusion of cancer in an integrated NCD policy, strategy or action plan.

Fig. 5.10. Mortality-to-incidence ratios by cancer site in the WHO European Region, 2022



Note: estimates by cancer site based on data from 50 Member States (no data for Andorra, Monaco and San Marino).

Source: Ferlay et al. *(4)*.

WHO's EPW supports the implementation of global cancer initiatives *(2)*, including the elimination of cervical cancer, breast cancer and childhood cancers *(42)*. This work is grounded in four main pillars:

- to promote the implementation of the WHO NCD best buys to reduce cancer risk factors (e.g. tobacco, alcohol, obesity) and promote immunization against cancer-causing infections (such as human papillomavirus and hepatitis);
- to strengthen early detection through early diagnosis programmes (fast track for patients presenting with symptoms) and population-based screening programmes, particularly for cervical and (in Member States with strong health systems) breast and colorectal cancers;
- to ensure prompt and equitable access to high-quality treatment, including surgery, radiotherapy and essential cancer medicines; and
- to provide comprehensive palliative care, which is essential for enhancing the quality of life for individuals with advanced-stage cancer.

This work highlights the WHO Regional Office for Europe's expertise in supporting Member States to implement cost-effective primary prevention policies, including vaccination, and sustainable early detection strategies such as screening. However, screening alone is insufficient: even in Nordic countries with high participation rates, less than 10% of cancers are detected through screening *(43)*. Early diagnosis programmes that streamline care pathways and reduce waiting times for symptomatic patients are crucial to address late-stage diagnoses. The Regional Office also supports Member States to improve cancer diagnosis and treatment by updating clinical guidelines, rationalizing cancer medicine budgets and facilitating access to innovative therapies. Furthermore, it actively promotes the development of palliative care, which remains inadequate in many Member States, leaving patients in pain and subject to costly interventions in their final months of life. Reducing cancer mortality is achievable even as incidence rises (Fig. 5.8), underscoring the feasibility of meeting SDG Target 3.4 *(13)* to reduce premature mortality from NCDs by one third by 2030 *(44)*.

5.3 Raised blood pressure

Main findings

- Raised blood pressure is a major contributor to CVD and a leading risk factor for death and disability. In 2019 it was responsible for 24% of all deaths and 13% of disabilities in the WHO European Region.
- More than a third of adults aged 30–79 years in the Region have raised blood pressure.
- In nearly all Member States of the Region, people consume more than the recommended maximum of 5 g salt per day.
- The WHO Signature Initiative aims to reduce salt intake and improve blood pressure control. However, only 6% of Member States have implemented comprehensive salt reduction strategies. Additionally, only two thirds of people with high blood pressure are aware of their condition and only one in four achieve adequate control.

Raised blood pressure (hypertension) is the leading contributor to CVD and chronic kidney disease and results in more deaths than any other risk factor *(45)*. High salt intake[32] is a significant risk factor for both raised blood pressure and CVD. In 2019 nearly one quarter of all deaths (24%) and 13% of disabilities in the WHO European Region were attributed to CVD *(17)*.

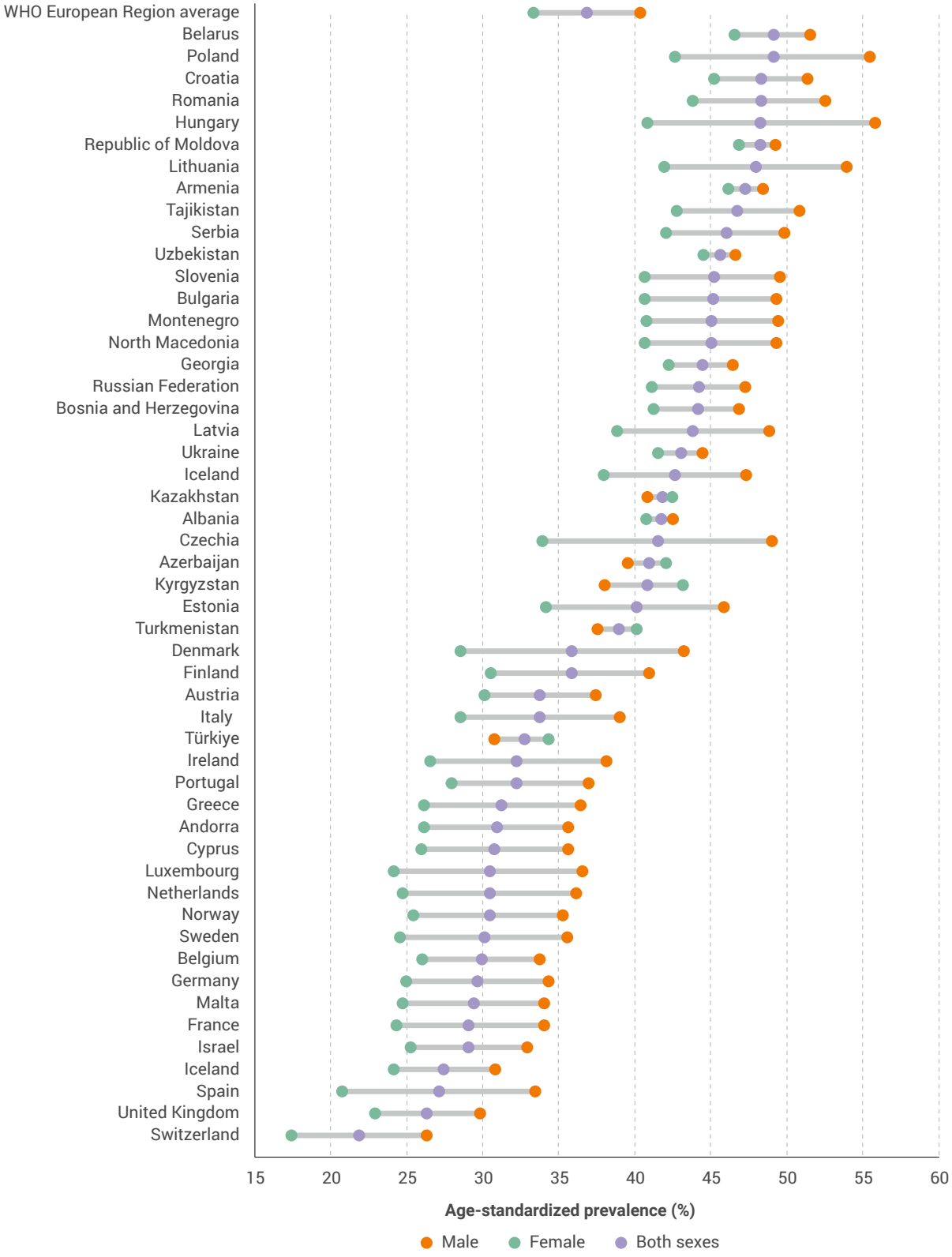
The WHO Regional Director for Europe's Advisory Council on Innovation for Noncommunicable Diseases together with the WHO Secretariat identified six Signature Initiatives to reduce NCDs *(46)*. One of the Initiatives focuses primarily on reducing the CVD burden through reducing salt intake and improving the control of blood pressure *(47)*.

The World Health Assembly's global target, set in 2021, is to reduce the prevalence of hypertension among adults by 25% by 2025 and one third by 2030 from 2010 baseline levels *(22)*. The WHO EPW also shares this target *(2)*.

The indicator "prevalence of hypertension among adults aged 30–79 years" can be used for monitoring progress because it offers the latest available data and enables a detailed understanding throughout the cascade of prevalence, awareness, treatment and control *(48)*. Prevalence of raised blood pressure/hypertension within this age group decreased from 39.7% in 2010 to 36.9% in 2019 in the WHO European Region *(45)*, but with significant variation across Member States: the highest rates were reported in eastern European Member States such as Belarus, Poland and Republic of Moldova (48–49%) and the lowest in Switzerland (21.9%), the United Kingdom (26.4%) and Spain (27.2%). The prevalence was higher in men than in women and, overall, higher rates were recorded in eastern Europe and central Asia than in western Europe (Fig. 5.11) *(15)*.

[32] High salt intake is defined as the consumption of at least 5 g salt per day, which is equivalent to more than 2 g sodium.

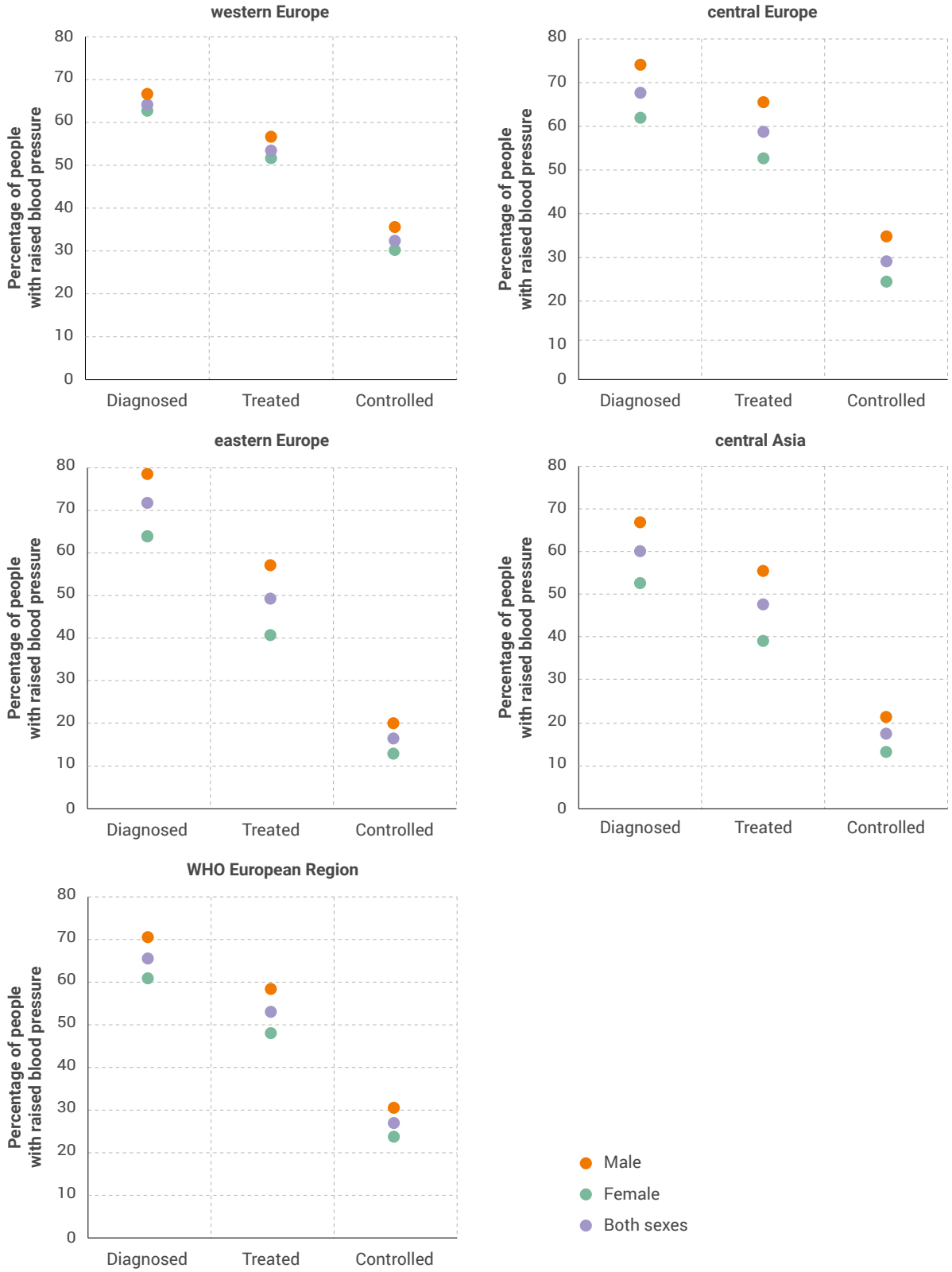
Fig. 5.11. Prevalence of raised blood pressure in men and women aged 30–79 years in the WHO European Region, 2019



Source: WHO *(48)*.

Although more than one in three adults aged 30–79 years have raised blood pressure, many (34%) are unaware of their condition. Only 53% of those diagnosed receive treatment, and just 26% of these are successfully managed (Fig. 5.12) *(17,45,49)*.

Fig. 5.12. Proportion of men and women aged 30–79 years with diagnosed raised blood pressure who were treated and whose blood pressure was effectively controlled among all with diagnosed high blood pressure in different subregions of the WHO European Region, 2019



Notes: subregions as designated by WHO Regional Office for Europe *(17)*: central Europe (13): Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Hungary, Montenegro, North Macedonia, Poland, Romania, Serbia, Slovakia, Slovenia; eastern Europe (7): Belarus, Estonia, Latvia, Lithuania, Republic of Moldova, Russian Federation, Ukraine; western Europe (21): Andorra, Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Greenland, Iceland, Israel, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland; central Asia (8): Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan.

Sources: WHO *(50)* and additional calculations based on WHO Regional Office for Europe *(17)* and Zhou et al. *(49)*.

CVD and raised blood pressure are largely preventable because high salt intake is a significant cause of both. In nearly all Member States in the WHO European Region (52 of 53), people consume more than the WHO-recommended maximum of 5 g salt per day; notably, Malta is the only Member State that meets this recommendation *(17)*.

In 2024 the WHO Regional Office for Europe published the report, *Action on salt and hypertension: reducing cardiovascular disease burden in the WHO European Region*, to promote evidence-informed strategies to lower salt intake and improve blood pressure management to significantly reduce cardiovascular events such as heart attacks, strokes and deaths *(17)*. Both population-level and individual-level approaches are needed *(17)*. The Signature Initiative to tackle CVD, launched by the Regional Office in 2022, integrates comprehensive salt reduction at population level with improved hypertension detection, treatment and control at individual level through primary care *(46)*. This approach recognizes that while individuals can influence their own health behaviours, widespread changes also depend on the involvement of the food industry, educational sectors and policy-makers, because most staple foods, including bread and cheese, typically contain high salt levels *(46)*. Progress has been slow: so far, only 6% of Member States have implemented the highest level of salt reduction interventions and only 25% have achieved adequate control *(17)*.

5.4 Obesity in adults

Main findings

- In the WHO European Region in 2022, 22.6% of adults were living with obesity, and the prevalence of obesity has been rising steadily for the past 50 years. The Region is not on track to achieve the WHO EPW target to halt this increase by 2025.
- There are substantial differences across Member States, with the prevalence of obesity varying from 9.7% to 34.7%.
- Levels of obesity are higher among males than females. In several countries, the proportion of males living with overweight or obesity is nearing or exceeding 70%.

WHO defines overweight in adults as a BMI of 25 kg/m^2 or higher and obesity as a BMI of 30 kg/m^2 or higher *(5)*. These conditions are major contributors to the burden of NCDs, including diabetes, CVD, musculoskeletal disorders, chronic kidney disease and certain types of cancer *(5)*. Additionally, obesity is linked to a range of mental health challenges, including an increased risk of depression, social anxiety and mood disorders and to experiences of stigmatization and bullying *(51)*.

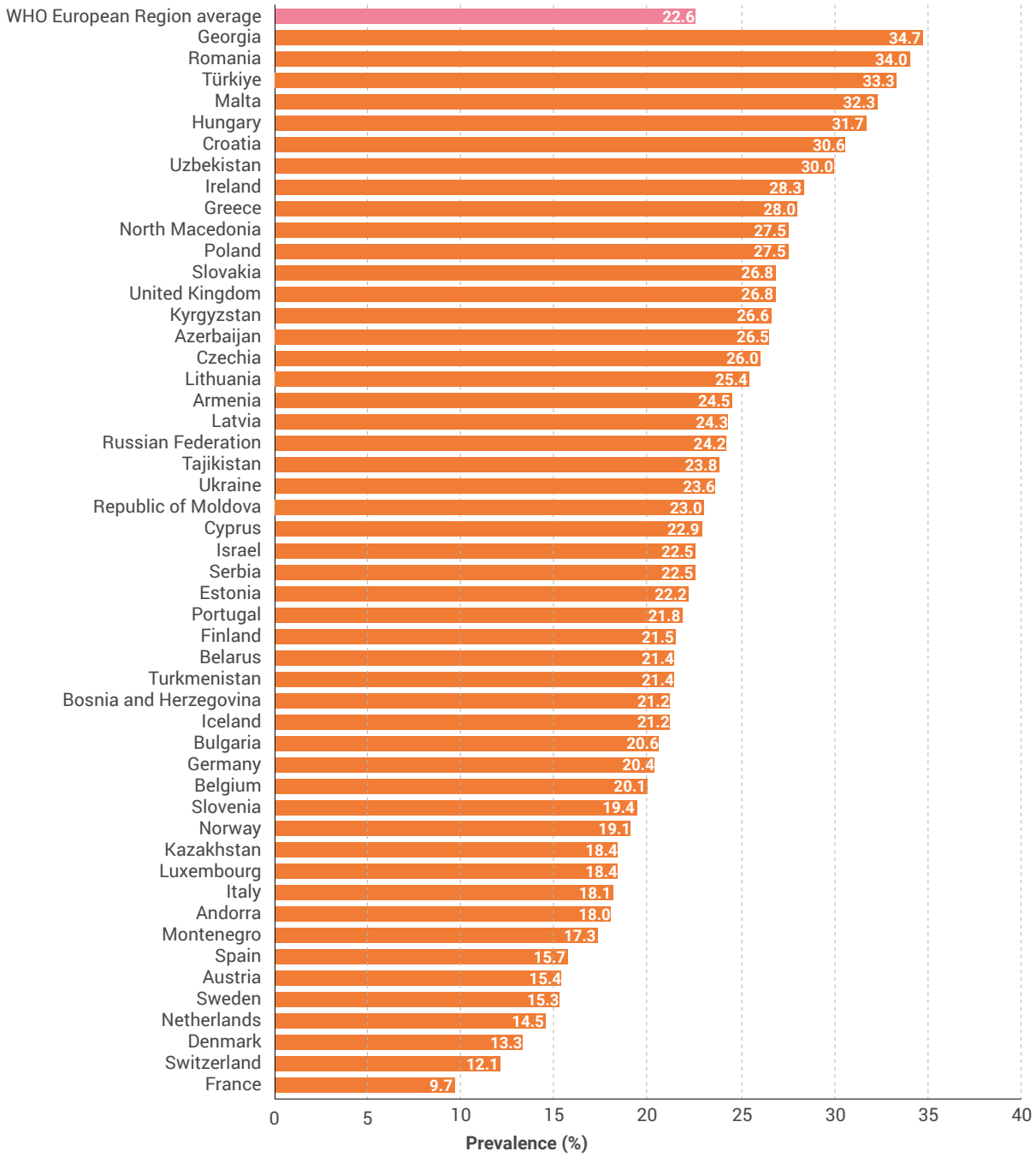
The implications of high BMI extend beyond individual health by significantly lowering quality of life to placing substantial pressure on health systems. The global economic costs associated with obesity are projected to reach an alarming US$ 3 trillion per year by 2030 *(5)*.

In the WHO European Region, the prevalence of obesity has been increasing steadily over the past 50 years, with a marked increase of over 20% from the prevalence in 2006 (18.8%) to that in 2022 (22.6%) *(52,53)*. The Regional prevalence of 22.6% is well above the global average of 15.8%. Across Member States, the prevalence of obesity varies from 9.7% in France to 34.7% in Georgia (Fig. 5.13). The highest rates are found in Mediterranean and eastern European countries, such as Georgia, Hungary, Malta, Romania and Türkiye *(52)*.

As reported in the *WHO European Regional obesity report 2022*, levels of overweight and obesity are also higher among males than females (63% vs 54%). In several countries, levels for males are near to or exceed 70% *(51)*. Overweight and obesity are significant risk factors for NCDs and contribute to 7% of the total years lived with disability *(4)*. In some countries, obesity may even surpass smoking as the primary risk factor for preventable cancers *(5–8)*. The causes of high BMI are multifaceted, encompassing genetic predispositions, lifestyle choices and socioeconomic factors. Research indicates that adults with lower education levels face a higher risk of becoming overweight or obese *(51)*.

In response to the rising prevalence of obesity, the *WHO acceleration plan to stop obesity (54)* was endorsed by the Seventy-fifth World Health Assembly in May 2022 *(5,55)*. This plan emphasizes the need for a coordinated response across policy sectors. Member States have a crucial role to play in implementing effective measures, such as reducing the fat, sugar and salt content of processed foods; promoting front-of-pack food labelling; restricting the marketing of unhealthy foods; and imposing taxes on sugary drinks and other unhealthy products. WHO's list of best buys provides a comprehensive framework of cost-effective interventions proven to address key NCD risk factors for reducing unhealthy diets and physical inactivity *(8,27)*. Effectively addressing overweight and obesity is crucial for global strategies aimed at reducing NCDs and enhancing overall population health.

Fig. 5.13. Age-standardized prevalence of obesity (BMI ≥ 30 kg/m^2) among adults in the WHO European Region and globally, 2022



Note: data available from 51 Member States in the Region.

Source: WHO *(52)*.

Interventions that adopt holistic, people-centred approaches – that is, focusing not just on weight loss but on overall well-being – have demonstrated greater effectiveness in meeting the needs of individuals living with obesity *(5)*. The objective should be to integrate preventive and therapeutic strategies that address the root causes of obesity while supporting people who are currently affected.

5.5 Trans-fat policy implementation

Main findings

- More than 278 000 deaths each year globally can be attributed to the consumption of industrially produced trans-fats.
- By 2024, two thirds of Member States in the WHO European Region (35 of the 53) had implemented best practice policies for eliminating industrially produced trans-fats.

Trans-fats (also known as trans-fatty acids) are unsaturated fatty acids derived from both industrial and natural sources. High trans-fat intake increases all-cause mortality by 34%, the total risk of coronary heart disease by 21% and mortality from coronary heart disease by 28%. This is likely due to the effect on lipid levels in blood: trans-fat increases low density lipoprotein cholesterol (so-called bad cholesterol) levels while lowering high density lipoprotein cholesterol (good cholesterol) levels. Trans-fat has no known health benefits *(56)*.

For a healthy diet, WHO recommends limiting consumption of trans-fats to less than 1% of total energy intake, which is less than 2.2 g per day for a 2000-calorie diet. Industrially produced trans-fats are not part of a healthy diet and should be avoided. The WHO EPW proposes the target that by 2025 "all Member States in the Region have adopted policies to eliminate TFA [trans-fatty acids]" *(2)*, in line with SDG Target 3.4 to reduce premature mortality from NCDs through prevention and treatment and promote health and well-being *(13)*. The consumption of industrially produced trans-fats, which are present in many processed foods, accounts for around 278 000 deaths worldwide *(9)*.

The indicator "best practice policy implemented for industrially produced trans-fatty acids" is based on trans-fat country score cards *(10)* and reported in the WHO Global Database on the Implementation of Food and Nutrition Action *(57)*. Member States report whether they have implemented policy(ies) or regulatory measure(s) that limit industrially produced trans-fats in all settings and in line with the recommended approach.

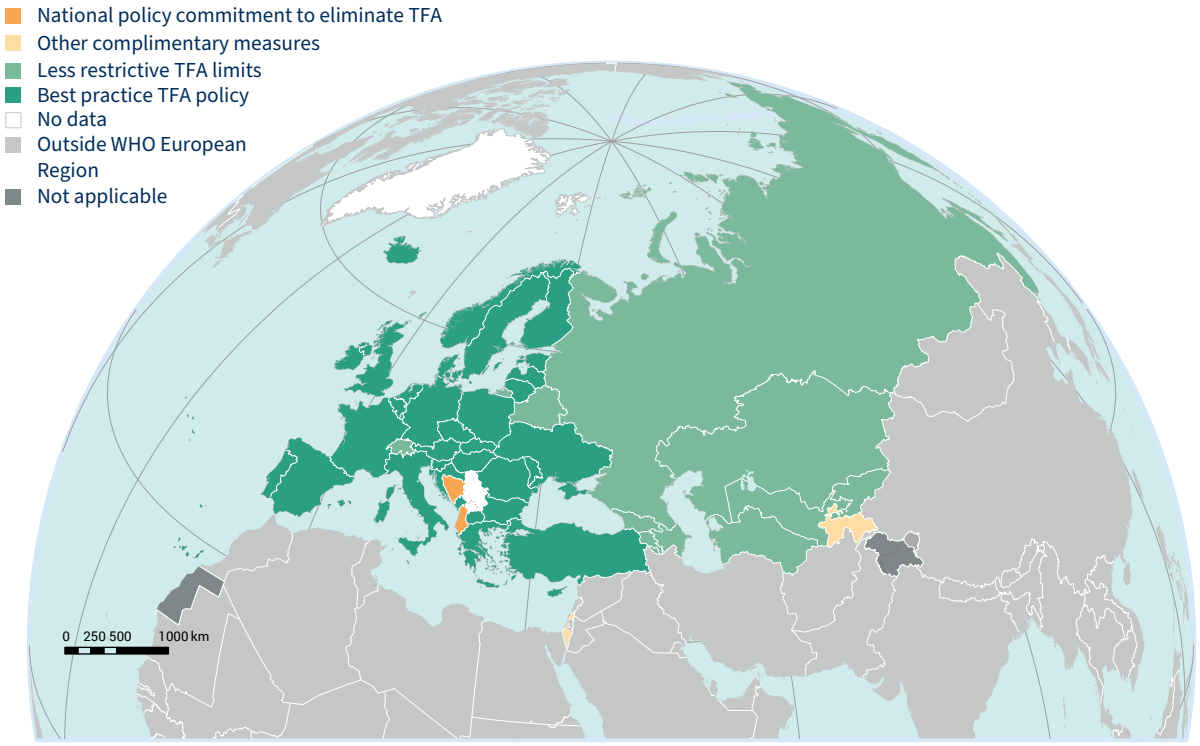
As of 2024 best practice trans-fat policies had been implemented by 35 Member States in the Region: that is, legislative or regulatory measures that limit industrially produced trans-fats in foods in all settings in line with the recommended approach (Fig. 5.14). In all, 10 Member States (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Russian Federation, Switzerland, Turkmenistan and Uzbekistan) have policies that are less restrictive than the recommended approach and 14 have additional monitoring mechanisms related to mandatory trans-fat limits (Armenia, Austria, Belarus, Denmark, Georgia, Hungary, Iceland, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Norway, Russian Federation and Switzerland). Data are lacking for Andorra, Monaco, San Marino and Serbia *(10,58)*.

It is possible to use healthier oils and fats in food products without compromising the price or flavour of the food for consumers. More importantly, eliminating trans-fats is an effective way of preventing heart disease, as well as saving on health-care costs and lost productivity *(59)*. In May 2019 WHO released six REPLACE modules *(59)* that provide practical, step-by-step implementation guidance to support country actions to eliminate industrially produced trans-fat from national food supplies. The six areas of action are to:

- **review** dietary sources of industrially produced trans-fats and the landscape for required policy change;
- **promote** the replacement of industrially produced trans-fats with healthier fats and oils;
- **legislate** or enact regulatory actions to eliminate industrially produced trans-fats;
- **assess** and monitor trans-fat content in the food supply and changes in trans-fat consumption in the population;

- **create** awareness of the negative health impact of trans-fat among policy-makers, producers, suppliers and the public; and
- **enforce** compliance with policies and regulations.

Fig. 5.14. Policies implemented for industrially produced trans-fatty acids



Notes: TFA: trans-fatty acids. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

Source: created by the WHO GIS Centre for Health DNA/DDI based on data in the Global Database on the Implementation of Food and Nutrition Action *(10,57)*, latest year of data 2024.

Making Europe free of trans-fats is a priority in the EPW *(2)* and there are inspiring examples of progress in several Member States. For example, in 2024 WHO awarded Denmark, Lithuania and Poland the first-ever certificates validating their progress in eliminating industrially produced trans-fats *(60)*. Moreover, following the ban in Demark, cardiovascular mortality dropped significantly and the increasing trends in child and adolescent obesity were halted. Nevertheless, progress is uneven across the Region. The Eurasian Economic Union (Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russian Federation) remains the largest global region in which the population is not protected by WHO best practice trans-fat policies. Belarus and the Russian Federation, along with Azerbaijan, contribute to 90% of the trans-fat-related health burden. Strengthening the Eurasian Economic Union Regulation TR CU 024/2011 on oil and fat products in line with WHO best practice is a priority *(61)*. The Race to the Finish Initiative of the Special Initiative on NCDs and Innovation (WHO Regional Office for Europe) is committed to accelerating progress towards the NCD-related SDGs for 2030 by supporting priority interventions including interventions to eliminate trans-fats *(62)*.

5.6 Alcohol consumption

Main findings

- Alcohol consumption is one of the leading causes of morbidity and mortality in the WHO European Region and is responsible for nearly one in every 11 deaths per year.
- The Region has the highest intake of alcohol in the world: the average adult (age over 15 years) drank 8.8 litres of pure alcohol in 2020, with men drinking on average four times more than women.
- In 2020 the total intake of pure alcohol varied between 0.7 litres and 16.8 litres per capita in the WHO European Region. EU countries top regional and global consumption numbers – seven of the 10 countries with the highest alcohol consumption are EU Member States.
- The WHO European framework for action on alcohol 2022–2025 set a target of a 10% relative reduction in total alcohol consumption by 2025 from a 2010 baseline. The Region is on track to achieve this, but patterns vary. Total alcohol consumption increased in 15 out of 53 Member States during the 2010–2019 period, indicating that sustained efforts are needed.

Alcohol consumption is a significant public health issue, especially in the WHO European Region, which has the highest intake of alcohol globally. It is also the WHO region where alcohol makes the greatest contribution to morbidity and mortality *(63–65)*. In general, consumption patterns are heavily influenced by the commercial determinants of health *(66)*. Alcohol consumption places a considerable burden on health systems and causes large productivity losses not only in the form of premature deaths but also in absenteeism and costs to juridical systems and welfare services. Overall, alcohol consumption undermines national commitments to achieving at least 13 of the 17 SDGs *(63,64,67)*.

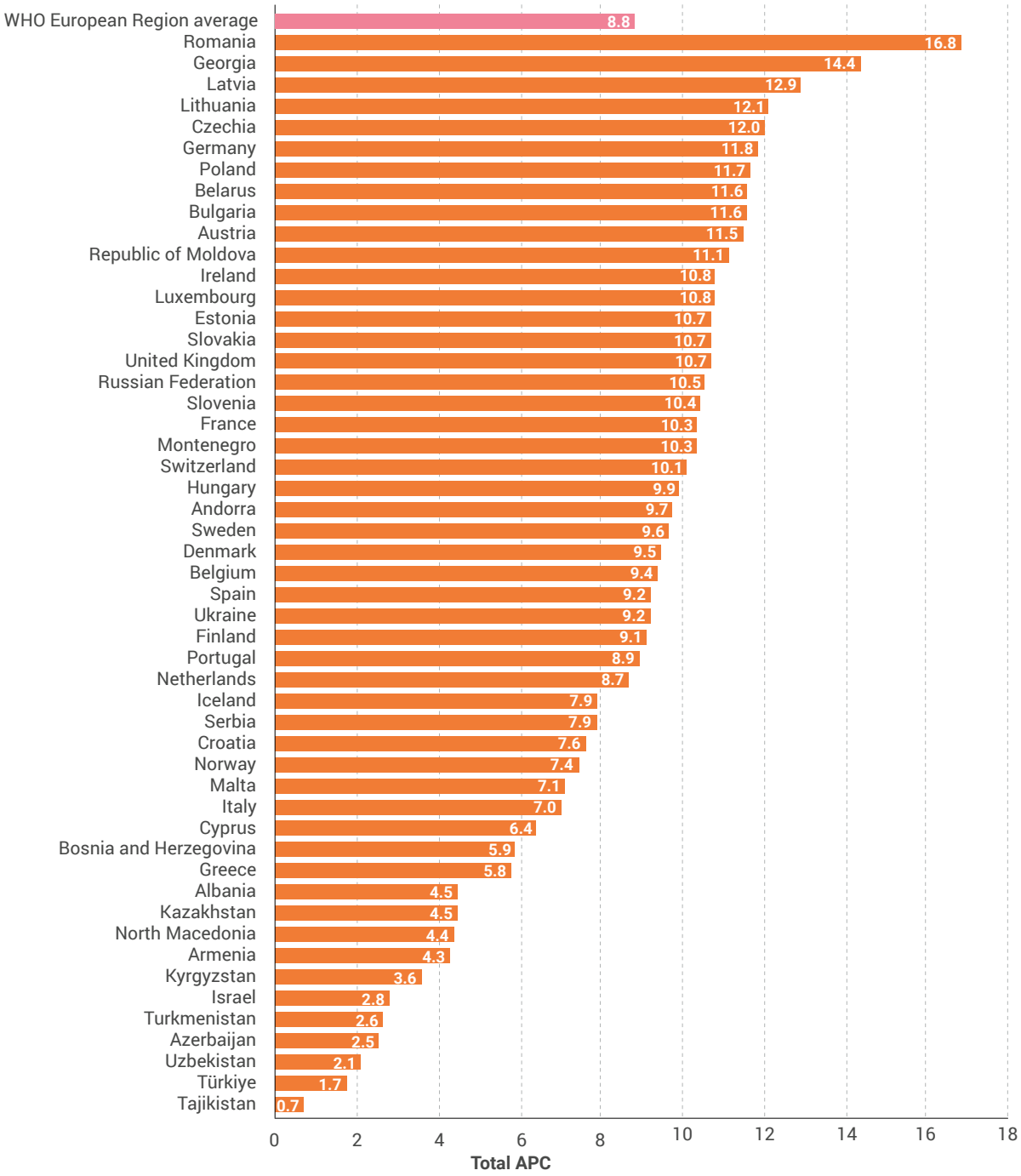
Addressing alcohol-related harm is critical to achieving WHO's EPW objectives, particularly to reduce premature mortality from NCDs *(2)*. Alcohol consumption is linked to many different diseases, including cancer. With regard to cancer, it has been long known that there is no safe level of alcohol consumption *(68,69)*. The WHO *Global alcohol action plan 2022–2025 (70)* and the WHO European framework for action on alcohol 2022–2025 *(71)* outline the way forward to reduce alcohol-related harm. In particular, several countries face significant challenges in protecting alcohol policy development from industry interference. The WHO Regional Office for Europe's SAFER initiative supports cost-effective policy implementation and ensures accountability through strong monitoring systems *(72)*.

Total alcohol per capita consumption (total APC) is defined as the total amount of recorded and unrecorded[33] alcohol consumed (adjusted for tourist consumption) among people aged 15 years and older over in a calendar year, in litres of pure alcohol. Reporting is based on a 3-year average APC to reduce variability and improve reliability of the indicator at global level *(65)*. The EPW monitors the total APC using data sources for calculating the estimates, including alcohol sales and/or taxation data, national surveys and health databases; methodological limitations include underreporting and variations in data collection methods.

In the WHO European Region, total APC was 8.8 litres in 2020 *(11)*. Consumption figures vary substantially, between 0.7 litres in Tajikistan to 16.8 litres in Romania (Fig. 5.15). In the Region, men drink on average four times more alcohol compared with women (Fig. 5.16).

[33] Unrecorded alcohol refers to various alcoholic products that are not included in official statistics on alcohol taxation or sales in the country where they are consumed because they are typically produced, distributed and sold outside formal government-controlled channels. Examples include homemade, smuggled or counterfeit alcohol.

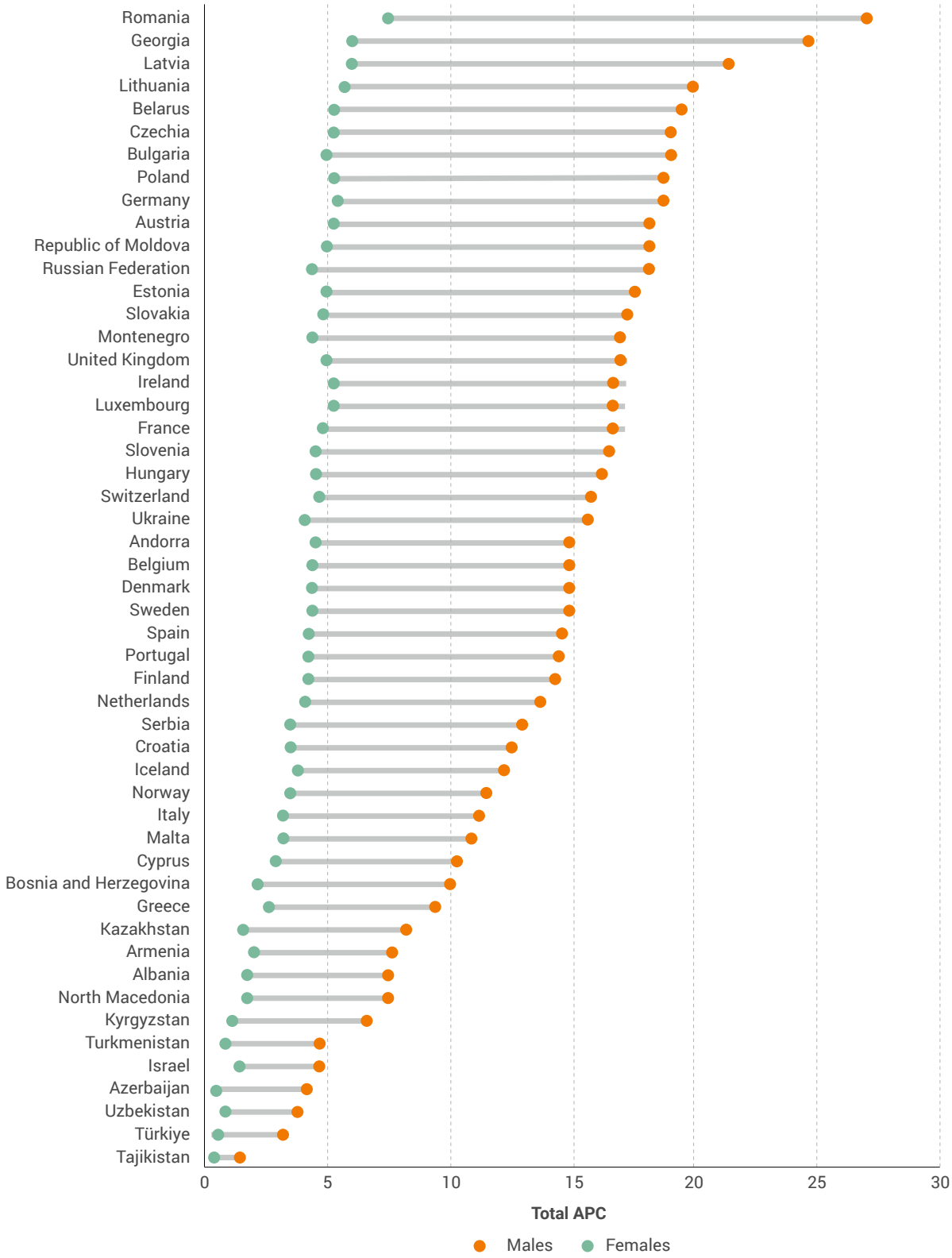
Fig. 5.15. Alcohol consumption in the WHO European Region, 2020



Notes: data available for 51 Member States; all data for 2020 apart from Montenegro and Serbia where data are for 2019; the latest estimates cover only 2020 and will be adjusted retrospectively once 3-year data are available.

Source: WHO *(11)*.

Fig. 5.16. Alcohol consumption in the WHO European Region in men and women, 2020

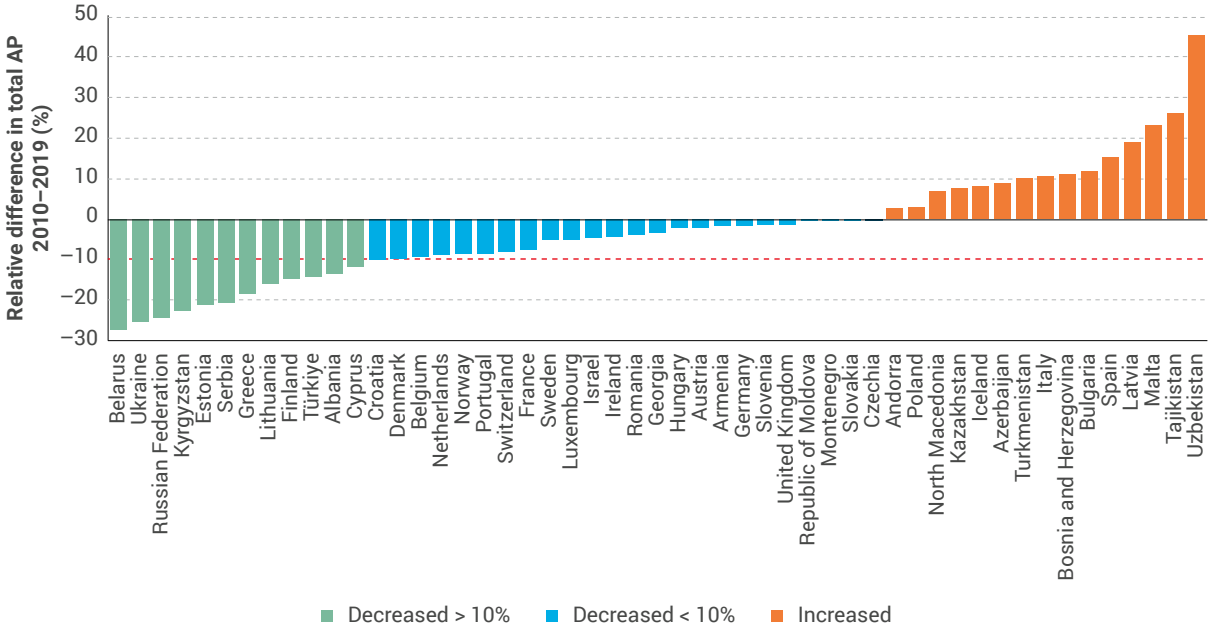


Notes: data available for 51 Member States; all data for 2020 apart from Montenegro and Serbia where data are for 2019; the latest estimates cover only 2020 and will be adjusted retrospectively once 3-year data are available.

Source: WHO *(11)*.

The WHO European framework for action on alcohol 2022–2025 set a target of a 10% relative reduction in APC by 2025 from a 2010 baseline *(71)*. Since the latest data in the Region are computed for 2020 only, instead of the 3-year average, this Report uses a more robust estimate of APC trends between 2010 and 2019 (Fig. 5.17).

Fig.5.17. Relative change in alcohol consumption in the WHO European Region between 2010 and 2019



Note: the red dotted line indicates the target of a 10% relative reduction in APC by 2025 from a 2010 baseline.

Source: WHO *(11)*.

Progress towards reducing alcohol consumption in the WHO European Region is ongoing, with positive trends in some Member States. Overall, alcohol consumption decreased from 10.2 litres in 2010 to 9.2 litres in 2019, so the Region is still on track to achieve the 10% reduction target; however, patterns vary across Member States. Total APC increased in 15 Member States and decreased in 36 during the 2010–2019 period. The largest relative reductions occurred in Belarus, Estonia, Kyrgyzstan, Russian Federation and Ukraine, and the largest increases in Malta, Latvia, Spain, Tajikistan and Uzbekistan.

High alcohol consumption levels, particularly in the EU and eastern Europe, and large increases in countries with relatively low levels such as Tajikistan and Uzbekistan underscore the need for public health interventions. In 2019 more than one in every 10 adults experienced an alcohol use disorder *(63,65)*.

Ethanol is the toxic substance in alcoholic beverages that is responsible for the most harm, regardless of the type of beverage consumed (e.g. wine, beer, spirits) *(63,64)*. In the Region, alcohol consumption is responsible for one in every 11 deaths each year, representing 800 000 deaths annually, and is linked to over 200 diseases and health conditions *(64)*. More specifically, in 2019 alcohol was responsible for 42% of all homicides, 37% of suicides and 35% of road deaths, as well as 28.3% of all digestive diseases (mostly liver cirrhosis), 8.5% of all deaths due to CVD and 5.7% of all cancer deaths *(65)*.

In Europe, although the link between alcohol consumption and cancer has been known for many years *(68)*, awareness of the link is generally low and needs to be improved *(73,74)*. According to the limited studies available, only about half of Europeans can correctly identify alcohol as a risk factor or cause of cancer *(73,74)*. Introducing cancer-specific health warnings on alcoholic beverages could serve as a cost-effective tool for raising awareness of the associated risks, thereby replicating the success of tobacco-related health warnings. While no mandatory alcohol health warnings currently exist in EU countries, implementation rates are significantly higher in the eastern part of the WHO European Region, although no Member State has yet implemented a cancer-specific health warning *(75)*. Labelling must be paired with broader policies: raising taxes, limiting availability and restricting advertising. These proven measures reduce alcohol harm at the population level with a positive impact on life expectancy. Overall, alcohol policy implementation rates are higher in the eastern part of the WHO European Region, where some of the largest countries have seen the largest relative reductions in alcohol consumption levels but still show a very high contribution of alcohol to mortality statistics *(63,76)*.

To address alcohol-related harms, nearly 70% of Member States in the WHO European Region have produced national alcohol policies *(63,65)*. Notably, during the COVID-19 pandemic many high-income countries relaxed their alcohol control policies to allow remote purchasing of alcohol for the first time *(14,63)*. Studies suggest that alcohol consumption initially declined in the general population during this period, except in more vulnerable people with substance use disorders *(63)*. However, additional evidence is needed to confirm the impact of the COVID-19 pandemic on alcohol consumption *(11,77,78)*.

The WHO *Global alcohol action plan 2022–2025 (70)* and the European framework for action on alcohol 2022–2025 *(71)* outline the way forward to reduce alcohol-related harm. Alcohol tax and pricing policies are the best-researched measures, but are currently the least implemented across the Region *(72)*. Most Member States do not implement specific restrictions on the availability of alcoholic beverages, such as restrictions on days and/or hours of sales *(72)*. Full bans and partial restrictions on alcohol advertising in the Region are not common – especially for wine advertisements *(65)*. Sustained efforts are needed across Member States to lower the affordability of alcoholic beverages (particularly by raising taxes), restrict advertising and promote public-awareness campaigns *(64)*.

5.7 Tobacco use

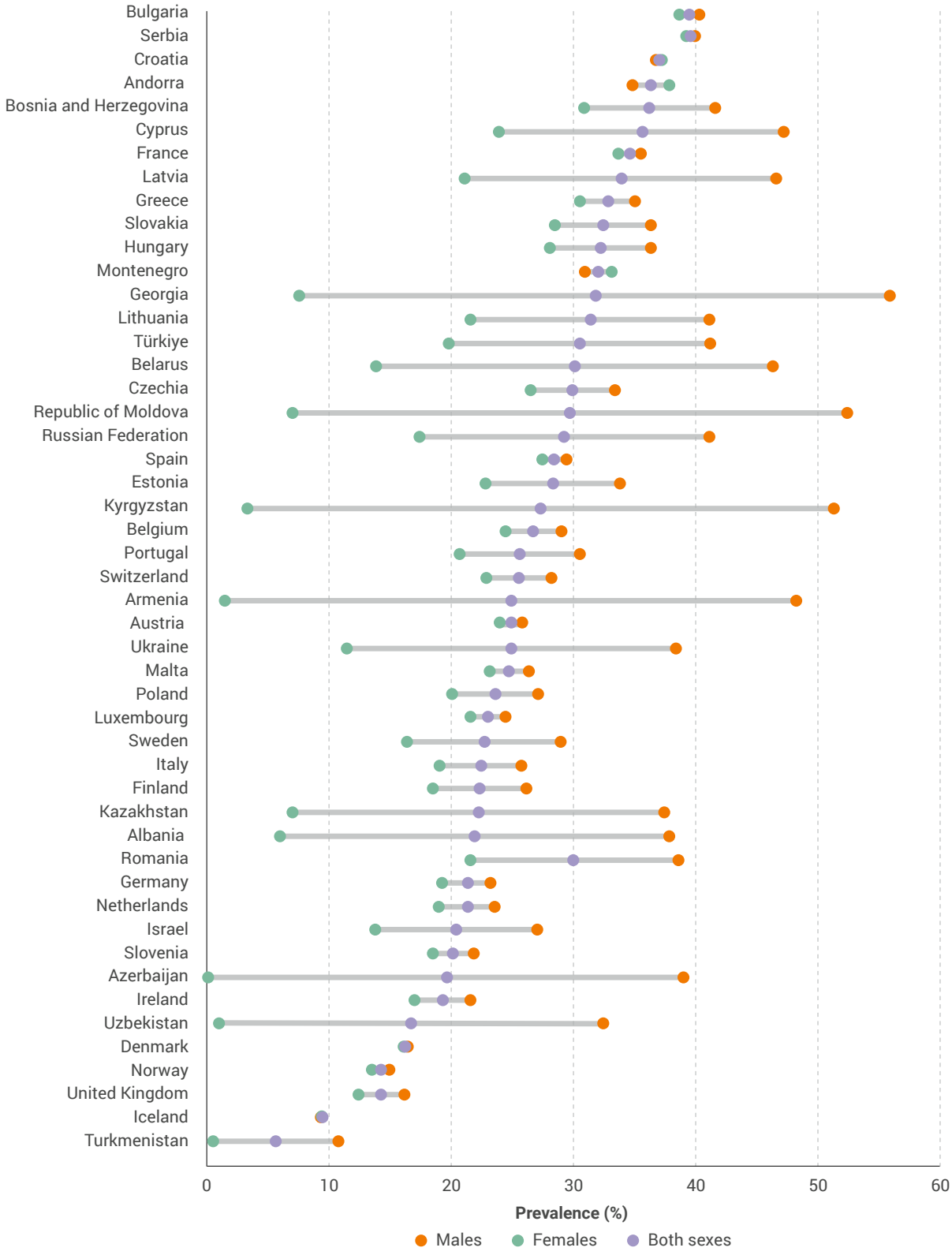
Main findings

- The WHO European Region has one of the highest prevalences of tobacco use. In 2022 25.3% of the population were tobacco users: 32.0% of men and 18.5% of women. In some countries, nearly half of the men use tobacco.
- Patterns vary substantially across Member States, with prevalences of tobacco use ranging from 5.6% to 39.5% in 2022.
- Tobacco use has been declining since 2010 but the decline is slow, particularly for women.
- Data predict that by 2025 the relative reduction in prevalence of tobacco use in the Region will be only 17%, whereas the WHO Global NCD target aims for a 30% relative reduction by 2030.
- E-cigarette use among adolescents (aged 13–15 years) ranges between 0.7% and 23.3% across Member States, with higher rates in boys. Although a Region-wide overview is not yet at hand, available data suggest declining trends for cigarette smoking among young people and increasing trends for e-cigarette use. E-cigarette use is surpassing cigarette smoking in many countries.

Tobacco use is a major public health challenge that is responsible for over 8 million deaths annually, including 1.3 million from second-hand smoke *(79,80)*. Nicotine's addictive nature causes continuing tobacco use that is a burden for health systems. It is a leading cause of NCDs such as CVD, cancers and chronic respiratory diseases *(81,82)*. Notably, eight out of 10 cases of lung cancer could be prevented if smokers were to quit *(79)*. All forms of tobacco are harmful and there is no safe exposure level. The WHO Framework Convention on Tobacco Control, which was endorsed by 183 Parties covering over 90% of the world's population, provides a comprehensive legal framework for global tobacco control *(83,84)*. Implementation of the Framework is included in the SDGs *(67)*.

The WHO European Region has one of the highest prevalences of tobacco use worldwide *(80)*. Among people aged 15 years and over, 25.3% use tobacco in the Region versus 20.9% at global level (lowest is 9.5% in the WHO African Region and the highest is 26.5% in the WHO South-East Asia Region *(80)*). Nevertheless, patterns of use vary significantly across Member States. In 2022 prevalences ranged from 5.6% in Turkmenistan to 39.5% in Bulgaria and Serbia (Fig. 5.18). In some Member States (Armenia, Belarus, Cyprus, Georgia, Kyrgyzstan, Latvia and Republic of Moldova), roughly half of men in the general population smoke. In the Region overall, nearly twice as many men as women use tobacco products: 32.0% vs 18.5%. Nevertheless, a greater proportion of women smoke in the Region compared with all other WHO regions.

Fig. 5.18. Age-standardized prevalence of current tobacco use in those aged 15 years and older in the WHO European Region, 2022



Note: no data available for Monaco, North Macedonia, San Marino and Tajikistan.

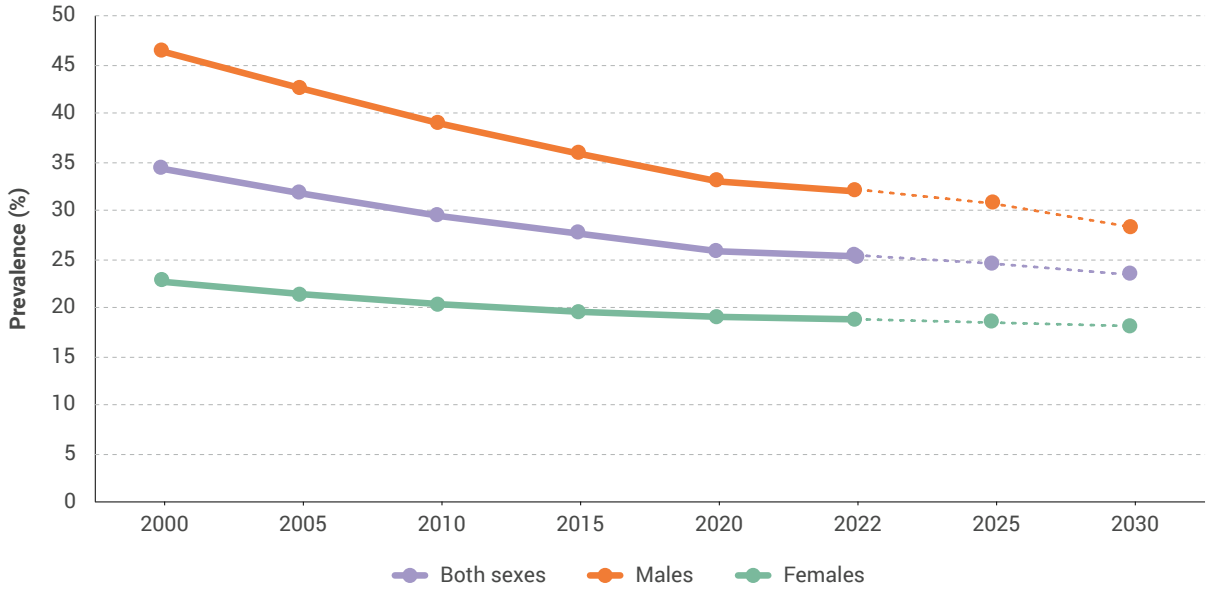
Source: WHO *(80)*.

The WHO NCD Global Monitoring Framework target is a 30% relative reduction in prevalence of tobacco use by 2030 *(12)* and the EPW aim is to reach 30% reduction by 2025 (using 2010 as baseline) *(2)*. However, the WHO European Region is not on track to meet these targets: the projected relative reduction by 2025 is only 17% overall and is much lower in women *(80)*. Patterns vary across Member

States: 11 are likely to reach the target,[34] 34 are likely to achieve a decrease without reaching the target,[35] three are unlikely to achieve a significant change,[36] one (Republic of Moldova) is likely to experience an increased prevalence and the remaining four do not have sufficient data to allow for projections *(80)*.

Although a downwards trend is expected across most Member States of the Region, efforts are still needed to reach the WHO NCD Global Monitoring Framework target of a 30% reduction by 2030 *(12)*. The prevalence of tobacco use is projected to decrease from 29.5% in 2010 to 24.4% by 2025, representing a relative reduction of 17% (Fig. 5.19). Moreover, the prevalence is decreasing more slowly in women (9% projected decrease from 2010 to 2025) than in men (22% projected decrease from 2010 to 2025).

Fig. 5.19. Trends in prevalence of current tobacco use in those aged 15 years and older in the WHO European Region, estimates for 2000–2022, projections for 2025 and 2030



Note: no data available for Monaco, North Macedonia, San Marino and Tajikistan; estimated prevalence for 2000–2022, and projected prevalence for 2025 and 2030.

Source: WHO *(74)*.

In the WHO European Region, 10.8% of adolescents aged 13–15 years used tobacco in 2022 *(80)*. According to the Global Youth Tobacco Survey, the prevalence varies across Member States from 1.7% in Uzbekistan (2021) to 26.6% in Bulgaria (2023) *(85)*. Other school-based surveys in older students (15–16 years of age) found that tobacco use ranges between 10% in Norway and Malta to 32% in Bulgaria and Italy. In 17 out of 28 countries, rates of tobacco use in girls are similar to or higher than those in boys *(86,87)*.

Since the early 2010s, there has been a rapid proliferation of new and emerging nicotine and tobacco products on the global market, including electronic cigarettes (e-cigarettes), heated tobacco products and nicotine pouches. These products have gained in popularity among adolescents and young adults. The widespread use of e-cigarettes among young people in particular is of great concern. E-cigarette use among adolescents (age 13–15 years) ranges from 0.7% in Uzbekistan (2021) to 23.3% in Bulgaria (2023), with higher rates in boys. The increased trend of e-cigarette use among young people is reported to be of great concern in many Member States in the Region. For example, e-cigarette use more than doubled in Georgia and Italy and nearly doubled in Latvia between 2014 and 2019 *(88)*. Member States

[34] Austria, Denmark, Finland, Germany, Greece, Iceland, Ireland, Norway, Sweden, Turkmenistan, United Kingdom.

[35] Albania, Armenia, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Cyprus, Czechia, Estonia, France, Georgia, Hungary, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Montenegro, Netherlands, Poland, Portugal, Romania, Russian Federation, Serbia, Slovenia, Spain, Switzerland, Türkiye, Ukraine, Uzbekistan.

[36] Andorra, Croatia, Slovakia.

in the Region are seeing higher rates of e-cigarette use than of cigarette smoking in young people *(87,89)*. One example is United Kingdom (England), where the percentage of children aged 11–15 years who used e-cigarettes in 2021 was three times higher than those who were smoking *(90)*.

E-cigarettes come in many different flavours and the packaging is designed to appeal to young people *(91,92)*. They are being aggressively advertised by the tobacco and related industries through social media platforms and entertainment media, including by influencers who target the youngest population groups. E-cigarettes are addictive and harmful to health: the most recent systematic review established that the risks for CVD, stroke and metabolic dysfunctions are similar for e-cigarette use and conventional cigarette smoking *(93)*. Furthermore, e-cigarette use can increase the uptake of conventional cigarette smoking by nearly three times, particularly for non-smoking young people *(94)*. After assessing the available evidence (in particular, the increasing body of research on e-cigarette usage among children, adolescents and non-smokers), WHO issued a technical note and call to action on e-cigarettes (95,96). These emphasize the urgent need for decisive action to prevent the uptake of e-cigarettes (which are harmful to health) to protect children and non-smokers and minimize health risks to the population.

Tobacco kills up to half of those users who do not quit *(79)*. Factors contributing to high tobacco use include targeted marketing and product availability. The tobacco industry influences policies and public opinion to maintain profits, and these lead to worsening health disparities, particularly among people of lower socioeconomic status and education level *(79)*. Therefore, strong regulations are needed to limit the influence of the tobacco industry and protect public health, for example by eliminating second-hand smoke exposure in all indoor public places, workplaces and public transport *(52)*.

Effective interventions include raising tobacco taxes, enforcing advertising bans, eliminating second-hand smoke exposure in public spaces and offering cessation support. These measures align with the WHO Framework Convention on Tobacco Control *(83,84)*. Quitting offers both immediate and long-term health benefits, with the risk of coronary heart disease reducing by half after 1 year *(97)*.

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6

Mental health

Good mental health is essential for people to live healthy and productive lives. Over 143 million people in the WHO European Region live with some form of mental health condition, accounting for 16% of the population *(1)*. The social and economic costs of mental ill health are high, with devastating effects on individuals, families and communities and economic costs of up to 4% of gross domestic product *(2)*. This chapter brings together the indicators in the European Programme of Work 2020–2025: United Action for Better Health (EPW) measurement framework (EPW-MF) related to mental well-being and the occurrence and treatment of mental health conditions *(3,4)*.

Children and adolescents are among the populations most vulnerable to mental health conditions. The data presented in this Report show that girls consistently report lower levels of mental well-being than boys. Mental well-being scores among 15-year-old adolescents as measured on a 100-point scale are 49.9 for girls and 62.0 for boys *(5)*. The coronavirus disease (COVID-19) pandemic is likely to have severely impacted youth mental well-being as a consequence of confinement policies, school closures and social distancing measures disrupting crucial peer interactions and developmental experiences during formative years *(6)*.

The COVID-19 pandemic also contributed to an increased prevalence of depressive disorders in the WHO European Region, from 4.6% in 2019 to 5.2% in 2021 *(7)*. In 2019 dementia affected more than 14 million people in the Region, and the disease burden caused by dementia as expressed in disability-adjusted life-years (DALYs)[38] doubled between 2000 and 2021. As populations across the Region are ageing and the risk of developing dementia increases with age, the impact of dementia is expected to substantially increase in the coming years.

Despite a declining trend, suicide remains a serious public health problem. It accounts for one in 100 deaths across all age groups in the Region *(8)* and is the leading cause of death among young people. Suicide rates among men are four times higher than among women. Tackling the complex interplay of factors leading to suicide, including social, economic, interpersonal, mental health and media influences, requires a comprehensive approach.

People with substance use disorders should have access to comprehensive prevention, treatment and rehabilitation services without financial hardship, in line with the principle of universal health coverage (UHC) and the Sustainable Development Goal (SDG) targets *(9)*. However, in those Member States of the WHO European Region for which data are available, coverage of treatment interventions ranges from 2.1% to 35% for drug use disorders and from 1.2% to 13.8% for alcohol use disorders, highlighting substantial gaps in essential health services for this vulnerable group.

There is widespread consensus on the urgent need for concerted, multisectoral action on mental health. Accordingly, mental health was identified as one of the flagship areas under the EPW. A 2023 capacity survey showed that most European countries have established national mental health policies, plans and strategies, as well as comprehensive frameworks aligned with WHO guidelines that emphasize mental health promotion, prevention, treatment and rehabilitation *(10)*. Despite these advances, particular challenges remain in policy evaluation, mental health stigma, and services for older adults.

[38] DALYs are used to measure the overall impact of diseases and health problems on a population, indicating how much a health issue affects people's lives and society as a whole. DALYs combine two important factors: years of life lost due to early death and years lived with a disability or health problem. One DALY represents one lost year of healthy life. The use of DALYs enables comparison of the effects of different health problems that may affect people in different ways, for example a disease that causes early death versus one causing long-term disability. DALYs help to create a more complete picture of health beyond information from death rates. They help to answer the question "How much healthy life is being lost because of this health problem?" This information is crucial for making informed decisions about public health priorities and interventions.

6.1 Well-being among adolescents

Main findings

- Mental well-being among adolescents in the WHO European Region declines with age and shows stark gender gaps: 15-year-old girls fare the worst on the WHO-5 Well-being Index (49.9 out of a possible 100 vs 62.0 among 15-year-old boys), are less likely to have excellent health (23% vs 40% among boys) and report higher rates of loneliness (28% vs 13% of boys).
- Life satisfaction and self-rated health declined between 2017–2018 and 2021–2022, particularly among girls.

Mental well-being is a crucial aspect of overall health, particularly for adolescents as they navigate the challenges of growing up. The EPW *(3)* and *WHO European framework for action on mental health 2021–2025 (11)* emphasize the importance of promoting mental health and well-being across the life-course, with a particular focus on protecting and promoting the mental health of children and adolescents. The Health Behaviour in School-aged Children (HBSC) study, conducted in collaboration with the WHO Regional Office for Europe, provides valuable insights into the mental well-being of young people across the Region *(5)*. The WHO-5 Well-being Index is used to measure adolescents' mental well-being through their recent experiences *(12)*. It explores positive mood, vitality and general interests without focusing on symptomatic language. The Index serves as both a reflective measure of mental well-being and a potential screening tool for identifying depressive symptoms *(13)*.

According to the latest HBSC survey data from 2022, the mean mental well-being scores for 15-year-old boys and girls vary considerably across the WHO European Region *(5)*. There is a consistent gender gap across all Member States, with boys reporting higher levels of mental well-being than girls (Fig. 6.1). Mental well-being also declines with age for both boys and girls, with 15-year-old girls faring the worst overall (49.9 points out of a possible 100 compared with 62.0 among 15-year-old boys) *(5)*.

The gender gap in mental well-being is most pronounced in countries such as England (United Kingdom; 18 points), Italy (16 points) and Slovenia (14 points).

Stark gender gaps exist for other factors relevant to adolescent well-being. Girls are, in general, less likely to report having excellent self-rated health than are boys, and this gap widens with age: whereas 39% of girls reported self-rated health as excellent at 11 years of age, only 23% did so at 15 years. For boys, the decline is noticeably less steep (44% of boys at 11 years of age vs 40% at 15 years).

A similar pattern can be observed for loneliness. Girls are more likely to report being lonely most or all of the time, with the rate doubling between those aged 11 years (14%) and those aged 15 years (28%). The increase is more marginal for boys (8% at 11 years of age and 13% at 15 years).

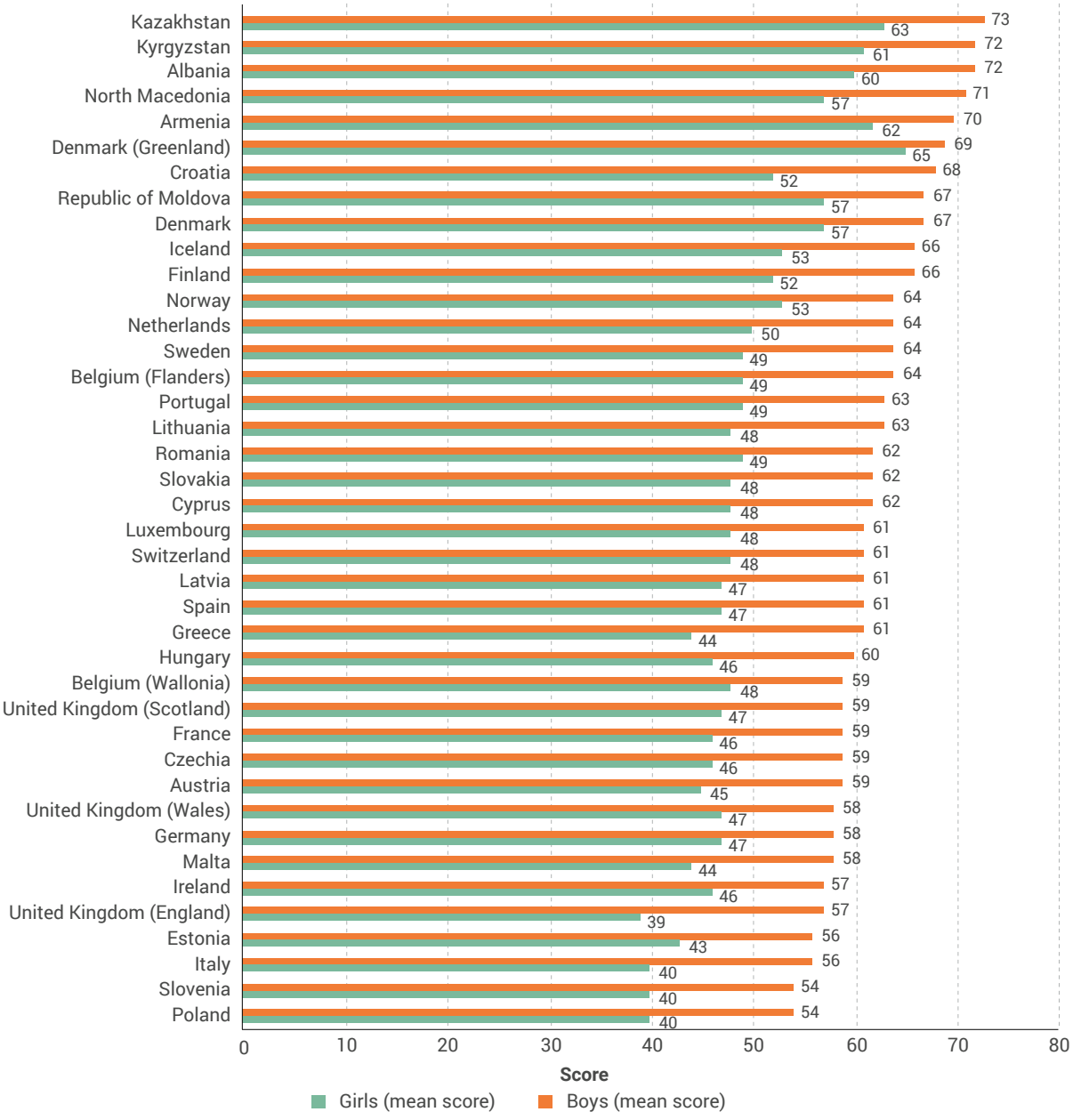
Adolescent well-being, according to some indicators, is declining over time. In a comparison of HBSC data from 2017–2018 and 2022, adolescents' ratings of life satisfaction and self-rated health declined marginally, with differences being larger for girls than for boys *(5)*.

These findings highlight the need for universal and targeted interventions to promote mental well-being among adolescents, with a particular focus on addressing gender disparity. Factors contributing to these differences may include societal expectations, academic pressure, social media use and access to mental health support *(13)*.

Many Member States in the Region reported that the COVID-19 pandemic has had significant impacts on the mental health and well-being of young people and has increased both help-seeking behaviour and waiting times for care. Pandemic-related confinement policies, school closures and social distancing measures disrupted crucial peer interactions and developmental experiences

during formative years, with potential long-term consequences for mental health and socioemotional development that had disproportionate impacts on the most vulnerable children, including those with low socioeconomic status, a migration background and/or limited living space *(6)*.

Fig. 6.1. Mean mental well-being scores (WHO-5 Well-being Index) for 15-year-old boys and girls by Member State or subnational region and sex, 2022



Source: based on data in HBSC Study *(5)*.

Trends that are shaping youth mental well-being in the WHO European Region include an increasing awareness and destigmatization of mental health issues among young people, the growing influence of social media and digital technologies on adolescent well-being, rising academic and social pressures in many Member States, and changing family structures and support systems *(5,14–17)*. To promote youth mental well-being in the light of these trends, policy-makers should consider implementing and scaling up school and community-based mental health programmes and support services, promoting digital literacy and healthy social media use among adolescents, addressing gender-specific factors affecting mental well-being, strengthening family and community support systems for young people, and integrating mental health promotion into broader public health strategies.

Continued monitoring of youth mental well-being through initiatives such as the HBSC study *(5)* will be crucial for informing targeted interventions and policies to improve young people's mental health across the WHO European Region.

6.2 Prevalence of depression

Main findings

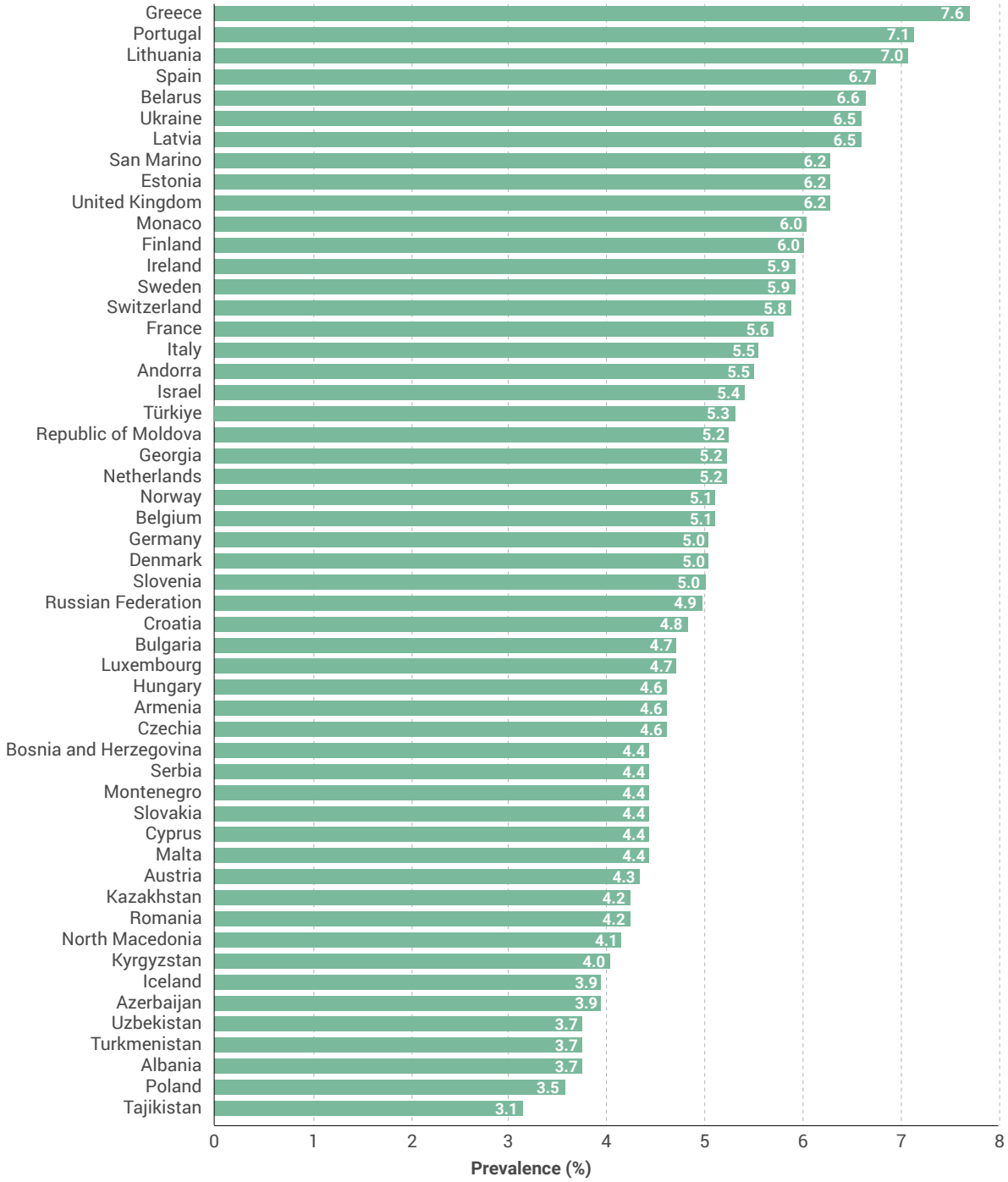
- The prevalence of depressive disorders in the WHO European Region increased from 4.6% in 2019 to 5.2% in 2021. This increase is likely to have been influenced by the COVID-19 pandemic.
- There is a significant variation in prevalence across Member States, ranging from 3.7% to 7.6%. Most Member States saw an increased prevalence of depressive disorders between 2019 and 2021, with some experiencing a substantial rise.

Depressive disorders represent a significant public health concern in the WHO European Region, affecting millions of individuals and impacting various aspects of society. The *WHO European framework for action on mental health 2021–2025* emphasizes the importance of promoting and protecting mental health across the life-course and of increasing access to services for mental health conditions, including depression, as part of a comprehensive approach to public health *(11)*. The prevalence of depressive disorders is defined as the percentage of the population experiencing a depressive disorder in a given year. This measure covers major depressive disorder and dysthymia and provides insight into the burden of these conditions across different populations. Dysthymia is characterized by chronic, low-grade depressive symptoms that last for at least 2 years and often interfere with daily functioning. Depressive disorders and dysthymia significantly impair people's ability to work, form relationships and maintain physical health, leading to a substantial reduction in quality of life *(17)*.

The overall estimated prevalence of depressive disorders in the WHO European Region increased from 4.6% in 2019 to 5.2% in 2021. Greece had the highest prevalence of depressive disorders in 2021 (7.6%), followed by Portugal (7.1%) and Lithuania (7.0%) (Fig. 6.2); Tajikistan had the lowest prevalence (3.1%), with slightly higher prevalences in Poland (3.5%) and Albania (3.7%). Most Member States experienced an increased prevalence between 2019 and 2021, with some seeing substantial rises. For example, prevalence increased from 5.5% to 6.5% in Ukraine and from 5.3% to 6.6% in Belarus *(18)*. In general, Member States in eastern Europe have lower prevalence rates, whereas some in western and southern Europe have higher rates.

Prevalence rates may be influenced by differences in health systems, cultural attitudes towards mental health, and socioeconomic factors *(19)*. Variations in diagnostic practices and access to mental health services can also affect the identification and reporting of depressive disorders *(20)*. Increasing awareness and destigmatization of mental health issues are potentially leading to higher reporting and diagnosis rates *(21)*. The data also highlighted a higher prevalence of depression in women than in men. In addition, rates were up to three times higher in the lowest education group than in the highest, emphasizing the importance of considering the effects of socioeconomic factors when addressing depressive disorders in the WHO European Region *(22)*. The COVID-19 pandemic is likely to have contributed to the increase in depressive disorders observed across the Region *(19,20)*. The growing impact of social and economic stressors, including those exacerbated by the COVID-19 pandemic, might also have contributed to shaping the prevalence of depressive disorders across the Region *(23)*. Evolving treatment approaches, including the integration of digital mental health interventions, is a notable development *(24)*. Furthermore, demographic changes such as ageing populations in many European countries may influence depression rates in older adults facing increased risk factors such as social isolation, chronic illness and bereavement *(25)*.

Fig. 6.2. Prevalence of depressive disorders in the WHO European Region, 2021



Source: based on data from the Institute for Health Metrics and Evaluation (IHME). GBD 2021 Study results. Seattle, WA: IHME, University of Washington, 2024 *(18)*.

To address the substantial prevalence of depressive disorders, policy-makers should consider strengthening mental health services and improving access to treatment for all population groups, as well as implementing prevention programmes targeting known risk factors for depression. Such efforts are aligned with the *WHO European framework for action on mental health 2021–2025 (11)* and the objectives of the EPW flagship, The Mental Health Coalition *(26)*. Additionally, promoting mental health literacy and reducing the stigma associated with mental health conditions could contribute significantly to these efforts. Supporting research into the long-term mental health impacts of the COVID-19 pandemic and into effective interventions remains crucial. Improved monitoring of the prevalence of depressive disorders, alongside other mental health indicators, is essential to inform targeted interventions and policies aimed at improving mental health across the WHO European Region. Such actions, supported by the Mental Health Coalition, can provide a comprehensive approach to addressing the mental health challenges faced in the Region *(11,26)*.

6.3 Burden of disease caused by dementia

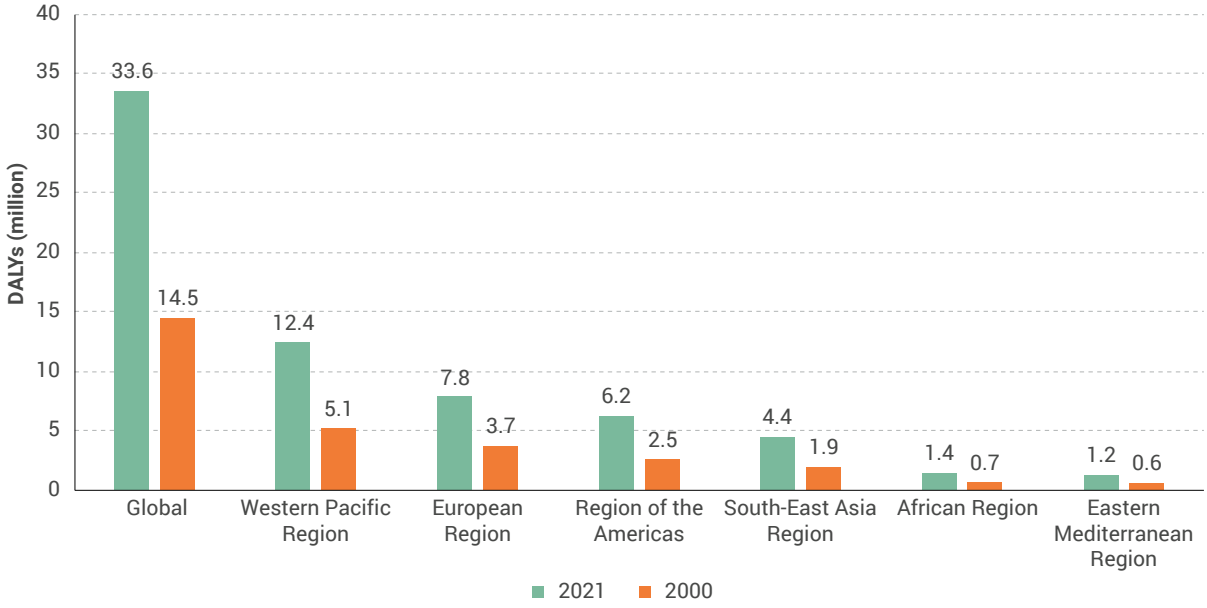
Main findings

- Dementia is a general term for progressive loss of memory, as well as of language and problem-solving abilities. It most often presents as Alzheimer's disease (60–70% of cases). Although the risk of developing dementia increases with age, it is not an inevitable consequence of biological ageing.
- In 2019 about 14 million people (one in 11 of those aged 65 years and older) were living with dementia in the WHO European Region.
- The number of dementia-related DALYs rose from 3.7 million in 2000 to 7.8 million in 2021 in the Region, with twice as many for women than for men.
- The prevalence of dementia is expected to double by 2030, anticipating a significant increase in the need for comprehensive and integrated care across all care settings, including long-term care.
- The WHO *Global action plan on the public health response to dementia 2017–2025* contributes to achieving the SDGs by improving timely diagnosis, treatment, care (long-term care) and rehabilitation for people with dementia and promoting population-wide risk reduction efforts for dementia.

Dementia is not a specific disease but, rather, a general term for impaired memory, impaired cognition and altered behaviour, which most often presents as Alzheimer's disease (60–70% of all dementias), vascular dementia, dementia with Lewy bodies and frontotemporal dementia *(27)*. In 2019 around 14 million people in the Region were affected by dementia, and the prevalence is expected to double by 2030 *(28,29)*. Among people aged 65 years or older in 2019, the prevalence was 8.46% or roughly one in 11 people *(28)*. The risk of developing dementia increases significantly with age, with the condition becoming more common among older populations. However, up to 9% of all cases are estimated to be young-onset dementia (i.e. presentation of symptoms before age 65 years). In the WHO European Region, dementia is one of the leading causes of dependency and disability among older people *(28)*. In 2019 dementia cost economies globally US$ 1.3 trillion *(29)*.

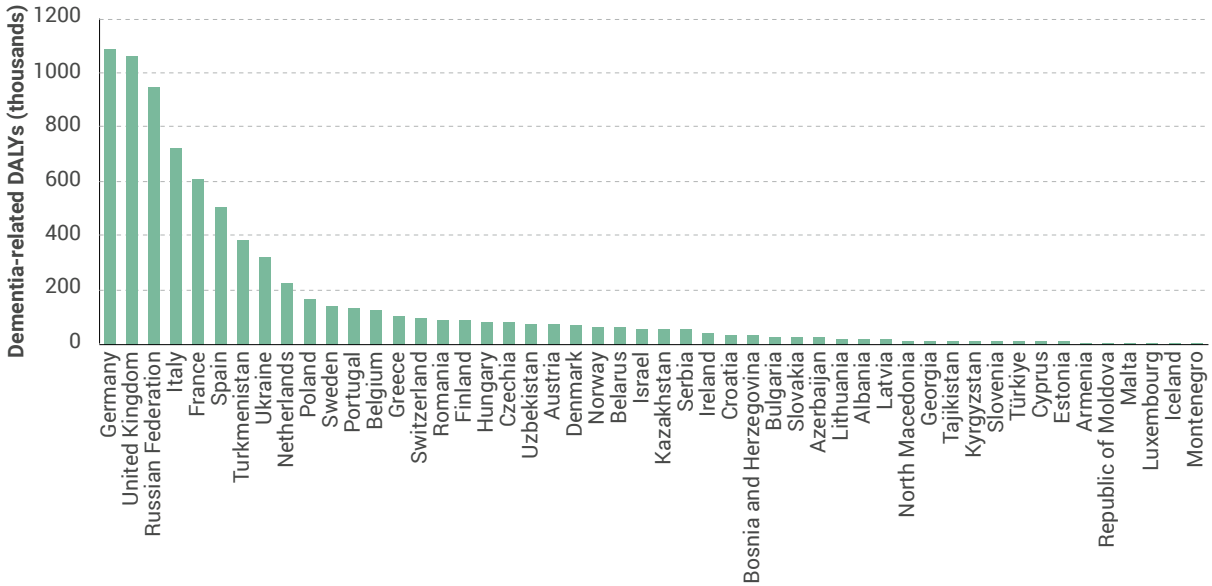
Dementia-related DALYs measure the combined associated burden of illness, disability, and premature death. According to the WHO Global Health Estimates, between 2000 and 2021 the number of dementia-related DALYs rose globally from 14.5 million to 33.6 million (Fig. 6.3) *(30)*. In the same period, the increase was from 3.7 million to 7.8 million DALYs in the WHO European Region, with women experiencing approximately twice the burden compared with men in 2021 *(30)*. The absolute burden of dementia across Member States reached 1 087 000 DALYs in Germany, while Montenegro and Iceland experienced 3000 and 4000 DALYs, respectively (Fig. 6.4). Similar high burdens were observed in the United Kingdom (1 060 000 DALYs) and the Russian Federation (944 000 DALYs). These differences in absolute DALYs also reflect the varying population sizes of Member States (Fig. 6.4).

Fig. 6.3. Dementia-related DALYs across WHO regions, 2000 and 2021



Source: WHO *(30)*.

Fig. 6.4. Dementia-related DALYs in Member States of the WHO European Region, all ages and both sexes, 2021



Note: data are for Alzheimer's disease and other dementias, all age groups and both sexes; no data for Andorra, Malta and San Marino.

Source: WHO *(30)*.

The increase in dementia-related DALYs in the WHO European Region between 2000 and 2021 (Fig. 6.3) and the larger impact on women can be attributed to several factors. Women generally have a longer life expectancy than men. This means that more women survive into the age ranges where dementia risk is highest. Historically, men have had higher rates of cardiovascular disease, which can lead to earlier mortality (before dementia onset). Studies have shown that women have a higher lifetime risk of developing dementia compared with men *(31)*, which may be due to biological factors, including hormonal differences and genetics. Women with dementia tend to live longer after diagnosis than men, potentially accumulating more years lived with disability. Therefore, the larger impact on women is caused by a combination of factors: demographics (longer lifespan), potentially higher dementia risk

and longer survival with the condition. The overall increase reflects the growing challenge that dementia poses to health systems and societies as populations age *(31)*.

Dementia is often underdiagnosed or diagnosed late, which presents significant challenges for patients, caregivers and health systems. Several key risk factors for dementia are known, including older age, genetics and modifiable factors. The Lancet Commission on Dementia Prevention, Intervention and Care identified 12 potentially modifiable risk factors that account for around 40% of the cases of dementia worldwide *(32)*, suggesting a high potential for prevention. These risk factors span the life-course and include lower education level, hypertension, hearing impairment, smoking, obesity, depression, physical inactivity, diabetes, low social contact, excessive alcohol consumption, traumatic brain injury and air pollution.

Common symptoms of dementia include memory loss, difficulty in problem-solving, language impairment, disorientation, mood changes, and challenges with daily tasks, and these symptoms are often complicated by multimorbidities. While disease-modifying pharmaceutical treatments are currently limited, dementia care requires a multifaceted approach involving primary, specialist, community-based rehabilitation and palliative care services. Challenges in ensuring access to diagnosis and care are often structural and relate to health system issues. Improving dementia care necessitates addressing these systemic barriers, enhancing coordination between the social and health-care domains, and investing in research and innovation for better prevention, diagnosis, treatment and care strategies. The impact of dementia extends beyond the individual to affect caregivers, families and communities, both financially and psychologically. Therefore, supporting and training dementia carers is a key priority. WHO's iSupport programme represents an important tool in this effort and is currently being adopted or implemented in 21 Member States of the Region to provide accessible, evidence-informed training and information tailored to carers' needs *(33)*. A comprehensive approach is needed to address this growing global health priority, focusing on risk reduction, early diagnosis, improved care pathways and support for people affected by the condition *(27,29,32–34)*.

The WHO *Global action plan on the public health response to dementia 2017–2025 (27)* and the *Intersectoral global action plan on epilepsy and other neurological disorders 2022–2031 (35)* will contribute to improvements in timely diagnosis, treatment, care (long-term) and rehabilitation for people with dementia, as well as to the promotion of population-wide risk reduction efforts for dementia. These documents outline measurable targets in seven areas: (i) dementia as a public health priority; (ii) dementia awareness and friendliness; (iii) dementia risk reduction; (iv) dementia diagnosis, treatment, care and support; (v) support for dementia carers; (vi) information systems for dementia; and (vii) dementia-related research and innovation *(27,35)*.

The 2021 *Global status report on the public health response to dementia* reported that 23 of the 24 Member States in the WHO European Region that provided data had a stand-alone or integrated dementia plan *(28)*. In all, 19 of the 24 Member States had at least one functioning public awareness campaign, and 11 had a risk reduction campaign. The Regional median diagnosis rate was 60% (range: 3–95). Twenty-three Member States had some form of community-based dementia services provision. Although these figures are encouraging, data are needed from more Member States in the Region to monitor whether targets have been met. This is particularly important because other sources, such as the annual reports from Alzheimer's Disease International, suggest that developments on this front are stagnating, including in the WHO European Region *(36)*.

6.4 Suicide mortality

Main findings

- In the WHO European Region, more than one in every 100 deaths is from suicide.
- Suicide rates vary widely across Member States, ranging from 1.6 to 17.9 deaths per 100 000 population in 2021.
- The age-standardized suicide rate in the Region is four times higher in men than in women across all ages.
- Suicide is the leading cause of death among young people (15–29 years of age) in the Region.
- From 2015 to 2021, deaths by suicide decreased by 16.2%, from 14.8 to 12.4 per 100 000 population.

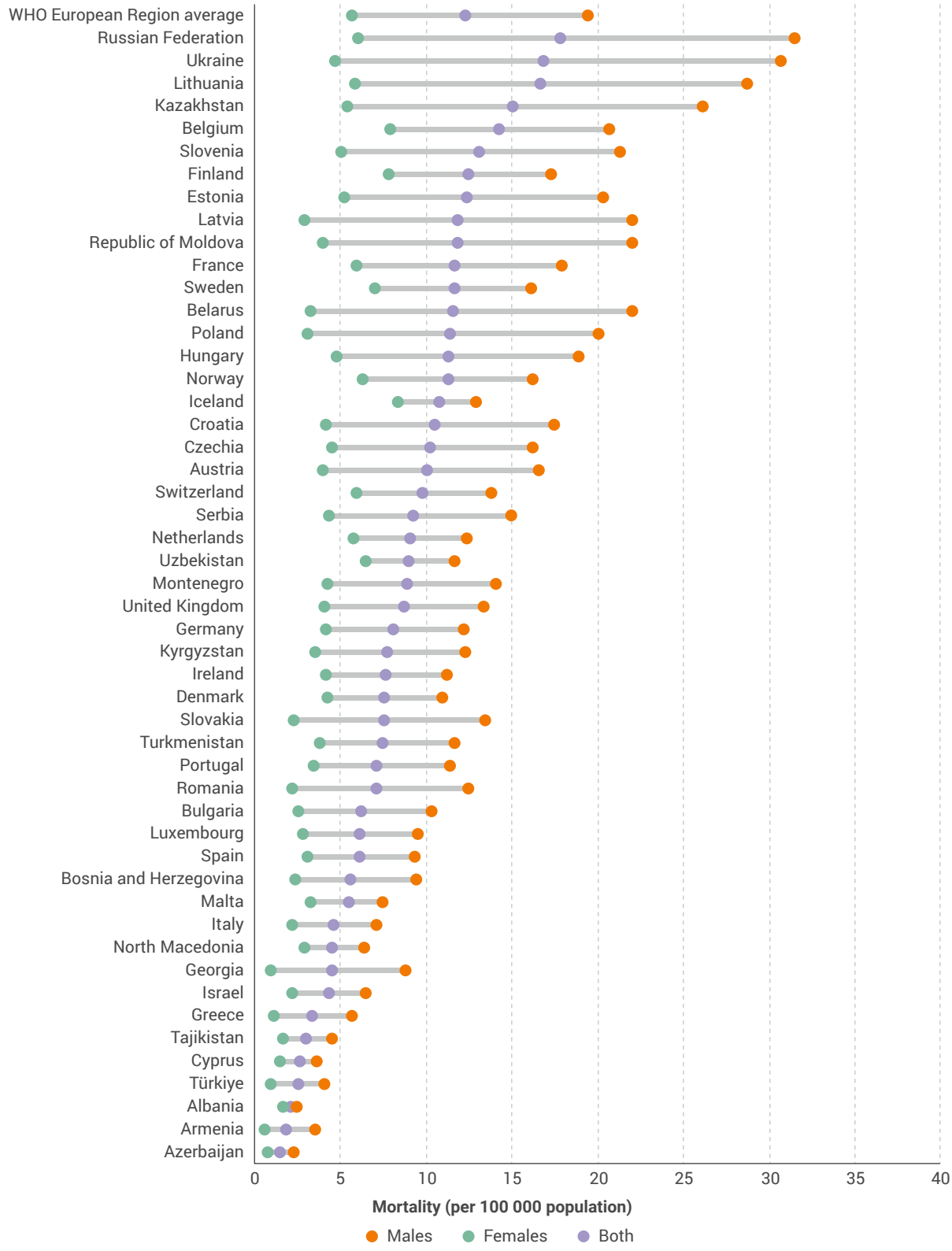
Suicide is a serious public health problem that results in approximately 120 000 deaths annually in the WHO European Region. Furthermore, there are an estimated 20 attempts for each suicide *(8,37)*. In 2021 suicides accounted for one in every 100 deaths in the Region, ranking as the 18th leading cause of death across all age groups and the leading cause of death for people aged 15–29 years, followed by road fatalities and COVID-19 *(8)*. The factors contributing to suicide are complex but involve mental health disorders, particularly depression and alcohol use disorders, and past suicide attempts. Furthermore, external stressors such as conflict, disaster, violence, financial strain, relationship breakdown, chronic pain and illness significantly contribute to suicidal behaviour. Vulnerable groups facing discrimination are at higher risk, including refugees and migrants; indigenous people; lesbian, gay, bisexual, transgender and intersex people; and prisoners *(38)*.

WHO has targeted suicide reduction in the Thirteenth general programme of work, 2019–2023 *(39)* and the *Comprehensive mental health action plan 2013–2030 (40)* by setting a goal to decrease the global suicide mortality rate by one third by 2030. This target aligns with SDG indicator 3.4.2 *(9)*. The EPW-MF established a more immediate goal of a 15% reduction by 2025 for the WHO European Region *(4)*.

In 2021 the crude suicide mortality rate was 12.4 per 100 000 population in the WHO European Region *(8)*. The age-standardized suicide rate was highest for the Russian Federation at 17.9 deaths per 100 000 population, closely followed by Ukraine (17.0) and Lithuania (16.8) (Fig. 6.5). The lowest rates were reported for Azerbaijan at 1.6 per 100 000 population, followed by Armenia (1.9) and Albania (2.1).

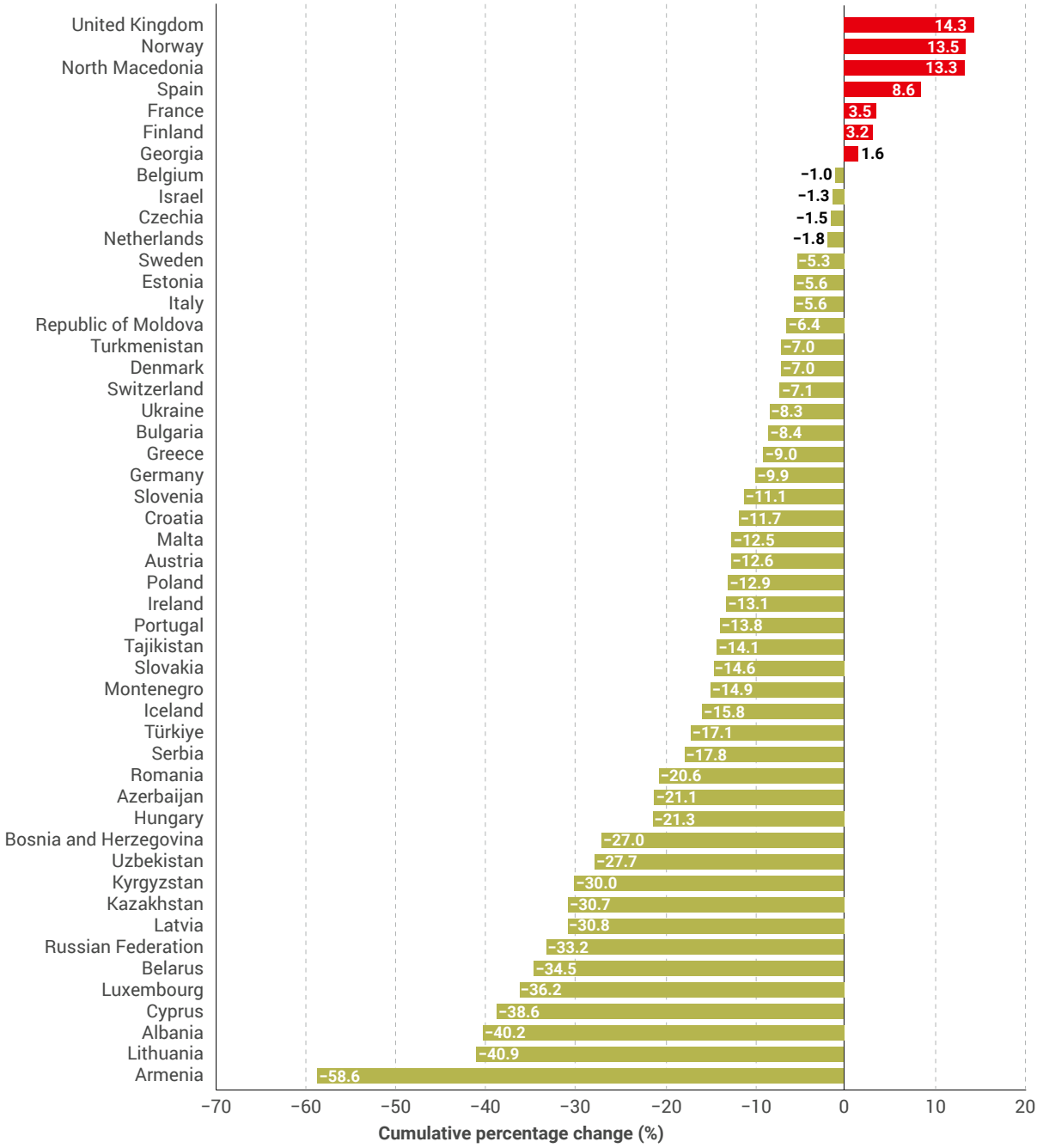
Men are four times more likely to die by suicide than women (19.5 vs 5.7 per 100 000 population) *(8)*. Georgia had the largest disparity in age-standardized suicide rates between genders, with men approximately 9.1 times more likely than women to die by suicide. The next largest disparities were reported for Latvia and Belarus, where suicide rates for men were 7.4 and 6.7 times higher, respectively, than those for women. The smallest gender disparities were observed in Albania, Iceland and Uzbekistan, where male suicide rates were only about 1.5, 1.5 and 1.8 times higher, respectively, than those for women *(8)*. Between 2015 and 2021 the Regional suicide rate across all gender and age groups decreased by 16.2%, from 14.8 to 12.4 per 100 000 population *(8)*. Although suicide rates declined in most Member States, there were increases in the United Kingdom (+14.3%), Norway (+13.5%), North Macedonia (+13.3%), Spain (+8.6%), France (+3.5%), Finland (+3.2%) and Georgia (+1.6%) (Fig. 6.6).

Fig. 6.5. Suicide mortality rate by gender in Member States of the WHO European Region, 2021



Source: WHO *(8)*.

Fig. 6.6. Cumulative percentage change in age-standardized suicide rates from 2015 to 2021 in Member States of the WHO European Region, both sexes



Note: the data in the Global Health Observatory are WHO's official estimates based on evidence up to December 2024; these estimates may differ from national statistics and raw data provided by Member States to WHO *(41)*.

Source: WHO *(8)*.

There were concerns that suicides might increase during the COVID-19 pandemic; however, research exploring the impact of the pandemic on suicide rates found no significant deviation from pre-pandemic trends *(42,43)*. Despite these findings, the pandemic has been associated with adverse mental health outcomes, including an increase in suicidal ideation and attempts, particularly among young people *(44)*.

Suicide remains a significant issue and the leading cause of mortality among young people in the WHO European Region. This alarming trend emphasizes an urgent need for targeted public health interventions to improve the mental health of people of all ages, address the major drivers of suicidal behaviour, restrict access to common means of suicide and promote positive coping mechanisms for life's challenges.

Given the complex interplay of factors leading to suicide (including social, economic, interpersonal and mental health factors, and media influences), developing effective suicide prevention policies requires a comprehensive approach. Over the last decade, the WHO European Region has seen a significant shift towards prioritizing suicide prevention. Many Member States have implemented targeted initiatives for mental health promotion/prevention and resilience *(10)*, which are likely to be contributing to the observed declines in suicide trends *(38)*. The success of these programmes highlights the need to expand such measures, especially in Member States where suicide prevention strategies have lacked sufficient focus. By adopting the effective approaches of others, these Member States could save countless lives and strengthen the global commitment to mental health and well-being.

In 2021 WHO introduced the LIVE LIFE guide to help countries to implement suicide prevention strategies *(45)*. This approach includes several key measures, such as advocating for responsible media coverage, enhancing young people's socioemotional skills, and improving early identification and support for at-risk people. Additionally, the 2023 update of *Preventing suicide: a resource for media professionals* addresses the impact of the media on suicide and provides practical guidance for responsible coverage *(46)*. However, a significant acceleration in suicide reduction efforts is needed to meet the targets set by the WHO *Comprehensive mental health action plan 2013–2030* and the EPW-MF *(4,40)*.

6.5 Coverage of treatment interventions for substance use disorders

Main findings

- People with substance use disorders should have access to comprehensive prevention, treatment and rehabilitation services without incurring financial hardship, in line with the principle of UHC and with SDG targets.
- Treatment intervention coverage for substance use disorders in Member States of the WHO European Region ranges from 2.1% to 35.4% for drug use disorders and from 1.2% to 13.8% for alcohol use disorders. However, data were only available from 10 Member States for alcohol use disorders and 13 for drug use disorders and only for the 2016–2018 reporting period.
- The WHO Service Capacity Index for Substance Use Disorders (SCI-SUD) is a tool designed to evaluate the effectiveness of treatment systems aimed at addressing substance use disorders. It focuses on specific aspects crucial for treatment efficacy: workforce, funding, information systems, medications and communication. The scores from this Index range between 0 and 1, with higher values indicating a greater capacity. Across the Region, these scores vary widely – from as low as 0.15 to as high as 0.80 – highlighting significant disparities in the readiness and capacity of treatment systems. This wide variation suggests substantial differences in how effectively various Member States handle substance use disorders, potentially influenced by factors such as resource allocation, policy implementation and socioeconomic conditions.

SDG Target 3.5 is to strengthen the prevention and treatment of substance abuse by introducing an indicator (SDG 3.5.1) for treatment coverage of substance use disorders *(9)*. Additionally, SDG Target 3.8 is to achieve UHC to ensure access to quality health services and essential medicines *(9)*.

Access to health services for substance use disorders is crucial to reducing the health and social burden of substance use. People with these disorders should have access to comprehensive prevention, treatment and rehabilitation services without incurring financial hardship, in line with UHC principles *(47)*. Despite the high prevalence and impact of substance use disorders, access to effective treatment remains limited, which often deprives individuals of their rights to health, education and societal reintegration (section 5.6 discusses alcohol consumption in the framework of noncommunicable disease risk factors). Treatment intervention options include screening, pharmacological treatments, psychosocial services, community outreach, harm reduction services and after-care services *(48)*.

Treatment contact coverage is calculated as the number of people receiving treatment divided by the total number of those who sought treatment, ideally disaggregated by alcohol and drug use *(49)*. Estimating treatment coverage poses challenges due to data collection difficulties and the need for accurate prevalence rates. Data from the WHO global survey on progress on SDG 3, as presented in the *Global status report on alcohol and health and treatment of substance use disorders (48)*, show that treatment coverage for substance use disorders in Member States of the WHO European Region ranges from 2.1% in Latvia to 35.4% in Sweden for drug use disorders and from 1.2% in Belgium to 13.8% in the Netherlands for alcohol use disorders (Tables 6.1 and 6.2). However, data are only available from 10 Member States for alcohol use disorders and 13 for drug use disorders and only for the 2015–2018 reporting period *(48)*.

Table 6.1. Treatment contact coverage for drug use disorders and latest year of available data

Member State	Latest year of available data	Treatment contact coverage (%)
Sweden	2018	35.4
Iceland	2018	35.0
Italy	2017	26.6
Croatia	2018	23.5
Netherlands	2015	20.0
Czechia	2018	14.8
Belarus	2018	10.0
Slovakia	2017	8.4
Ukraine	2018	8.0
Belgium	2018	7.8
Tajikistan	2018	3.4
Republic of Moldova	2018	2.2
Latvia	2017	2.1

Source: WHO *(48)*.

Table 6.2. Treatment contact coverage for alcohol use disorders and latest year of available data

Member State	Latest year of available data	Treatment contact coverage (%)
Netherlands	2016	13.8
Ukraine	2016	10.6
Italy	2016	10.0
Slovakia	2016	5.3
Iceland	2016	4.2
Czechia	2016	4.0
Republic of Moldova	2016	3.0
Türkiye	2016	1.4
Tajikistan	2016	1.3
Belgium	2018	1.2

Source: WHO *(48)*.

Estimating the actual treatment coverage for alcohol and drug use disorders involves significant methodological challenges and requires regular monitoring of several key indicators. The latter include the number of people using treatment services, the estimated number of people who need such services, and the prevalence of alcohol and drug use disorders as a proxy for service needs. Additional challenges arise from the distribution of treatment and care services across various governmental and nongovernmental sectors (such as the medical, social and criminal justice sectors), which complicates data collection, collation and analysis *(49)*.

The data reveal strikingly low treatment contact coverage for alcohol and drug use disorders across all countries listed, with even the highest rates barely exceeding 10% for alcohol use disorders and just over 34% for drug use disorders *(50)*. This underscores a significant gap in addressing alcohol and drug use disorders, as even in the best-performing countries, such as the Netherlands and Ukraine, nearly 90% of people with alcohol use disorders are not accessing treatment services.

The provision of minimum sterile injection equipment kits is vital to prevent blood-borne infections among people who inject drugs and is an essential coverage indicator in Regional action plans *(48)*. Yet not all Member States in the WHO European Region have implemented a policy to provide such kits as part of a comprehensive package of harm reduction services across all settings, including in prisons. Among Member States of the European Union (EU), 17 reported distributing sterile syringes in 2022, and only five have achieved the interim target set for 2025 of distributing 200 or more syringes[39] per person per year *(50)*.

Improving data collection and reporting on treatment contact coverage are essential to improve treatment systems, as is monitoring the capacity of health and social care systems to provide treatment for alcohol and drug use disorders, in line with SDG indicator 3.5.1 *(9)*. SCI-SUD was introduced as a complementary measure of these treatment systems *(48)*. The effective functioning of such treatment systems relies on factors such as a competent workforce, funding, information systems, availability of medicines, communication and overall guidance. SCI-SUD was developed based on the WHO framework for monitoring health systems, which breaks down health systems into core components (or building blocks) to identify indicators and measurement strategies for monitoring capacity and performance *(52)*. The framework enables the creation of an index that reflects the overall capacity of services to provide treatment for substance use disorders, as well as specific indexes for alcohol and drug use disorders. These specific indexes are strongly associated with variables related to macro-level economics and health care, as well as epidemiological variables related to substance use and disorders.

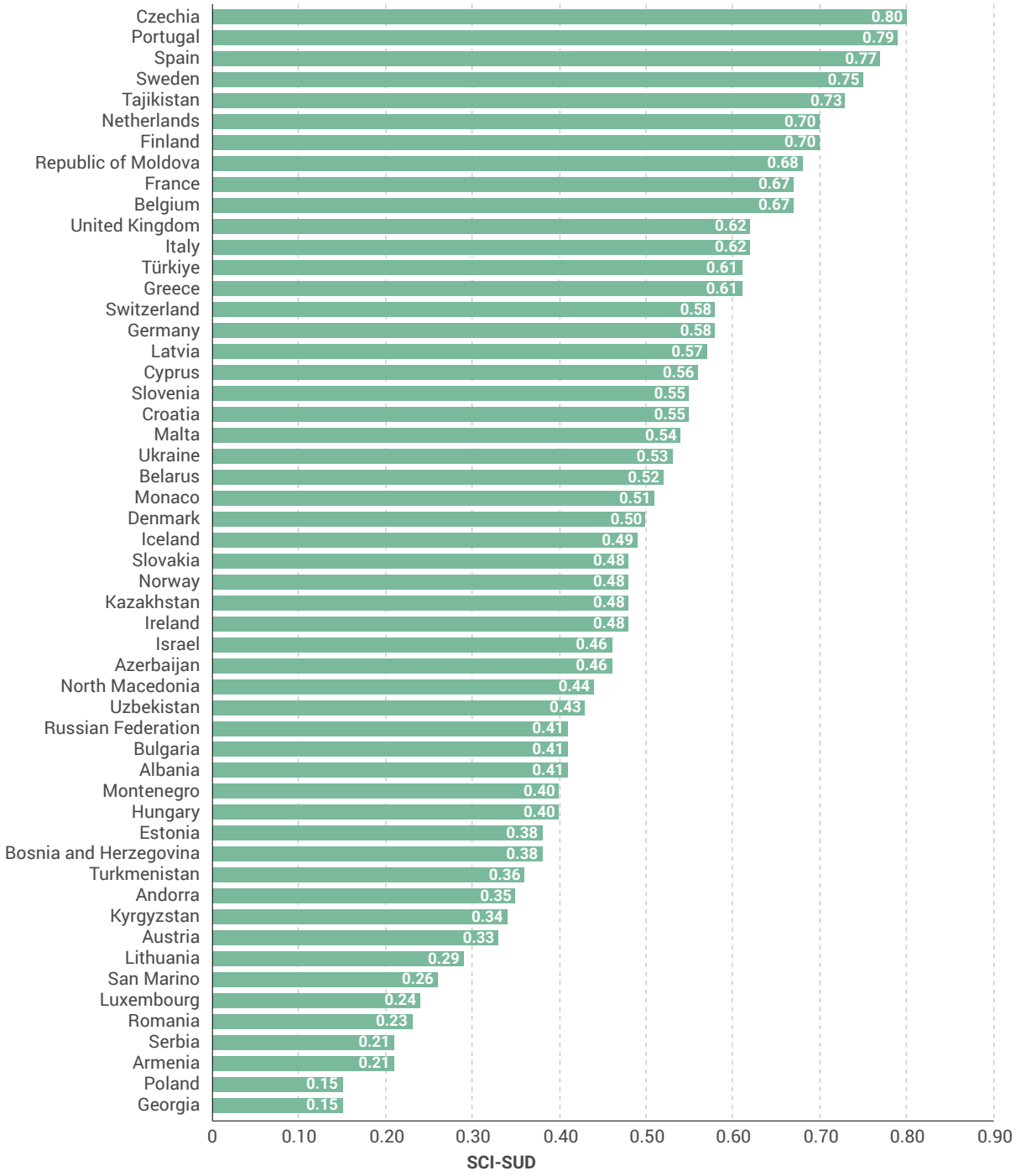
In 2024 the SCI-SUD varied significantly across countries of the WHO European Region (minimum: 0; maximum: 1), ranging from the lowest, 0.15, for Georgia and Poland to the highest, 0.8, for Czechia, followed by 0.79 for Portugal and 0.77 for Spain (Fig. 6.7) *(48)*.

Some Member States notably exhibit a disconnect between their SCI-SUD scores and treatment coverage rates. For example, Tajikistan had a relatively high SCI-SUD score of around 0.73 (Fig. 6.8), but treatment contact coverage for alcohol use disorders of only 1.3% (Table 6.2). This discrepancy highlights the complex relationship between service capacity and actual treatment utilization and suggests that factors beyond capacity – such as accessibility, awareness and stigma – may significantly influence treatment rates.

Strengthening the capacity of health and social care systems to provide effective prevention and treatment for substance use disorders is essential for achieving UHC and meeting SDG Target 3.5 *(9)*. Enhancing both national SCI-SUD monitoring capacities and treatment contact coverage (especially in low- and middle-income countries) through improved surveillance, research and infrastructure development is vital to facilitate international comparisons and foster data-sharing among countries and international organizations.

[39] While the World Drug Report 2024 refers solely to the distribution of sterile syringes, WHO guidance includes monitoring the distribution of complete injection kits (including swab, syringe, cotton and bandages) *(51)*.

Fig. 6.7. SCI-SUD for Member States of the WHO European Region based on direct and imputation estimates, 2024



Notes: estimation method is direct for all countries apart from Albania, Bosnia and Herzegovina, Bulgaria, Montenegro and Uzbekistan (where it is based on imputation); details on methodology are given in WHO *(48)*.

Source: data derived from WHO *(48)*.

6.6 EPW flagship initiative on mental health: policies and programmes in Member States

Main findings

- According to a 2023 survey assessing the capacity of mental health systems in the WHO European Region, most of the 44 reporting Member States have embraced a public health approach to mental health through implementation of policies on mental health promotion and resilience over the life-course. Suicide prevention policies were among the most advanced, being in place in 33 Member States (75%).
- Mental health policies addressing the needs of children, adolescents and young people were being implemented in 86% of Member States for children and adolescents up to 19 years of age, and in 77% for young people aged 15–24 years.
- Mental health stigma and discrimination remains underprioritized, with approximately one in three Member States not having started implementation of policies to tackle these issues.
- The mental health of older people is also underprioritized, with policies yet to be implemented.
- Within the EPW, the pan-European Mental Health Coalition has served as an operational structure for implementing the *WHO European framework for action on mental health 2021–2025* in addressing today's challenges and advancing mental health. WHO continues to collaborate with Member States to transform mental health services, integrate mental health into emergency responses and promote mental well-being across all ages to ensure comprehensive and accessible mental health care for all.

Mental health is fundamental to overall health and well-being. Therefore, addressing mental health issues is essential for enabling individuals to lead fulfilling lives. Over 143 million people in the WHO European Region live with some form of mental health condition (latest data from 2021), accounting for 16% of the population *(1)*. Mental health and well-being are significantly influenced by current geopolitical trends and emerging health-related events. In recent years, the COVID-19 pandemic, rapid technological advancements, rising living costs, the full-scale invasion of Ukraine, other regional conflicts and climate change-related events have highlighted the critical importance of mental health. The COVID-19 pandemic significantly exacerbated mental health issues through factors such as social isolation, economic uncertainty and psychological toll on front-line workers.

There is now widespread consensus on the urgent need for concerted, multisectoral action on mental health and the integration of mental health considerations into all policies across the WHO European Region. Accordingly, mental health was chosen as one of the WHO Regional Office for Europe's flagship initiatives because of its critical importance to public health in the Region *(3)*. At the 70th session of the Regional Committee for Europe in 2021, Member States approved the *WHO European framework for action on mental health 2021–2025 (11)*, an operational roadmap to increase knowledge-sharing and collective action to transform mental health systems.

The WHO European framework is a comprehensive initiative aimed at revolutionizing mental health care across the Region. It focuses on three pivotal areas: transforming mental health services to achieve UHC, integrating mental health into emergency preparedness and response, and promoting mental well-being throughout all stages of life. By addressing these core elements, the WHO European framework seeks to enhance mental health systems, foster societal well-being and provide robust support for people affected by mental health conditions.

Implementation of the WHO European framework has been supported by the creation of the pan-European Mental Health Coalition *(26)*. Since its launch in 2021, the Coalition has attracted more than 300 individual and organizational members, representing a diverse range of stakeholders and sectors, which includes representatives of Member States and WHO collaborating centres, as well as professional associations, service providers, people with lived experience, young people, researchers and civil society organizations. Members come together under six work packages to advance the priorities of the WHO European framework and have been a driving force behind much of the Flagship work. Box 6.1 provides an overview of some of the main actions undertaken within the framework of the Coalition.

Box 6.1. Actions to strengthen mental health services and policies in the WHO European Region

The 2021 *Roadmap for health and well-being in the western Balkans (2021–2025)* aims to foster cooperation among countries and stimulate increased investment in health, with a focus on mental health and the promotion of community-based mental health care *(53)*. In a policy dialogue in Tirana, Albania, in 2022 western Balkans countries prioritized mental health care for children and adolescents; in response, the WHO Regional Office for Europe partnered with the United Nations Children's Fund to build intersectoral collaboration in delivering high-quality mental health support for children and adolescents in Albania, North Macedonia and Serbia. Through this collaboration, frontline workers have received training on child and adolescent mental health, health systems have been mapped, and policies and plans for child and adolescent mental health have been strengthened.

Similar actions were taken in the central Asian countries, in line with the *Roadmap for health and well-being in central Asia (2022–2025) (54)*. The WHO flagship initiative on mental health has aided implementation of the WHO Mental Health Gap Action Programme toolkit *(55)* to help primary health-care providers to deliver basic mental health services, as well as supported transition away from institution-based care to community-based care.

In 2023 the European Commission launched its new comprehensive approach to mental health across the EU *(56)*. The WHO flagship initiative on mental health supports this effort through an EU-funded project focused on capacity-building, leadership training and cross-national learning in the 27 EU member countries plus Iceland and Norway. Tailored policy dialogues with each participating country's health ministry and key stakeholders prompted capacity-building activities, including training in the WHO QualityRights initiative for mental health workers *(57)*, and active participation in WHO-led knowledge sharing. This project aligns with WHO's pan-European Mental Health Coalition *(26)* and the *WHO European framework for action on mental health 2021–2025 (11)*.

The WHO Mental Health Flagship supported the EU's Joint Action on Implementation of Best Practices in the area of Mental Health, through capacity-building in implementation science and long-term sustainability of reforms in mental health policy and practice *(58)*.

The WHO *Youth engaged for mental health* framework was developed in response to requests from pan-European Mental Health Coalition members to strengthen meaningful youth participation and engagement *(59)*. It is co-produced with young Coalition members and aims to provide a roadmap for how the Coalition and WHO will engage young people in activities that impact their mental health and well-being, including policy and guidance development, research and programming *(59)*. Following on from this, six young people have meaningfully participated in the development and implementation of WHO's work to improve the quality of child and adolescent mental health care.

Box 6.1. contd

The WHO *Mosaic toolkit to end stigma and discrimination in mental health* was also developed in response to Coalition members' requests *(60)*. Co-produced by people with the lived experience of mental health conditions and anti-stigma experts, the toolkit provides practical advice on how to set up and run evidence-informed anti-stigma activities at the local and national levels. The toolkit also contains case studies from 11 countries worldwide and a spotlight on the EU.

The first WHO Regional Office for Europe quality standards for child and youth mental health services are being developed through an innovative programme dedicated to improving the quality of mental health care for children and adolescents set up in collaboration with the Government of Greece *(61)*. The quality standards will provide a framework for Member States to assess and prioritize areas for quality improvement.

To strengthen capacity to improve the quality of child and adolescent mental health care, WHO hosted the first-ever Autumn School on Quality of Child and Adolescent Mental Health Care, which brought together 36 participants from more than 15 countries to learn about improving quality in child and adolescent mental health care. A Young Researchers Forum, which has over 700 members, has been set up to spark inspiration and strengthen capacity in evidence for child and adolescent mental health care *(62)*.

The WHO Mental Health Flagship team has closely supported and collaborated with mainstream mental health services in Nordic and Baltic countries, the WHO Small Countries Initiative *(63,64)* and the WHO Regions for Health Network *(65)* to continuously invest in promoting policy dialogues across Member States to better define needs, address challenges and find solutions to overcome the barriers to strengthening mental health services.

The WHO Regional Office for Europe, through the Mental Health Flagship team, has provided direct support to 42 Member States to strengthen their mental health policies and actions.

In recent years, persistent gaps and deficiencies in mental health service delivery and financing have become increasingly apparent, requiring urgent attention *(66)*. In recognizing the critical need for improvement, the pan-European Mental Health Coalition took decisive action in 2022 by initiating comprehensive mapping exercises across the primary domains of its working packages. This effort aimed to clearly identify existing gaps and advocate for immediate advancements in mental health services and programmes *(67)* by:

- assessing the implementation level of community-based mental health interventions to transition away from institutionalized care;
- identifying the available resources to enhance the mental health and well-being of children, adolescents and young adults;
- understanding the challenges and enablers of implementing digital mental health solutions;
- assessing the resources available to meet the mental health and well-being needs of older adults, who face unique challenges such as dementia, depression and social isolation;
- reviewing workplace initiatives that prioritize policies and programmes to promote mental well-being among employees; and
- identifying resources to support effective leadership in mental health services.

6.6.1 Mental health systems capacity in the WHO European Region

In 2023 the WHO Regional Office for Europe's Mental Health Flagship conducted a survey *(10)* to explore the capacity of Member States to promote mental health and prevent and manage mental health conditions.[40] Specifically, the survey aimed to collect data on:

- the presence/absence of a national strategic policy framework;
- the status of implementation and evaluation of national policy and the barriers, enablers and priority areas for reform;
- alignment of national policy frameworks with relevant Member State-endorsed WHO Regional and global policy guidance (EPW *(3)*, *WHO European framework for action on mental health 2021–2025 (11)*, the WHO global *Comprehensive mental health action plan 2013–2030 (40)*); and
- the nature and strength of enabling structures, roles and functions in place to:
  - support mental health policy development, implementation, monitoring and sustainment;
  - improve the impact of mental health policy at the health service and population levels; and
  - support the development and maintenance of a high-quality, effective and equitable mental health system.

All 53 Member States of the WHO European Region were invited to complete the survey in 2023. Survey links were distributed to focal points at health ministries, and 44 Member States responded (response rate: 83%).

6.6.2 Presence of national policy

Strong mental health systems are based on mental health policies, plans and strategies that provide a coherent framework for action and accountability and serve to identify and promote guiding principles, values and standards for activities to meet population needs for mental health promotion, prevention, treatment and rehabilitation. All but two of the 44 responding Member States (95%) reported having a national mental health policy. Furthermore, 40 Member States (91%) had a strategy or action plan in place to guide implementation of these and 12 delegated the authority for developing and implementing the mental health policies/plans to subnational regions or local areas. In all, 30 Member States (68%) reported that their policy, plan or strategy was in the process of being developed, updated or revised. Similarly, 33 countries (75%) reported that their policy clearly mentioned objectives and indicators to enable regular monitoring and evaluation (Table 6.3).

[40] This survey was initially conducted in collaboration with the European Commission and targeted EU countries. Later, the WHO Regional Office for Europe extended the survey to include all Member States in the Region. The results of this exercise within the EU countries are available in *Mental health systems capacity in European Union Member States, Iceland and Norway (10)*. The results for the non-EU countries are for the first time published in this Report.

Table 6.3. National mental health policy status, implementation and evaluation

Member State	Current national mental health policy	Strategy or action plan (or set of strategies/ plans) that guide implementation of the mental health policy	In the process of developing, updating or revising national-level mental health policies or plans	Policy, strategy or action plan/s clearly mention objectives and indicators allowing for regular monitoring and evaluation	Has undertaken an evaluation of the national mental health policy strategy or action plan
Andorra	✓	✓	✓	✓	✓
Armenia	✓	✓	✓	✓	✓
Austria	✓	✓	✓	Unsure/other	Unsure/other
Belarus	✓	✓	✓	✓	Unsure/other
Belgium	✓	✓	✓	✓	✓
Bulgaria	✓	✓	✓	✓	✓
Croatia	Unsure/other	✓	Unsure/other	Unsure/other	Unsure/other
Cyprus	✓	✓	✓	✓	✓
Czechia	✓	✓	✓	✓	✓
Denmark	✓	✓	✓	✓	✓
Estonia	✓	✓	Unsure/other	Unsure/other	✗
Finland	✓	✓	✗	✓	✓
France	✓	✓	✓	✓	✓
Georgia	✓	✓	✗	✓	✓
Germany	✓	✗	✓	✗	Unsure/other
Greece	✓	✓	✗	✗	✗
Hungary	✓	✓	✓	✓	Unsure/other
Iceland	✓	✓	✓	✓	✓
Ireland	✓	✓	✗	✓	✓
Israel	✓	✓	✓	✓	✓
Italy	✓	✓	✓	✓	✓
Kazakhstan	✓	✓	✓	✓	✓
Kyrgyzstan	✓	✓	✗	✓	✗
Latvia	✓	✓	✗	✓	✓
Lithuania	✓	✓	✓	✓	✓
Luxembourg	✓	Unsure/other	✓	✓	✓
Malta	✓	✗	✗	Unsure/other	✗
Monaco	✓	✓	✓	✓	✗

Table 6.3. contd

Member State	Current national mental health policy	Strategy or action plan (or set of strategies/ plans) that guide implementation of the mental health policy	In the process of developing, updating or revising national-level mental health policies or plans	Policy, strategy or action plan/s clearly mention objectives and indicators allowing for regular monitoring and evaluation	Has undertaken an evaluation of the national mental health policy strategy or action plan
North Macedonia	✓	✓	✓	✓	✗
Norway	✓	✓	✓	✓	✓
Poland	✓	✓	✓	✓	✓
Portugal	✓	✓	✓	✓	✓
Romania	✓	✓	✓	✗	✗
Serbia	✓	✓	Unsure/other	✓	✗
Slovakia	✗	✗	✓	Unsure/other	Unsure/other
Slovenia	✓	✓	✗	✓	✓
Spain	✓	✓	✓	✓	✓
Sweden	✓	✓	✓	✓	✓
Switzerland	✓	✓	✗	Unsure/other	✓
Netherlands	✓	✓	✗	✗	✗
Türkiye	✓	✓	✓	✓	✗
Turkmenistan	✓	✓	✗	✓	✓
Ukraine	✓	✓	✓	✗	✓
Uzbekistan	✓	✓	✓	✓	✓

Note: green tick and red cross indicate having achieved/yet to achieve the indicator in a Member State.

Source: WHO *(10)* and original data collected by the WHO Regional Office for Europe.

6.6.3 Policy evaluation

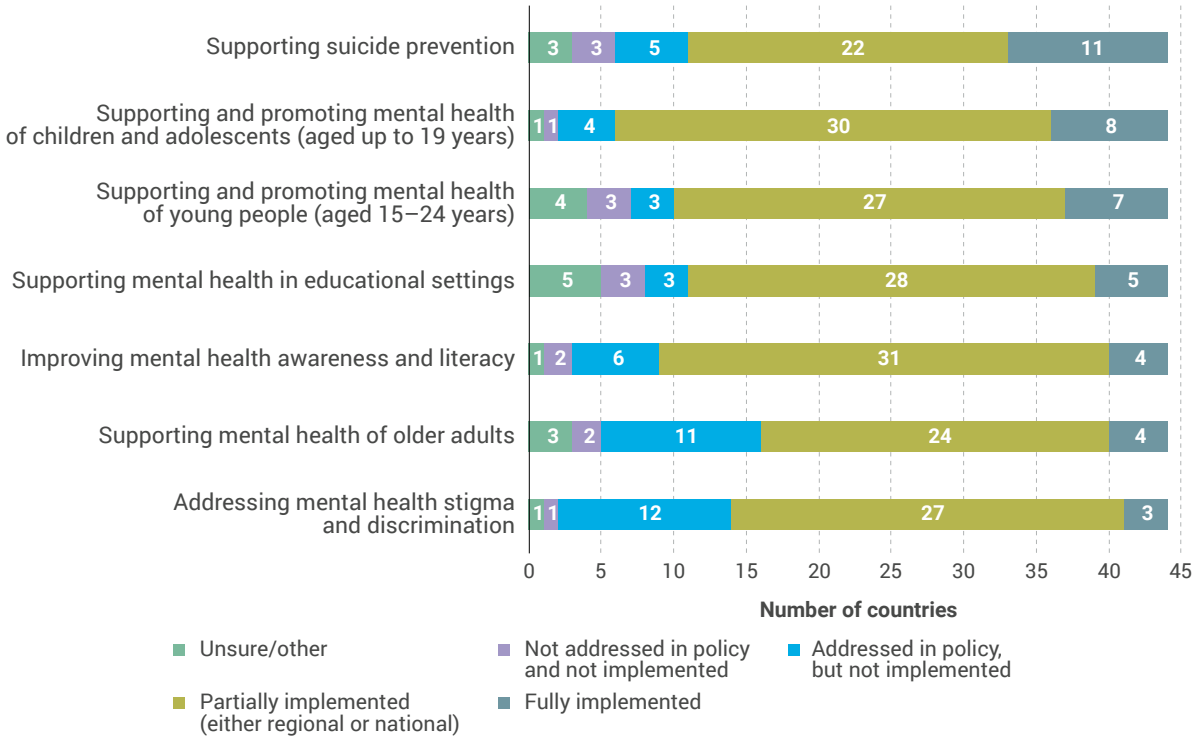
Of the 42 Member States that reported having a national mental health policy, strategy or action plan in place, 28 (67%) had undertaken an evaluation of current or previous strategies or action plans (Table 6.3). Of these, 20 (74%) were conducting monitoring activities, either within or outside the framework of the policies. Of the 28 Member States conducting evaluations, 19 (68%) evaluated the extent of implementation and 18 (64%) evaluated the effectiveness, outcomes or impact.

6.6.4 Policies addressing mental health promotion/prevention and resilience throughout the life-course

Policies focused on mental health promotion and illness prevention throughout the life-course are crucial to foster resilience, improve individual and community well-being, and reduce the impact of

mental health conditions on individuals, communities and the health system. Most of the Member States surveyed had begun implementing mental health policies and programmes in key areas related to mental health promotion and resilience over the life-course (Fig. 6.8). Suicide prevention policies were among the most advanced: they were present and had been (partially) implemented in 33 Member States (75%) and fully implemented in 11 (25%). Among these, the majority had also implemented programmes to address after care for people who had attempted suicide.

Fig. 6.8. Implementation status of policies in 44 Member States for key areas of mental health promotion/prevention and resilience over the life-course



Source: WHO Regional Office for Europe *(10)* and original data collected by the WHO Regional Office for Europe.

Most of the Member States were implementing policies targeting the mental health of children, adolescents and young people. In all, 38 Member States (86%) had partially or fully implemented policies for children and adolescents up to 19 years of age, and 34 (77%) for young people aged 15–24 years. Programmes to improve mental health awareness and literacy had also been partially or fully implemented in 35 Member States (80%).

Policies or programmes to tackle mental health stigma and discrimination and the mental health of older people had the lowest levels of implementation: 14 countries (32%) had not begun implementing policies to address stigma and discrimination.

The WHO Europe Mental Health Flagship 2023 survey on mental health system capacity in the WHO European Region highlighted the significant strides made by Member States in establishing and implementing national mental health policies, plans and strategies. Most Member States had developed comprehensive frameworks aligned with WHO Regional and global guidelines on mental health promotion, prevention, treatment and rehabilitation. Despite these advances, particular challenges remain in the areas of policy evaluation, mental health stigma and services for older adults. The WHO Regional Office for Europe is committed to providing continuing support to Member States to update and refine these policies to ensure effective implementation and monitoring with the aim of fostering resilient and equitable mental health systems across the Region.

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7

Health systems

Health policy-making and reform require a sound understanding of how a health system is performing. Especially today, with health systems facing unprecedented challenges including the ongoing impacts of the coronavirus disease (COVID-19) pandemic, climate change, ageing populations and armed conflicts, solid evidence to inform decision-making is vital. Health system performance assessment frameworks provide policy-makers with structured tools to measure how well a health system is achieving its ultimate goals: health improvement, financial protection (affordable access to health care) and people-centred care *(1)*. Elements such as quality, equity and efficiency are important intermediate objectives that help health systems to achieve their ultimate goals. This chapter draws on indicators from the European Programme of Work 2020–2025: United Action for Better Health (EPW) measurement framework related to the coverage and accessibility of health services, including financial protection *(2,3)*.

The data presented in this European health report 2024 show that out-of-pocket (OOP) payments lead to financial hardship and unmet need in every Member State in the WHO European Region and undermine affordable access to health care (financial protection). Across Member States, the incidence of impoverishing health spending ranges from under 1% to over 14% of households; catastrophic health spending ranges from under 1% to over 21% of households; and unmet need due to cost, distance or waiting time (health system factors) ranges from under 1% to 13% of the population for health care and from under 1% to 16% for dental care. There are significant inequities in affordable access to health care, with the poorest households consistently most affected *(4–6)*.

Despite the WHO European Region reporting the highest densities of doctors, nurses and midwives worldwide, almost all Member States are facing a health workforce crisis with shortages and maldistribution. The reason is multifaceted, and the growing demand for health services is outpacing the supply of health workers. The density of health professionals varies fivefold between Member States of the Region, with the lowest densities in central and western Asia and the highest in northern and western Europe *(7–10)*.

Home care services are a key element in maintaining the dignity and autonomy of older adults. In 2019 nearly half of people aged 65 years and over with severe difficulties reported lacking the necessary assistance for personal care or household activities, which highlights significant unmet needs among older adults *(11–14)*.

Digital health carries the potential to accelerate progress towards universal health coverage (UHC). For this reason, the WHO Regional Office for Europe launched the Empowerment through Digital Health flagship initiative *(15)*, as part of the EPW *(3)*. To assess the adoption and progress of digital health in Member States, a survey was conducted in 2022; it showed that 44 of the 53 Member States had digital health strategies (DHS), whereas 27 either had developed or were developing digital health education action plans, policies and strategies *(16,17)*.

Using behavioural and cultural insights (BCI) offers an opportunity to design and provide more effective and people-centred health and care services. Given this potential, Healthier Behaviours: incorporating behavioural and cultural insights *(18)* was identified as another EPW flagship initiative. Member States reported their BCI activities to the WHO Regional Office for Europe for the first time in 2023, covering the years 2021–2022 as a baseline to measure progress, following a resolution on the topic adopted in September 2022 *(19)*. The outcomes of this survey showed that although a BCI approach is being applied across the Region, implementation is not yet systematic and the evaluation of BCI-informed policy and practice is still an emerging practice among health authorities.

7.1 Affordable access to health care: addressing financial hardship and unmet need

Main findings

- OOP payments lead to financial hardship and unmet need in every Member State of the WHO European Region, thus undermining affordable access to health care (financial protection). Across Member States, the incidence of impoverishing health spending ranges from under 1% to over 14% of households; catastrophic health spending ranges from under 1% to over 21% of households; and unmet need due to cost, distance or waiting time (health system factors) ranges from under 1% to 13% of the population for health care and from under 1% to 16% for dental care.
- There are significant inequities in affordable access to health care, with the poorest households consistently most affected. The poorest quintile accounts for at least 40% of households experiencing catastrophic health spending in all Member States. Within the poorest quintile, the incidence of catastrophic health spending ranges from 2% to 74%. The incidence of unmet need is also generally higher in the poorest quintile, ranging from under 1% to 23% for health care and from under 1% to 17% for dental care. OOP payments for outpatient medicines are the main driver of financial hardship across Member States, especially for the poorest consumption quintile.
- There is strong correlation between catastrophic health spending and a health system's reliance on OOP payments: the incidence of catastrophic health spending tends to be low in Member States where the OOP payment share of current spending on health is less than or close to 15%. Most Member States in the Region need to reduce their reliance on OOP payments: in 2021 OOP payments accounted for more than 15% of current spending on health in over three quarters of Member States. Member States with higher public spending on health as a share of gross domestic product (GDP) tend to have a lower OOP payment share.
- Member States can improve financial protection by redesigning their coverage policy to reduce financial hardship and unmet need (especially for people with low incomes or chronic conditions), ensuring adequate public spending on health and allocating health-care resources efficiently and equitably. Coverage policy changes that are likely to strengthen financial protection include basing entitlement to publicly financed health care on residence rather than on payment of contributions; ensuring that no one is excluded from coverage; introducing effective mechanisms to protect people from user charges for covered health care; making sure that access to medicines, medical products and dental care is an affordable part of treatment in primary care settings; and lowering expectations about the usefulness of voluntary health insurance.

7.1.1 Affordable access to health care is central to UHC

Ensuring that access to health care is affordable for everyone – that is, financial protection – is central to UHC and a key dimension of health system performance assessment. It is also an indicator of the Sustainable Development Goals (SDGs), part of the European Pillar of Social Rights *(20)* and at the heart of the EPW *(3)*, the WHO Regional Office for Europe's strategic framework.

Financial protection is undermined by OOP payments for health care. OOP payments can cause financial hardship for people using health care, leading to impoverishing and catastrophic health spending. The payments can also be a barrier to access, resulting in an unmet need for health care.

OOP payments may not be a problem if they are small or paid by people who can afford them, but even small OOP payments can cause financial hardship for people with low incomes and for those who have to pay for long-term treatment such as medicines for chronic illness. Because all health systems involve a degree of OOP payment, financial hardship and unmet need can occur in any Member State.

Without financial protection, people may be forced to choose between health care and other basic needs, which can deepen poverty, erode health and well-being and increase inequities.

7.1.2 Financial hardship

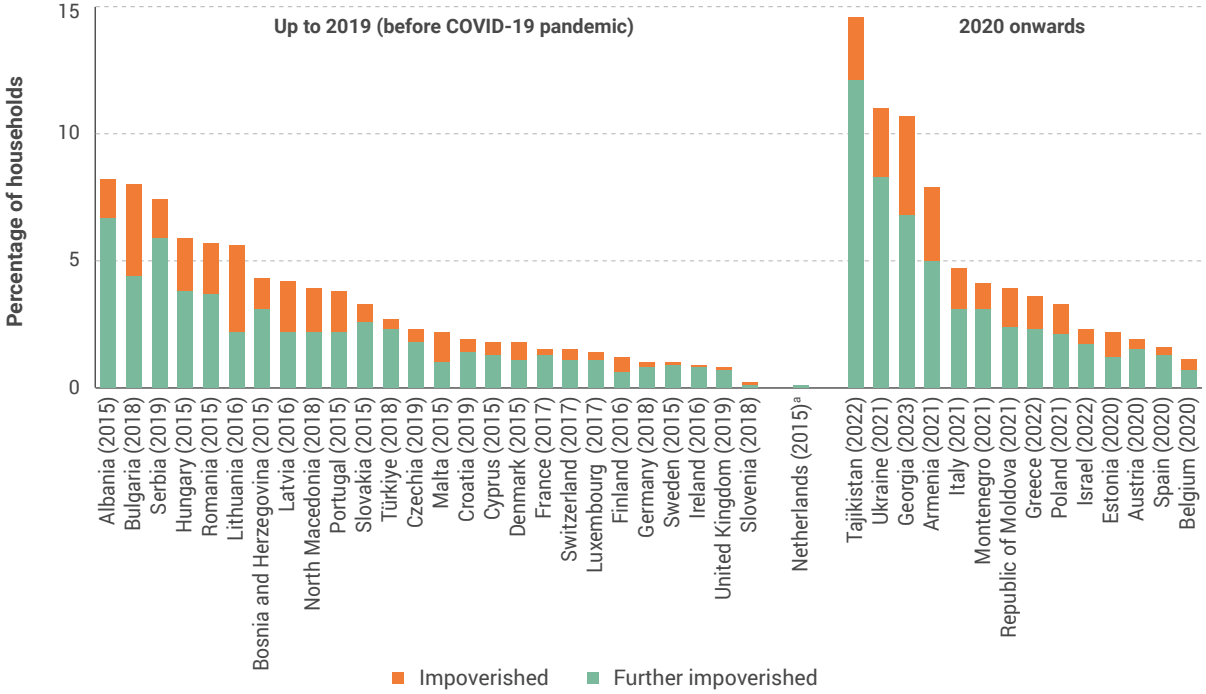
Financial hardship is measured using two indicators.

- **Impoverishing health spending** provides information on the impact of OOP payments on poverty. A household is impoverished if its total spending (consumption) is below the basic needs line after OOP payments (i.e. it can no longer meet its basic needs – food, housing and utilities) and is further impoverished if its total spending is already below the basic needs line (i.e. it is already unable to meet its basic needs) and it then incurs OOP payments.
- **Catastrophic health spending** occurs when a household's OOP payments are greater than its capacity to pay for health care, which may mean that the household cannot meet its other basic needs.

Impoverishing and catastrophic health spending can be calculated in different ways. This Report uses metrics developed by the WHO Regional Office for Europe because the global measure of catastrophic health spending (SDG indicator 3.8.2 *(21)*) does not adequately capture equity *(4,22–24)*.

OOP payments push some people into poverty – or further into poverty – in every Member State in the WHO European Region. The share of households that are impoverished or further impoverished after OOP payments ranges from under 1% of households in Ireland, Slovenia and the United Kingdom to over 7% in Albania, Armenia, Bulgaria, Georgia, Serbia, Tajikistan and Ukraine (Fig. 7.1) *(4,25)*.

Fig. 7.1. Share of households with impoverishing health spending in the WHO European Region, latest available year



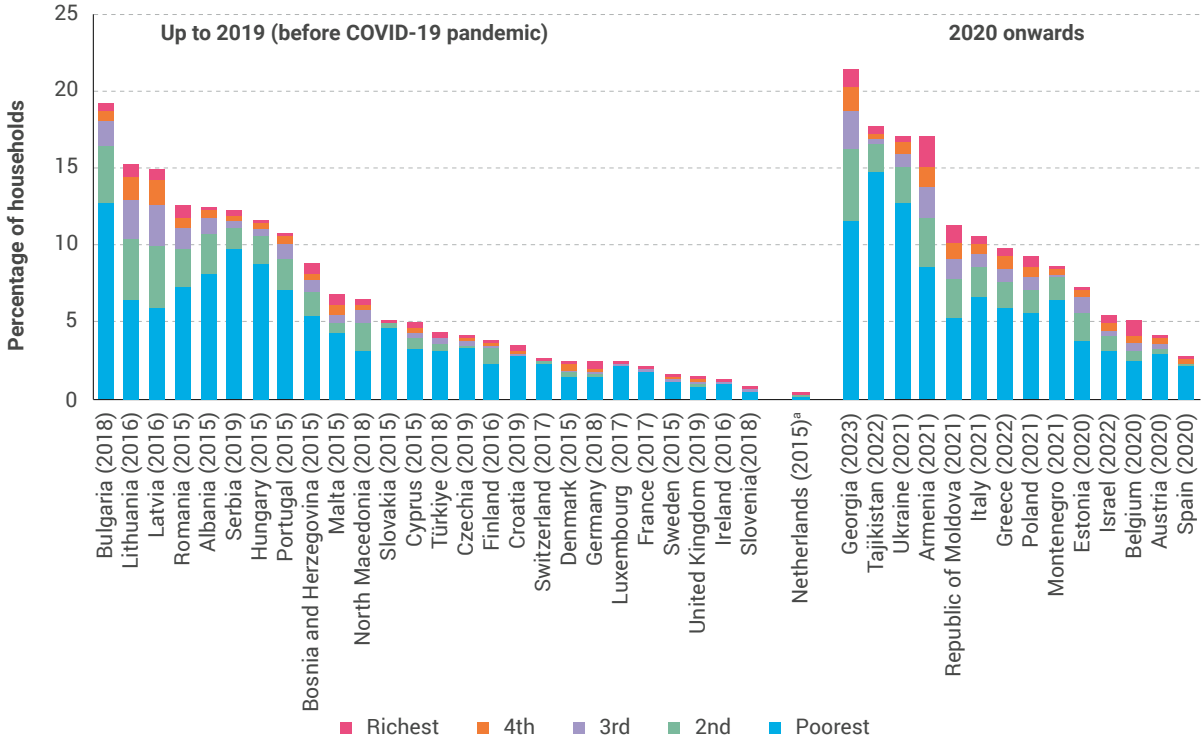
Notes: data on the left of the chart are for 2019 or the latest available year before the COVID-19 pandemic; data on the right are for 2020 onwards; data for 2020 and 2021 should be interpreted with caution due to shifts in health-care use and spending during the peak years of the pandemic.

[a] The Netherlands cannot be compared with other Member States because the Dutch household budget survey does not collect spending on the annual deductible amount that households pay as OOP fees for health care, biasing the results downwards.

Source: WHO *(4,5)*.

OOP payments also prevent people from meeting their other basic needs and affect poorest households the most. The incidence of catastrophic health spending ranges from under 2% of households in Ireland, Slovenia, Sweden and the United Kingdom to over 15% in Armenia, Bulgaria, Georgia, Latvia, Lithuania, Tajikistan and Ukraine (Fig. 7.2). National averages conceal major differences in impact: households in the poorest quintile are consistently most likely to experience financial hardship due to OOP payments (Fig. 7.2). These households account for at least 40% of those with catastrophic health spending in every Member State and for over 70% in more than a third (data not shown). Within Member States, the incidence of catastrophic health spending in the poorest quintile is two to five times higher than the national average, and ranges from 2% to 74% (data not shown).

Fig. 7.2. Share of households with catastrophic health spending by quintile in the WHO European Region, latest available year



Notes: quintiles are based on per person consumption adjusted for household size and composition using Organisation for Economic Co-operation and Development equivalence scales. The first quintile is labelled "poorest" and the fifth quintile "richest".

[a] The Netherlands cannot be compared with other Member States because the Dutch household budget survey does not collect spending on the annual deductible amount households pay as OOP fees for health care, biasing the results downwards.

Source: WHO *(5,25)*.

In the majority of Member States in the European Region, the incidence of catastrophic health spending increased, but in 12 Member States the situation improved over time. However, the Region is not immune to the global trend of worsening financial protection *(4,21)*.

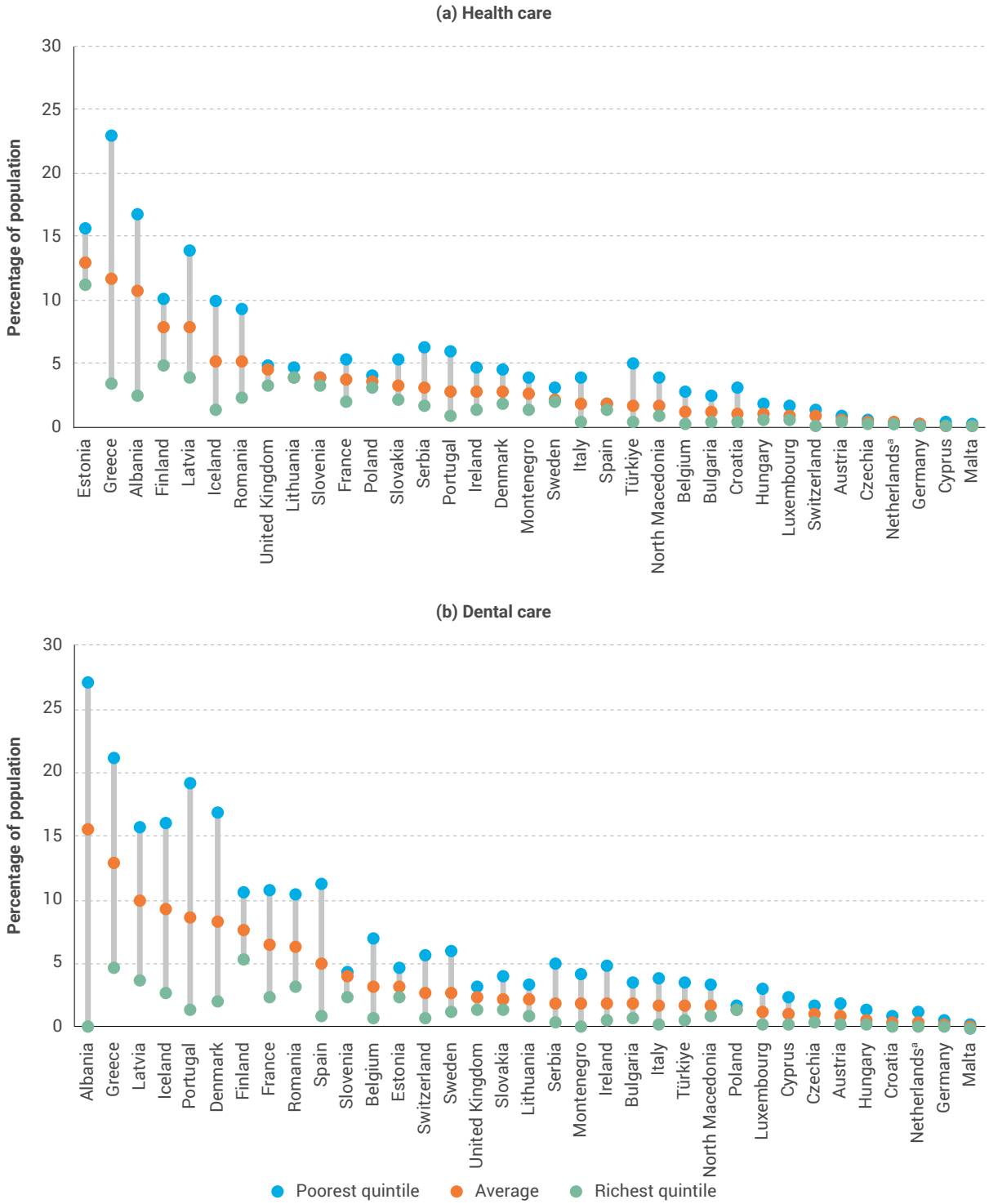
7.1.3 Unmet need for health care and dental care

Data on unmet need come from household surveys that ask people if there was a time in the last year when they needed care but were not able to access it due to cost, distance or waiting time (health system factors). European Union (EU) Statistics on Income and Living Conditions is an annual survey carried out in EU countries and Albania, Montenegro, North Macedonia, Serbia, Switzerland and Türkiye *(26)*. The latest available year for data is 2023.

Self-reported data on unmet need should be interpreted with caution, especially across countries. However, research has shown positive relationships between unmet need and subsequent deterioration in health *(27)* and between unmet need and the OOP payment share of current spending on health *(28)*, which suggests

that unmet need can be a useful indicator of affordable access to health care. Fig. 7.3 shows EU Statistics on Income and Living Conditions data on self-reported unmet need for health care (medical examination or treatment) and dental care (dental examination or treatment) on average and by richest and poorest quintiles. The share of people aged over 16 years who report unmet need for health care ranges from 0.1% in Cyprus and Malta to 12.9% in Estonia; for dental care, the range is from 0.1% in Malta to 15.6% in Albania.

Fig. 7.3. Share of the population reporting unmet need for health care (a) and dental care (b) due to cost, distance and waiting time by quintile, WHO European Region



Notes: quintiles are based on income for a population aged over 16 years; data are not available for all countries and are for 2023, except for the United Kingdom (2018), Iceland (2019), North Macedonia (2020), Albania (2021) and Montenegro, Serbia, Switzerland and Türkiye (2022).

[a] The Netherlands cannot be compared with other Member States because the Dutch household budget survey does not collect spending on the annual deductible amount households pay OOP fees for health care, biasing the results downwards.

Source: European Commission *(29)*.

The main reason for unmet need for health care is waiting time in 19 Member States and cost in 16 Member States (data not shown). For dental care, cost is the main reason for unmet need in all Member States apart from Finland and Slovenia, where waiting time is the main reason.

Levels of unmet need for health care and dental care tend to be higher among people in the poorest quintile (Fig. 7.3) *(5,25)*. The largest income-related gaps are in Albania and Greece for health care and in Albania and Portugal for dental care.

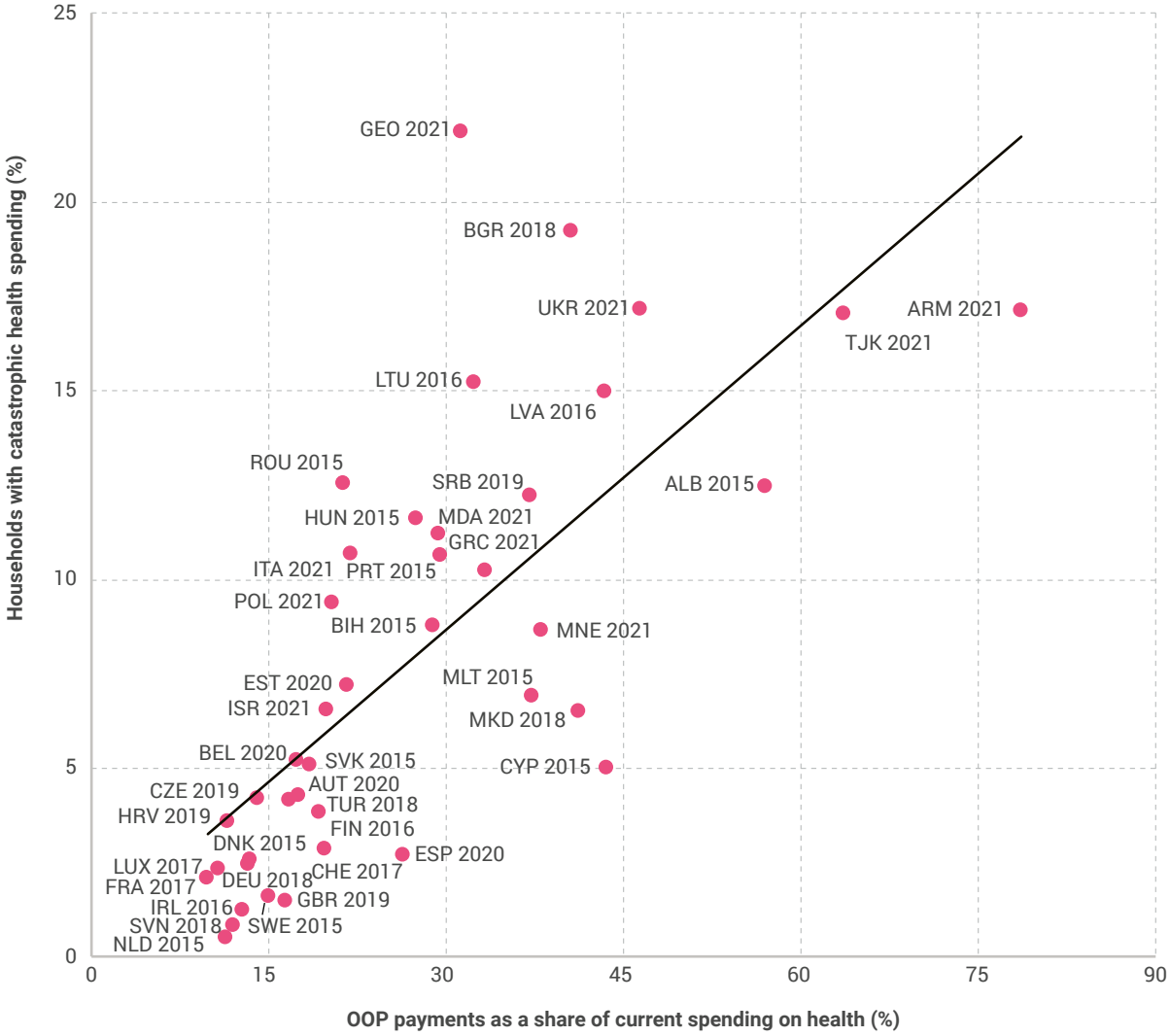
7.1.4 OOP payments affect people differently

In poorer households, financial hardship is mainly driven by spending on outpatient medicines. OOP payments for outpatient medicines result in both financial hardship and unmet need for poorer households *(4)*. OOP payments for dental care lead to financial hardship for richer households and to unmet need for poorer households.

7.1.5 Financial hardship, OOP payments and public spending on health

Fig. 7.4 shows the relationship between the incidence of catastrophic health spending and the OOP payment share of current spending on health. Across Member States in the Region, the incidence of catastrophic health spending correlates positively with the OOP payment share: it is generally low in countries where the OOP payment share of current spending on health is less than or close to 15%.

Fig. 7.4. Catastrophic health spending and OOP payments in the WHO European Region, latest available year

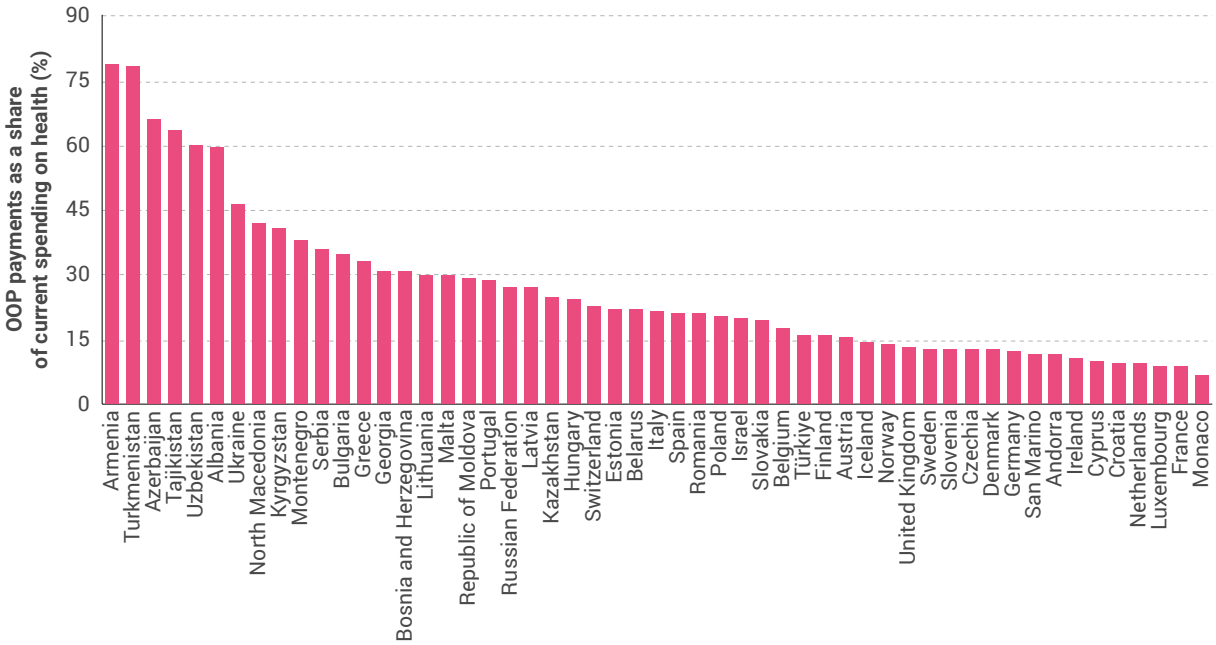


Notes: data on catastrophic health spending and OOP payments are for the same year but note that data for 2020 and 2021 should be interpreted with caution due to shifts in health-care use and spending during the peak years of the pandemic. ALB, Albania; ARM, Armenia; AUT, Austria; BEL: Belgium; BIH, Bosnia and Herzegovina; BGR, Bulgaria; CHE, Switzerland; CYP, Cyprus; CZE, Czechia; DEU, Germany; ESP, Spain; EST, Estonia; FIN, Finland; FRA, France; GBR, United Kingdom; GEO, Georgia; GRC, Greece; HRV, Croatia; HUN, Hungary; IRL, Ireland; ISR, Israel; ITA, Italy; LTU, Lithuania; LUX, Luxembourg; LVA, Latvia; MDA, Republic of Moldova; MKD, North Macedonia; MLT, Malta; MNE, Montenegro; NLD, Netherlands; POL, Poland; PRT, Portugal; ROU, Romania; SRB, Serbia; SVK, Slovakia; SVN, Slovenia; SWE, Sweden; TJK, Tajikistan; TUR, Türkiye; UKR, Ukraine. The Netherlands cannot be compared with other Member States because the Dutch household budget survey does not collect spending on the annual deductible amount households pay out of pocket for covered health care, biasing the results downwards.

Source: data on catastrophic health spending: WHO Barcelona Office for Health Systems Financing *(5)*, Thompson et al. *(25)*; data on OOP payments: WHO *(6)*.

In 2021 OOP payments accounted for more than 15% of current spending on health in nearly 80% of Member States in the Region, including in many EU countries (Fig. 7.5). This suggests that most Member States need to reduce their reliance on OOP payments to improve financial protection.

Fig. 7.5. OOP payments as a share of current spending on health in the WHO European Region, 2021

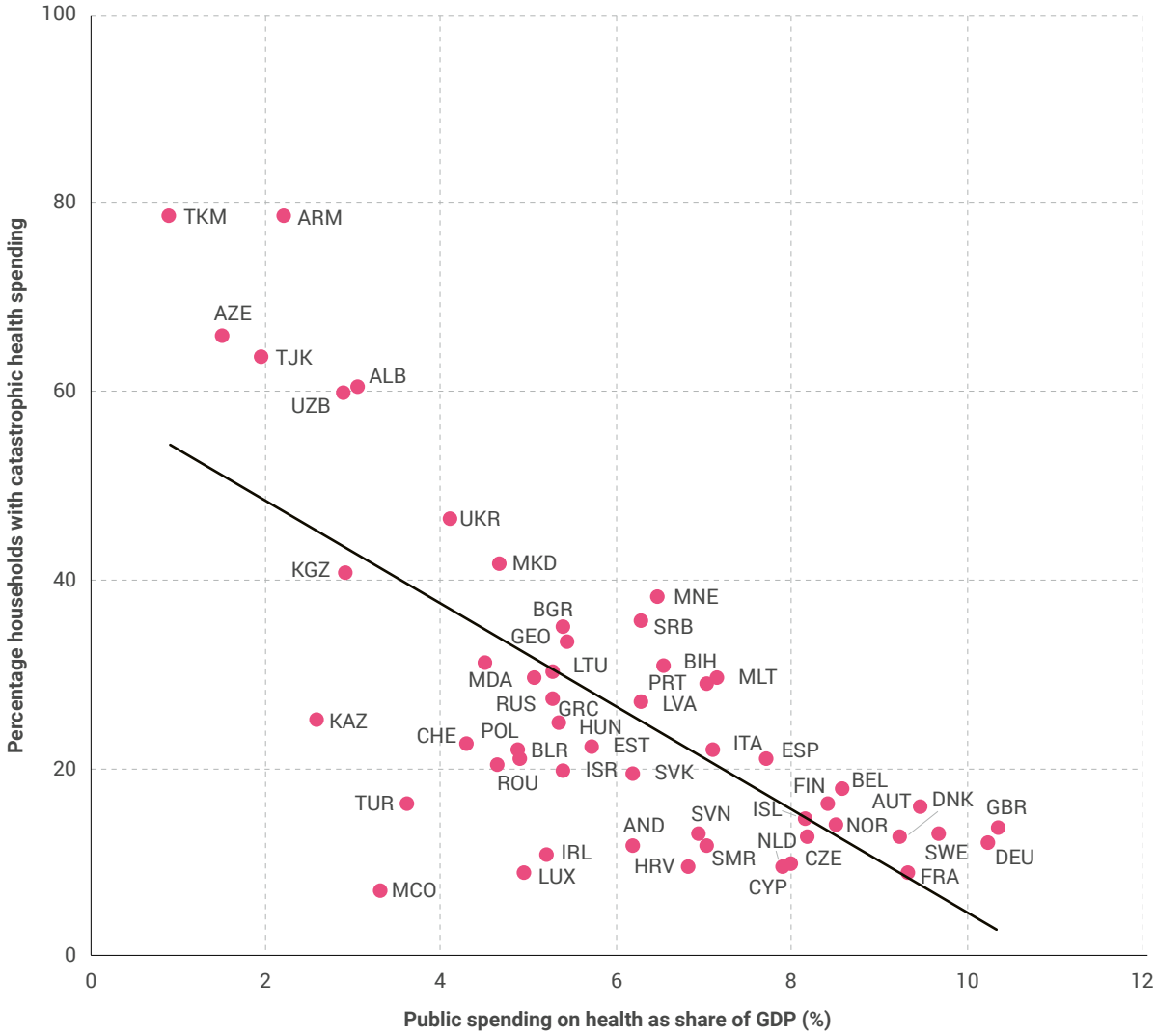


Source: WHO *(6)*.

Fig. 7.6 shows that public spending on health, measured as a share of GDP, is strongly associated with a lower reliance on OOP payments. This share is influenced by how much of the government budget is allocated to health (Fig. 7.7). Most Member States in the WHO European Region have the potential to give health a higher priority when allocating government spending.

However, data on health spending do not fully explain the differences in OOP payments and incidence of catastrophic health spending across Member States. There are large differences in reliance on OOP payments in Member States with the same level of public spending on health as a share of GDP (Fig. 7.6), as well as large differences in catastrophic health spending in Member States with equal reliance on OOP payments. These differences indicate that increases in public spending or reductions in OOP payments are not enough to improve financial protection in all contexts: policy choices are also important.

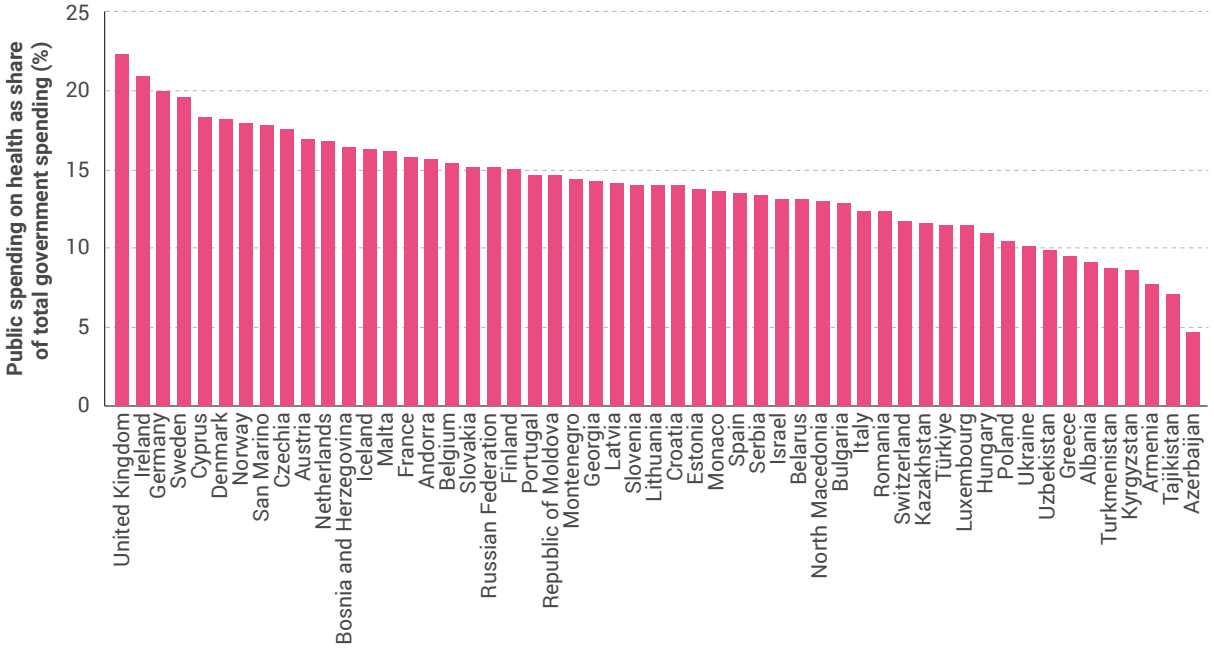
Fig. 7.6. OOP payments and public spending on health in the WHO European Region, 2021



Notes: ALB, Albania; AND, Andorra; ARM, Armenia; AUT, Austria; AZE, Azerbaijan; BEL, Belgium; BGR, Bulgaria; BIH, Bosnia and Herzegovina; BLR, Belarus; CHE, Switzerland; CYP, Cyprus; CZE, Czechia; DEU, Germany; DNK, Denmark; ESP, Spain; EST, Estonia; FIN, Finland; FRA, France; GBR, United Kingdom; GEO, Georgia; GRC, Greece; HRV, Croatia; HUN, Hungary; IRL, Ireland; ISL, Iceland; ISR, Israel; ITA, Italy; KAZ, Kazakhstan; KGZ, Kyrgyzstan; LTU, Lithuania; LUX, Luxembourg; LVA, Latvia; MDA, Republic of Moldova; MKD, North Macedonia; MLT, Malta; MNE, Montenegro; MON, Monaco; NLD, Netherlands; NOR, Norway; POL, Poland; PRT, Portugal; ROU, Romania; RUS, Russian Federation; SMR, San Marino; SRB, Serbia; SVK, Slovakia; SVN, Slovenia; SWE: Sweden; TJK, Tajikistan; TKM, Turkmenistan; TUR, Türkiye; UKR: Ukraine; UZB, Uzbekistan. Public spending on health is defined here as transfers from the government budget and social health insurance contributions.

Source: WHO *(6)*.

Fig. 7.7. Public spending on health as a share of total government spending in the WHO European Region, 2021



Source: WHO *(6)*.

7.1.6 Coverage policy choices to avoid

A country's reliance on OOP payments, and the distribution of those OOP payments across the population, are heavily influenced by coverage policy – that is, how health coverage is designed and implemented *(4,23)*.

Health coverage has three dimensions: people, services and costs. The goals of UHC are most likely to be met when the whole population is covered, the range and quality of services covered are sufficient to meet everyone's health needs, and health-care costs are largely financed through income-based pre-payment with risk pooling *(30)*. People can be exposed to OOP payments, financial hardship or unmet need when there are gaps in any of the three dimensions.

Lessons learned from the economic crisis that began in 2008, and from the COVID-19 pandemic, also point to the importance of coverage policy that strengthens household and health system resilience to shocks by providing extra protection for people with low incomes or chronic conditions and is countercyclical, that is, increases as the economy contracts *(30)*.

A recent study into the relationship between health coverage and OOP payments found that financial hardship is largely driven by OOP payments for outpatient medicines, medical products and dental care – services that are commonly delivered or managed in primary care settings – indicating that many countries have significant gaps in the coverage of primary care *(4,25)*. In countries with a higher incidence of catastrophic health spending, the main driver is overwhelmingly outpatient medicines. The study *(4)* identified that the five coverage policy choices **to avoid** are to:

- base entitlement to publicly financed health care on payment of social health insurance contributions;
- exclude people from coverage;
- apply user charges (co-payments) to services, medicines and medical products without effective protection mechanisms;
- fail to cover treatment in primary care settings (e.g. medicines, medical products and dental care); and
- think that voluntary health insurance is the answer.

Drawing on the evidence and on examples of good practice from across Europe, the Report set out a financial protection checklist for policy-makers *(4)*. The checklist highlights policy choices that have improved financial protection in Member States with a low incidence of financial hardship and unmet need (Box 7.1).

Box 7.1. A financial protection checklist for policy-makers

Entitlement to publicly financed health care is de-linked from payment of social health insurance contributions.

The tax agency deals with non-payment of social health insurance contributions (not the health system).

Refugees, asylum seekers and undocumented migrants are entitled to the same benefits as other residents.

Everyone is aware of their entitlements – there are no administrative barriers to accessing entitlements.

User charges are applied sparingly and are carefully designed so that:

- people with low incomes or chronic conditions are automatically exempt from all user charges;
- there is an annual income-based cap on all user charges, which works automatically;
- there are no percentage co-payments;
- there is no balance billing or extra billing for medical services; and
- any co-payments in place are low and fixed and people know in advance exactly how much they have to pay when they see a doctor, undergo a diagnostic test, collect a prescription or are admitted to hospital.

Primary care coverage includes treatment, not just consultation and diagnosis, so that the following types of care are affordable for everyone:

- medicines
- medical products
- dental care.

Box 7.1. contd

Coverage policy is supported by an adequate level of public spending on health so that there are:

- no major staff shortages
- no major issues with the quality and availability of services
- no long waiting times for treatment
- no informal payments.

Source: WHO Regional Office for Europe *(4)*.

In summary, the study *(4)* found that countries can improve financial protection by:

- redesigning coverage policy so that it reduces financial hardship and unmet need, particularly for people with low incomes or chronic conditions;
- supporting coverage policy through the allocation of an adequate level of public spending on health; and
- spending better by allocating health-care resources efficiently and equitably.

7.2 Health and care workforce

Main findings

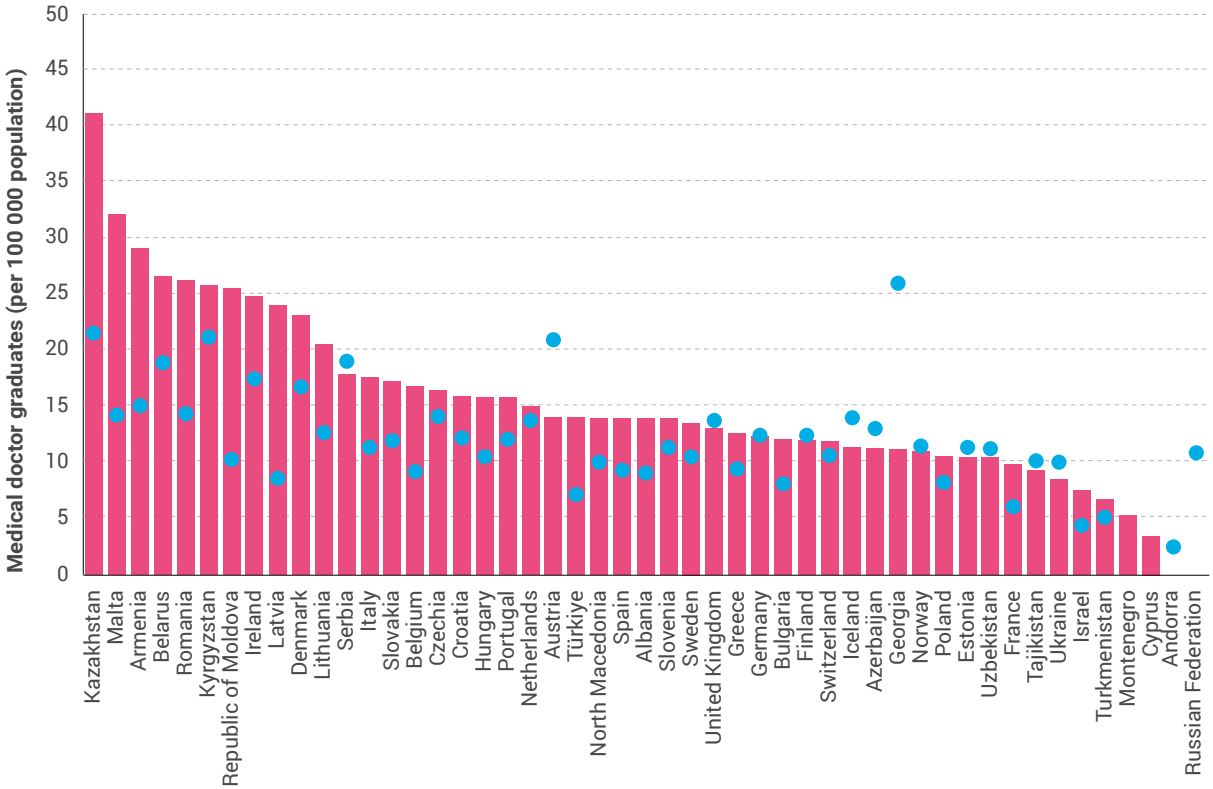
- Over 2012–2022 in the WHO European Region, there was an increase of 20% and 8%, respectively, in the density of doctors and nurses (based on 10 000 population). Despite having more health and care workers than ever, health systems in the Region face persistent health and care workforce shortages. The reason is that the growing demand for health services is outpacing the supply of health workers.
- Several factors are reducing the supply of health workers: (i) ageing of health workers, particularly doctors; (ii) increased internal mobility from rural areas to urban areas and from the public to the private sector; (iii) increased international migration of doctors and nurses after the COVID-19 pandemic; and (iv) increased attrition of health workers driven mainly by poor working conditions and poor mental health.
- The density of health professionals varies five-fold between Member States of the Region, with the lowest densities in central and western Asia and the highest in northern and western Europe.
- Improving the supply and retention of health and care workers, optimizing their performance, and improving health workforce planning and investment are the critical actions needed to strengthen the health workforce in the Region. Actions will also have to be taken globally to reduce the predicted global shortage of 10 million health workers by 2030.
- The Framework for action on the health and care workforce in the WHO European Region 2023–2030 is crucial to achieve the targets and objectives of WHO's global and European programmes of work (Thirteenth General Programme of Work, 2019–2023 and EPW) and ensure robust health systems to tackle current and future health challenges.

The health and care workforce is crucial to achieving national health system objectives and meeting the goals of the 2030 Agenda for Sustainable Development (as adopted by the United Nations General Assembly in resolution 70/1 in September 2015) *(32)*. SDG Target 3c aims to increase health financing and strengthen the recruitment, development, training and retention of the health workforce, particularly in developing countries *(33)*. The WHO Global strategy on human resources for health: workforce 2030 *(34)* and the WHO Regional Committee for Europe resolution EUR/RC73/R1 on a Framework for action on the health and care workforce in the WHO European Region 2023–2030 (unanimously adopted in October 2023) *(35)* provide guidance towards ensuring equitable access to health workers within robust health systems. The Framework for action is crucial to achieve the targets and objectives of WHO's global Thirteenth General Programme of Work, 2019–2023 *(1)* and the EPW *(3)* and to ensure robust health systems to tackle current and future health challenges. This was supported by the first evidence report in 2022, *Health and care workforce in Europe: time to act (36)* and by Member State consultations that resulted in the 2023 Bucharest Declaration on health and care workforce *(7)*, both of which recognized and emphasized that health and care workers are the backbone of any health system.

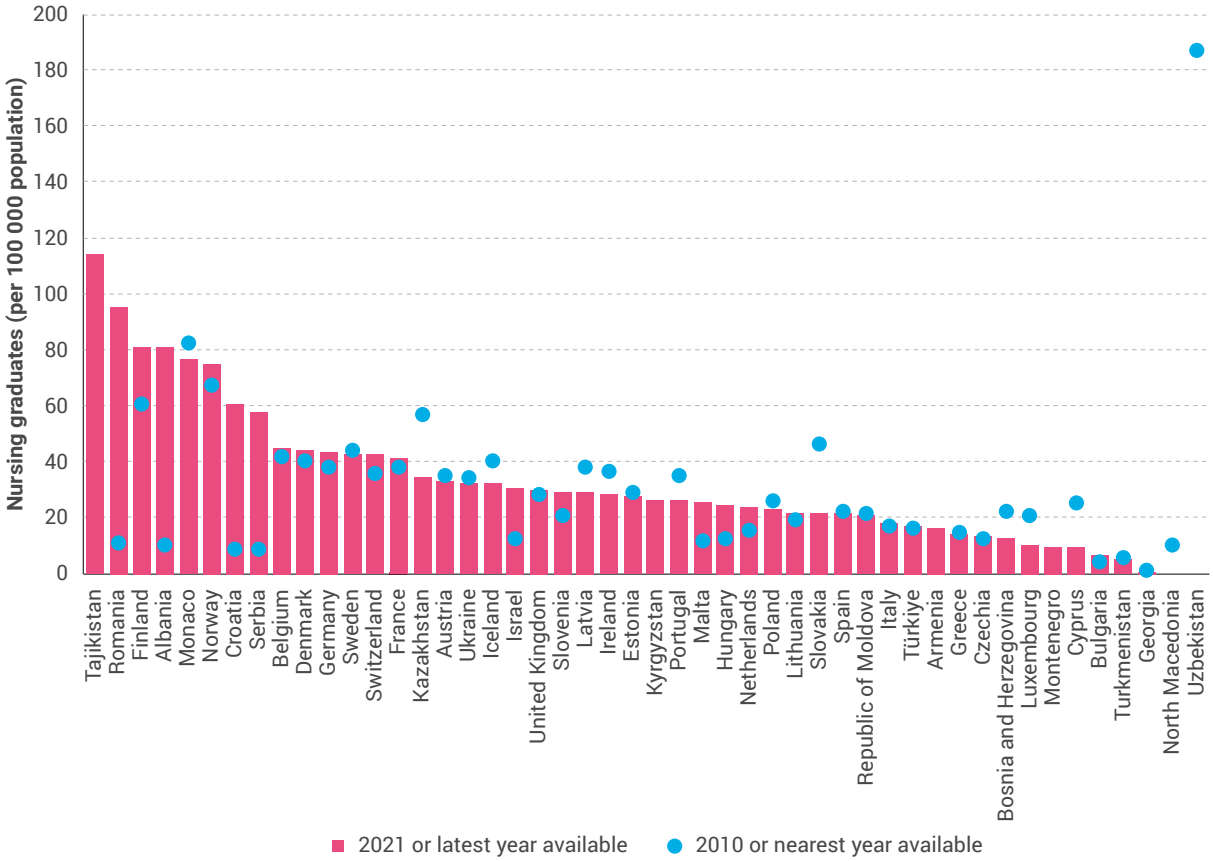
The WHO European Region has more health and care workers than ever in history and it is the WHO Region that has the highest density of health and care workers worldwide. Over the last decade (2012–2022), the average density of doctors has increased by 20%, the density of nurses by 8%, the density of midwives by 2.1%, the density of dentists by 17% and the density of pharmacists by 21% *(7,34)*. The number of graduate medical doctors and nurses increased by 15% and 2%, respectively, between 2010 and 2021 (Fig. 7.8).

Fig. 7.8. Change in the number of medical doctor (a) and nursing (b) graduates per 100 000 population between 2010 and 2020, or latest year available

(a) Medical doctor graduates



(b) Nursing graduates

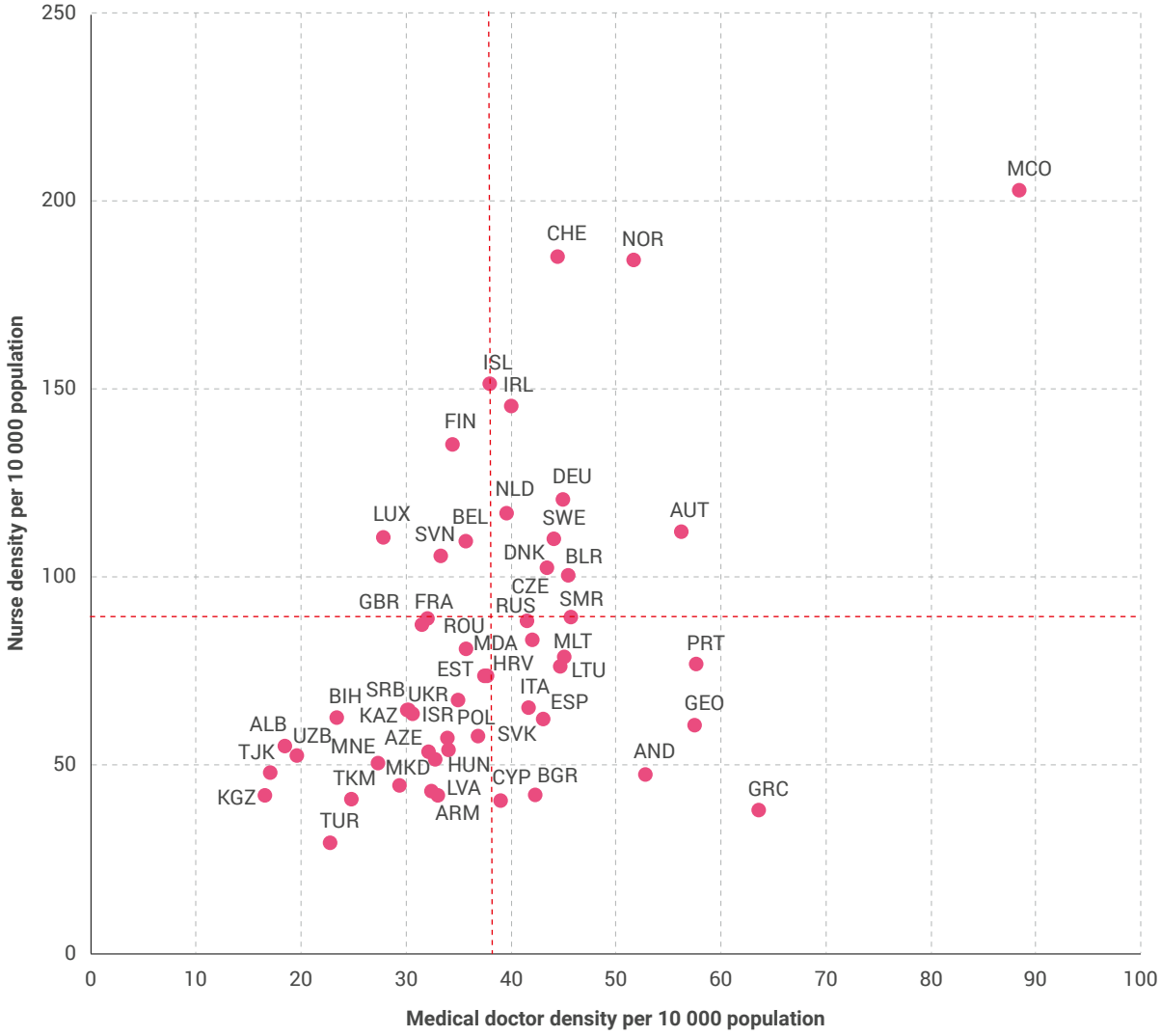


Note: (a) data for Andorra and Russian Federation are 2010 or nearest year, data for Cyprus and Montenegro are 2021 or nearest year; (b) data for North Macedonia and Uzbekistan 2010 or nearest year, data for Armenia, Kyrgyzstan, Montenegro and Tajikistan 2021 or nearest year.

Source: WHO Regional Office for Europe, Eurostat, Organisation for Economic Co-operation and Development joint data collection by the joint questionnaire on non-monetary health care statistics *(10)*.

Based on the latest data available, which are from 2022–2023 for most WHO European Region Member States, the density of active health professionals varies five-fold between Member States, with the lowest densities in central and western Asia and the highest in northern and western Europe. The density of medical doctors and nurses per 10 000 population remains uneven across the Region (Fig. 7.9), which can lead to disparities in access to health-care services and, possibly, contribute to health inequities *(8,9)*.

Fig. 7.9. Density of medical doctors and nurses per 10 000 population, 2023 or latest year available



Notes: ALB, Albania; AND, Andorra; ARM, Armenia; AUT, Austria; AZE, Azerbaijan; BEL, Belgium; BGR, Bulgaria; BIH, Bosnia and Herzegovina; BLR, Belarus; CHE, Switzerland; CYP, Cyprus; CZH, Czechia; DEU, Germany; DNK, Denmark; ESP, Spain; EST, Estonia; FIN, Finland; FRA, France; GBR, United Kingdom; GEO, Georgia; GRC, Greece; HRV, Croatia; HUN, Hungary; IRL, Ireland; ISL, Iceland; ISR, Israel; ITA, Italy; KAZ, Kazakhstan; KGZ, Kyrgyzstan; LTU, Lithuania; LUX, Luxembourg; LVA, Latvia; MCO, Monaco; MDA, Republic of Moldova; MKD, North Macedonia; MLT, Malta; MNE, Montenegro; NLD, Netherlands; NOR, Norway; POL, Poland; PRT, Portugal; ROU, Romania; RUS, Russian Federation; SMR, San Marino; SRB, Serbia; SVK, Slovakia; SVN, Slovenia; SWE, Sweden; TJK, Tajikistan; TKM, Turkmenistan; TUR, Türkiye; UKR, Ukraine; UZB, Uzbekistan. The red dotted lines indicate the Regional averages for doctors (38.4) and nurses (80.8).

Source: WHO Regional Office for Europe, Eurostat, Organisation for Economic Co-operation and Development joint data collection by the joint questionnaire on non-monetary health care statistics *(10)*.

However, despite the Region having the highest density of health and care workers worldwide, Member States are still facing critical shortages, while the demand for health services is growing at a faster pace than the increased supply. Several factors are contributing to reducing the supply of health and care workers.

Ageing of the health and care workforce, particularly doctors. Across the Region, an average of 30% of doctors are over 55 years of age and in 13 Member States more than 40% of doctors are over 55 years of age. This means that in the next 10 years a significant proportion of doctors will retire, which will increase the current shortages in the Region *(8,9,37)*.

Increased internal mobility of health and care workers. Within Member States, rural and remote areas often face shortages of health professionals, particularly medical doctors, compared with urban centres *(38)*. In addition, increased mobility of health and care workers from the public to the private sector worsens the shortages in the public sector, which is critical to provide essential services for those who need them most.

International migration of health workers from lower-income to higher-income Member States within the Region. The inequities generated by internal migration are exacerbated by the international migration of health workers from lower-income to higher-income Member States within the Region. This international migration particularly affects some countries in the EU, such as Romania, Bulgaria and Greece, and western Balkan and central Asian countries. WHO is helping to respond to these challenges through the WHO Global Code of Practice on the International Recruitment of Health Personnel, which was approved by the Sixty-third World Health Assembly (May 2010) in resolution WHA63.16 *(2,10,39,40)*.

Increased attrition of health and care workers. The COVID-19 pandemic had a significant impact on the health workforce in the WHO European Region. It highlighted the existing shortages and maldistribution of health workers, particularly in intensive care departments and public health services. The pandemic caused the deaths of many health and care workers and increased burnout and mental health issues among health workers, with a potential impact on retention rates. Increased attrition of health and care workers has become a major challenge in the Region. Protecting the health and safety of health and care workers is a core aspect of WHO's work. Although women make up nearly 80% of the health and care workforce, despite recent progress they continue to be largely underpaid, undervalued and unacknowledged in the health and care sector *(41,42)*. Addressing this issue requires support from all key partners in society.

On the positive side, many Member States in the Region have implemented rapid training and redeployment strategies to increase their workforce capacity in response to the COVID-19 pandemic. *(9,43–47)*.

The increased demand for health services is driven by several factors *(36)*:

- ageing of the population in many Member States of the Region increasing demand for health services, particularly in geriatric and long-term care, and influencing workforce needs and specialization;
- increasing burden of noncommunicable diseases and of multimorbidity *(8)*;
- increasing incidence of mental health conditions after the COVID-19 pandemic *(48)*;
- increasing backlogs and waiting list generated after the COVID-19 pandemic *(49)*; and
- increasing patient expectations *(49)*.

In addition, several emerging trends are influencing health workforce density and distribution in the WHO European Region. Digital health, telemedicine and artificial intelligence are changing the way that health care is delivered, potentially enabling more efficient use of the existing workforce and improving access in underserved areas *(35)*.

Growing recognition of the importance of mental health professionals is partly driven by increased awareness of mental health issues, including those exacerbated by social media use among young people *(37)*. The shift towards more integrated, people-centred care models is changing skill mix requirements towards an increasing emphasis on multidisciplinary teams and expanded roles for nurses and other allied health professionals *(45)*.

These factors are shaping health workforce policies and strategies across the Region, as Member States strive to ensure they have an adequate, well-distributed and appropriately skilled health workforce

to meet current and future health needs. The recent Framework for action on health and care workforce in Europe 2023–2030 provides five concrete and actionable pillars to address these challenges and improve the health and care workforce in Europe *(35)*:

- **retain and recruit** – this includes policy actions to improve the working conditions of health and care workers to avert the current labour, mental health and gender equality crises;
- **optimize performance** – this includes policy actions to increase efficiency of the limited number of available health workers in the health system such as reconfiguring health services using digital health technologies and redefining teams and the skill mix to maximize the limited human resources and guarantee that the actions they perform add value;
- **build supply** – this involves modernizing health education and training, including by building digital health competencies to build a fit-for-purpose health workforce for both the present and future health services demands and needs;
- **plan** – health workforce planning is essential for anticipating future needs of the health system and start taking actions to address them now, such as strengthening the capacity of human resources for health units in ministries of health (including other stakeholders) and improving human resources for health information systems (HIS) and data; and
- **invest** – increased investment in health workforce is a precondition to improve working conditions and health education, along with investing more smartly by investing in areas that add value.

Implementation of the Framework for action *(35)* and monitoring its progress are crucial for Member States to achieve by 2030 the health-related SDGs and to ensure robust health systems capable of providing access to quality health services and improving health outcomes now and in the future *(8,34)*.

7.3 Long-term care

Main findings

- Indicators such as "need for help with personal care or household activities" and "use of home care services" provide crucial insights into the long-term care needs and services provided at home for community-living older adults in Member States in the WHO European Region, and specifically in EU countries for which these data are available.
- In 2019 nearly half (46.6%) of people aged 65 years and over with severe difficulties reported lacking the necessary assistance for personal care or household activities, which highlights significant unmet needs among older adults.
- Home care service utilization varied widely across levels of disability and age groups – only 6.7% of people with moderate disabilities and 24.8% with severe disabilities across all age groups used these services, indicating a potential gap between need and formal care provision.
- These findings underscore the importance of enhancing access to home care services and addressing unmet care needs across the Region, particularly for older adults with severe difficulties, to support healthy ageing and improve quality of life.

Since the prevalence of chronic conditions and disability increases with age, the demand for long-term care, including care provided at home, is expected to rise in the WHO European Region, particularly among the oldest age groups. The fastest-growing demographic in the Region is people aged 80 years and older, where the prevalence of care needs is highest. Notably, the WHO European Region is the WHO region with the oldest population. Investing in healthy ageing programmes throughout the life-course can contribute to a lower or delayed incidence of long-term conditions in older people *(11,12)*.

The indicators "need for help with personal care or household activities" and "use of home care services" provide crucial insights into the current state of home care needs and service utilization. Although home care service utilization rates may not tell the whole story, in combination with data on perceived need for assistance, they offer insight into how well care needs are being met more generally across both formal and informal care arrangements. Home care encompasses all personal, social and medical services provided in the home of the care user by professional health or long-term care workers with the aim of maintaining, or preventing/compensating for loss in, functional ability. The indicator on home care services use shows the use of any type of home (health and social) care services. It includes only formal care services provided by professional health or social workers (not by family members or friends) in the 12 months prior to the interview *(12,13)*.

The WHO *Global strategy and action plan on ageing and health (50)* and the United Nations Decade of Healthy Ageing (2021–2030) *(51)* emphasize the importance of optimizing physical and mental capacity and integrating long-term care services in the context of UHC.

According to European Health Interview Survey data for 2019, across 27 EU countries 18.0% of people aged 65 years and over who experienced moderate difficulty in undertaking personal care or household activities reported a lack of needed assistance (Table 7.1) *(14)*. This represents an improvement compared with 2014, when almost a quarter of the population (23.8%) reported a lack of such assistance. In 2019 the proportion of people in the same age group with severe difficulty in performing these activities who lacked assistance was 46.6% (Table 7.1 shows heatmaps for selected data points). For people aged 75 years and over, 19.7% of those with moderate difficulty and 47.3% of those with severe difficulty in undertaking personal care or household activities reported a lack of needed assistance (Table 7.2). For those with severe difficulty, this represented an improvement from 2014, when 51.8% reported a lack of such assistance.

Table 7.1. Proportion of people aged over 65 years who reported the need for help with personal care or household activities, met and unmet, by level of difficulty experienced in those activities, 2019

	Need for assistance for moderate or severe level of difficulty (%)					
	Moderate			Severe		
	No need	Get enough	Lack	No need	Get enough	Lack
EU average	48.3	33.7	18.0	13.3	40.1	46.6
Belgium	*88.9*	*0.0*	*11.1*	–	–	–
Bulgaria	38.2	24.3	37.4	9.5	22.9	67.5
Czechia	85.1	9.2	5.7	31.9	30.2	37.9
Denmark	66.2	17.7	16.2	21.2	35.8	43.0
Germany	42.0	37.6	20.4	6.0	44.3	49.7
Estonia	20.0	45.6	34.3	1.9	39.6	58.4
Ireland	53.7	31.1	15.2	13.2	38.3	48.5
Greece	19.9	62.7	17.4	3.9	53.0	43.1
Spain	25.6	47.5	26.8	6.6	45.3	48.0
France	47.1	36.2	16.7	15.4	45.9	38.7
Croatia	33.8	25.4	40.8	5.6	23.3	71.0
Italy	54.4	33.3	12.3	13.0	42.9	44.2
Cyprus	43.2	44.0	12.7	11.4	58.1	30.4
Latvia	49.4	42.2	8.4	15.7	60.9	23.4
Lithuania	31.5	56.9	11.7	5.0	57.8	37.2
Luxembourg	38.9	31.8	29.2	6.4	18.9	74.6
Hungary	69.0	17.3	13.8	24.8	26.2	49.0
Malta	61.6	12.2	26.2	26.9	16.9	56.3
Netherlands	62.8	31.5	5.7	17.2	58.3	24.5
Austria	41.4	51.1	7.5	7.2	60.4	32.4
Poland	67.2	20.7	12.1	22.7	30.6	46.7
Portugal	52.6	34.3	13.0	16.7	44.4	38.9
Romania	24.9	37.4	37.7	11.9	26.5	61.6
Slovenia	46.0	38.0	16.0	14.9	46.4	38.8
Slovakia	40.3	38.9	20.8	6.1	43.0	50.9
Finland	46.8	21.5	31.8	13.6	16.0	70.4
Sweden	45.9	34.6	19.5	8.1	38.3	53.6
Iceland	51.2	38.3	10.5	5.2	63.9	30.9
Norway	36.8	42.4	20.8	6.6	57.1	36.3
Serbia	49.7	26.9	23.3	12.9	36.7	50.4
Türkiye	41.9	11.7	46.5	16.2	7.4	76.5

0–19.9%
20.0–39.0%
40.0–59.9%
60.0–79.9%
80.0–100%

Notes: personal care includes feeding oneself, getting in and out of a bed or chair, dressing and undressing, using toilets, bathing or showering; household activities include preparing meals, using the telephone, shopping, managing medication, light housework, occasional heavy housework, taking care of finances and everyday administrative tasks. Italic figures have low reliability; EU averages include 27 countries and do not include data for Iceland, Norway, Serbia or Türkiye.

Source: European Commission *(14)*.

Table 7.2. Proportion of people aged over 75 years who reported the need for help with personal care or household activities, met and unmet, by level of difficulty experienced in those activities, 2019

	Need for assistance for moderate or severe level of difficulty (%)					
	Moderate			Severe		
	No need	Get enough	Lack	No need	Get enough	Lack
EU average	42.2	38.1	19.7	10.9	41.8	47.3
Belgium	*90.4*	*0.0*	*9.6*	–	–	–
Bulgaria	34.8	24.5	40.8	6.8	21.8	71.4
Czechia	79.1	13.8	7.1	25.6	34.0	40.4
Denmark	*61.2*	*19.2*	*19.6*	17.9	38.1	44.1
Germany	38.2	40.6	21.2	5.9	47.4	46.7
Estonia	*15.6*	*41.4*	*43.0*	1.9	40.7	57.4
Ireland	44.6	35.3	20.2	9.8	37.6	52.6
Greece	15.2	66.3	18.5	3.9	52.7	43.4
Spain	21.3	49.0	29.7	5.7	43.9	50.4
France	43.4	39.9	16.7	15.2	46.9	38.0
Croatia	28.3	28.3	43.3	4.7	22.9	72.4
Italy	46.6	39.1	14.3	10.7	43.7	45.6
Cyprus	40.8	45.5	13.7	7.2	62.5	30.3
Latvia	53.0	39.0	8.0	12.1	62.4	25.5
Lithuania	27.1	59.1	13.9	2.5	57.7	39.8
Luxembourg	36.6	34.4	29.0	*2.4*	*23.5*	*74.0*
Hungary	60.9	24.2	14.9	23.5	25.8	50.8
Malta	53.5	12.4	34.1	23.0	17.8	59.2
Netherlands	51.9	42.6	5.5	12.7	66.1	21.3
Austria	42.7	50.2	7.1	6.8	59.7	33.5
Poland	61.1	23.4	15.5	17.2	32.1	50.8
Portugal	44.5	39.2	16.3	12.7	45.3	42.0
Romania	22.6	37.5	39.9	7.9	25.6	66.6
Slovenia	33.7	42.4	23.9	9.4	51.0	39.6
Slovakia	32.1	46.0	21.9	4.3	42.0	53.7
Finland	39.7	21.6	38.8	11.2	15.9	72.8
Sweden	41.7	38.6	19.7	4.6	42.4	53.0
Iceland	40.0	52.0	8.0	7.1	65.5	27.4
Norway	30.1	45.2	24.8	3.1	61.2	35.6
Serbia	42.4	27.9	29.7	9.1	36.3	54.6
Türkiye	40.1	13.1	46.8	14.5	7.6	77.9

0–19.9%
20.0–39.0%
40.0–59.9%
60.0–79.9%
80.0–100%

Notes: personal care includes feeding oneself, getting in and out of a bed or chair, dressing and undressing, using toilets, bathing or showering; household activities include preparing meals, using the telephone, shopping, managing medication, light housework, occasional heavy housework, taking care of finances and everyday administrative tasks. Italic figures have low reliability; EU averages include 27 countries and do not include data for Iceland, Norway, Serbia or Türkiye.

Source: European Commission *(14)*.

There are significant variations across countries *(14)*. For example, among those aged 65 years and over with severe difficulty in undertaking personal care or household activities, the proportion who reported a lack of needed assistance ranged from 23.4% in Latvia to 76.5% in Türkiye. For those aged 75 years and over with severe difficulty, the range was even wider, from 21.3% in the Netherlands to 77.9% in Türkiye. In Estonia and Greece, a large proportion of people aged 65 years and over reported a need for assistance in undertaking these activities: only 20.0% and 19.9%, respectively, of those with moderate difficulty reported no need for assistance.

The data also highlight that the need for assistance generally increases with age and the severity of difficulty in undertaking personal care or household activities *(14)*. For example, in the EU overall, only 10.9% of those aged 75 years and older with severe difficulty reported no need for assistance. These data underscore that varying levels of support are available across EU countries and that a significant proportion of older adults, particularly those with severe difficulties, lack the needed assistance with personal care and household activities.

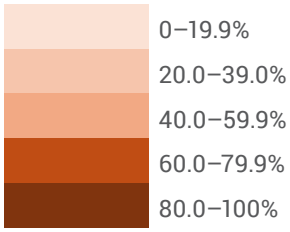
Across 27 EU countries in 2019, the use of home care services varied significantly depending on age and level of activity limitation (Table 7.3) *(14)*. For all age groups, 6.7% of people with moderate activity limitation and 24.8% of those with severe activity limitation used home care services. Of EU citizens of all ages who reported no activity limitation, only 1.5% used these services.

Table 7.3. Proportion of people who used home care services for personal needs in the previous 12 months by level of activity limitation and age, 2019

	Level of disability (% those using home care services)								
	All age groups			65 years or over			75 years or over		
	None	Moderate	Severe	None	Moderate	Severe	None	Moderate	Severe
EU average	1.5	6.7	24.8	3.0	10.4	33.8	5.5	15.0	40.3
Belgium	7.8	25.0	39.1	12.7	36.7	56.9	19.4	42.7	67.0
Bulgaria	0.5	3.0	14.3	1.4	3.9	16.7	1.3	4.4	19.3
Czechia	0.1	3.1	13.7	0.6	6.0	18.3	0.8	10.2	24.3
Denmark	2.2	9.5	32.3	4.7	19.7	50.2	9.0	29.7	70.7
Germany	2.2	7.0	25.0	3.0	11.4	38.5	5.5	15.5	47.0
Estonia	0.5	1.7	6.0	0.4	2.7	8.9	0.5	4.3	12.4
Ireland	1.3	6.8	23.4	4.1	14.5	37.7	9.1	26.9	54.6
Greece	1.4	3.6	21.2	3.1	4.8	25.5	4.3	5.2	26.8
Spain	0.7	7.6	28.3	2.5	13.6	42.0	4.9	19.3	47.6
France	3.2	10.9	31.6	5.5	15.8	44.1	8.8	20.1	55.6
Croatia	0.6	5.2	25.3	1.4	7.6	29.6	1.2	8.8	32.6
Italy	0.6	4.5	28.8	1.1	7.1	35.4	2.1	10.2	41.1
Cyprus	0.1	3.3	22.5	0.8	6.2	27.4	2.0	8.8	38.3
Latvia	0.1	1.8	13.6	0.0	3.9	16.9	0.0	6.6	19.1
Lithuania	0.4	2.4	17.0	1.1	3.3	21.8	1.6	4.9	24.7
Luxembourg	1.7	9.7	23.2	2.8	12.7	*42.0*	6.8	19.3	*47.5*
Hungary	1.0	4.8	18.7	2.0	8.3	26.7	3.4	14.0	33.5
Malta	1.5	6.8	17.5	5.8	12.5	28.3	11.3	19.9	35.5
Netherlands	2.8	11.7	35.7	6.5	22.6	58.5	15.8	39.2	67.6
Austria	0.7	3.7	19.6	1.8	7.6	31.1	4.2	13.3	38.5
Poland	0.5	4.0	18.9	1.2	6.2	24.2	2.7	11.9	30.1
Portugal	0.7	4.0	16.7	1.4	6.0	20.5	1.7	9.1	25.2
Romania	0.1	1.6	12.0	0.4	2.1	12.5	0.8	3.4	14.0
Slovenia	1.3	2.9	12.3	2.3	4.7	17.4	3.8	7.8	20.6

Table 7.3. contd

Slovakia	0.2	1.2	10.0	1.4	2.4	15.0	3.9	5.1	19.9
Finland	1.3	4.6	16.3	3.3	10.2	32.9	8.2	17.0	38.2
Sweden	0.5	2.8	12.0	0.6	5.3	20.8	1.1	7.6	27.4
Iceland	4.1	8.3	15.8	8.7	15.2	27.4	19.1	29.7	41.5
Norway	6.4	14.6	20.4	8.2	21.4	32.5	12.9	29.9	44.7
Serbia	0.6	2.4	14.6	1.2	3.9	17.8	2.0	5.7	24.4
Türkiye	0.4	0.8	3.7	1.2	2.1	5.8	1.8	4.9	8.8



Notes: EU averages include 27 countries but will not include data for Iceland, Norway, Serbia or Türkiye; the data include both public and privately funded home care and EU averages are population-size weighted.

Source: European Commission *(14)*.

Home care use increased with age, following an increase in the prevalence of chronic conditions and related activity limitation. Among people aged 65 years and over, 10.4% with moderate and 33.8% with severe activity limitations reported using home care services for personal needs in the past 12 months. For people aged 75 years and over, the percentages rose to 15.0% for those with moderate limitations and 40.3% for those with severe limitations.

There are substantial variations across countries. For people aged 65 years and over with moderate activity limitation, Belgium had the highest usage at 36.7%, followed by the Netherlands (22.6%) and Norway (21.4%). For those aged 65 years and over with severe activity limitation, usage exceeded 50% in some countries, with the highest percentage in Netherlands (58.5%), followed by Belgium (56.9%) and Denmark (50.2%).

The disparity was even more pronounced for people aged 75 years and over with severe limitations. In Denmark, 70.7% of this group used home care services, whereas the figures were 67.6% in the Netherlands and 67.0% in Belgium.

In contrast, several countries reported significantly lower usage of home care services. For example, among those 65 years and over with severe disabilities, the proportion using home care services was notably low in Türkiye (5.8%), Estonia (8.9%) and Romania (12.5%). The gap was even more striking for those 75 years and over with severe limitations, with usage rates in Türkiye (8.8%), Estonia (12.4%) and Romania (14.0%), far below the EU average. These lower usage rates in these countries are likely to reflect a combination of factors, including reduced availability of home care services, less state support for home care and a strong reliance on family members to provide care. Additionally, eligibility criteria for public support can lead to a lower affordability of home-based care, whereas access to residential care may benefit from higher public support. This complex interplay of factors affects the accessibility and utilization of home care services across different WHO regions *(52)*.

It is important to note that while this indicator reflects the use of home care services, it may not fully capture issues of access or availability. Low rates of home care use may indicate either less need for such services or potential barriers to accessing them, and this highlights the complexity in interpreting such data without additional context.

The data on the need for help with personal care or household activities and the use of home care services across European countries highlight significant variations in access and provision *(14)*. As countries work to strengthen their long-term care systems, particular attention should be given to home care services as a key element in supporting people to continue to live at home while aging and for maintaining the dignity and autonomy of older adults.

7.4 EPW Empowerment through Digital Health initiative: strategies and education plans in Member States

Main findings

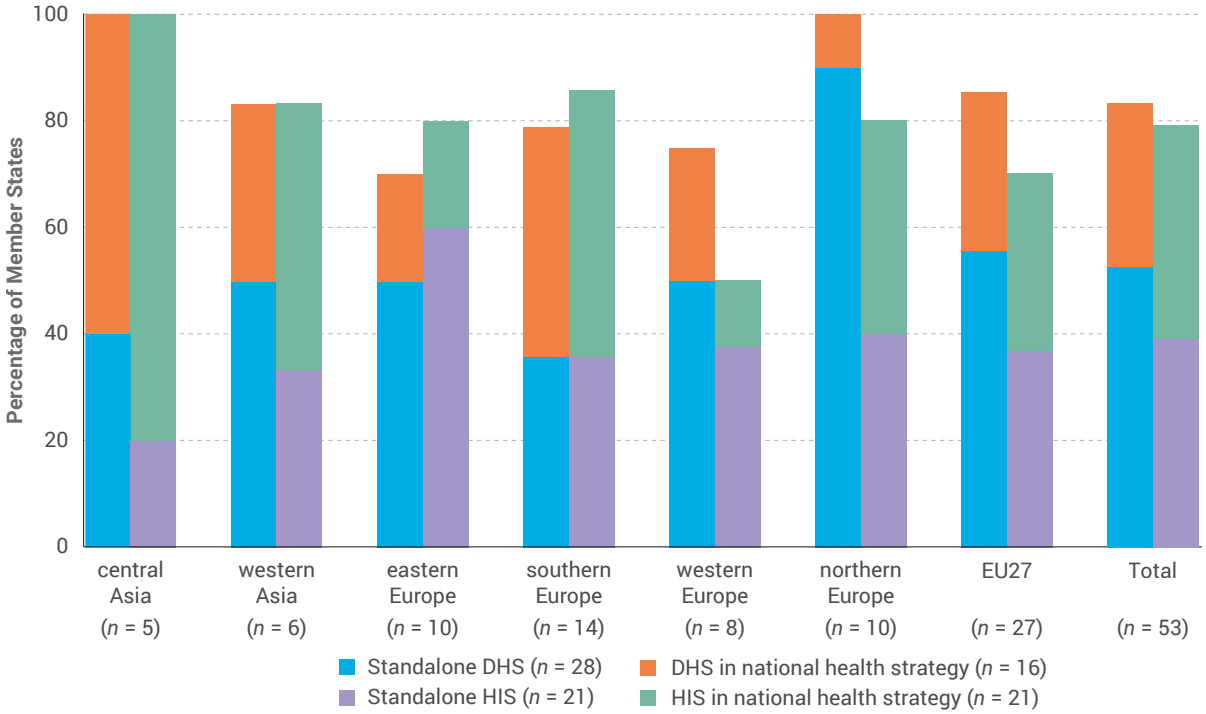
- In 2022 83% of WHO European Region Member States (44/53) reported having specific strategies for digital health, while more than half (52%; 27/53) reported they either had developed or were in the process of developing digital health education action plans, policies and strategies.
- Strong governance is an increasingly important mechanism for improving the quality and timeliness of health data and is crucial for enabling equitable, people-centred care delivery and evidence-informed public health action.
- Within the framework of the EPW flagship initiative Empowerment through Digital Health, the WHO Regional Office for Europe is supporting Member States to address barriers and leverage enabling factors for health professionals to utilize digital health technologies and explore new opportunities for technology to support the needs of patients and carers and to create sustainable financing strategies for the continued development and implementation of digital health.

Digital health has the potential to accelerate progress towards UHC. For this reason, the WHO Regional Office for Europe launched the Empowerment through Digital Health flagship initiative *(15)*, as part of the EPW *(11)*, to coordinate and support the strategic implementation of digital health initiatives in the WHO European Region. At the 72nd session of the Regional Committee for Europe in September 2022, Member States adopted resolution EUR/RC72/R2 on leveraging digital transformation for better health in Europe: Regional digital health action plan for the WHO European Region 2023–2030 *(53)*. The action plan aims to support Member States to leverage and scale up digital transformation for better health and align digital technology investment decisions with their health system needs, while fully respecting the values of equity, solidarity and human rights.

Designing and implementing digital health policies can facilitate better data management, interoperability and innovation in health services, thus supporting overall health system strengthening and UHC *(16,17)*. To assess the adoption and progress of digital health in Member States, the WHO Regional Office for Europe conducted a survey in 2022 to gain insight into the essential elements to support digital health, how it is being championed and utilized, and the barriers that might impede its widespread adoption.

The survey showed that Member States vary in the extent to which they have policies or strategies to address digital health and HIS. In all, 83% of Member States (44/53) reported having DHS and 79% had a HIS strategy (42/53). Of the 44 Member States that had DHS, more than half (28/44) reported having dedicated DHS and another 16 reported having DHS included within the scope of their national health strategies or policies or broader digital strategies. The highest proportion of national DHS or digital health policies were in Member States in central Asia and northern Europe. All except one Member State in northern Europe had stand-alone national DHS (Figs 7.10 and 7.11) *(17)*.

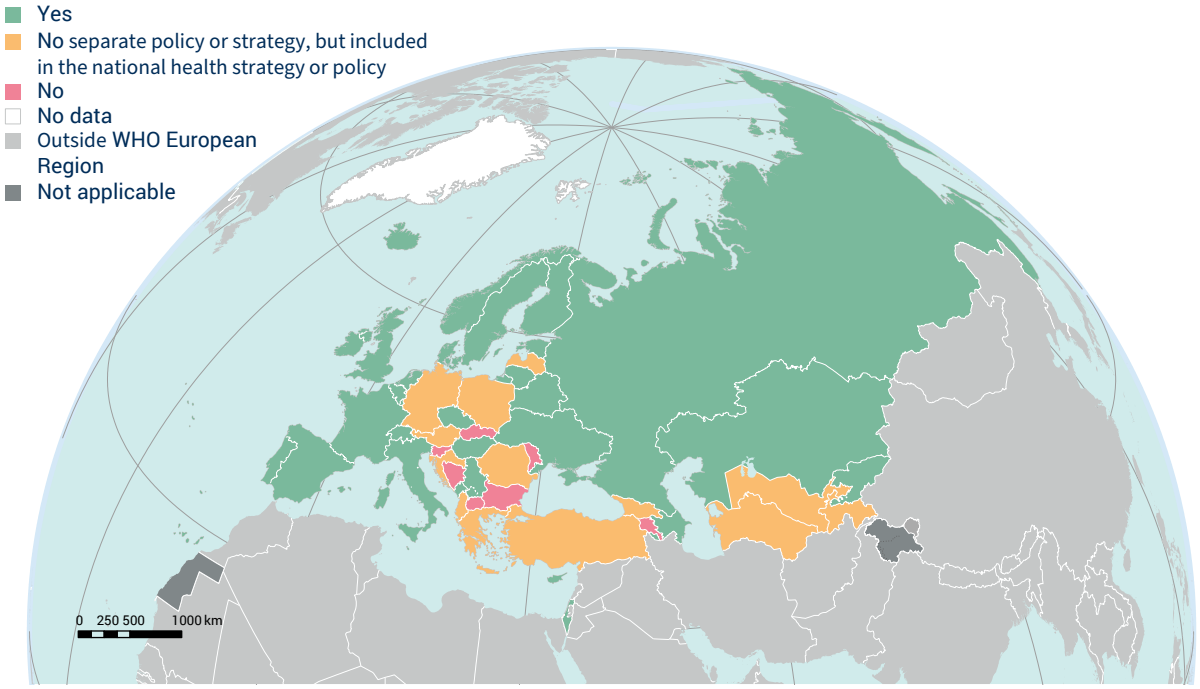
Fig. 7.10. Member States of the WHO European Region with policies or strategies addressing digital health and HIS by subregion, 2022



Notes: subregions are defined as central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan), western Asia (Armenia, Azerbaijan, Cyprus, Georgia, Israel, Türkiye), eastern Europe (Belarus, Bulgaria, Czechia, Hungary, Poland, Republic of Moldova, Romania, Russian Federation, Slovakia, Ukraine), northern Europe (Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden, United Kingdom), southern Europe (Albania, Andorra, Bosnia and Herzegovina, Croatia, Greece, Italy, Malta, Montenegro, North Macedonia, Portugal, San Marino, Serbia, Slovenia, Spain) and western Europe (Austria, Belgium, France, Germany, Luxembourg, Monaco, Netherlands, Switzerland). EU27 is the 27 EU countries since the United Kingdom left on 31 January 2020.

Source: WHO Regional Office for Europe *(16)*.

Fig. 7.11. WHO European Region Member States with policies or strategies addressing digital health, 2022



Notes: the designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

Source: created by the WHO GIS Centre for Health DNA/DDI based on data in WHO Regional Office for Europe *(17)*.

The last two decades (2002–2022) have seen an increasing number of Member States across the WHO European Region adopt DHS (Table 7.4), driven by growing recognition of a role for information and communication technologies in enhancing health-care delivery and managing health emergencies, such as the COVID-19 pandemic. National DHS often encompass a range of key objectives to facilitate digital HIS, including the development of robust infrastructures, defining functional requirements, ensuring cybersecurity, promoting interoperability, managing organizational change, leveraging data innovations and training health professionals *(16,17)*.

Table 7.4. Trends in WHO European Member States with digital health policies and strategies, 2005–2022

	2005	2009	2015	2022
Member States with a national e-health/digital health policy or strategy	73% (19 out of 26)	89% (32 out of 36)	70% (30 out of 43)	83% (44 out of 53)

Source: WHO Regional Office for Europe *(16)*.

Key challenges to developing and, equally importantly, implementing national DHS include limited financial resources, lack of technical expertise and issues related to data privacy and security. Additionally, when collecting quantitative and qualitative input on barriers for the report entitled *Digital health in the European Region: the ongoing journey to commitment and transformation (16)*, some Member States also mentioned barriers related to political incentives to integrate data sources, the lack of public trust in the use of health data, and the political and the financial support for such initiatives *(17,54)*.

As health-care systems continue to embrace advanced technologies, such as artificial intelligence, significant strides are being made in establishing policies to guide their integration into the health sector to enhance service delivery and outcomes. The survey showed that 35% (17 out of 48 responding Member States) reported the existence of national policies governing the application of big data and advanced analytics in the health sector. Artificial intelligence emerged as the most widely adopted technology, implemented in 69% of participating countries (33 out of 48). This was followed by the use of cloud computing resources, reported by 57% of Member States (27 out of 47). Additionally, 56% of countries (25 out of 45) indicated the integration of personalized medicine into their health-care systems, while genomic medicine was reported as being utilized in 48% of countries (21 out of 44) *(17)*.

Digital health literacy plays a pivotal role in empowering individuals to engage with digital technologies for managing their health and accessing health-care information. This ability is influenced by various individual, societal and technological factors, all of which shape how effectively people can search for, evaluate and use health-related information. Enhancing digital health literacy ensures that individuals can make informed decisions about their health, thereby improving their overall quality of life. On a broader level, promoting digital health literacy supports health equity by reducing barriers to high-quality health-care services and information, thus helping to avoid misinformation and confusion that can lead to poor health management, delayed treatments and increased health-care costs.

Improving digital health literacy not only benefits citizens but also enhances the capabilities of health professionals. For citizens, it facilitates interactions with digital health services such as navigating patient portals, understanding telehealth platforms or using health-tracking apps. For health professionals, it strengthens the ability to effectively use electronic health records, telemedicine tools and data analytics, which improves the quality of patient care. Initiatives such as the European mHealth Hub's Digital Health Literacy for Citizens programme *(55)* demonstrate how digital health education can be successfully implemented and can offer free online courses to help individuals to develop vital skills such as evaluating online health information and managing data privacy *(15,55–57)*.

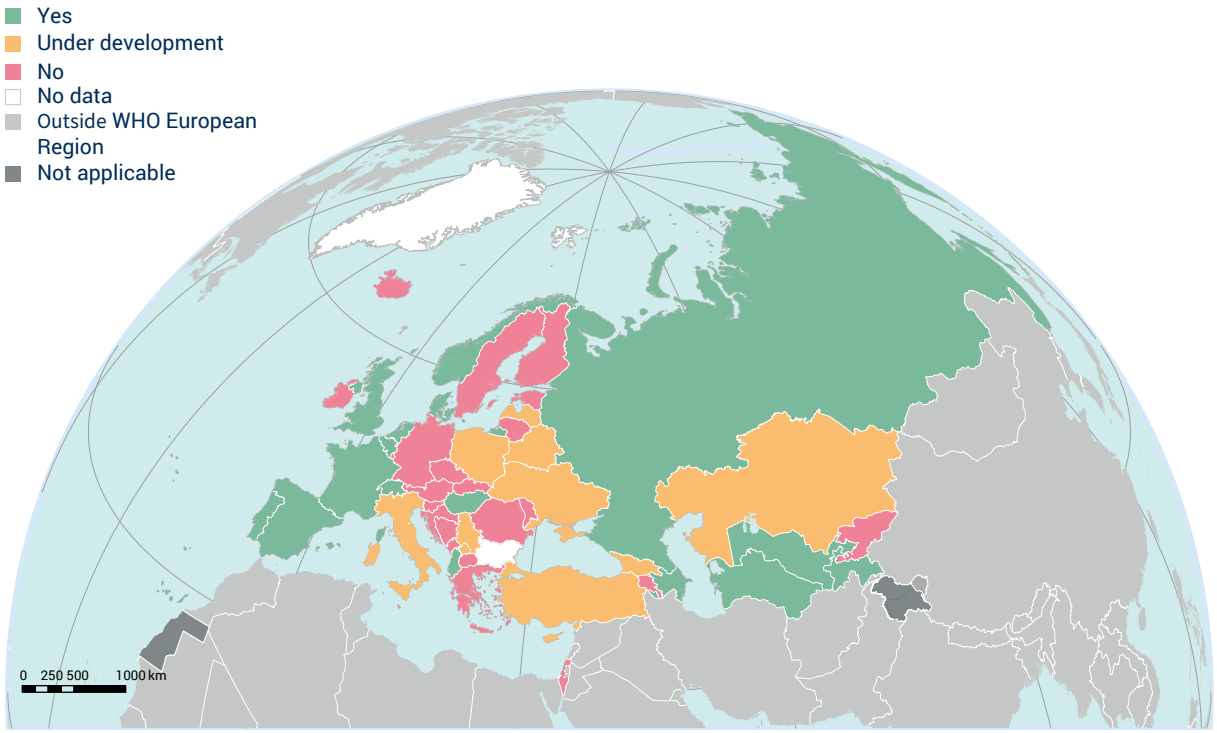
Plans and strategies targeting both digital health education for health professionals and digital inclusion for the general population are crucial for reducing inequities in access to health-care technologies. Digital inclusion plans aim to bridge the gap between individuals who have access to and can effectively

use digital tools and those who lack such opportunities. This digital divide can exacerbate health inequities, leaving vulnerable populations without the ability to benefit from advancements in digital health.

In the WHO European Region, progress on implementing digital health education and inclusion strategies has been mixed. Of the 52 Member States that responded to the survey, 27 (52%) reported having digital health education policies or strategies in place: 17 had developed education action plans and the other 10 reported that these plans were under development. Similarly, 25 out of 45 Member States (56%) have developed digital inclusion plans or strategies such as digital literacy programmes for disadvantaged populations *(17)*.

The disparity in adoption of digital health education and inclusion plans is most evident across different subregions of the WHO European Region (Fig. 7.12). For example, all five Member States in central Asia and eight of the 10 in northern Europe reported having digital inclusion plans, but in the other subregions less than 50% of responding Member States reported having such plans *(17)*. A similar uneven distribution of digital health education plans, policies and strategies was also notable across subregions *(17)*.

Fig. 7.12. Digital health education action plans, policies or strategies in WHO European Region Member States in 2022



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Source: created by the WHO GIS Centre for Health DNA/DDI based on data in WHO Regional Office for Europe *(17)*.

The COVID-19 pandemic exposed the cost of underinvestment in data and digital health *(58)*. Member States should make efforts to create sustainable financing strategies for the continued development and implementation of digital health. The Empowerment through Digital Health initiative *(15)* is a comprehensive approach to advance digital health across the WHO European Region by addressing critical aspects from infrastructure development to data governance. By focusing on these key areas and supporting Member States in leveraging digital technologies, the initiative aims to enhance health system performance, strengthen public health functions and, ultimately, improve the interface

between people and health services while ensuring that equity, privacy and human rights are preserved *(16,17,54,55,59)*.

The need to strengthen data governance is particularly important to improve the quality and timeliness of health data and an important mechanism for safeguarding privacy, garnering the trust of individuals in using digital health solutions and ensuring equitable access to care. Therefore, it is vital that the scope, functions and accountability of a health data governance framework are well articulated and understood by all stakeholders. An example of a health data governance framework is the European Health Data Space (EHDS) *(59,60)*, for which the adoption of an agreement has laid an important foundation for vastly strengthened health data governance across the EU and beyond. The EHDS offers a common legislative framework that enables the trusted exchange of primary data for health-care delivery and establishes a legislative framework for the secondary use of health data for research, innovation, policy-making and public health. This is also expected to strengthen collaboration, catalyse innovation and foster increased interoperability with countries well beyond the EU, as was observed with the example of the EU Digital COVID Certificate *(60,61)*.

Effective governance of data and digital health requires national agencies or specialized bodies to be created and expanded. Furthermore, it is crucial that national policies and strategies are supported by robust evaluation systems that assess both the clinical effectiveness and the cost–effectiveness of digital health practices *(17)*. Accordingly, the EU's regulation on the EHDS enables national health data access bodies to play a central role in providing safe and efficient access to health data for secondary use and facilitates the findability of health data by curating national datasets *(59)*, which are subsequently federated into an EU datasets catalogue. The national health access bodies and dataset catalogue are just two examples of EHDS structures and elements that will improve data governance and enhance data findability, access and quality.

The EHDS also aims to empower individuals to take control of their health data. According to the 2023 Digital Economy and Society Index, the average score for access to e-health records in the EU is 79.12 (out of 100), with scores in individual EU Member States ranging from 11.37 to 100 *(62,63)*. This reveals that a considerable gap remains even though many Member States have made concerted efforts to improve the transparency and accessibility of health data to their citizens.

EU Member States are collaborating in various projects, including the Second Joint Action Towards the European Health Data Space *(60)* and the HealthData@EU pilot project *(64)*, to produces concrete guidelines and technical specifications to ensure a harmonized implementation of the EU's regulation on the EHDS and develop and pilot concrete building blocks for the EHDS infrastructure *(64)*. To leverage the principles and ideas proposed in the EHDS framework beyond the EU, the European Commission and the WHO Regional Office for Europe have signed an agreement to strengthen HIS and boost health data governance and interoperability in the entire WHO European Region *(65)*.

7.5 EPW flagship initiative on healthier behaviours: use of BCI by national public health authorities

Main findings

- In line with resolution EUR/RC72/R1 on BCI for health adopted in September 2022, Member States reported on their use of BCI in health during 2021–2022. These data are used as a baseline and allow monitoring of the use of BCI in health over time following this resolution.
- In 2021–2022 of the 48 public health authorities (PHAs) that submitted a report on their use of BCI in health, 79% (38/48) had conducted BCI-related research and 73% (35/48) had used the insights gained to inform the development of health policies, services and communication.
- BCI work is rarely done in a systematic or integrated way across health topics or target groups. The majority of PHAs (71%; 34/48) reported little or some degree of awareness and recognition of BCI for health among key stakeholders.
- Only 35% of PHAs (17/48) had human and financial resources in place and only 10% (5/48) reported having an overall national strategy or plan defining BCI work as a public health priority.
- Since the baseline data were collected, Member States have scaled up their engagement and collaboration in the field of BCI, and the WHO Regional Office for Europe has established an active platform for Member States to share learning and support. An active BCI community of practice with nominated BCI focal points from across the Region meet regularly. Responding to requests from Member States, WHO is providing direct support for in-country projects and tailored training programmes and developing guidance and policy considerations.

The use of BCI for health policies, services and communications offers an opportunity to design and provide more evidence-informed, effective, culturally informed and people-centred health and care services. This is especially important in the context of current pressures faced by health systems: rising costs related to ageing populations and a soaring demand for services, as well as medicine shortages and an overstretched health and care workforce. It is estimated that behaviours are the single most influential factor determining people's health *(66–69)*.

Given the potential of BCI to improve health services and advance UHC, Healthier Behaviours *(18)* was launched as a flagship initiative under the EPW *(3)*. In September 2022 Member States of the WHO European Region acknowledged the importance of behaviour and its cultural context for health by adopting WHO Regional Committee for Europe resolution EUR/RC72/R1 on BCI for health *(19)* and an action framework on BCI for health *(70,71)* that includes five strategic commitments and related targets. Member States committed to reporting their BCI activities to the Regional Office every 2 years from 2021–2022 (baseline) until 2025–2026. PHAs from 44 Member States, four countries and one area collected baseline data in early 2023 (Table 7.5). In general, the reporting showed that BCI is being applied across the Region but is insufficiently funded and supported and is not systematically used *(66)*.

Table 7.5. Reporting for indicators on BCI research and plans by individual PHAs within Member States, countries and areas in the Region

	SC2: BCI research		SC5: BCI plans	
	Self-assessment of BCI research	Quantitative indicator: impact evaluation	Self-assessment: BCI in health plans	Quantitative indicator: national BCI plan
Armenia	1	No	3	No
Austria	3	No	3	Yes
Azerbaijan	4	No	3	No
Belarus	2	No	1	No
Belgium	3	No	3	No
Bulgaria	2	No	2	No
Croatia	2	No	1	No
Cyprus	4	No	3	No
Czechia	3	Yes	3	No
Denmark	3	No	2	No
Estonia	3	Yes	1	No
Finland	4	No	3	No
France	1	No	1	No
Georgia	3	Yes	2	No
Germany	5	Yes	2	No
Greece	2	No	2	No
Hungary	1	No	1	No
Iceland	1	No	1	No
Ireland	4	Yes	3	No
Israel	1	No	1	No
Kazakhstan	1	No	1	No
Kyrgyzstan	2	No	1	No
Latvia	2	No	1	No
Lithuania	2	No	1	No
Luxembourg	2	No	1	No
Malta	1	No	1	No
Montenegro	3	No	1	No
Netherlands	4	Yes	3	No
North Macedonia	2	No	3	No
Norway	4	Yes	1	No
Portugal	3	Yes	3	Yes
Republic of Moldova	3	No	2	No
Romania	2	No	1	No
Russian Federation	3	Yes	4	Yes
Serbia	3	No	3	No
Slovakia	2	No	1	No
Slovenia	4	Yes	4	No
Spain	4	Yes	2	No

Table 7.5. contd

	SC2: BCI research		SC5: BCI plans	
	Self-assessment of BCI research	Quantitative indicator: impact evaluation	Self-assessment: BCI in health plans	Quantitative indicator: national BCI plan
Sweden	3	No	2	No
Tajikistan	1	No	2	No
Turkmenistan	1	No	1	No
Türkiye	1	No	1	No
Ukraine	4	No	2	No
United Kingdom[a]				
England	4	Yes	2	Yes
Northern Ireland	4	Yes	1	No
Scotland	4	Yes	2	Yes
Wales	3	No	2	No
Kosovo[42]	3	No	2	No

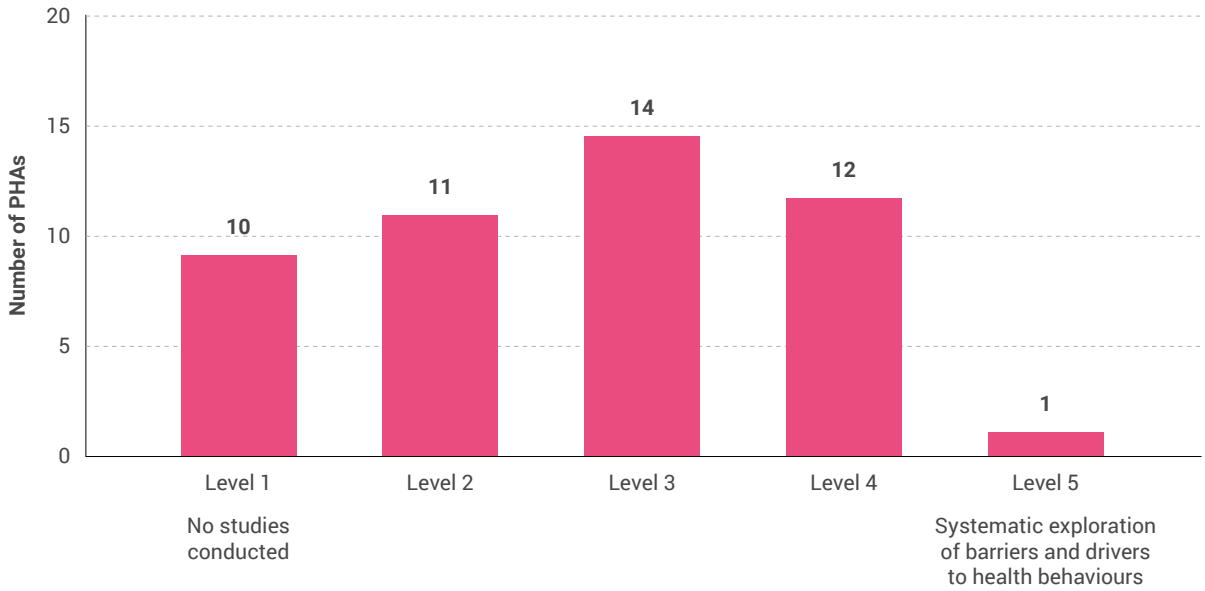
Notes: strategic commitments were grouped into five areas (SC1 to SC5) with just SC2 and SC5 given here; self-assessment gives the number of PHAs providing assessment in an indicator. SC2: range from 1 (no studies conducted) to 5 (systematic exploration of barriers and drivers to health behaviours). SC5: range from 1 (BCI not integrated in specific health area plans) to 5 (BCI integrated in all specific health area plans).

[a] The United Kingdom reports from four countries.

Source: WHO Regional Office for Europe *(66)*.

Over half of PHAs (56%; 27/48) had conducted more than one BCI study (levels 3–5; Fig. 7.13), with one PHA (from Germany) reporting that BCI was being applied in a systematic manner across all relevant health areas. The target for 2026 is to increase the proportion of PHAs reporting at level 3 or higher for conducting BCI research to at least 85% (45/53) (*50*).

Fig. 7.13. Qualitative self-assessment on conducting BCI research, 2021–2022



Note: results of individual PHA reporting are presented in Table 7.5.

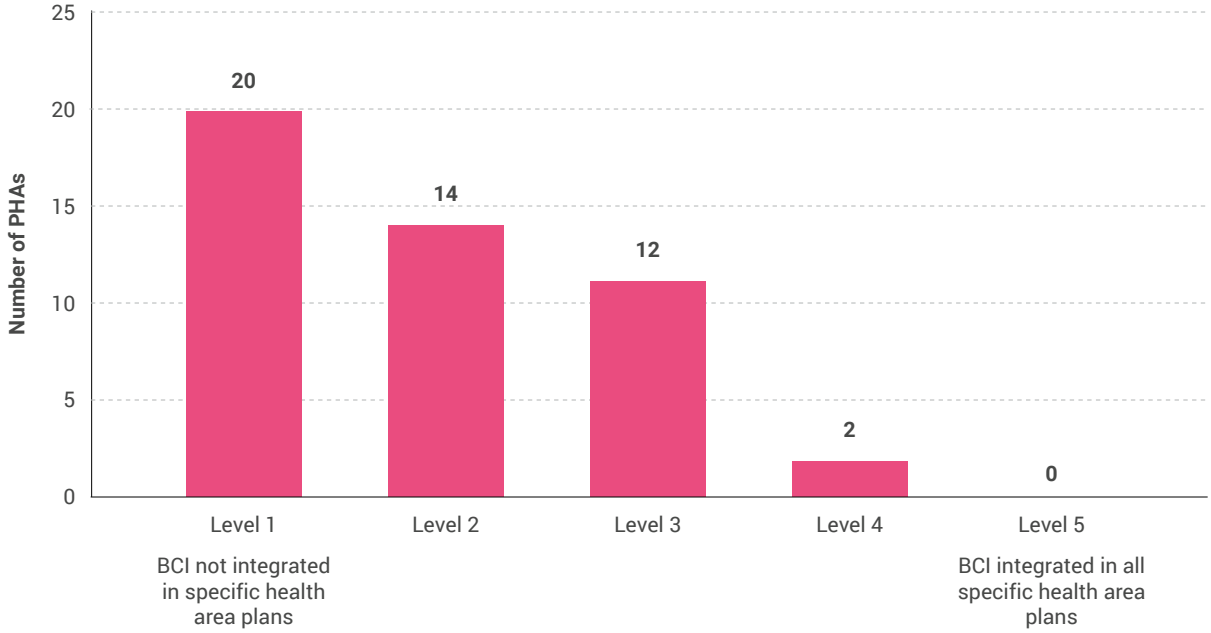
Source: WHO Regional Office for Europe *(66)*.

[42] All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

Six PHAs in five Member States (10%) reported having an overall national strategy or plan that defines BCI work for better health as a general public health priority and 43 PHAs did not. The target for 2026 is to increase those having an overall national strategy or plan to at least 38% of Member States (20/53) *(66)*.

The qualitative self-assessment on integrating BCI into health plans and strategies found that almost three quarters of PHAs (71%; 34/48) reported at levels 1 and 2 (Fig. 7.14 and Table 7.5), indicating that BCI work is not included in any of their strategies or plans related to specific health topics or that some of their strategies or plans refer to BCI work but with no clear identification of how this work will be conducted. In total, 12 PHAs reported at level 3, indicating that some of their strategies or plans explicitly include BCI work and related actions and targets. Two PHAs reported at level 4, indicating that their strategies or plans in several priority health areas make an explicit commitment to BCI work. No PHA reported at level 5, which indicates that BCI is included in strategies and plans across all health areas *(66)*.

Fig. 7.14. Qualitative self-assessment on integrating BCI into health plans and strategies, 2021–2022



Note: reporting from PHAs is given in Table 7.5.

Source: WHO Regional Office for Europe *(66)*.

These baseline data for 2021–2022 reveal that while the importance of BCI is recognized, the systematic implementation and evaluation of BCI are still emerging practices among PHAs. Nevertheless, the number of illustrative and inspiring examples of how Member States have applied BCI to health policies, services and communications is growing (Box 7.2 shows a selection of case studies).

Box 7.2. Illustrative case studies from Regional Member States

- Croatia conducted a mixed method study to increase uptake of colorectal cancer screening, including interviews and a randomized controlled trial to test the effectiveness of behaviourally informed reminder letters.
- Czechia, Poland, Romania, Slovakia and Slovenia explored health access and needs among refugees and displaced people from Ukraine to inform effective action and tailor health services and communication to their needs.
- France implemented front-of-pack nutritional labelling to influence food choices, with the Nutri-Score system *(72)* proving effective in helping consumers make healthier choices.
- Georgia tested the effectiveness of multiple evidence-informed and tailored interventions to increase influenza vaccination uptake among hospital health workers.
- Ireland redesigned hospital waiting list validation letters using behavioural insights, with the result that nearly 20% more non-responders changed their behaviour by responding to the letters *(73)*.
- Kyrgyzstan used behavioural insights into barriers and drivers to early, exclusive and continued breastfeeding to inform action in maternity wards as well as at the policy level *(74)*.
- Slovenia conducted a qualitative field study to identify vulnerabilities and inequities in health across local communities to improve the inclusion of vulnerable groups in health programmes.
- Spain conducted regular population surveys to understand social perceptions and behaviours related to COVID-19, and used the data to inform more effective communication strategies and address pandemic fatigue.

Overall, enabling, supporting and promoting health-related behaviours requires tailored, evidence-informed approaches, and BCI offers a lens to better understand these factors and develop effective interventions, as aligned with the EPW objectives to create responsive and resilient health systems *(3)*. The relatively few PHAs that are conducting impact evaluations of interventions targeting behaviours, have dedicated BCI strategies and are systematically integrating BCI methods and evidence across health areas underscores the need for technical support from WHO and for cross-country collaboration and exchange. An interview study of 26 Member States in 2023 showed that PHAs face challenges in applying evidence-informed, people-centred and culturally informed approaches to health behaviours due to multiple factors, including gaps in skills, knowledge translation, strategy development and capacity *(75)*. Since the baseline data were collected, Member States have scaled up their engagement and collaboration in the field of BCI, and the WHO Regional Office for Europe has established an active platform for country sharing, learning and support. This includes a BCI Community of Practice within which ministerially nominated BCI focal points from 51 Member States meet regularly to share experiences and promote collaboration *(68)*. Responding to requests from the Member States, WHO is providing direct support for in-country projects and tailored training programmes and developing guidance and policy considerations.

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8

Health emergency preparedness and response

This chapter combines the indicators from the European Programme of Work 2020–2025: United Action for Better Health (EPW) measurement framework (EPW-MF) related to health emergency preparedness and response. The International Health Regulations (IHR) (2005) provide a key guiding tool for actions on health emergency preparedness at international and country levels. The IHR (2005) provide a comprehensive legal framework that defines countries' rights and obligations in handling public health events and emergencies that could have international repercussions *(1)*. The effectiveness of implementing the IHR (2005) is evaluated through the States Parties Self-Assessment Annual Reporting (SPAR) tool, which assesses States Parties on various indicators across 15 core capacity areas, with a maximum possible score of 100% *(2)*.

The data presented in this report show that in 2023 the SPAR submission rate among the 55 States Parties in the WHO European Region was 98%, demonstrating a strong commitment to strengthening global health security. However, the IHR all-capacity average reported in the Region saw a slight decrease, from 74% in 2021 to 73% in 2023. Pronounced differences were observed between States Parties, with reported average scores ranging between 29% and 100%. The lowest-scoring core capacities in the Region were in Policy, legal and normative instruments to implement IHR (2005) (C1), Human resources (C6) and Risk communication and community engagement (C10) *(2)*.

During the development of the EPW-MF, Member States identified two critical areas for health emergency readiness: the availability of preparedness plans and guidelines to address high-threat pathogens, and a minimum package of health services in emergencies. The SPAR core capacities for Planning for health emergencies (C7.1) in Health emergency management (C7) and Continuity of essential health services (EHS) (C8.3) in Health services provision (C8) serve as proxy measures for these areas. There was wide variation among States Parties, with the scores for C7.1 ranging from 20% to 100% and for C8.3 ranging from 0% to 100% *(2)*. This indicates significant disparities and substantial gaps in regional health emergency preparedness and response.

8.1 Implementation of the IHR (2005) and health emergency preparedness

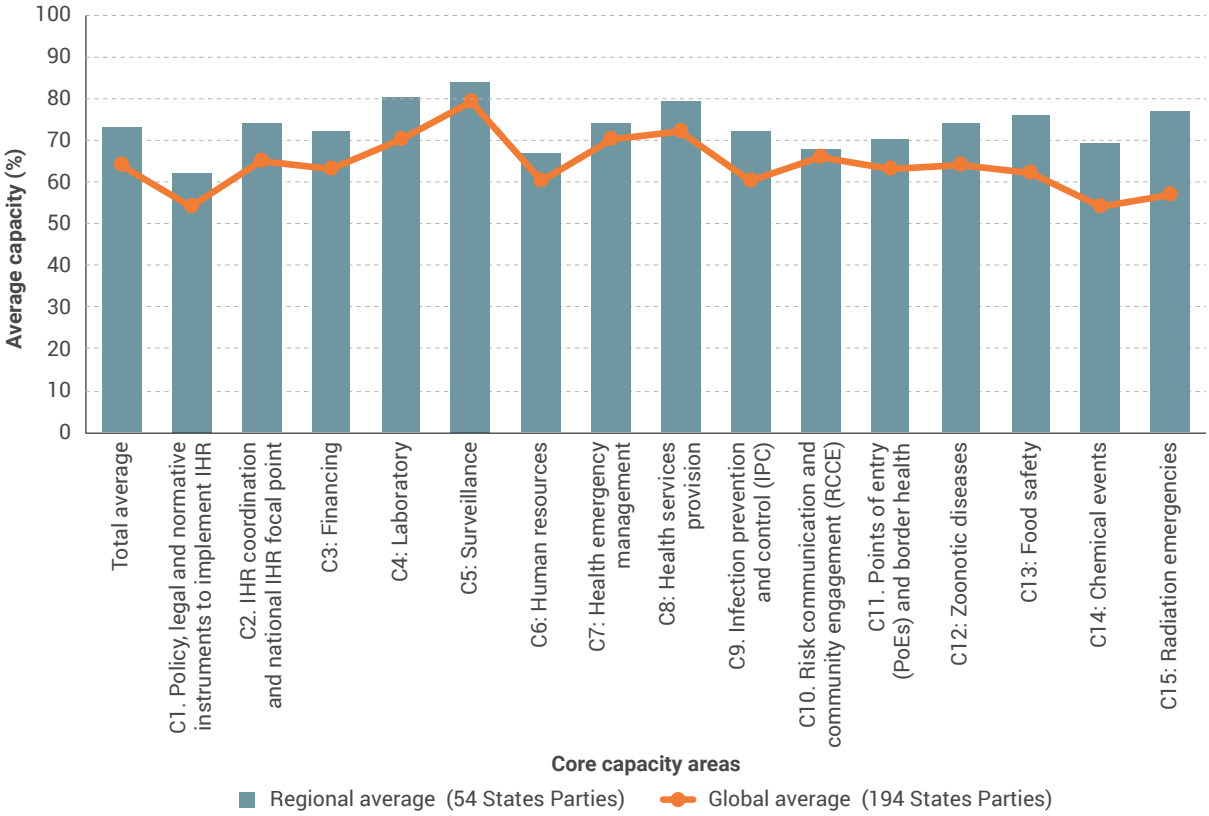
Main findings

- Implementation of the IHR (2005) is assessed through the SPAR tool, which examines 35 indicators across 15 core capacity areas. The maximum possible score is 100%. The SPAR submission rate among the 55 States Parties in the WHO European Region increased from 93% in 2021 to 98% in 2023, its highest-ever level, demonstrating the commitment to implementing the IHR (2005) and strengthening global health security.
- The IHR all-capacity average reported in the WHO European Region saw a slight decrease from 2021 to 2023 of 74% to 73%. The highest capacities were reported in the area of Surveillance (C5; 85%), Laboratory (C4; 80%) and Health services provision (C8; 79%), while the lowest scores were in the areas of Policy, legal and normative instruments to implement IHR (C1; 62%), Human resources (C6; 67%) and Risk communication and community engagement (C10; 68%). The reported core capacities across the Region's States Parties varied significantly, ranging from 29% to 100%.
- The Regional average score for Continuity of essential health services (C8.3) was 76%, with reported scores ranging from 0% to 100% among the States Parties. The average score for Planning for health emergencies (C7.1) was 70%, with a range from 20% to 100%.
- Following the coronavirus disease (COVID-19) pandemic, WHO Member States initiated a process to amend the existing IHR (2005) and to develop a legally binding pandemic agreement to improve global pandemic prevention, preparedness and response by promoting international cooperation, ensuring equitable access to medical resources and countermeasures and enhancing prevention efforts towards future pandemics.
- On 1 June 2024, during the Seventy-seventh session of the World Health Assembly, WHO Member States agreed on a comprehensive package of amendments aimed at strengthening the IHR (2005) and extended the mandate of the established Intergovernmental Negotiating Body to continue its work on the WHO pandemic agreement.

Protecting populations from health emergencies is a key goal of the EPW. Progress towards this goal is measured through three main indicators: (i) prepare, (ii) prevent and (iii) detect, notify and respond. The Prepare indicator specifically measures overall readiness through all IHR core capacities. International Health Regulations were first adopted by the World Health Assembly in 1969 to provide a comprehensive legal framework that defines countries' rights and obligations in handling public health events and emergencies with potential international implications. This includes an obligation for the 196 signatory parties, including the 194 WHO Member States, to report public health events *(1)*. The IHR (2005) outlines the criteria for determining what constitutes a "public health emergency of international concern". In the most recent set of amendments to the Regulations in 2024, a new alert level, "Pandemic emergency", was introduced. Sustainable Development Goal indicator 3.d.1 reflects the capacities that State Parties have agreed and committed to develop.

The SPAR tool facilitates the process for States Parties to fulfil their obligation under IHR (2005) Art. 54 to report annually on implementation to the World Health Assembly *(2)*. The tool assesses 35 indicators across the 15 IHR core capacities, which evaluate the ability of States Parties to detect, assess, notify, report and respond to public health risks and acute events of domestic and international concern. The EPW-MF sets a target for IHR (2005) States Parties in the WHO European Region to collectively achieve a Regional average score of 85 or higher by 2025 *(3)*. Notably, average scores include data from the Holy See and Liechtenstein, which are States Parties to the IHR (2005) but not members of the WHO European Region (Fig. 8.1) *(2)*.

Fig. 8.1. Average IHR (2005) capacities reported in the WHO European Region, 2023



Note: the Regional average is calculated from only 54 reporting State Parties (data from Holy See and Lichtenstein but no data from Andorra).

Source. WHO (2).

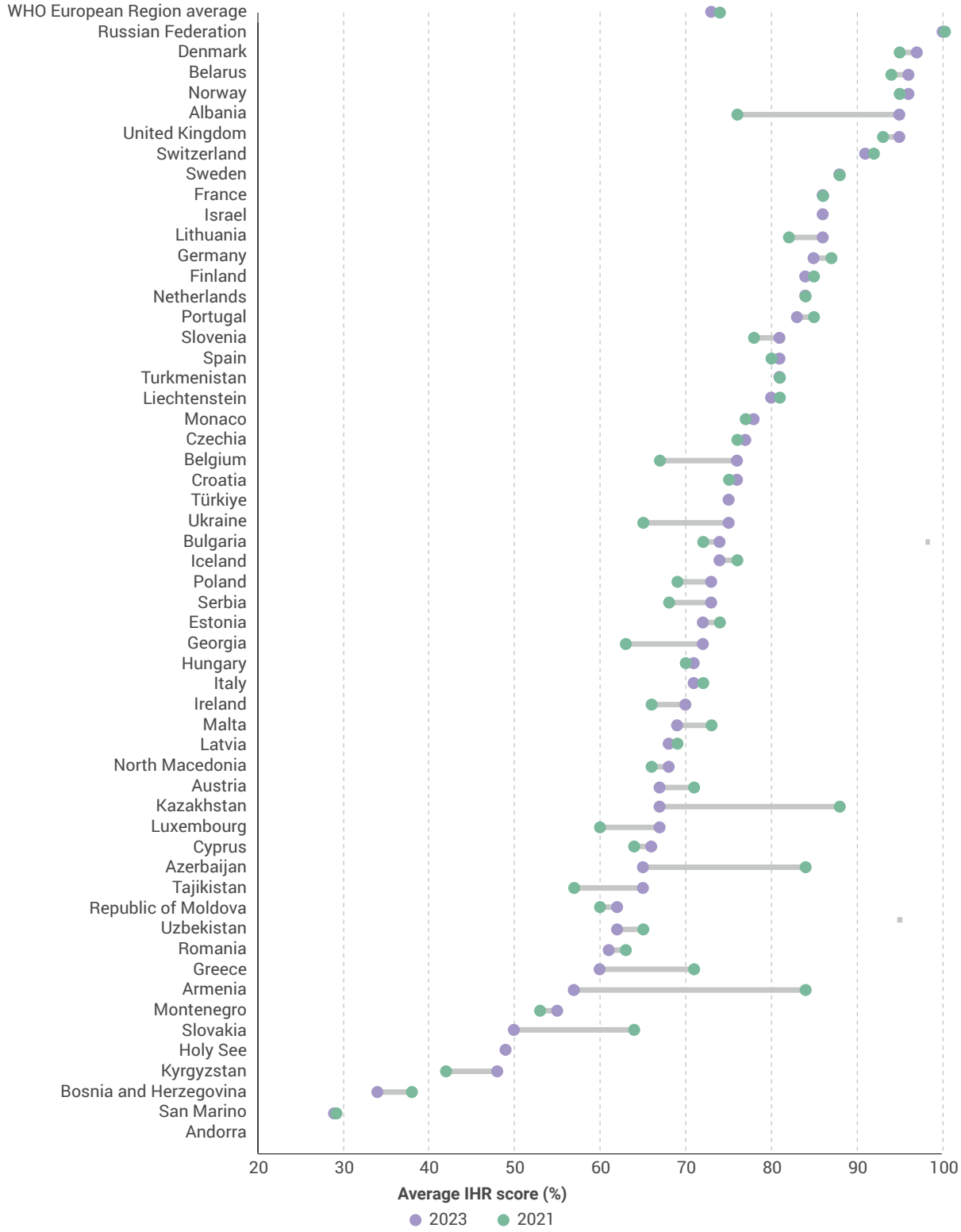
In the WHO European Region, the average IHR core capacity score decreased slightly from 74% in 2021 to 73% in 2023. The score, which measures the average of reported attributes across 15 core capacities, is based on States Parties' self-assessment on a scale of 1 to 5 of the implementation of attributes under each of the 35 indicators. The average reported levels are displayed as a score ranging from 0% to 100%. Top strengths reported in 2023 included the Surveillance (C5) and Laboratory (C4) capacity areas, scoring 85% and 80%, respectively.

In 2023 the main challenge reported in the Region was in capacity area C1 (Policy, legal and normative instruments), with a Regional average score of 62%. The main Regional challenge at indicator level is also reported for this capacity area, with the indicator Gender equality in health emergencies (C1.2) scoring significantly lower at 52%. Other challenges reported were the areas of Human resources (C6) at 67%, and the area of Risk communication and community engagement (C10) at 68%. In 2021 the electronic SPAR tool (e-SPAR) was revised to incorporate lessons learned from the COVID-19 pandemic. The updated second edition expanded the number of core capacities from 13 to 15 and increased the number of indicators from 24 to 35. New indicators were introduced to address gender equality, advocacy for IHR implementation and community engagement. As a result of these updates, data collected during the 2018 to 2020 reporting periods cannot be directly compared with data collected using the revised 2021 edition of the e-SPAR tool.

In 2023 the reported all-capacity average varied significantly between States Parties in the Region: the Russian Federation reached the highest at 100%, while San Marino was the lowest at 29%. Both have been unchanged since 2021. Five of the seven States Parties that scored 60% or less in 2021 had improved these scores by 2023. However, 20 States Parties reported a decrease in their all-capacity average during the same period.

For the 2023 reporting period, all but one State Party in the WHO European Region submitted SPAR data, achieving a record submission rate of 98.2% – the highest ever in the Region. Globally, the rate reached 99% (194/196 States Parties), reflecting a significant achievement (Fig. 8.2).

Fig. 8.2. Average IHR (2005) capacities progress across States Parties in the WHO European Region, 2021 to 2023



Source. WHO (2).

The EPW-MF uses development indicators for areas with data gaps or lacking established measures in international data collection. Specifically, for health emergencies, it looks at the availability of preparedness plans and guidelines to mitigate the risk of high-threat or emerging pathogens and at a minimum package of health services in emergencies. This report operationalizes these indicators using the SPAR scores for Planning for health emergencies (C7.1) and Continuity of essential health services (C8.3).

Emergency preparedness encompasses all-hazard response, contingency and business continuity plans integrated with hazard-specific plans for scenarios such as chemical or radiation emergencies. These comprehensive plans outline necessary procedures, roles and responsibilities. The plans should be multidisciplinary and interoperable, supporting coordinated responses across different sectors and agencies. The Planning for health emergencies indicator tracks progress from an initial stage, where plans are absent or in development, through to their comprehensive implementation at all administrative levels and where plans are continuously improved through regular updates and simulation exercises *(2)*. In 2023 the Regional average score for this indicator was 70%, with significant disparities across countries: 10 States Parties scored 100%, while others such as Austria, Bosnia and Herzegovina, Estonia, Finland, Malta and San Marino scored 20% (Fig. 8.3) *(2)*.

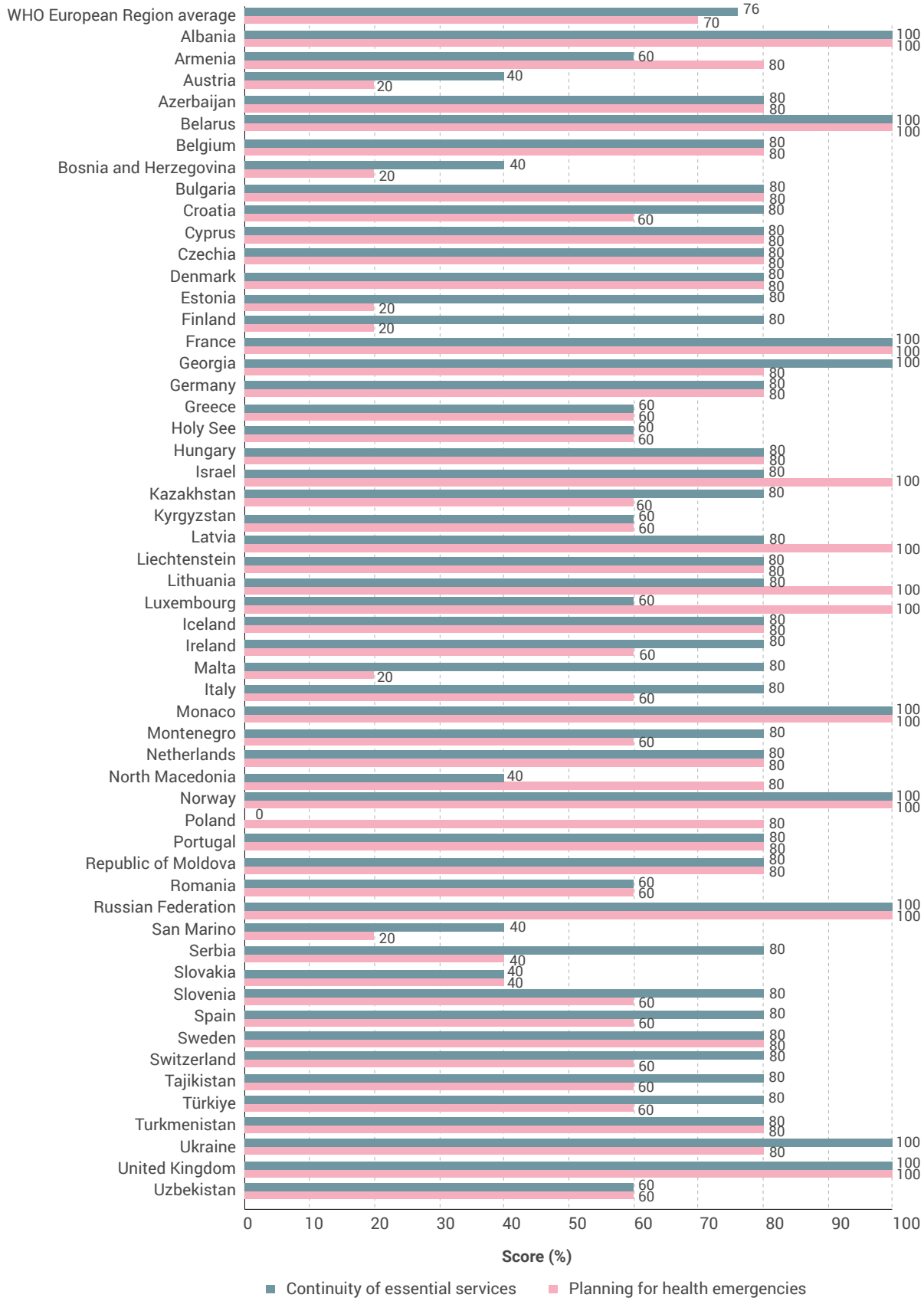
The latest WHO Pulse Survey, which assessed global disruptions to essential health services (EHS) due to the COVID-19 pandemic, revealed that service delivery and utilization had yet to return to pre-pandemic levels in early 2023. Disruptions in EHS continued to be widely reported across all income levels *(4)*. These findings emphasize the critical need for resilient health systems capable of mitigating, preparing for, responding to and recovering from public health disruptions to ensure the continuity of EHS. The indicator Continuity of essential health services (C8.3) measures the ability of a health system to maintain EHS delivery during emergencies, from the most basic stages where there is no specific EHS package defined, to stages where both EHS and their continuity plans are developed, along with mechanisms to monitor service continuity during emergencies. The highest level involves a fully operational system where EHS, emergency continuity plans and monitoring mechanisms are effectively implemented at national, subnational and local levels *(2)*. In 2023 the Regional average score for this indicator was 76%. The highest scores, at 100%, were reported by Albania, Belarus, France, Georgia, Monaco, Norway, the Russian Federation, Ukraine and the United Kingdom. Armenia, Austria, Bosnia and Herzegovina, Greece, Kyrgyzstan, Luxembourg, North Macedonia, Romania, San Marino, Slovakia and Uzbekistan scored 60% or less. Poland did not report a score on this indicator (Fig. 8.3) *(2)*.

In 2022 Member States agreed to amend the current IHR (2005), building on lessons from several global health emergencies, including the COVID-19 pandemic. Key amendments, approved at the Seventy-seventh World Health Assembly in June 2024, included a new global alert level "Pandemic emergency" for improved response coordination, enhancing solidarity and equity in access to medical products and financing, and the establishment of a committee for effective implementation of the IHR. The IHR amendment process, led by WHO Member States through the Working Group on Amendments to the IHR (2005) *(5)*, ran in parallel with ongoing negotiations for a pandemic agreement aimed at enhancing global pandemic prevention, preparedness and response *(6,7)*.

During the Seventy-fourth session of the Regional Committee for Europe, the WHO European Member States adopted a new regional strategy and action plan on health emergency preparedness, response and resilience for the next 5 years (2024–2029): Preparedness 2.0 *(8)*. Preparedness 2.0 will support the Region's IHR States Parties in implementing these amendments to the IHR (2005). The strategic aim of Preparedness 2.0 is to strengthen health emergency preparedness, response and resilience in the Region and to support Member States to address emerging needs and alignment with ongoing developments in the global health security architecture. Preparedness 2.0 will strategically guide the Region's Member States to manage the dual-track approach of maintaining essential health services while effectively managing any risk and hazard throughout the emergency management cycle. Reporting by IHR States Parties in the WHO European Region on the implementation of the IHR (2005) through SPAR remains an important monitoring tool for enhancing health security capacities in the Region guided by Preparedness 2.0, and the upcoming second European Programme of Work.

To advance the implementation of Preparedness 2.0 and embrace innovative approaches within the upcoming European Programme of Work, the Standing Committee of the Regional Committee proposed the establishment of the Pan-European Network for Disease Control as a key initiative to fulfil one of the recommendations of the Pan-European Commission on Health and Sustainable Development *(9)*. The priorities of Preparedness 2.0 and the amendments to the IHR (2005) are fully embedded in the working groups of the Network, which collaborates with its members to identify and address contextual challenges that may emerge during the implementation of these amendments. This Network strengthens the global architecture for health emergency prevention, preparedness, response and resilience *(10)* within the WHO European Region and stands as a flagship initiative of Preparedness 2.0. Officially inaugurated in April 2024, the Pan-European Network for Disease Control serves as an additional pillar to support IHR States Parties in the Region by facilitating the implementation of amendments through the collaborative efforts of its members.

Fig. 8.3. Planning for health emergencies and Continuity of essential health services by IHR State Parties in the WHO European Region, 2023



Note: a value of 0 means that the Member State did not report on the indicator.

Source: WHO *(2)*.

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[44] All references were accessed 2 December 2024.

9

Climate change and other environmental impacts

Our health is primarily determined by the conditions in which people are born, grow, work, live and age. These encompass both the social and physical environment, including the effects of climate change. This chapter combines the indicators from the European Programme of Work 2020–2025: United Action for Better Health (EPW) measurement framework related to these environmental impacts on health. These indicators consider aspects of climate change, air pollution and road traffic mortality. There are several priority areas.

- **Climate change** is an increasingly important factor affecting people's health.
- **Air pollution** is a risk for all-cause mortality as well as specific diseases, including stroke, ischaemic heart disease and lung diseases.
- The **built environment** is an important factor contributing to road safety. Transportation forms a complex interplay between human factors, the environment, road infrastructures and design.

The data presented in this Report show that populations are increasingly exposed to heat stress and heatwaves, leading to a rise in heat-related mortality. Exposure to heatwaves in vulnerable groups such as infants and older people has increased significantly since a 1986–2005 baseline *(1)*. In 2022 more than 61 000 heat-related deaths were estimated over 35 Member States *(2)*. Reducing greenhouse gas emissions is essential for curbing the health effects of climate change. In 2020 the global health sector was responsible for approximately 5% of these emissions *(3)*, with some Member States in the Region with available data having higher shares up to 8%.

Many sources of high carbon dioxide emissions, such as the combustion of fossil fuels, are also sources of air pollution. While average concentrations of fine particulate matter ($PM_{2.5}$; < 2.5 µg in diameter), a key indicator of air pollution, have decreased, there remain substantial differences between Member States. In the WHO European Region, the age-standardized mortality attributed to ambient air pollution was 35.3 deaths per 100 000 in 2019, well below the global average of 59.7 *(4)*. However, mortality rates ranged from 7.5 to 159.6 deaths per 100 000 across Member States, indicating the large disparities in the Region *(4)*.

Despite progress, road traffic injuries remain a leading cause of death among people aged 5–29 years in Member States. There are substantive differences between Member States, with road traffic mortality rates ranging from 17.2 per 100 000 to close to zero *(5)*. Pedestrians and cyclists are particularly vulnerable road-user groups: case fatalities in cyclists have alarmingly increased by 50% in the last decade (2012–2022) *(6)*.

More information on how the environment in which people live affects their health can be found in Chapter 4.

9.1 Climate change: heat-related mortality and health sector greenhouse gas emissions

Main findings

- One of the most significant health impacts of climate change in the WHO European Region is the increased exposure of vulnerable populations to heat stress and heatwaves, which has led to a rise in heat-related mortality.
- Change in annual heat-related deaths of adults over 65 years shows an excess 35 864 deaths in the Region during 2018–2022 compared with 2000–2004, with large differences between Member States.
- In the WHO European Region in 2023 and compared with a 1986–2005 baseline, infants were exposed to 109.9 million more heatwave person-days and people over 65 years to 1502.7 million more heatwave person-days.
- Specific local actions, international collaboration and adherence to climate agreements are vital to curbing the adverse health effects of climate change. These include measures taken by the health sector to reduce greenhouse gas emissions. In 2020 the global health sector was responsible for approximately 5% of these emissions, with this share reaching up to 8% in some countries in the Region.

Climate change poses significant health risks globally. In 2023, the WHO European Region experienced temperature increases of 1.0 °C above the global average and 2.6 °C above the pre-industrial level. The region's three hottest years on record have all occurred since 2020, and the 10 hottest years have all been recorded since 2007 *(7)*.

Climate change affects human health and well-being in many ways. It causes more frequent and intense extreme weather events, shifts infectious disease patterns, affects mental health and exacerbates noncommunicable diseases. In the WHO European Region, climate-related extreme weather events, such as heatwaves, floods and storm surges, have increased five-fold in the past 50 years. Floods are the most common form of natural disaster in the Region, causing not only death, disease and suffering but also devastation, damage to health facilities, displacement and enormous economic costs. Since the early 2000s, almost all Member States in the Region have experienced severe floods, with more than 2000 deaths. Some of the deadliest floods in the Region's history occurred in the Valencia region of Spain in 2024, with more than 200 deaths, and in central and western Europe in 2021 *(8)*.

9.1.1 Exposure of vulnerable populations to heatwaves

Heat and heatwaves are the deadliest climate change-related extreme events in the WHO European Region; 19 of the 23 most severe heatwaves in the Region since 1950 have occurred since 2000, with four of them occurring in the last 3 years. Heatwaves are known to lead to significant numbers of excess deaths *(7)*. The summer of 2022 was estimated to have resulted in over 61 000 heat-related deaths *(2)*. In response, the United Nations Secretary-General António Guterres issued a call to action on extreme heat in response to the deadly impacts of rising temperatures worldwide *(9,10)*.

Exposure to extreme heat has significant health consequences, including heat stress, heat stroke, exacerbation of heart disease and acute kidney injury. Infants and older adults are particularly vulnerable *(11)*. The frequency and intensity of heatwaves are increasing globally, posing a severe risk to these populations. Monitoring heatwave exposure in vulnerable groups is crucial for addressing the

global burden of heat-related health issues. It aligns with the objectives of the EPW and the upcoming Fourteenth General Programme of Work, 2025–2028 of protecting people against health emergencies and ensuring healthy lives and well-being for all at all ages *(12,13)*.

Indicators on the exposure of vulnerable populations to heatwaves track the number of heatwave person-days and the exposure of vulnerable populations (under 1 year and over 65 years) to heatwaves, defined as periods of 2 days or more with temperatures above the 95th percentile of 1986–2005 averages. Person-days refer to the cumulative number of days of heatwave that people were collectively exposed to (e.g. if 100 people are each exposed for 5 days, there would be 500 person-days) *(3)*.

Globally in 2023, infants and people over 65 years experienced a record total of 13.4 billion person-days of heatwaves (and a record average of 13.8 heatwave days per person), exceeding the previous high of 11.1 billion days (2022) by over 20%. When compared with a 1986–2005 baseline, in 2023 in the WHO European Region, infants were exposed to 109.9 million more heatwave person-days and people over 65 years of age to 1502.7 million more heatwave person-days *(1)*.

Reducing greenhouse gas emissions to mitigate climate change is crucial and urgent to minimize the magnitude of human costs from extreme heat. WHO collaborates with the health sector to enhance governance, preparedness and response to the acute impacts of heatwaves. This includes developing heat–health action plans. These plans identify risks, vulnerable populations and available resources to protect high-risk groups, such as those in health facilities, nursing homes and those without access to cooling systems *(11)*. Effective interventions include urban planning that incorporates green spaces *(14)*, public health campaigns on heatwave preparedness and improved health-care infrastructure to manage heat-related illnesses *(3)*. National and international policies and heat action plans can further mitigate future risks by addressing both adaptation and mitigation strategies.

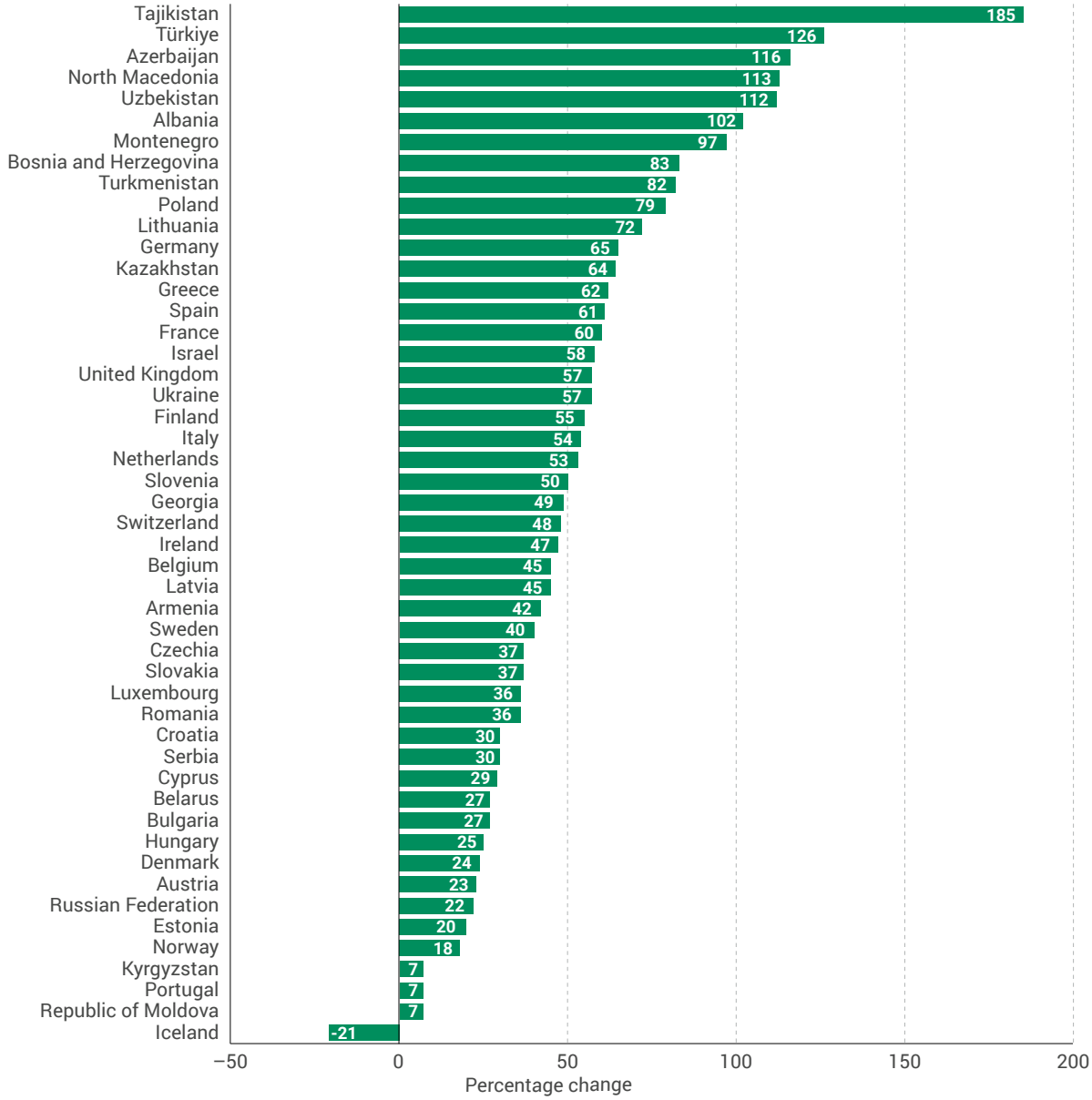
9.1.2 Heat-related mortality

Heat-related mortality is an increasing concern as extreme heat events become more frequent due to climate change. Populations aged over 65 years are particularly vulnerable, experiencing a higher risk of heat stress, heat stroke and worsening of chronic conditions. Monitoring heat-related deaths provides crucial data to inform public health interventions and aligns with global strategies to mitigate climate change impacts on health *(3,15)*.

Indicators on heat-related mortality track the percentage change in annual heat-related deaths of adults over 65 years against a counterfactual scenario of unchanged baseline temperatures.

Between 2018 and 2022 there was a significant increase in heat-related deaths among adults over 65 years across the WHO European Region compared with 2000–2004. The percentage change varied across countries, with southern and eastern Europe experiencing the highest increases, most in Tajikistan (185%) and Türkiye (126%), as shown in Fig. 9.1, amounting to 35 864 absolute deaths in the Region attributable to heat-related mortality (Table 9.1). This rise correlates with more frequent and severe heatwaves, particularly in urban areas with higher population densities and limited access to cooling resources *(1,3)*.

Fig. 9.1. Relative change in the estimated annual number of heat-related deaths of people aged over 65 years, comparing 2000–2004 with 2018–2022



Note: data are missing for Andorra, Malta, Monaco and San Marino.

Source: data derived from Romanello et al. *(3)*, with permission from Elsevier.

Table 9.1. Estimated annual heat-related deaths of people aged over 65 years comparing 2000–2004 with 2018–2022

Country	Change in absolute numbers of deaths from 2000–2004 to 2018–2022	Percentage change from 2000–2004 to 2018–2022
Tajikistan	199	185
Türkiye	1632	126
Azerbaijan	307	116
North Macedonia	126	113
Uzbekistan	885	112
Albania	97	102
Montenegro	43	97
Bosnia and Herzegovina	253	83

Table 9.1. contd

Country	Change in absolute numbers of deaths from 2000–2004 to 2018–2022	Percentage change from 2000–2004 to 2018–2022
Turkmenistan	114	82
Poland	2579	79
Lithuania	251	72
Germany	6213	65
Kazakhstan	509	64
Greece	365	62
Spain	1532	61
France	3068	60
Israel	55	58
Ukraine	3239	57
United Kingdom	2566	57
Finland	233	55
Italy	2264	54
Netherlands	693	53
Slovenia	108	50
Georgia	198	49
Switzerland	240	48
Ireland	68	47
Belgium	479	45
Latvia	108	45
Armenia	83	42
Sweden	310	40
Czechia	408	37
Slovakia	232	37
Luxembourg	11	36
Romania	842	36
Croatia	154	30
Serbia	280	30
Cyprus	9	29
Belarus	307	27
Bulgaria	283	27
Hungary	339	25
Denmark	98	24
Austria	199	23
Russian Federation	3713	22
Estonia	29	20
Norway	68	18
Kyrgyzstan	11	7
Portugal	37	7
Republic of Moldova	29	7
Iceland	−2	−21

Note: data missing for Andorra, Malta, Monaco and San Marino.

Source: data derived from Romanello et al. *(3)*, with permission from Elsevier.

The trend indicates a growing health burden due to extreme heat, emphasizing the need for enhanced public health measures and infrastructure improvements to protect vulnerable populations from heat-related mortality.

Developing heat–health action plans is a crucial adaptation process that makes communities more resilient to heatwaves. More than 20 countries in the Region have such plans in place, which is encouraging, but it is not enough to protect all communities.

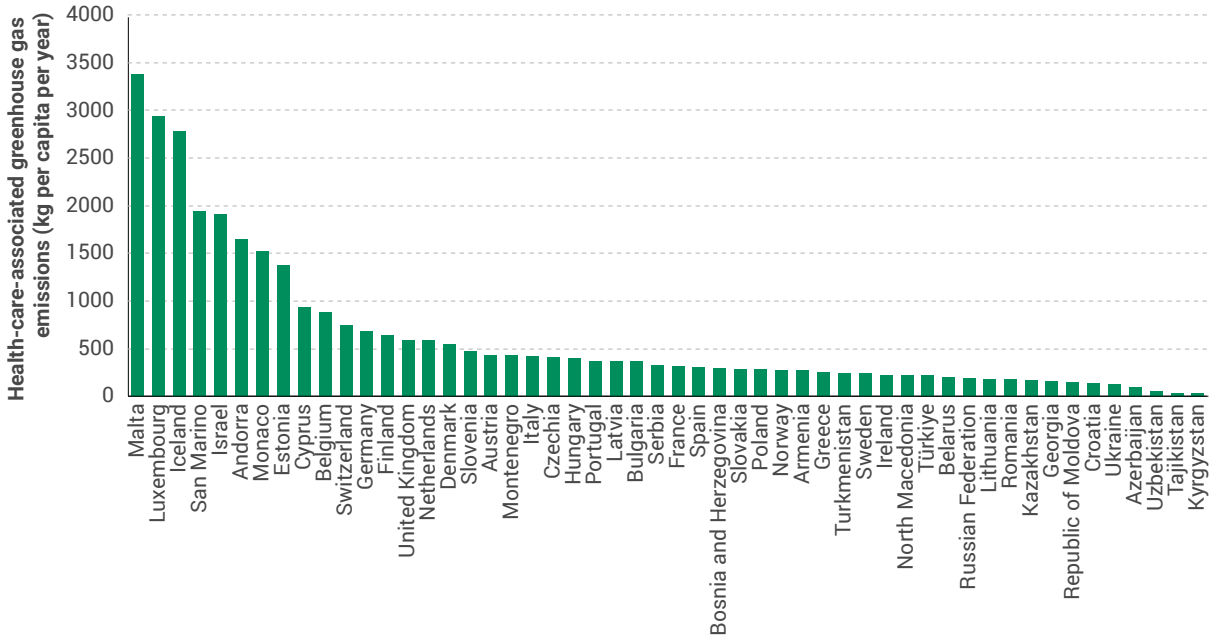
The WHO Regional Office for Europe is currently developing an updated second edition of its heat–health action plan guidance *(11,16)*.

9.1.3 Health sector greenhouse gas emissions

Quality health care depends on energy, goods, services and infrastructure, all of which contribute to global greenhouse gas emissions. In 2020 the global health sector was responsible for approximately 5% of these emissions *(3)*. In several European countries where these data are available, this percentage is higher, up to 8% *(17,18)*. Health sectors worldwide must balance the tasks of adaptation to climate change and becoming climate resilient alongside taking mitigative action to reduce their own carbon footprints. Monitoring and reducing health-care emissions are critical for achieving global climate targets and ensuring sustainable health systems *(7)*.

The per capita carbon footprint, expressed in total kilograms of greenhouse gas emissions (carbon dioxide equivalents; CO_2eq) per capita, of health systems in the WHO European Region in 2023 varied greatly, from 31 kg CO_2eq/capita in Kyrgyzstan to more than 100 times more, 3379 kg CO_2eq/capita in Malta (Fig. 9.2). This indicator represents estimates based on global modelling and includes health-care-associated greenhouse gas emissions per capita per year, encompassing direct emissions from facilities as well as emissions from the consumption of goods and services supplied by other sectors.

Fig. 9.2. Per capita carbon footprint, in total kilograms of greenhouse gas emissions, of health systems in the WHO European Region, 2023



Note: no data available for Albania.

Source: data derived from Romanello et al. *(3)*, with permission from Elsevier.

Reducing greenhouse gas emissions in the health sector is crucial to meet global and regional climate targets. Several global and regional policy frameworks have been developed to advance climate change mitigation in the health sector, starting with the health programme set out at the 26th Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change in 2021. One key initiative of this programme facilitates the commitment of countries to developing low-carbon sustainable health systems by delivering greenhouse gas baseline assessments of their health systems, developing action plans to advance sustainable low-carbon health systems and committing to set a target date for health system net zero emissions (for high-emission/high-emitter countries) *(19)*. The importance of this initiative was reaffirmed and strengthened by the Seventy-seventh World Health Assembly in resolution WHA77.14 on climate change and health on 1 June 2024 *(20)*. The Alliance for Transformative Action on Climate and Health, established in 2022, is a WHO-led initiative to support delivery of the COP26 Health Programme commitments. Thirteen European countries have, as of 2024, committed to building low-carbon health systems, and 10 have set goals of reaching net zero emissions under this global process *(21)*. Member States in the WHO European Region confirmed their commitment to make health systems and facilities climate resilient, environmentally sustainable and decarbonized in the Declaration of the Seventh Ministerial Conference on Environment and Health in 2023 (Budapest Declaration) *(21)*. The European Environment and Health Process Partnership for Health Sector Climate Action, launched at the Conference, aims to establish a community of practice and support countries in their efforts towards achieving climate-resilient, low-carbon and environmentally sustainable health systems *(21)*.

Adaptation and mitigation measures are needed to address the burden of disease from current climate impacts and the additional burden from projected climate change. There is a need to strengthen public health and health services to support climate-resilient communities *(19)*. Countries' efforts to implement action on climate change and health across national priorities should align closely with international global commitments on implementing the United Nations Framework Convention on Climate Change Paris Agreement *(22)*, the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) *(23)*, particularly SDG 13 (Climate action) and SDG 3 (good health and well-being). They should also correspond with the Seventy-seventh World Health Assembly resolution WHA77.14 on climate change and health *(20)* and the new Fourteenth General Programme of Work, 2025–2028 *(13)*, as well as regional commitments such as implementing the Budapest Declaration in the WHO European Region *(21)* and implementing the European Green Deal for European Union Members *(24)*.

WHO European Member States have already demonstrated that they can work together effectively on urgent threats to global health. The outcome of the Seventh Ministerial Conference on Environment and Health and its Budapest Declaration define environment and health priorities and commitments for the Region to 2030 and beyond, with a focus on addressing the health dimensions of the triple environmental crisis of climate change, biodiversity loss and environmental pollution *(21)*. COP29 in Baku, Azerbaijan, aimed to continue lifting the political profile of the climate–health nexus, and mainstreaming health in the global climate change agenda.

9.2 Urban air pollution and air pollution mortality

Main findings

- In the WHO European Region, air pollution is a single major environmental risk to health, responsible every year for more than 569 000 deaths that are attributable to ambient air pollution.
- In the WHO European Region, the age-standardized mortality rate attributed to ambient air pollution was 35.3 deaths per 100 000 population in 2019, well below the global average of 59.7.
- Age-standardized mortality rates attributed to ambient air pollution vary between 7.5 and 159.6 deaths per 100 000 population. Ischaemic heart disease is the leading cause of death attributed to ambient air pollution.
- Average concentrations of fine particulate matter ($PM_{2.5}$) in urban areas of the WHO European Region have decreased from 20.1 µg/m³ in 2010 to 14.7 µg/m³ in 2019. Although average concentrations decreased, marked differences among countries remain.

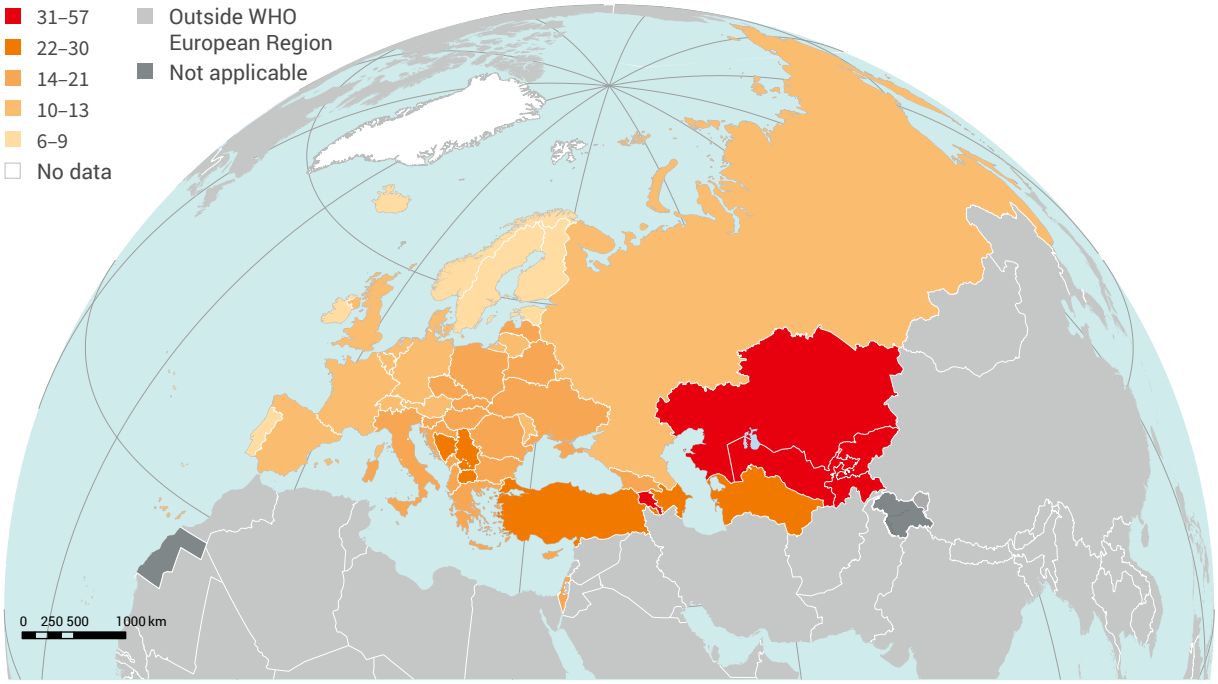
Ambient (outdoor) air pollution, caused by emissions from industrial activity, household combustion and motor vehicles, is a major environmental risk factor for health in the WHO European Region and globally. Each year, it is responsible for 4 million attributable deaths globally *(25)*. The WHO Global air quality guidelines provide evidence-informed recommendations for setting the relevant air quality standards to protect public health *(26,27)*.

In 2019 99% of the world's population lived in places where WHO air quality guidelines levels were not met *(25)*.

The EPW measurement framework indicators Urban air pollution and Air pollution mortality are linked to the WHO European Regional priority of promoting healthier populations. Specifically, WHO is a custodian agency for reporting on SDG indicator 3.9.1 (the mortality rate attributed to household and ambient air pollution) and indicator 11.6.2 (the annual mean levels of fine $PM_{2.5}$). This air pollutant presents a major health concern since it can penetrate deep into the respiratory system and enter the bloodstream.

Globally, the average concentration of $PM_{2.5}$ in urban areas was 33.1 µg/m³ in 2019. In the WHO European Region, concentrations decreased from 19.0 µg/m³ in 2010 to 14.7 µg/m³ in 2019. However, this value remains well above the recommended WHO air quality guideline value of 5 µg/m³. In addition, there were variations of nearly 10-fold across Member States: 6.2 µg/m³ in Finland and 56.8 µg/m³ in Tajikistan (Fig. 9.3).

Fig. 9.3. Concentration of fine particulate matter ($PM_{2.5}$) in urban areas in Member States of the WHO European Region, 2019



Notes: concentrations (μg/m³) are estimated using data integration from satellite remote sensing, population estimates, topography and ground measurements *(26)*; annual mean levels of fine particulate matter (e.g. $PM_{2.5}$) in urban settings are population weighted. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

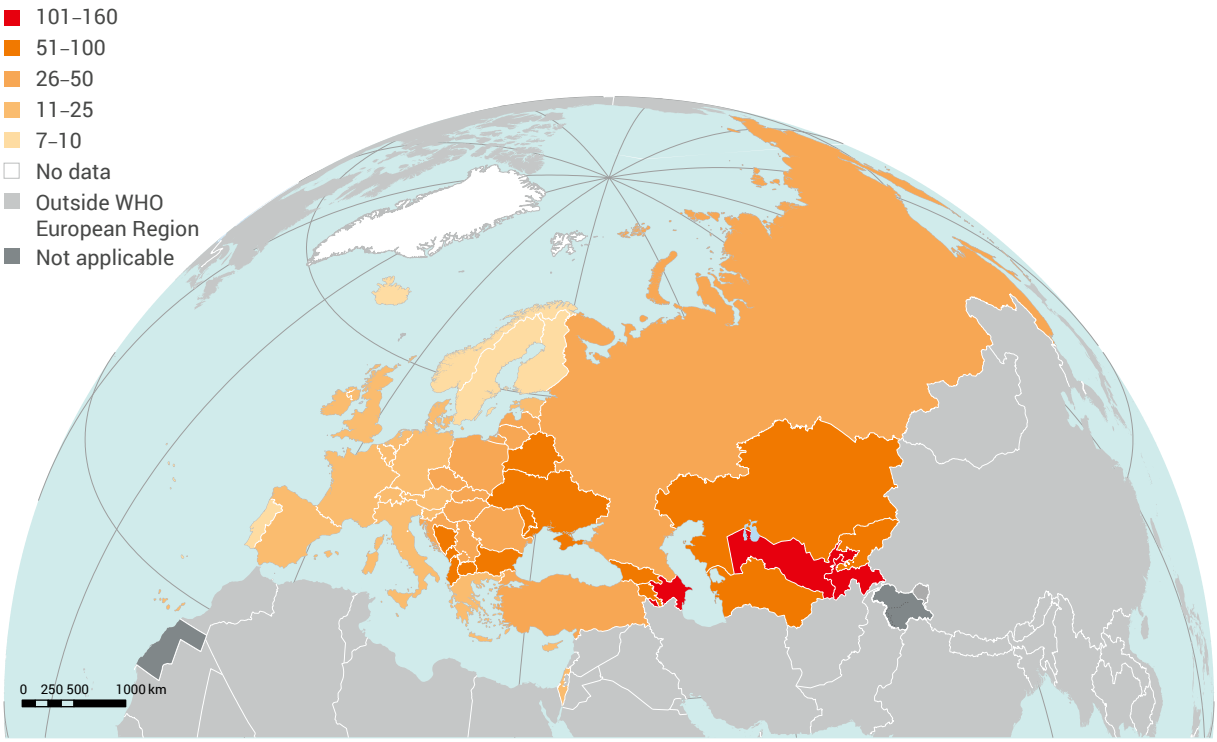
Source: created by the WHO GIS Centre for Health DNA/DDI based on data in WHO *(26)*.

9.2.1 Air pollution mortality

In the WHO European Region, air pollution is a single major environmental risk to health, responsible every year for more than 569 000 deaths that are attributable to ambient air pollution *(28)*, and close to 182 000 due to household air pollution *(29)*.

The age-standardized mortality rate attributed to ambient air pollution was 35.3 per 100 000 in 2019, below the global average of 59.7. However, there are vast differences between Member States, ranging from 7.5 to 159.6 per 100 000 (Fig. 9.4). Rates among men (45.7) are 1.67 times higher than in women (27.5) due to patterns of cardiovascular and other diseases.

Fig. 9.4. Age-standardized mortality rate per 100 000 population attributed to ambient air pollution, 2019



Notes: data (deaths per 100 000) are available for 50 out of 53 Member States (no data for Andorra, Monaco or San Marino). The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or its authorities or concerning the delimitation of its frontiers or boundaries. Dotted or dashed lines on maps represent approximate border lines for which there may not be full agreement.

Source: created by the WHO GIS Centre for Health DNA/DDI based on data in WHO *(4,30)*. © WHO 2025; Licence: CC BY-NC-SA 3.0 IGO.

Ischaemic heart disease is the leading cause of death attributed to ambient air pollution globally and in the Region. There are significant variations between countries; for example the lowest stroke rates are reported for Iceland, which are 37 times smaller than the highest rates (in Tajikistan) (Table 9.2). These patterns in cause-specific deaths attributed to air pollution are also influenced by the overall health status of a population, assessed by factors such as the background rate of ischaemic heart disease or stroke.

Table 9.2. Smallest and largest standardized mortality rate attributed to ambient air pollution in WHO European Region Member States, 2019

Standardized mortality rate (per 100 000 population)	Ischaemic heart disease	Stroke	Trachea, bronchus, lung cancers	Acute lower respiratory infections	Chronic obstructive pulmonary disease	Total
Smallest	4.8	0.9	0.2	0.1	0.3	7.5
Largest	105.6	32.9	4.2	12.3	7.2	159.6

Source: WHO *(26)*.

WHO Member States adopted the first-ever resolution on air pollution in 2015. The Sixty-eighth World Health Assembly in May 2015 adopted resolution WHA68.8 on health and the environment: addressing the health impacts of air pollution *(30,31).* This was followed in May 2016 by the Sixty-ninth World Health Assembly adopting resolution WHA69/A69 on health and the environment: draft road map for an enhanced global response to the adverse health effects of air pollution *(32)*. Air pollutants severely impact health, but they also negatively impact the climate and ecosystems. Indeed, many of the sources of outdoor air pollution, such as the combustion of fossil fuels, are also sources of high carbon dioxide emissions *(33)*. Regional and country-level responses that build upon synergies between air quality and climate change agendas provide an opportunity for improving the health and well-being of populations across the Region. Worthwhile investments to protect health include engaging different sectors, such as the energy and transport sectors, focusing economic and urban growth on cleaner transport and power generation, and improving urban planning with green spaces, energy-efficient homes and better municipal waste management.

9.3 Road traffic mortality

Main findings

- The WHO European Region reported 6.7 road traffic deaths per 100 000 population in 2021. Rates differed significantly between Member States, ranging from 17.2 per 100 000 population to close to zero.
- Road traffic mortality in the Region has declined by 27.2% since 2015.
- Despite progress, road safety remains a leading cause of death in all Member States, in particular among people aged 5–29 years. Cyclists are also a particularly vulnerable road-user group – case fatalities have alarmingly increased by 50% in the last decade (2012–2022). Close to 3800 cyclists were killed in 2021.

With 1.19 million people killed in 2021 globally and millions more injured *(6,34)*, road traffic injuries are the second leading cause of death for those aged 5–29 years in the Region, and strengthening road safety is a priority.

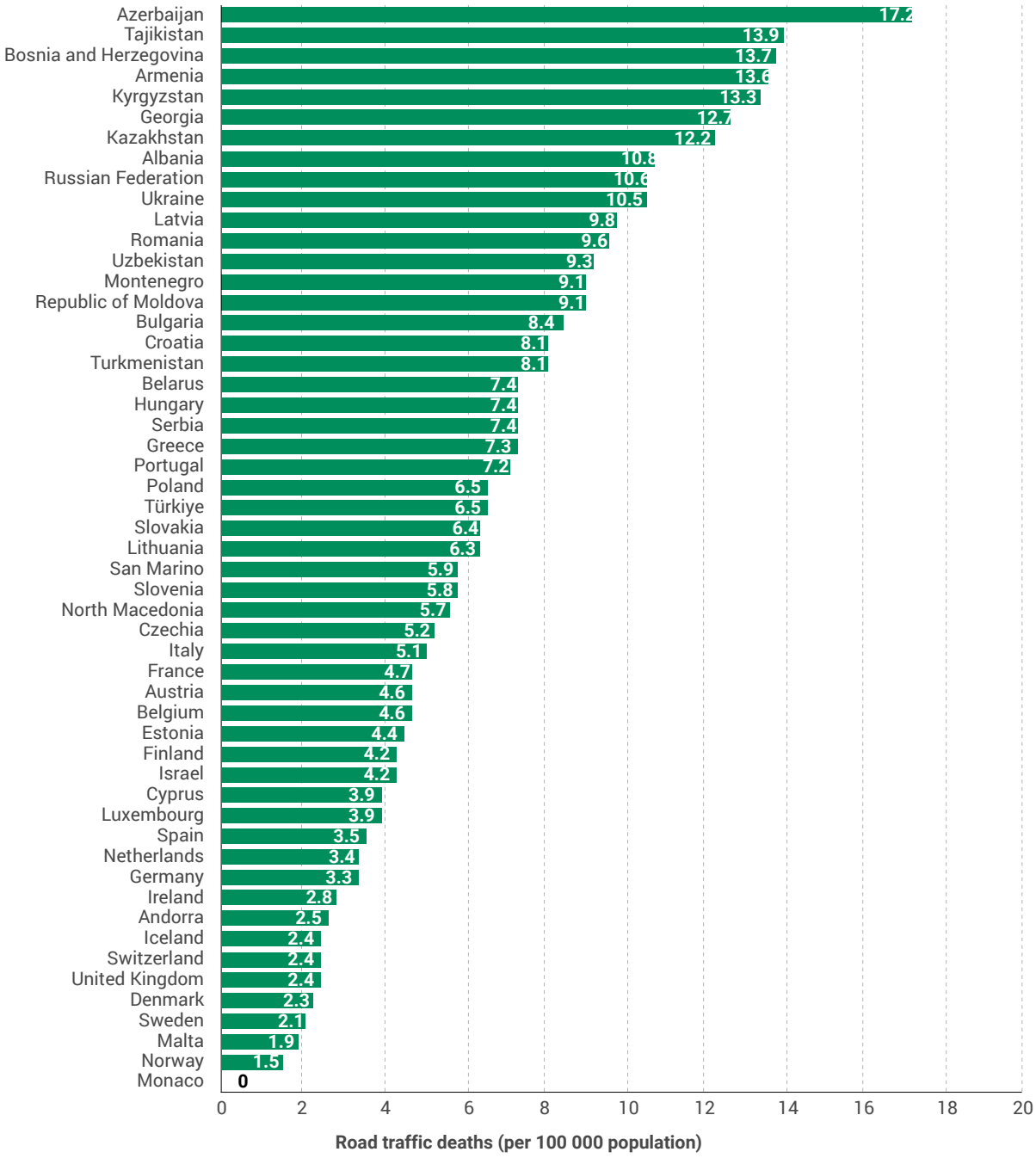
As part of the United Nations 2030 Agenda, the global community adopted SDG Target 3.6 to halve the number of road traffic deaths and injuries by 2020 *(23,35)*, with this unfinished objective continued under the Decade of Action for Road Safety 2021–2030, adopted by the United Nations General Assembly *(36)*.

Road traffic mortality is estimated from the death rate per 100 000 population,[45] informed by both official submissions from Member States to the Global Status Report on Road Safety and vital registration or death certificate data received annually from Member States. All but three Member States (Azerbaijan, Bosnia and Herzegovina, and Tajikistan) in the WHO European Region are Group 1, meaning that at least 80% of deaths are captured and classified by cause. Official statistics (routinely collected and reported by police) represent a significant underestimation of road trauma compared with the vital registration data in the WHO Global Health Estimates.

The WHO European Region has 5% of the global road traffic mortality burden, with an estimated 6.7 deaths per 100 000 population, representing over 62 000 preventable deaths in 2021 *(5,6)*. Mortality patterns vary significantly across Member States, with estimated rates as high as 17.2 per 100 000 population in Azerbaijan and close to zero in Monaco (Fig. 9.5) *(6)*. By road-user type, 50% of fatalities are occupants of four-wheeled vehicles, 25% pedestrians, 12% users of powered two- or three-wheelers, 6% cyclists and 7% are other types of road user *(6)*. In the last decade (2012–2022), the number of cyclist fatalities increased by a striking 50% in the Region *(6)*. Close to 3800 cyclists were killed in 2021. The increase could be due to the increased uptake of cycling as a mode of active transport in cities without a corresponding investment into cycling-specific infrastructures and low-speed urban environments *(5,6)*.

[45] The methods used for the analysis of causes of death varies depending on the data availability and quality of vital registration systems. For countries with high-quality cause-of-death statistics, interpolation/extrapolation was conducted for missing country-years; for countries with only low-quality or no data on causes of death, modelling was used. See additional methodological considerations in Annex 1.

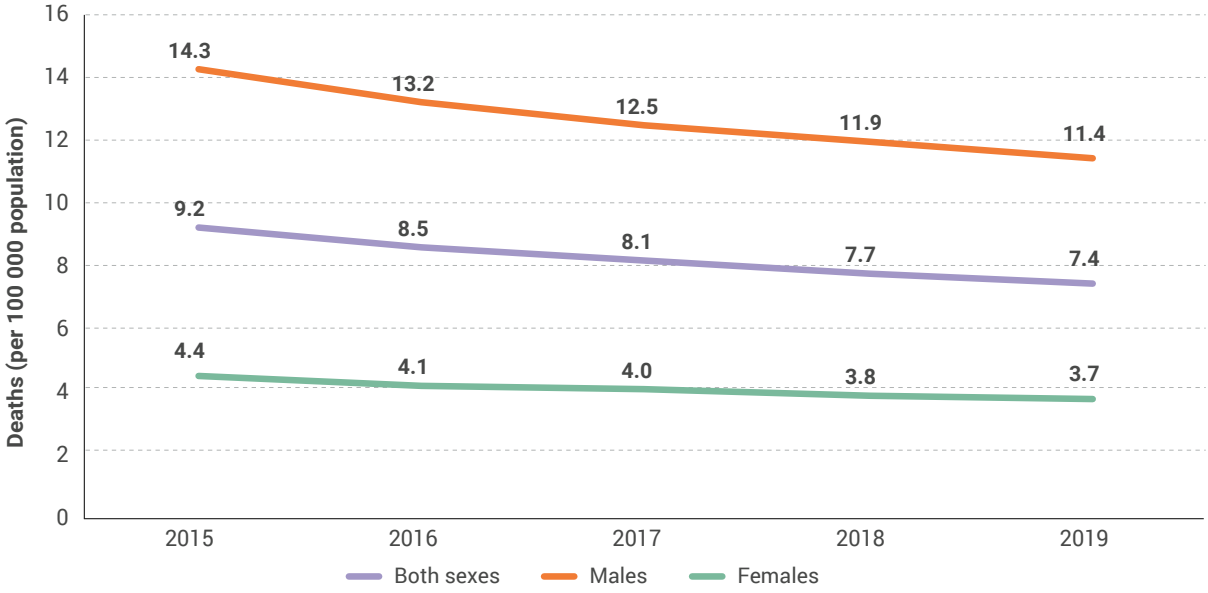
Fig. 9.5. Estimated road traffic deaths per 100 000 population in Member States of the WHO European Region, 2021



Source: WHO *(5)*.

The European Road Safety Observatory has observed that personal mobility devices such as e-scooters are becoming increasingly popular and that their crash risk is hypothesized to be similar to that of cyclists. Although sound data are still lacking, evidence suggests that injuries following e-scooter crashes are more severe than those on bicycles due essentially to falls *(37)*. A study from the United States of America observed an e-scooter injury rate similar to that previously reported for motorcycles *(38)*. Lastly, based on the latest sex-disaggregated data, males are three times more likely than females to be killed by road traffic injuries (Fig. 9.6) *(39)*.

Fig. 9.6. Estimated male and female road traffic deaths per 100 000 population in the WHO European Region, 2015–2019



Notes: no data for Andorra, Monaco and San Marino.

Source: WHO Regional Office for Europe *(39)*.

While WHO considers road traffic injuries an important public health issue, national policy ownership for achieving road safety objectives lies outside of health within all Member States. Ongoing efforts to mainstream engagement with ministries in charge of interior and transportation are crucial to the uptake of WHO evidence-informed and data-driven recommendations *(6,40)*. The adherence (or lack of) by road users to legislation that mandates key behavioural risk factors (speed, alcohol, drugs, helmets and restraints) is a key contributor to road crashes, injuries and deaths. Timely and efficient police enforcement is the primary mechanism by which road users are deterred from violating road safety legislation. Recent population-based research involving 22 Member States found that 47% of drivers exceeded urban speed limits, and 11% drove when they suspected they were under the influence of alcohol.

WHO advocates for Member States to establish "safe system" approaches that recognize transportation as a complex interplay between human factors, the environment, road infrastructure and design. More specifically, the implementation of "safe system" approaches consists of addressing (i) multimodal transport and land use planning, (ii) safe road infrastructure, (iii) vehicle safety, (iv) safe road use and (v) post-crash response, also taking into account the impact of human error. With this approach originating in the WHO European Region and being core to European Union transport policy, the Region has the greatest concentration of countries that align with these recommendations *(6)*. Notably, road traffic mortality in the Region has declined by 36% between 2010 and 2021 *(6)*. Despite these encouraging statistics, efforts to ensure the safety of specific road users such as pedestrians, cyclists, children and young adults (5–29 years old) are still needed *(6)*.

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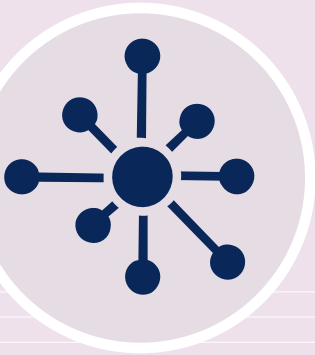
ANNEX 1



Indicator selection and methodological considerations

The European Programme of Work 2020–2025 measurement framework indicators

The European Programme of Work 2020–2025: United Action for Better Health (EPW) *(1)* was adopted in resolution EUR/RC70/R3 in September 2020 at the Seventieth session of the WHO Regional Committee for Europe *(2)*. This built on the Thirteenth General Programme of Work 2019–2023 *(3)* and aligns with the Sustainable Development Goals (SDGs) *(4)*. The EPW focuses on three core strategic priorities: (i) achieving universal health coverage, (ii) addressing health emergencies and (iii) promoting healthier populations. These priorities are further supported by four flagship initiatives: (i) the Mental Health Coalition, (ii) Empowerment through Digital Health, (iii) the European Immunization Agenda 2030 and (iv) Healthier Behaviours: incorporating behavioural and cultural insights.

The EPW measurement framework (EPW-MF) was developed in 2021 following extensive consultations with technical teams at the WHO Regional Office for Europe and Member States *(5)*. The EPW-MF aims to ensure that the work done under the EPW is measured effectively and contributes to the overall achievement of the 2030 Agenda for Sustainable Development. Document EUR/RC71/5 of August 2021 *(6)* outlined the process for the development of the EPW-MF as per resolution EUR/RC70/R3 of September 2020 *(2)*.

The EPW-MF utilizes SDG targets but tailors them to focus on indicators and targets relevant to the WHO European Region by replacing or supplementing the global indicators to address the distinct challenges and opportunities in the Region. It excludes SDG targets not relevant to major Regional health issues or those already met by most Member States. The EPW-MF also prioritizes established indicators that are comparable across the Region, have routine data availability for most Member States to minimize reporting burdens, are supported by clear and relevant metadata, and serve both as measures and drivers of policy action.

The EPW-MF includes core indicators related to the three strategic priorities (achieving universal health coverage, addressing health emergencies and promoting healthier populations). Additionally, it features a development list of indicators, which reflects topics that are highly relevant for the Region but for which no well-developed measures exist in international databases, or for which data are only available for a limited number of Member States. The development list enhances the visibility of these areas and prioritizes them for further work on indicators and data by the WHO Regional Office for Europe and Member States. The EPW-MF also incorporates the four flagship initiatives, with Mental Health, Digital Health, and Behavioural and Cultural Insights included in the development list.

Indicator selection

The European Health Report 2024 is primarily based on the indicators of the EPW-MF. For the broader topics on the development list, one to three suitable indicators were selected for operationalization of these topics for the Report, in consultation with the relevant technical units at the Regional Office. Consequently, this Report does not aim to provide a complete picture for these topics on the development list but rather highlights specific aspects. A limited number of development list topics and indicators were excluded because of either insufficient data available or limited added value for the narrative of the Report. In addition, to ensure that the Report provides a comprehensive picture, several basic population health indicators that are not part of the EPW-MF were included. Table A1.1 provides an overview of the indicators used in the Report. The data used for the indicators are included in Annex 2.

Table A1.1. EPW measurement framework and other indicators used in the Report

Chapter	Indicator	Type in EPW[a]	Policy framework from which indicator was taken or adapted
2	Life expectancy at birth	Additional	_
2	Healthy life expectancy at birth	Additional	_
2	Topic: ageing populations, healthy ageing Indicator healthy life expectancy at age 60 years	EPW-MF DL	_
2	Main causes of death	Additional	_
3	Maternal mortality	EPW-MF C	SDG 3.1.1
3	Neonatal mortality	Additional	_
3	Under-5 years mortality	Additional	_
3	Met need for family planning	EPW-MF DL	SDG 3.7.1
3	Early childhood development	EPW-MF DL	SDG 4.2.1
3	Child overweight and obesity prevalence	EPW-MF C	NCD Global Monitoring Framework *(7)*
3	Violence against women	EPW-MF C	SDG 5.2.1
3	Violence against children	EPW-MF DL	SDG 16.2.1
4	Safe drinking water Safe sanitation	EPW-MF C	SDG 6.1.1, SDG 6.2.1
4	Population covered by all vaccines in the national programme	EPW-MF C	SDG 3.b.1, European Immunization Agenda 2030 *(8)*
4	Human papillomavirus vaccination	EPW-MF C	Global and regional strategies to accelerate the elimination of cervical cancer
4	Antibiotic consumption	EPW-MF C	World Health Assembly resolution WHA68.7 *(9)*
4	Multidrug-resistant and rifampicin-resistant tuberculosis treatment success rate	EPW-MF C	Adapted from the SDG 3.8.1 UHC Service Coverage Index; top 10 indicator of the global End TB Strategy *(10)*
4	HIV: antiretroviral therapy coverage	EPW-MF C	SDG 3.8.1 (UHC Service Coverage Index)

Table A1.1. contd

Chapter	Indicator	Type in EPW[a]	Policy framework from which indicator was taken or adapted
4	Hepatitis C treatment coverage	EPW-MF C	Linked to SDG 3.3
4	European Immunization Agenda 2030 indicators included: ▶ measles and rubella elimination ▶ polio elimination and control	EPW flagship	SDG 3.b.1, European Immunization Agenda 2030 *(8)*
5	Premature mortality from NCDs	EPW-MF C	SDG 3.4.1
5	Cancer (all cancers excluding non-melanoma skin cancer) age 0–74 years ▶ cumulative risk of developing cancer ▶ cumulative risk of dying from cancer	Additional	SDG 3.4, NCD Global Monitoring Framework *(7)*
5	Raised blood pressure prevalence	EPW-MF C	NCD Global Monitoring Framework *(7)*
5	Obesity in adults	EPW-MF C	NCD Global Monitoring Framework *(7)*
5	Trans-fatty acid policy implementation	EPW-MF C	NCD Global Monitoring Framework *(7)*
5	Alcohol consumption	EPW-MF C	SDG 3.5.2, NCD Global Monitoring Framework *(7)*
5	Tobacco use	EPW-MF C	SDG 3.a.1, NCD Global Monitoring Framework *(7)*
5	Topic: behavioural insights Indicators included: ▶ implementing strategic plan(s) for the application of behavioural and cultural better health ▶ understanding and support of behavioural and cultural insights among key stakeholders	EPW-MF DL, EPW flagship	–
6	Topic: mental health Indicators included: ▶ well-being among adolescents ▶ prevalence of depression ▶ national mental health policy status, implementation and evaluation	EPW-MF DL, EPW flagship	–
6	Topic: ageing populations, dementia Indicator included burden of disease caused by dementia	EPW-MF DL	–
6	Suicide mortality	EPW-MF C	SDG 3.4.2
6	Coverage of treatment interventions for substance use disorders	EPW-MF DL	SDG 3.5.1

Table A1.1. contd

Chapter	Indicator	Type in EPW[a]	Policy framework from which indicator was taken or adapted
7	Impoverishing health spending	EPW-MF C	Tallinn Charter *(11)*, WHO Regional Committee for Europe resolution EUR/RC65/13 *(12)*
7	Catastrophic health spending	EPW-MF C	Tallinn Charter *(11)*, WHO Regional Committee for Europe resolution EUR/RC65/13 *(12)*, SDG 3.8.2
7	Unmet need for health care or dental care due to cost, distance or waiting time	EPW-MF DL	_
7	Public spending on health as a share of gross domestic product	Additional	_
7	Out-of-pocket payments as a share of current spending on health	Additional	_
7	Density of health workers (medical doctors, nurses, medical doctor and nursing graduates)	EPW-MF C	SDG 3.c.1
7	Topic: ageing populations, long-term care and rehabilitation Indicator included access to long-term care	EPW-MF DL	_
7	Topic: digital health Indicators included: ▶ Member States with policies or strategies addressing digital health ▶ digital health literacy action and inclusion plans	EPW-MF DL & EPW flagship	_
8	International Health Regulations (2005) *(13)* capacity	EPW-MF C	SDG 3.d.1
8	Minimum package of health services in emergencies Indicator included SPAR score for continuity of essential services (C8.3) *(13)*	EPW-MF DL	_
8	Availability of preparedness plans and guidelines to mitigate risk of high-threat or emerging pathogens Indicator included SPAR score for planning for health emergencies (C7.1) *(13)*	EPW-MF DL	_

Table A1.1. contd

Chapter	Indicator	Type in EPW[a]	Policy framework from which indicator was taken or adapted
9	Topic: health effects of climate change Indicators included: ▶ exposure of vulnerable populations to heatwaves ▶ heat-related mortality ▶ health sector greenhouse gas emissions	EPW-MF DL	_
9	Urban air pollution	EPW-MF C	SDG 11.6.2
9	Air pollution mortality	EPW-MF C	SDG 3.9.1
9	Road traffic mortality	EPW-MF C	SDG 3.6.1

Note: NCD: noncommunicable disease; SPAR: States Parties self-assessment annual reporting (tool); UHC: universal health coverage.

[a] Indicator types: additional: not included in the EPW-MF but added for the purpose of this Report; EPW-MF C: indicator from the core set of the EPW-MF; EPW-MF DL: indicator or topic from the development list of the EPW-MF; flagship: indicator related to an EPW flagship initiative. The following indicators from the EPW-MF, mostly from the development list, were excluded from this publication based on a lack of Region-wide, relevant data and/or limited added value for the narrative of the Report: availability of essential medicines; specific primary health-care aspects such as quality of care, integrative care, multisectorality and multidisciplinarity; intersectoral action for health; hospital beds; burden of non-fatal injuries; and self-perceived health and well-being.

Methodological considerations

The technical units of the WHO Regional Office for Europe advised on the most suitable and relevant data sources for this Report. The majority of data presented in this Report is sourced from the Global Health Observatory database, which gathers and provides access to a wide array of datasets, including mortality, disease burden, SDGs and noncommunicable diseases (NCDs) and their risk factors. These datasets are WHO's best estimates, designed for comparability across countries and time, and they are regularly updated with new or revised data, or when significant methodological changes occur. However, they might not always align with official national estimates. Note that the Netherlands (Kingdom of the) comprises six overseas countries and territories and the European mainland area; only the last is part of the WHO European Region. As data for this Report refer only to the European territory the Report refers simply to the Netherlands throughout the document. Where WHO data were unavailable, other internationally recognized databases were used, preferably those of official United Nations entities.

To ensure consistency, reliability and comparability, the disaggregated data presented in the Report and the overall indicator data are from the same source. This ensures that the data align in terms of methodology, timing, scope and definitions. Differences in data sources can introduce bias in the way the results are interpreted. For example, demographic categories (such as age or income groups) might be defined differently, making it hard to combine or compare the data meaningfully.

Limitations

Data gaps, particularly in recent years, could affect the reliability of conclusions about progress towards EPW-MF milestones and other targets. In addition, WHO and other United Nations and international databases are updated several times each year. Consequently, the data presented in this version of the European Health Report are a snapshot of the most recent data available at the time the Report was compiled.

For this reason, although data presented are the latest official data available from WHO and the United Nations at the time of writing, countries may submit retrospective data updates, which could impact Regional averages or specific values for Member States post-publication. Minimum and maximum values presented for some indicators should also be interpreted with caution, particularly for recent years when there are the most gaps in data coverage.

Data availability, and particularly data disaggregations, are highly contingent upon response rates of Member States to various data collections each year. Many indicators have several years of data gaps because of the time it takes to gather, validate and report data both within Member States (from local authorities to regional public health institutes to a national authority) and to international organizations. Timeliness of causes of death and population data are a particular challenge across the Region: of the 53 Member States, only 24 (45%) can report data from 2022 or more recently. In the case of nine Member States (17%), the latest reported cause of death data predates the coronavirus (COVID-19) pandemic, leaving decision-makers without timely insights for future preparations. Addressing these gaps in the civil registration and vital statistics systems is crucial to enable accurate tracking of global health trends. Many indicators face a similar situation: it is not uncommon for the most recent data available for a Member State to be from 2 or 3 years before the current year. WHO has the goal of working with Member States to optimize their health information systems (HIS), enabling them to gather, process and manage data more efficiently and to facilitate seamless transfer of data within and outside of Member States.

The original sources will give detailed information on the limitations of specific indicators.

Issues hampering performance of HIS in the WHO European Region

Assessments of HIS are conducted throughout Member States of the WHO European Region to identify priority areas for HIS strengthening and mobilize support for the strengthening process. These assessments often serve as a baseline for monitoring progress and to connect different stakeholders in the national HIS with each other, creating a forum for stakeholders from across the national HIS to discuss issues and potential solutions.

Since the European Health Report 2021 was published, 14 more assessments of HIS have been conducted in Member States in collaboration with WHO. The results have shown that often, no matter how developed national HIS are, improving data availability in a structured and responsible way is the logical first step towards broader improvements in HIS.

In many Member States, key data, particularly data disaggregations, are absent at country level, leaving national public health institutes unable to observe current trends or to project future trend scenarios. This is compounded by a lack of health data standardization, which includes definitions, calculations and formatting of key data, which often contributes to the lack of interoperability of the HIS. Member States repeatedly cite a lack of trained staff to collect and manage the existing data, and even fewer people are trained to calculate data into policy-informative indicators. These roadblocks at country level cause delays in processing and releasing data to international partners such as WHO. This, coupled with an ever-growing request for data from many international partners, makes data management and analysis at country level a constant struggle.

Still, these smaller data issues would not exist without larger underlying problems within the HIS in Member States. First and foremost is a lack of good data governance across the entire HIS. Data governance issues, in particular unclear responsibilities of departments that are often understaffed and weak collaboration between stakeholders of the national HIS, result in data being scattered across systems that often do not connect or relate to each other. These data silos challenge the efficiency of the HIS and are a direct result of fragmentation and lack of interoperability within HIS. Technological and legal issues such as the compatibility of systems, privacy and security concerns, and lack of standardization present the biggest challenges to achieving data interoperability.

Furthermore, the data gathered are used primarily for administrative purposes and are not adequately leveraged for secondary use. Legal loopholes and misinterpretation of existing laws in countries regarding secondary use of data are often cited as a barrier in many cases, and as reasons data cannot be used for other purposes. Finally, there is a noticeable disconnect between the data collected, analyses performed and decisions made. The decision-making processes often lack proper evaluation, leading to a gap between policy and evidence. Data literacy at executive level can be limited, and this often leads to policy-driven evidence-making, where evidence is tailored to support pre-existing policies.

Establishing a data governance framework would be a good place to start in addressing the issues discussed here. Such a framework would define the roles and responsibilities of all stakeholders working within the national HIS. If developed appropriately, it would establish policies and standards that would guide the collection, management, use and sharing of data across members of the HIS and with other potential collaborators.

Indicator-specific methodological notes for the Report

Basic methodological information for the indicators used in the Report is provided in the main text. For the more complex indicators, additional methodological information is provided here to support interpretation of the indicator values presented in this Report.

Chapter 2

Life expectancy and healthy life expectancy

The accuracy of WHO's estimates of life expectancy and healthy life expectancy also depends on the quality of reporting of mortality and morbidity data in Member States. When data are incomplete or inaccurate, estimates are modelled using data from other populations, which may result in minor discrepancies compared with official life tables prepared by Member States *(14,15)*.

Main causes of death

The main causes of death data presented in this Report come from the WHO Global Health Estimates, which provide comprehensive data on mortality, morbidity, disease burden, life expectancy and other health indicators for over 160 diseases *(16)*. Table A2.9 in Annex 2 presents age-standardized mortality rates per 100 000 population for the top 20 causes of death in the WHO European Region by Member State, based on analysis of latest available national information on levels of mortality and cause distributions as of mid 2020, together with latest available information from WHO programmes for causes of public health importance. Population estimates are from the 2024 revision of the United Nations World Population Prospects *(17)*. Data for Andorra, Monaco and San Marino were not available.

Standardized methods are used to ensure comparability across countries. Therefore, estimates produced may differ from official national statistics and from the raw data as submitted to WHO by Member States. Due to methodological changes, current estimates are not comparable with previous WHO releases. Details on data sources, estimation methods, uncertainty intervals and evidence levels are available in a Global Health Estimates technical paper *(18)*.

Chapter 3

Maternal mortality

The United Nations Maternal Mortality Estimation Inter-Agency Group, which includes the United Nations Children's Fund (UNICEF), United Nations Department of Economic and Social Affairs, United Nations Population Fund, WHO and the World Bank, compiles maternal mortality data from various sources, such as civil registration, surveys, censuses and specialized studies. The Group uses statistical modelling, including the Bayesian maternal mortality model, to generate consistent estimates at the country, regional and global levels. The analysis adjusts for errors from data collection and processing, as well as for random and sampling errors. Maternal mortality data are collected at different intervals – annually for civil registration, every 3–10 years for other sources – and include both point estimates and uncertainty intervals. Adjustments are often made to address data quality issues, such as underreporting and misclassification of maternal deaths.

Child mortality

UNICEF and the United Nations Inter-agency Group for Child Mortality Estimation compile child mortality data from various sources, including household surveys, censuses and vital registration systems. They conduct data quality assessments and also collect data through UNICEF country offices and ministries in charge of health. A civil registration system that continuously records births and deaths is the ideal source for high-quality data on under-5 mortality. However, in many low- and middle-income countries, these systems are underdeveloped and so household surveys and population censuses serve as the primary data sources. Using multiple data sources such as surveys and censuses, often conducted years apart, can lead to inconsistent mortality rates due to errors such as misreporting, recall bias and underreporting. Misclassifications, such as early neonatal deaths recorded as stillbirths, also affect accuracy. Direct comparisons between different data sources can be misleading. To correct for these issues, the Group uses a statistical model that harmonizes data from various sources to produce reliable annual estimates and has created a web portal for child mortality data *(19)*.

Overweight and obesity in school-aged children

The fifth round of data collection for the WHO European Childhood Obesity Surveillance Initiative used two forms: a child record form and a family form *(20)*. The child record form, completed by the examiner, documented the child's age, gender, time of measurement, clothing and anthropometric data. The family form, filled out by parents or caregivers on paper or online, gathered information on the child's diet, physical activity, sedentary behaviour, sleep, and family socioeconomic and health conditions related to obesity. Children's weight and height were measured at school by trained examiners using standardized equipment: digital scales for weight and height boards for height. Precise and accurate measurements were ensured across countries. Sampling weights were estimated by the WHO Regional Office, except in Cyprus where the analysis was unweighted. Minor deviations from national results may occur through several factors: (i) data-checking procedures by the WHO Regional Office, (ii) the use of sampling weights for estimates, (iii) differences in inclusion criteria used in data analysis, and (iv) variations in how indicators were defined.

Violence against women and girls

The WHO's Global Database on Prevalence of Violence Against Women compiles data from a range of prevalence surveys and studies on physical, sexual and psychological violence *(21)*. The data cover intimate partner violence, sexual violence by any perpetrator and non-partner sexual violence. A systematic review was conducted to identify studies for inclusion, focusing on population-based nationally or subnationally representative surveys conducted between 2000 and 2018. Key data sources included specialized violence surveys, such as the WHO multicountry study *(22)*, European Union (EU) Member States surveys and national health surveys such as the Demographic and Health Surveys and the Reproductive Health Surveys. The data were reviewed in a country consultation process in 2020. While there is growing recognition of the impact of psychological violence, there is currently no standardized measure for this form of violence, and efforts are ongoing to improve its assessment and measurement.

Chapter 4

Antibiotic consumption

In 2017 the WHO Expert Committee on Selection and Use of Essential Medicines introduced the AWaRe classification to optimize and monitor global antibiotic use, categorizing antibiotics into Access (first or second choice for empirical treatment), Watch (higher resistance potential) and Reserve (for severe, multidrug-resistant infections) groups *(23)*. Monitoring of antimicrobial consumption is conducted for countries in the EU and the European Economic Area through ESAC-Net from the European Centre for Disease Prevention and Control (ECDC) *(24)* and for non-EU Member States by the WHO Antimicrobial Medicines Consumption Network *(25)*, while the United Kingdom reports to the WHO Global Antimicrobial Resistance and Antibiotic Use Surveillance System *(26)*. Regional estimates are available through the European Health Information Gateway *(27)*. Data provided by the ECDC are sourced from national sales, reimbursement records or national drug registers. The WHO Anatomical Therapeutic Chemical classification system is used for allocating antimicrobial agents into groups, with data preferably collected at the medicinal product level and measured in defined daily doses per 1000 inhabitants per day *(28)*. The ECDC disclaims responsibility for data accuracy, completeness, timeliness, management or processing operations, and for any analysis, conclusions or misapplications of the data.

Chapter 5

Premature mortality from NCDs

The risk of premature death from an NCD in those aged 30–70 years is calculated using cause-specific mortality rates across 5-year age groups and standard life table methods, assuming no other causes of death. The estimates, derived from the WHO Global Health Estimates, are chosen to exclude confounding across countries or over time due to differences or changes in mortality rates for other competing causes and to control for differences in population age structure. These estimates aim to provide comparable data across countries, although they may not align with national statistics. The age range of 30–70 years is used because the mortality risk from the four major NCDs – cardiovascular diseases, cancers, diabetes and chronic respiratory disease – begins to increase at age 30. Deaths from these NCDs before the age of 70 years are also typically considered premature across diverse global regions. Beyond that age, cause-specific mortality estimations are less reliable due to increased comorbidities, higher incidence of ill-defined causes and inaccuracies in demographic reporting *(29,30)*.

Chapter 7

Affordable access to health care (financial protection)

Data on impoverishing health spending and catastrophic health spending across the WHO European Region (2023 and 2024) were prepared by the WHO Barcelona Office for Health Systems Financing, in collaboration with country experts, using microdata from national household budget surveys. Data are available on UHC Watch for over 40 countries in the Region *(31)*.

Data on self-reported unmet need for health and dental care are derived from EU Statistics on Income and Living Conditions (EU-SILC) in Eurostat and relate to 2023 (for most countries), covering people aged 16 years or over in 35 countries in the Region *(32)*.

Data on out-of-pocket payments as a share of current spending on health and public spending on health as a share of gross domestic product are from the WHO Global Health Expenditure Database *(33)*. They are based on the System of Health Accounts international classification and relate to 2021, the latest available year for most countries. Data are available for all 53 Member States.

Long-term care

Data on the proportion of people reporting the need for help with personal care or household activities by level of difficulty experienced in those activities and the proportion who used home care services for personal needs in the previous 12 months by level of disability and age are available from the European Health Interview Survey for 2019 *(34)*. Home care included only formal care services provided by professional health or social workers (not by family members or friends).

Chapter 8

Implementation of the International Health Regulations (2005) and health emergency preparedness

States Parties self-assessment annual reporting (SPAR) is a requirement for States Parties under the International Health Regulations (2005) and is used to provide annual reports to the World Health Assembly on a country's emergency preparedness. The e-SPAR tool facilitates the process for States Parties to fulfil this obligation (under Art. 54). The tool assesses 35 indicators across the 15 International Health Regulations (2005) core capacities needed to detect, assess, notify, report and respond to public health risks and acute events of domestic and international concern. In 2021 the e-SPAR tool was revised to incorporate lessons learned from the COVID-19 pandemic *(13)*. The updated second edition expanded the number of core capacities from 13 to 15 and increased the number of indicators from 24 to 35. New indicators were introduced to address gender equality, advocacy for International Health Regulations (2005) implementation, and community engagement. As a result of these updates, data collected during the 2018 to 2020 reporting periods cannot be directly compared with data collected using the revised 2021 edition of the SPAR tool.

Chapter 9

Health effects of climate change

Exposure of vulnerable populations to heatwaves is given as the absolute change in the number of heatwave person-days experienced by vulnerable groups (aged under-1 year and over 65 years) for the WHO European Region over the period 1980–2023. Data sources include the ERA5-Land reanalysis dataset for climate data and the Socioeconomic Data and Applications from the United States National Aeronautics and Space Administration (using gridded population of the world, version 4) and Eurostat for demographic data.

Heat-related mortality is given as the relative change in the estimated annual number of heat-related deaths of adults aged 65 years and over comparing 2000–2004 with 2018–2022. Data sources included climate models and mortality records. Limitations involve potential discrepancies in attributing deaths directly to heat and variations in data reporting standards.

Health sector greenhouse gas emissions

The per-capita carbon footprint of health systems in the WHO European Region in 2023 was derived from estimates of the greenhouse gas emissions from the global health sector using environmentally extended multiregion input–output models combined with data on health expenditure from WHO. The indicator matches the per capita greenhouse gas emissions data with the United Nations Development Programme's Human Development Index *(35)* to report health-care-associated greenhouse gas emissions per capita per year, including direct emissions from health-care facilities as well as emissions from the consumption of goods and services supplied by other sectors.

Road traffic mortality

Estimation of road traffic fatal injuries in Member States of the WHO European Region was based on the WHO *Global status report on road safety 2023 (36)*. This relies on four categories of countries based on the availability and completeness of death registration data.

1. For countries with death registration data completeness of at least 80%, data from death registration, projections or reported deaths were used.
2. For countries with other sources of information on cause of death, a regression method was applied using the most recent available estimates of road traffic deaths. Compared with previous editions of the report, the 2023 edition subdivided group 2 into two groups based on the status of their data systems improvements.
3. For countries with populations under 150 000 and without eligible death registration data, reported deaths from surveys were used directly, without adjustments.
4. For countries without eligible death registration data, a negative binomial regression model was applied.

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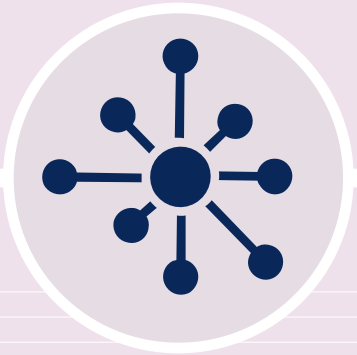
ANNEX 2



Data used for the European health report 2024

An overview of the Member State data underlying the various indicators used in this Report is provided in Tables A2.1 to A2.8. The data are displayed in the order the indicators are presented in the Report where possible, except for the data on behavioural and cultural insights and main causes of death. Data on behavioural and cultural insights have been excluded because they do not represent data at the Member State level, but rather they are derived from data reported by public health authorities, sometimes from subnational regions. The data regarding behavioural and cultural insights used for this Report can be found in Table 7.5 in section 7.6. The main causes of death data are presented separately later in this Annex (Table A2.9).

The data were collected for different indicators from various databases and publications, with source access dates mostly ranging between April and June 2024 as the Report was being drafted, unless otherwise specified. Databases may have been updated since then. A noteworthy example is the recent sixth round of the WHO European Childhood Obesity Surveillance Initiative data from 2022–2024, which were not available at the time of drafting this report; however, since then a brief review of results is now available *(1)*.

The data used in this Report on health workforce density (medical doctors, nurses, medical doctor graduates, nurse graduates) represent the latest available data from the WHO Regional Office for Europe, Eurostat, the Organisation for Economic Co-operation and Development joint data collection by the joint questionnaire on non-monetary health care statistics. At the time of writing, these data had not yet been made available in the national health workforce accounts data portal *(2)*.

Some indicators used in the report are based on modelled estimates that may not align with raw data provided by Member States.

Table A2.1. Member State data used for Chapter 2: main causes of death

	Life expectancy at birth, both sexes (years)	Life expectancy at birth, females (years)	Life expectancy at birth, males (years)	Healthy life expectancy at birth, both sexes (years)	Healthy life expectancy at birth, females (years)	Healthy life expectancy at birth, males (years)	Healthy life expectancy at 60 years of age, both sexes (years)	Healthy life expectancy at 60 years of age, females (years)	Healthy life expectancy at 60 years of age, males (years)
Type of indicator	**Additional**	**Additional**	**Additional**	**Additional**	**Additional**	**Additional**	**Development**	**Development**	**Development**
Policy framework from which indicator was taken or adapted	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**
Data source	**WHO *(3)***	**WHO *(3)***	**WHO *(3)***	**WHO *(4)***	**WHO *(4)***	**WHO *(4)***	**WHO *(4)***	**WHO *(4)***	**WHO *(4)***
Year of data	**2021**	**2021**	**2021**	**2021**	**2021**	**2021**	**2021**	**2021**	**2021**
Regional average	**76.3**	**79.3**	**73.3**	**66.0**	**67.3**	**64.6**	**15.7**	**16.8**	**14.5**
Albania	76.4	78.6	74.4	66.7	67.8	65.7	15.3	16.3	14.5
Andorra	–	–	–	–	–	–	–	–	–
Armenia	73.0	76.9	68.6	64.0	66.3	61.5	13.6	15.2	11.6
Austria	81.0	83.3	78.7	69.8	70.5	69.1	17.7	18.7	16.7
Azerbaijan	72.9	75.2	70.5	64.0	65.0	63.0	14.3	14.8	13.6
Belarus	73.1	78.1	68.1	63.7	66.8	60.5	13.6	15.8	11.0
Belgium	81.5	83.7	79.3	69.8	70.3	69.3	18.0	18.8	17.1
Bosnia and Herzegovina	74.9	77.2	72.6	65.0	66.1	63.9	13.7	14.6	12.7

Table A2.1. contd

	Life expectancy at birth, both sexes (years)	Life expectancy at birth, females (years)	Life expectancy at birth, males (years)	Healthy life expectancy at birth, both sexes (years)	Healthy life expectancy at birth, females (years)	Healthy life expectancy at birth, males (years)	Healthy life expectancy at 60 years of age, both sexes (years)	Healthy life expectancy at 60 years of age, females (years)	Healthy life expectancy at 60 years of age, males (years)
Bulgaria	71.3	75.0	68.0	62.4	64.6	60.4	12.8	14.3	11.1
Croatia	76.9	80.0	73.8	66.8	68.5	65.1	15.2	16.5	13.7
Cyprus	81.9	84.0	79.9	70.7	71.2	70.3	18.4	19.2	17.6
Czechia	77.1	80.3	74.0	66.7	68.3	65.1	15.0	16.5	13.5
Denmark	81.2	82.9	79.5	70.1	70.4	69.7	18.0	18.8	17.3
Estonia	77.1	81.2	72.8	66.7	69.2	64.1	15.8	17.6	13.5
Finland	81.5	84.1	79.0	69.9	71.0	68.8	18.1	19.3	16.9
France	81.9	84.7	79.1	70.1	71.0	69.1	18.6	19.8	17.4
Georgia	71.2	75.6	66.9	62.5	65.3	59.6	12.9	14.5	10.9
Germany	80.5	82.9	78.2	68.9	69.4	68.4	17.3	18.3	16.4
Greece	79.6	82.0	77.3	68.6	69.3	67.8	17.3	18.1	16.4
Hungary	74.4	77.8	70.9	64.8	66.7	62.9	14.0	15.6	12.2
Iceland	82.6	83.9	81.3	71.4	71.3	71.4	19.1	19.4	18.8
Ireland	81.6	83.4	79.9	70.0	70.2	69.8	18.3	18.9	17.6
Israel	81.7	82.1	82.4	70.8	70.1	72.1	18.4	17.9	19.5
Italy	82.2	84.3	80.0	70.6	71.1	70.0	18.4	19.3	17.3
Kazakhstan	70.3	73.9	66.4	61.6	63.8	59.2	12.5	13.7	10.8
Kyrgyzstan	72.2	75.8	68.5	63.4	65.5	61.3	14.2	15.4	12.7
Latvia	73.2	77.9	68.5	63.8	66.7	60.8	14.2	15.9	11.9

Table A2.1. contd

	Life expectancy at birth, both sexes (years)	Life expectancy at birth, females (years)	Life expectancy at birth, males (years)	Healthy life expectancy at birth, both sexes (years)	Healthy life expectancy at birth, females (years)	Healthy life expectancy at birth, males (years)	Healthy life expectancy at 60 years of age, both sexes (years)	Healthy life expectancy at 60 years of age, females (years)	Healthy life expectancy at 60 years of age, males (years)
Lithuania	74.1	78.7	69.6	64.2	67.0	61.4	14.6	16.3	12.4
Luxembourg	82.8	84.8	80.8	71.2	71.7	70.8	18.8	19.7	17.9
Malta	81.8	83.7	80.0	70.7	71.0	70.4	18.6	19.4	17.9
Monaco	–	–	–	–	–	–	–	–	–
Montenegro	74.7	77.9	71.6	65.2	66.8	63.6	13.9	15.3	12.4
Netherlands	81.1	82.7	79.6	70.0	69.9	70.0	17.8	18.4	17.2
North Macedonia	73.0	75.2	70.9	63.7	64.6	62.9	13.0	13.8	12.2
Norway	82.9	84.3	81.5	71.2	71.1	71.2	18.7	19.2	18.2
Poland	75.4	79.4	71.6	65.5	68.1	63.1	14.8	16.4	13.0
Portugal	81.2	83.9	78.3	69.5	70.5	68.5	18.2	19.3	16.9
Republic of Moldova	69.6	73.6	65.5	61.2	63.6	58.8	12.2	13.6	10.5
Romania	72.8	76.5	69.2	63.9	66.2	61.6	13.7	15.3	11.9
Russian Federation	70.0	74.3	65.6	60.9	63.6	58.2	12.7	14.1	10.8
San Marino	–	–	–	–	–	–	–	–	–
Serbia	72.8	75.6	70.0	63.9	65.4	62.4	13.0	14.1	11.8
Slovakia	74.5	78.0	71.1	64.9	67.0	63.0	14.1	15.6	12.5

Table A2.1. contd

	Life expectancy at birth, both sexes (years)	Life expectancy at birth, females (years)	Life expectancy at birth, males (years)	Healthy life expectancy at birth, both sexes (years)	Healthy life expectancy at birth, females (years)	Healthy life expectancy at birth, males (years)	Healthy life expectancy at 60 years of age, both sexes (years)	Healthy life expectancy at 60 years of age, females (years)	Healthy life expectancy at 60 years of age, males (years)
Slovenia	80.4	83.4	77.5	69.4	70.9	67.9	17.0	18.4	15.6
Spain	82.7	85.3	80.0	71.1	71.8	70.3	18.9	20.1	17.6
Sweden	82.7	84.3	81.0	71.1	71.2	71.0	18.7	19.2	18.1
Switzerland	83.3	85.1	81.5	71.2	71.4	70.9	19.0	19.7	18.3
Tajikistan	71.8	73.5	70.2	63.1	63.6	62.6	14.3	14.5	14.1
Türkiye	75.3	78.1	72.5	65.2	65.9	64.5	14.6	15.6	13.5
Turkmenistan	69.1	72.5	65.7	60.8	62.8	58.8	14.1	15.0	13.0
Ukraine	70.9	75.3	66.3	61.6	64.4	58.6	13.1	14.6	11.2
United Kingdom	80.1	81.9	78.3	68.6	69.0	68.2	17.6	18.2	16.9
Uzbekistan	72.2	74.1	70.2	63.4	64.0	62.7	13.5	14.1	12.8
No. Member States with no available data	3	3	3	3	3	3	3	3	3

Note: n.a.: not available.

Table A2.2. Member State level data used for Chapter 3: reproductive, maternal, newborn and child health

(a) Reproductive and early childhood

	Estimated maternal mortality (per 100 000 live births)	Neonatal mortality (0–27 days; per 1000 live births)	Under-5 mortality (per 1000 live births)			Demand for family planning satisfied with modern methods (%)	Early childhood development (%)[a]		
			Both sexes	Females	Males		Both sexes	Females	Males
Type of indicator	**Core**	**Additional**	**Additional**	**Additional**	**Additional**	**Development**	**Development**	**Development**	**Development**
Policy framework from which indicator was taken or adapted	**SDG 3.1.1**	**SDG 3.2.2**	**SDG 3.2.1**	**SDG 3.2.1**	**SDG 3.2.1**	**SDG 3.7.1**	**SDG 4.2.1**	**SDG 4.2.1**	**SDG 4.2.1**
Data source	**WHO *(5)***	**World Bank *(6)***	**UNIGME *(7)***	**UNIGME *(7)***	**UNIGME *(7)***	**United Nations *(8)***	**UNICEF *(9)***	**UNICEF *(9)***	**UNICEF *(9)***
Year of data	**2020**	**2022**	**2022**	**2022**	**2022**	**2024 (projection)**	**2012–2022**	**2012–2022**	**2012–2022**
Regional average	**12.6**	**2.2 (median)**	**4.0 (median)**	**3.6 (median)**	**4.3 (median)**	**77.0 (median)**	n.a.	n.a.	n.a.
Albania	8.3	7.0	9.4	8.7	10.2	33.1	–	–	–
Andorra	–	1.3	2.7	2.3	3.0	–	–	–	–
Armenia	27.2	5.3	10.3	9.2	11.3	45.6	–	–	–
Austria	5.2	2.0	3.2	2.9	3.5	87.9	–	–	–
Azerbaijan	40.8	9.1	18.1	16.3	19.8	34.4	–	–	–
Belarus	1.1	0.8	2.6	2.3	2.9	72.3	86.9	89.3	84.4

Table A2.2(a). contd

	Estimated maternal mortality (per 100 000 live births)	Neonatal mortality (0–27 days; per 1000 live births)	Under-5 mortality (per 1000 live births)			Demand for family planning satisfied with modern methods (%)	Early childhood development (%)[a]		
			Both sexes	Females	Males		Both sexes	Females	Males
Belgium	4.8	2.2	3.7	3.3	4.1	88.9	–	–	–
Bosnia and Herzegovina	5.7	4.4	6.0	5.5	6.5	35.4	96.4	97.6	95.3
Bulgaria	7.1	2.7	6.1	5.6	6.6	68.5	–	–	–
Croatia	4.8	2.7	4.6	4.1	5.0	58.9	–	–	–
Cyprus	68.4	2.0	3.5	3.3	3.7	–	–	–	–
Czechia	3.4	1.3	2.6	2.3	2.9	85.2	–	–	–
Denmark	4.7	1.9	3.5	3.2	3.8	87.5	–	–	–
Estonia	5.2	0.8	1.9	1.7	2.1	76.9	–	–	–
Finland	8.3	1.3	2.3	2.1	2.5	89.4	–	–	–
France	7.9	2.5	4.1	3.7	4.4	91.6	–	–	–
Georgia	27.6	5.3	9.3	8.3	10.3	52.9	89.6	88.5	90.8
Germany	4.4	2.2	3.6	3.3	3.8	88.0	–	–	–
Greece	7.7	2.3	3.9	3.6	4.2	63.3	–	–	–
Hungary	15.1	2.2	4.0	3.6	4.3	79.7	–	–	–
Iceland	2.7	1.3	2.6	2.4	2.8	–	–	–	–
Ireland	5.0	2.1	3.1	2.9	3.4	84.2	–	–	–
Israel	2.8	1.8	3.4	3.1	3.7	69.7	–	–	–

Table A2.2(a). contd

	Estimated maternal mortality (per 100 000 live births)	Neonatal mortality (0–27 days; per 1000 live births)	Under-5 mortality (per 1000 live births)			Demand for family planning satisfied with modern methods (%)	Early childhood development (%)[a]		
			Both sexes	Females	Males		Both sexes	Females	Males
Italy	4.6	1.6	2.6	2.4	2.8	68.8	–	–	–
Kazakhstan	13.4	4.7	9.7	8.5	10.9	75.1	85.5	86.3	84.8
Kyrgyzstan	50.4	11.8	17.3	15.3	19.1	66.9	71.7	75.0	68.2
Latvia	18.3	1.6	3.2	3.0	3.5	76.9	–	–	–
Lithuania	8.7	2.0	3.5	3.2	3.8	72.3	–	–	–
Luxembourg	6.5	1.7	2.7	2.4	2.9	–	–	–	–
Malta	2.9	3.7	5.6	5.2	6.0	73.7	–	–	–
Monaco	–	1.5	2.8	2.5	3.1	–	–	–	–
Montenegro	6.2	1.0	2.7	2.5	2.9	33.9	90.2	90.6	90.0
Netherlands	4.3	2.6	3.9	3.5	4.3	88.2	–	–	–
North Macedonia	3.0	2.2	4.6	4.2	5.0	31.2	81.8	89.3	75.9
Norway	1.7	1.3	2.2	1.9	2.4	89.4	–	–	–
Poland	2.0	2.7	4.4	4.0	4.8	71.4	–	–	–
Portugal	11.8	1.6	3.2	2.9	3.4	77.7	–	–	–
Republic of Moldova	12.3	10.5	14.2	12.6	15.7	62.6	83.8	84.2	83.4
Romania	10.1	3.3	6.8	6.1	7.3	74.0	–	–	–

Table A2.2(a). contd

	Estimated maternal mortality (per 100 000 live births)	Neonatal mortality (0–27 days; per 1000 live births)	Under-5 mortality (per 1000 live births)			Demand for family planning satisfied with modern methods (%)	Early childhood development (%)[a]		
			Both sexes	Females	Males		Both sexes	Females	Males
Russian Federation	13.7	1.8	4.8	4.3	5.2	75.1	–	–	–
San Marino	–	0.7	1.5	1.3	1.6	–	–	–	–
Serbia	10.2	3.2	5.1	4.6	5.6	42.2	97.2	98.5	95.9
Slovakia	4.8	3.0	5.9	5.3	6.5	78.7	–	–	–
Slovenia	4.5	1.3	2.3	2.1	2.5	78.4	–	–	–
Spain	3.4	1.7	3.0	2.7	3.3	84.1	–	–	–
Sweden	4.5	1.4	2.5	2.3	2.7	86.2	–	–	–
Switzerland	7.4	2.9	4.0	3.7	4.4	85.6	–	–	–
Tajikistan	16.6	13.1	30.3	26.5	34.0	56.3	–	–	–
Türkiye	17.3	5.0	9.6	8.9	10.3	61.7	73.7	78.0	69.8
Turkmenistan	5.2	23.0	40.4	34.6	45.8	76.6	95.0	95.3	94.7
Ukraine	16.5	4.8	8.5	7.7	9.3	72.0	89.0	89.3	88.7
United Kingdom	9.8	2.7	4.1	3.7	4.5	83.4	–	–	–
Uzbekistan	30.2	7.6	13.3	11.7	15.0	81.0	82.6	86.2	79.3
No. Member States with no available data	3	0	0	0	0	6	40	40	40

(b) Child overweight and obesity, and violence against children and women

	Overweight in children aged 7–9 years (%)[b]			Obesity in children aged 7–9 years (%)[b]			Violence against children (%)[c]	Proportion of women aged ≥ 15 years subjected to physical and/or sexual violence by a current or former intimate partner since 15 years of age (%)[d]
	Both sexes	Females	Males	Both sexes	Females	Males		
Type of indicator	Core	Core	Core	Core	Core	Core	Development	Core
Policy framework from which indicator was taken or adapted	GMF-NCD	GMF-NCD	GMF-NCD	GMF-NCD	GMF-NCD	GMF-NCD	SDG 16.2.1	SDG 5.2.1
Data source	WHO *(10)*	WHO *(10)*	WHO *(10)*	WHO *(10)*	WHO *(10)*	WHO *(10)*	UNICEF *(11)*	WHO *(12)*
Year of data	2018–2020	2018–2020	2018–2020	2018–2020	2018–2020	2018–2020	2015–2022	2018
Regional average	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	**21**
Albania	–	–	–	–	–	–	–	13
Andorra	–	–	–	–	–	–	–	–
Armenia	27.5	24.7	29.9	12.6	9.6	15.2	68.9	10
Austria	25.3	25.1	25.5	9.1	7.1	11.3	–	15
Azerbaijan	–	–	–	–	–	–	–	14
Belarus	–	–	–	–	–	–	57.0	21
Belgium	–	–	–	–	–	–	–	22
Bosnia and Herzegovina	–	–	–	–	–	–	–	12
Bulgaria	30.5	28.9	32.0	13.6	12.0	15.2	–	19

Table A2.2(b). contd

	Overweight in children aged 7–9 years (%)[b]			Obesity in children aged 7–9 years (%)[b]			Violence against children (%)[c]	Proportion of women aged ≥ 15 years subjected to physical and/or sexual violence by a current or former intimate partner since 15 years of age (%)[d]
	Both sexes	Females	Males	Both sexes	Females	Males		
Croatia	35.0	33.2	36.8	14.8	11.8	17.7	–	13
Cyprus	43.3	39.0	47.9	19.5	15.3	24.1	–	16
Czechia	21.0	19.6	22.4	8.5	6.6	10.4	–	22
Denmark	18.7	19.1	18.4	5.7	4.8	6.6	–	23
Estonia	26.0	25.0	27.1	10.2	9.0	11.4	–	21
Finland	28.3	28.1	28.6	11.2	10.0	12.4	–	23
France	–	–	–	–	–	–	–	22
Georgia	28.3	25.4	31.0	11.6	9.2	13.9	68.8	10
Germany	25.9	23.5	28.2	10.3	8.2	12.3	–	21
Greece	42.1	40.4	43.9	17.1	13.3	20.8	–	18
Hungary	29.8	29.9	29.7	13.7	12.3	15.0	–	19
Iceland	–	–	–	–	–	–	–	21
Ireland	24.1	24.4	23.8	7.6	6.7	8.5	–	16
Israel	19.4	19.2	19.5	7.1	6.3	7.8	–	–
Italy	38.8	36.4	41.3	17.1	13.8	20.5	–	16
Kazakhstan	20.4	17.4	23.6	6.5	5.5	7.5	52.7	16
Kyrgyzstan	–	–	–	–	–	–	74.3	23
Latvia	23.8	22.5	25.0	8.8	7.8	9.8	–	25
Lithuania	24.9	25.3	24.6	9.2	9.1	9.3	–	22

Table A2.2(b). contd

	Overweight in children aged 7–9 years (%)[b]			Obesity in children aged 7–9 years (%)[b]			Violence against children (%)[c]	Proportion of women aged ≥ 15 years subjected to physical and/or sexual violence by a current or former intimate partner since 15 years of age (%)[d]
	Both sexes	Females	Males	Both sexes	Females	Males		
Luxembourg	–	–	–	–	–	–	–	20
Malta	33.0	31.1	34.9	14.9	12.2	17.5	–	17
Monaco	–	–	–	–	–	–	–	–
Montenegro	31.1	28.1	33.9	13.0	10.4	15.5	65.8	16
Netherlands	–	–	–	–	–	–	–	21
North Macedonia	31.6	31.4	31.8	15.3	12.5	18.0	73.1	13
Norway	–	–	–	–	–	–	–	20
Poland	32.3	28.6	35.9	13.6	9.4	17.6	–	13
Portugal	31.0	32.5	29.6	12.5	12.1	12.9	–	18
Republic of Moldova	–	–	–	–	–	–	–	27
Romania	26.2	26.1	26.3	11.7	9.6	13.7	–	18
Russian Federation	23.2 (Moscow); 22.7 (Yekaterinburg)	22.5 (Moscow); 20.6 (Yekaterinburg)	23.9 (Moscow); 24.8 (Yekaterinburg)	8.4 (Moscow); 8.4 (Yekaterinburg)	7.0 (Moscow); 6.2 (Yekaterinburg)	9.9 (Moscow); 10.8 (Yekaterinburg)	–	–
San Marino	33.2	30.4	35.8	11.2	8.9	13.3	–	–
Serbia	31.3	27.1	35.3	12.3	9.3	15.0	44.5	17
Slovakia	27.1	25.9	28.3	10.9	10.3	11.4	–	18
Slovenia	24.5	23.7	25.3	9.1	7.8	10.3	–	18

Table A2.2(b). contd

	Overweight in children aged 7–9 years (%)[b]			Obesity in children aged 7–9 years (%)[b]			Violence against children (%)[c]	Proportion of women aged ≥ 15 years subjected to physical and/or sexual violence by a current or former intimate partner since 15 years of age (%)[d]
	Both sexes	Females	Males	Both sexes	Females	Males		
Spain	38.8	39.3	38.4	16.1	14.2	17.8	–	15
Sweden	31.1	30.5	31.7	12.1	10.0	14.1	–	21
Switzerland	–	–	–	–	–	–	–	12
Tajikistan	6.1	5.5	6.7	1.4	1.0	1.8	69.0	24
Türkiye	–	–	–	–	–	–	–	32
Turkmenistan	–	–	–	–	–	–	68.6	–
Ukraine	–	–	–	–	–	–	–	18
United Kingdom	–	–	–	–	–	–	–	24
Uzbekistan	–	–	–	–	–	–	62.2	–
No. Member States with no available data	20	20	20	20	20	20	42	7

Note: GMF-NCD: Global Monitoring Framework on NCDs; n.a.: not available; UNICEF: United Nations Children's Fund; UNIGME: United Nations Inter-Agency Group for Child Mortality Estimation.

[a] Latest year of available data is 2012 for Bosnia and Herzegovina, Republic of Moldova and Ukraine; 2015 for Kazakhstan; 2018 for Georgia, Kyrgyzstan, Montenegro and Türkiye; 2019 for Belarus, North Macedonia, Serbia and Turkmenistan; and 2022 for Uzbekistan.

[b] Data relate to (i) 7-year-old children in Armenia, Bulgaria, Czechia, Denmark, Estonia, Finland, Germany (State of Bremen only), Georgia, Greece, Hungary, Ireland, Israel, Kazakhstan Latvia, Lithuania, Malta, Montenegro, North Macedonia, Portugal, Romania, Russian Federation (Moscow and Yekaterinburg), Serbia, Slovakia, Slovenia, Spain, Tajikistan; (ii) 8-year-old children in Austria, Croatia, Italy, Poland, San Marino and Sweden; and (iii) 9-year-old children in Cyprus.

[c] Latest survey data available for 11 Member States, with latest year of available data 2015 for Kazakhstan; 2016 for Armenia; 2017 for Tajikistan; 2018 for Georgia, Kyrgyzstan and Montenegro; 2019 for Belarus, North Macedonia, Serbia and Turkmenistan; and 2022 for Uzbekistan.

[d] Estimates are based on data from surveys and studies conducted between 2000 and 2018 among ever-married/partnered women aged 15–49 years subject to physical and/or sexual violence by a current of former intimate partner since the age of 15 years.

Table A2.3. Member State level data used for Chapter 4: infectious diseases

(a) Water and sanitation, vaccination, antibiotics and tuberculosis

	Population using safely managed drinking water services (%)	Population using safely managed sanitation services (%)	PCVf (%)	MCV2 (%)	DTP3 (%)	Human papilloma virus vaccine introduction	Use of ACCESS antibiotics as percentage of overall (or total) antibiotic consumption[a]	Multidrug/ rifampicin-resistant tuberculosis: successful treatment (%)
Type of indicator	**Core**	**Core**	**Core**	**Core**	**Core**	**Core**	**Core**	**Core**
Policy framework from which indicator was taken or adapted	**SDG 6.1.1**	**SDG 6.2.1**	**SDG 3.b.1; EIA 2030**	**SDG 3.b.1; EIA 2030**	**SDG 3.b.1; EIA 2030**	**Global and regional strategy to accelerate the elimination of cervical cancer**	**World Health Assembly resolution 68.7**	**Adapted from SDG 3.8.1 UHC index; top 10 indicator of the global End TB Strategy**
Data source	**WHO/UNICEF JMP *(13)***	**WHO/UNICEF JMP *(13)***	**WHO *(14)***	**WHO *(14)***	**WHO *(14)***	**WHO *(14)***	**ESAC-Net/ AMC Network/ GLASS *(15–17)***	**WHO Regional Office for Europe *(18)*, WHO *(19)***
Year of data	**2022**	**2022**	**2023**	**2023**	**2023**	**2023**	**2022**	**2020**
Regional average	**92.1 (95.1 urban; 83.9 rural)**	**78.4 (81.8 urban; 69.3 rural)**	**86**	**91**	**95**	u.p.	**54.7 (2021)**	**57.3**
Albania	70.7	56.4	85	93	97	Yes	39.0	50.0
Andorra	90.6	100	94	96	98	Yes	–	–
Armenia	82.4	10.8	94	96	94	Yes	50.0	62.2

Table A2.3(a). contd

	Population using safely managed drinking water services (%)	Population using safely managed sanitation services (%)	PCVf (%)	MCV2 (%)	DTP3 (%)	Human papilloma virus vaccine introduction	Use of ACCESS antibiotics as percentage of overall (or total) antibiotic consumption[a]	Multidrug/ rifampicin-resistant tuberculosis: successful treatment (%)
Austria	98.9	99.7	–	94	84	Yes	59.5	0
Azerbaijan	71.6	69.0	82	93	83	No	50.0	61.4
Belarus	93.1	75.0	–	95	98	No	68.0	79.9
Belgium	99.7	94.9	94	82	98	Yes	69.5	64.7
Bosnia and Herzegovina	87	54.6	–	63	73	Yes	62.0	–
Bulgaria	95.7	73.5	87	87	92	Yes	40.7	–
Croatia	96.6 (urban)	78.0	90	90	93	Yes	60.1	100
Cyprus	99.8	76.8	74	80	95	Yes	55.4	–
Czechia	97.9	89.7	–	90	94	Yes	58.9	9.1
Denmark	99.9	98.8	97	93	97	Yes	80.1	–
Estonia	97.0	90.4	–	84	90	Yes	64.0	80.0
Finland	99.6	90.0	87	92	91	Yes	72.3	–
France	99.7	89.7	96	93	96	Yes	71.3	–
Georgia	69.1	24.1	86	86	88	Yes	42.0	75.8
Germany	99.9	96.9	82	93	91	Yes	64.0	47.0
Greece	98.9	92.2	96	83	99	Yes	42.6	–
Hungary	100	87.8	99	99	99	Yes	49.1	60.0

Table A2.3(a). contd

	Population using safely managed drinking water services (%)	Population using safely managed sanitation services (%)	PCVf (%)	MCV2 (%)	DTP3 (%)	Human papilloma virus vaccine introduction	Use of ACCESS antibiotics as percentage of overall (or total) antibiotic consumption[a]	Multidrug/ rifampicin-resistant tuberculosis: successful treatment (%)
Iceland	100		92	89	92	Yes	83.7	–
Ireland	96.0	79.8	83	–	89	Yes	74.0	–
Israel	99.5	96.3	94	92	98	Yes	–	75.0
Italy	92.7	79.0	92	85	95	Yes	47.2	–
Kazakhstan	89.4	84.3 (urban)	98	99	99	No	–	75.9
Kyrgyzstan	76.5	92.6	91	93	86	Yes	67.0	71.7
Latvia	97.1	85.2	95	92	98	Yes	70.9	–
Lithuania	95	95.3	82	86	90	Yes	70.7	50.5
Luxembourg	99.5	95.8	96	90	99	Yes	60.8	–
Malta	99.8	88.2	97	95	98	Yes	55.0	100
Monaco	100	100	–	80	99	Yes	–	–
Montenegro	85.1	57.4	–	69	81	Yes	51.0	–
Netherlands	100	97.5	88	81	92	Yes	71.0	100
North Macedonia	80.5	12.2	56	88	86	Yes	48.0	100
Norway	98.8	78.1	95	94	96	Yes	62.0	100
Poland	88.9	97.9	88	86	94	No	56.7	–
Portugal	95.2	92.8	98	95	99	Yes	61.0	81.3

Table A2.3(a). contd

	Population using safely managed drinking water services (%)	Population using safely managed sanitation services (%)	PCVf (%)	MCV2 (%)	DTP3 (%)	Human papilloma virus vaccine introduction	Use of ACCESS antibiotics as percentage of overall (or total) antibiotic consumption[a]	Multidrug/ rifampicin-resistant tuberculosis: successful treatment (%)
Republic of Moldova	75.2	84.6 (urban)	85	93	87	Yes (partial)	–	61.8
Romania	82.1	87.6	78	62	78	Yes	50.3	48.1
Russian Federation	76.2	61.2	93	97	97	No	45.0	51.0
San Marino	100	90.2	83	79	91	Yes	–	–
Serbia	75.1	25.4	82	91	93	Yes	49.0	100
Slovakia	99.2	82.5	96	95	96	Yes	37.7	100
Slovenia	98.3	84.0	58	89	89	Yes	61.7	100
Spain	99.6	90.0	92	92	93	Yes	61.2	–
Sweden	99.7	95.6	94	92	94	Yes	–	83.3
Switzerland	96.7	99.8	89	91	95	Yes	66.0	100
Tajikistan	55.3	59.3 (rural)	31	96	96	No	48.0	80.6
Türkiye	–	78.7	95	94	99	No	54.0	53.0
Turkmenistan	94.9	–	99	99	98	Yes	–	59.9
Ukraine	87.6	71.9	–	87	83	No	40.0	65.1
United Kingdom	99.8	98.1	89	85	92	Yes	71.0	78.6
Uzbekistan	79.9	74.5	99	99	99	Yes	–	–
No. Member States with no available data	1	2	8	1	0	0	9	19

(b) HIV, hepatitis C, progress in eliminating infectious diseases, immunization policy support

	Antiretroviral therapy coverage for HIV/AIDS (%)	Hepatitis C treatment coverage (%)	Progress in measles elimination and control	Progress in rubella elimination and control	Polio-free status (Yes/No)	Polio risk assessment	Has legislation supportive of immunization, with government commitment to finance all aspects of the immunization programme at all levels (Yes/No)
Type of indicator	**Core**	**Core**	**Flagship**	**Flagship**	**Flagship**	**Flagship**	**Flagship**
Policy framework from which indicator was taken or adapted	**SDG 3.8.1 (UHC index)**	**SDG 3.3**	**EIA 2030**	**EIA 2030**	**EIA 2030**	**EIA 2030**	**EIA 2030**
Data source	**WHO Regional Office for Europe *(20)*, Joint United Nations Programme on HIV and AIDS *(21)*, WHO *(22)***	**WHO *(23,24)***	**WHO Regional Office for Europe *(25)***	**WHO Regional Office for Europe *(25)***	**WHO Regional Office for Europe *(26)***	**WHO Regional Office for Europe *(26)***	**WHO Regional Office for Europe *(27)***
Year of data	**2018–2022**	**2022**	**2022**	**2022**	**2022**	**2022**	**2023**
Regional average	**63.0 (2022)**	**9.0**	u.p.	u.p.	u.p.	u.p.	u.p.
Albania	57	16.6	Not achieved	Achieved	Yes	Low	Yes
Andorra	–	39.2	Achieved	Achieved	Yes	Low	Yes
Armenia	53	34.2	Achieved	Achieved	Yes	Intermediate	Yes
Austria	92	–	Achieved	Achieved	Yes	Intermediate	No
Azerbaijan	61	–	Achieved	Achieved	Yes	Intermediate	Yes
Belarus	79	4.9	Achieved	Achieved	Yes	Low	Yes

Table A2.3(b). contd

	Antiretroviral therapy coverage for HIV/AIDS (%)	Hepatitis C treatment coverage (%)	Progress in measles elimination and control	Progress in rubella elimination and control	Polio-free status (Yes/No)	Polio risk assessment	Has legislation supportive of immunization, with government commitment to finance all aspects of the immunization programme at all levels (Yes/No)
Belgium	84	–	Achieved	Achieved	Yes	Intermediate	Yes
Bosnia and Herzegovina	–	17.2	Not achieved	Not achieved	Yes	High	Yes
Bulgaria	67	–	Not achieved	Achieved	Yes	Low	Yes
Croatia	79	–	Achieved	Achieved	Yes	Low	Yes
Cyprus	86	–	Achieved	Achieved	Yes	Low	No
Czechia	77	–	Achieved	Achieved	Yes	Low	Yes
Denmark	86	–	Achieved	Achieved	Yes	Low	Yes
Estonia	–	–	Achieved	Achieved	Yes	Intermediate	Yes
Finland	87	–	Achieved	Achieved	Yes	Low	Yes
France	83	–	Not achieved	Achieved	Yes	Low	Yes
Georgia	72	64.7	Not achieved	Achieved	Yes	Intermediate	Yes
Germany	87	–	Not achieved	Achieved	Yes	Low	No
Greece	69	–	Achieved	Achieved	Yes	Low	Yes
Hungary	–	–	Achieved	Achieved	Yes	Low	Yes
Iceland	85	–	Achieved	Achieved	Yes	Low	Yes
Ireland	79	–	Achieved	Achieved	Yes	Low	Yes
Israel	–	21.5	Not achieved	Not achieved	Yes	Low	–

Table A2.3(b). contd

	Antiretroviral therapy coverage for HIV/AIDS (%)	Hepatitis C treatment coverage (%)	Progress in measles elimination and control	Progress in rubella elimination and control	Polio-free status (Yes/No)	Polio risk assessment	Has legislation supportive of immunization, with government commitment to finance all aspects of the immunization programme at all levels (Yes/No)
Italy	88	–	Not achieved	Achieved	Yes	Low	Yes
Kazakhstan	–	10.8	Not achieved	Achieved	Yes	Low	Yes
Kyrgyzstan	54	4.1	Not achieved	Achieved	Yes	Intermediate	Yes
Latvia	42	–	Achieved	Achieved	Yes	Low	Yes
Lithuania	41	–	Not achieved	Achieved	Yes	Low	Yes
Luxembourg	81	–	Achieved	Achieved	Yes	Low	Yes
Malta	65	–	Achieved	Achieved	Yes	Low	Yes
Monaco	65	41.1	Achieved	Achieved	Yes	Low	No
Montenegro	57	16.5	Achieved	Achieved	Yes	Intermediate	Yes
Netherlands	89	–	Achieved	Achieved	Yes	Low	Yes
North Macedonia	–	16.6	Achieved	Achieved	Yes	Intermediate	Yes
Norway	93	–	Achieved	Achieved	Yes	Low	Yes
Poland	71	–	Not achieved	Not achieved	Yes	Intermediate	Yes
Portugal	–	–	Achieved	Achieved	Yes	Low	Yes
Republic of Moldova	49	4.4	Achieved	Achieved	Yes	Intermediate	Yes
Romania	76	–	Not achieved	Achieved	Yes	Intermediate	No
Russian Federation	–	5.4	Not achieved	Achieved	Yes	Low	Yes

Table A2.3(b). contd

	Antiretroviral therapy coverage for HIV/AIDS (%)	Hepatitis C treatment coverage (%)	Progress in measles elimination and control	Progress in rubella elimination and control	Polio-free status (Yes/No)	Polio risk assessment	Has legislation supportive of immunization, with government commitment to finance all aspects of the immunization programme at all levels (Yes/No)
San Marino	–	41.0	Achieved	Achieved	Yes	Low	Yes
Serbia	63	16.9	Not achieved	Achieved	Yes	Intermediate	Yes
Slovakia	66	–	Not achieved	Achieved	Yes	Low	Yes
Slovenia	84	–	Achieved	Achieved	Yes	Intermediate	Yes
Spain	90	–	Achieved	Achieved	Yes	Low	Yes
Sweden	89	–	Achieved	Achieved	Yes	Low	Yes
Switzerland	90	35.7	Achieved	Achieved	Yes	Low	No
Tajikistan	63	3.1	Not achieved	Achieved	Yes	Low	Yes
Türkiye	–	16.1	Not achieved	Achieved	Yes	Low	Yes
Turkmenistan	–	7.8	Achieved	Achieved	Yes	Low	Yes
Ukraine	–	4.3	Not achieved	Not achieved	Yes	High	Yes
United Kingdom	94	–	Achieved	Achieved	Yes	Low	Yes
Uzbekistan	44	8.4	Not achieved	Achieved	Yes	Low	Yes
No. Member States with no available data	13	31	0	0	0	0	1.0

Notes: DTP3: diphtheria–tetanus–pertussis vaccine third dose; EIA: European Immunization Agenda; MCV2: second dose of the measles-containing vaccine; PCVf: pneumococcal conjugate vaccine final dose; u.p.: unapplicable; WHO/UNICEF JMP: WHO/UNICEF Join Monitoring Programme for Water Supply, Sanitation and Hygiene.

[a] AWaRe classification to optimize and monitor global antibiotic use has three categories (Access, Watch and Reserve); Access group antibiotics are recommended as the first or second choice for empirical treatment due to their lower resistance potential.

Table A2.4. Member State level data used for Chapter 5: noncommunicable diseases

(a) NCD-linked mortality, cancer, hypertension and obesity

	Risk of premature death from the four target NCDs (%)	All cancers excluding non-melanoma skin cancer (age 0–74 years) (%)			Age-standardized prevalence of hypertension (aged 30–79 years) (%)			Prevalence of obesity in adults (%)
		Cumulative risk of developing cancer	Cumulative risk of dying from cancer	Mortality to incidence ratio (derived from absolute numbers in data source)	Both sexes	Females	Males	
Type of indicator	Core	Additional	Additional	Additional	Core	Core	Core	Core
Policy framework from which indicator was taken or adapted	SDG 3.4.1	SDG 3.4; GMF-NCD	SDG 3.4; GMF-NCD	SDG 3.4; GMF-NCD	GMF-NCD	GMF-NCD	GMF-NCD	GMF-NCD
Data source	WHO *(28)*	Ferlay et al. *(29)*	Ferlay et al. *(29)*	Ferlay et al. *(29)*	WHO *(30)*	WHO *(30)*	WHO *(30)*	WHO *(31)*
Year of data	2019	2022	2022	2022	2019	2019	2019	2022
Regional average	**16.4**	**25.9**	**11.4**	u.p.	**36.9**	**33.4**	**40.4**	**22.6**
Albania	11.4	15.5	10.3	0.64	41.8	40.8	42.6	23.4
Andorra	–	–	–	–	31.0	26.2	35.7	18.1
Armenia	19.9	21.2	12.9	0.62	47.3	46.2	48.5	24.5
Austria	10.4	24.8	9.9	0.49	33.8	30.2	37.5	15.4
Azerbaijan	27.2	15.6	10.1	0.62	41.0	42.1	39.6	26.5
Belarus	23.8	28.1	14.3	0.50	49.2	46.6	51.6	21.4

Table A2.4(a). contd

	Risk of premature death from the four target NCDs (%)	All cancers excluding non-melanoma skin cancer (age 0–74 years) (%)			Age-standardized prevalence of hypertension (aged 30–79 years) (%)			Prevalence of obesity in adults (%)
		Cumulative risk of developing cancer	Cumulative risk of dying from cancer	Mortality to incidence ratio (derived from absolute numbers in data source)	Both sexes	Females	Males	
Belgium	10.6	29.8	9.7	0.40	30.0	26.1	33.8	20.0
Bosnia and Herzegovina	18.7	22.3	13.0	0.62	44.2	41.3	46.9	21.2
Bulgaria	24.2	22.6	12.5	0.59	45.2	40.7	49.4	20.6
Croatia	16.1	30.5	13.6	0.50	48.4	45.3	51.4	30.6
Cyprus	8.2	27.1	11.5	0.47	30.8	26.0	35.7	22.9
Czechia	14.3	27.4	11.4	0.46	41.6	34.0	49.1	26.0
Denmark	10.8	33.5	11.0	0.39	35.9	28.6	43.3	13.3
Estonia	14.9	28.7	12.7	0.52	40.2	34.2	45.9	22.2
Finland	9.6	26.3	8.5	0.38	35.9	30.6	41.0	21.5
France	10.6	31.1	11.1	0.44	29.1	24.4	34.1	9.7
Georgia	24.9	20.4	12.2	0.62	44.5	42.3	46.5	34.7
Germany	12.1	25.5	10.7	0.48	29.7	25.0	34.4	20.4
Greece	12.5	25.8	10.6	0.51	31.3	26.2	36.5	28.0
Hungary	22.1	31.9	15.8	0.52	48.3	40.9	55.9	31.7
Iceland	8.7	25.8	8.6	0.40	27.5	24.2	30.9	21.2
Ireland	9.7	29.8	9.8	0.38	32.3	26.6	38.2	28.3
Israel	8.8	24.3	8.2	0.42	29.1	25.3	33.0	22.5

Table A2.4(a). contd

	Risk of premature death from the four target NCDs (%)	All cancers excluding non-melanoma skin cancer (age 0–74 years) (%)			Age-standardized prevalence of hypertension (aged 30–79 years) (%)			Prevalence of obesity in adults (%)
		Cumulative risk of developing cancer	Cumulative risk of dying from cancer	Mortality to incidence ratio (derived from absolute numbers in data source)	Both sexes	Females	Males	
Italy	9.0	26.9	9.6	0.47	33.8	28.6	39.1	17.3
Kazakhstan	22.4	17.1	10.7	0.60	41.9	42.5	40.9	18.4
Kyrgyzstan	20.3	13.4	9.5	0.66	40.9	43.2	38.1	26.6
Latvia	21.6	29.1	13.7	0.52	43.9	38.9	48.9	24.3
Lithuania	19.3	29.1	13.8	0.51	48.0	42.0	54.0	25.4
Luxembourg	9.7	23.9	8.2	0.37	30.5	24.2	36.6	18.4
Malta	10.5	26.9	8.7	0.38	29.5	24.8	34.1	32.3
Monaco	–	–	–	–	–	–	–	–
Montenegro	22.3	23.2	13.0	0.61	45.1	40.8	49.5	18.0
Netherlands	10.3	30.8	10.7	0.43	30.5	24.8	36.2	14.5
North Macedonia	22.7	21.5	12.6	0.60	45.1	40.7	49.4	27.5
Norway	8.7	32.6	8.8	0.36	30.5	25.5	35.3	19.1
Poland	17.0	26.5	14.5	0.59	49.2	42.7	55.5	27.5
Portugal	11.0	28.0	11.1	0.50	32.3	28.0	37.0	21.8
Republic of Moldova	24.1	22.9	14.3	0.61	48.3	46.9	49.3	23.0
Romania	21.0	27.4	14.5	0.55	48.4	43.9	52.6	34.0

Table A2.4(a). contd

	Risk of premature death from the four target NCDs (%)	All cancers excluding non-melanoma skin cancer (age 0–74 years) (%)			Age-standardized prevalence of hypertension (aged 30–79 years) (%)			Prevalence of obesity in adults (%)
		Cumulative risk of developing cancer	Cumulative risk of dying from cancer	Mortality to incidence ratio (derived from absolute numbers in data source)	Both sexes	Females	Males	
Russian Federation	24.2	25.5	12.8	0.50	44.3	41.2	47.3	24.2
San Marino	–	–	–	–	–	–	–	–
Serbia	22.0	25.1	14.1	0.58	46.1	42.1	49.9	22.5
Slovakia	15.5	28.1	13.5	0.51	42.7	38.0	47.4	26.8
Slovenia	11.4	29.6	12.3	0.50	45.3	40.7	49.6	19.4
Spain	9.6	27.2	9.5	0.43	27.2	20.8	33.5	15.7
Sweden	8.4	28.8	8.6	0.41	30.2	24.6	35.6	15.3
Switzerland	7.9	25.9	8.2	0.40	21.9	17.5	26.4	12.1
Tajikistan	28.3	9.2	6.7	0.66	46.8	42.8	50.9	23.8
Türkiye	15.6	22.1	12.5	0.56	32.8	34.4	30.8	33.3
Turkmenistan	27.7	12.5	9.1	0.67	39.0	40.2	37.6	21.4
Ukraine	25.5	21.2	12.0	0.55	43.1	41.6	44.5	23.6
United Kingdom	10.3	28.5	9.9	0.43	26.4	23.0	29.9	26.8
Uzbekistan	25.3	12.1	8.1	0.62	45.7	44.6	46.7	30.0
No. Member States with no available data	3	3	3	3	2	2	2	3

(b) Trans-fatty acids, alcohol and tobacco

	Best practice policy implemented for industrially produced trans-fatty acids	Pure alcohol consumption (litres per capita, aged 15+ years)			Prevalence of tobacco use (age ≥ 15 years) (%)		
		Both sexes	Females	Males	Both sexes	Females	Males
Type of indicator	**Core**	**Core**	**Core**	**Core**	**Core**	**Core**	**Core**
Policy framework from which indicator was taken or adapted	**GMF-NCD**	**SDG 3.5.2; GMF-NCD**	**SDG 3.5.2; GMF-NCD**	**SDG 3.5.2; GMF-NCD**	**SDG 3.a.1; GMF-NCD**	**SDG 3.a.1; GMF-NCD**	**SDG 3.a.1; GMF-NCD**
Data source	**WHO *(32)***	**WHO *(33)***	**WHO *(33)***	**WHO *(33)***	**WHO *(34)***	**WHO *(34)***	**WHO *(34)***
Year of data	**2024**	**2020**	**2020**	**2020**	**2022**	**2022**	**2022**
Regional average	u.p.	**8.8**	**3.8**	**14.3**	**25.3**	**18.5**	**32.0**
Albania	National policy commitment	4.5	1.6	7.4	21.9	6.0	37.8
Andorra	–	9.7	4.4	14.8	36.3	37.9	34.8
Armenia	Less restrictive	4.3	1.8	7.5	24.9	1.5	48.2
Austria	Best practice	11.5	5.2	18.1	24.9	24.0	25.8
Azerbaijan	Less restrictive	2.5	0.7	4.4	19.6	0.1	39.0
Belarus	Less restrictive	11.6	5.2	19.4	30.1	13.9	46.3
Belgium	Best practice	9.4	4.3	14.8	26.7	24.5	29.0
Bosnia and Herzegovina	National policy commitment	5.9	2.0	9.9	36.2	30.9	41.6

Table A2.4(b). contd

	Best practice policy implemented for industrially produced trans-fatty acids	Pure alcohol consumption (litres per capita, aged 15+ years)			Prevalence of tobacco use (age ≥ 15 years) (%)		
		Both sexes	Females	Males	Both sexes	Females	Males
Bulgaria	Best practice	11.6	4.8	19.0	39.5	38.7	40.3
Croatia	Best practice	7.6	3.3	12.4	37.0	37.3	36.7
Cyprus	Best practice	6.4	2.7	10.1	35.6	23.9	47.2
Czechia	Best practice	12.0	5.2	19.0	29.9	26.5	33.4
Denmark	Best practice	9.5	4.3	14.8	16.2	16.1	16.4
Estonia	Best practice	10.7	4.8	17.4	28.3	22.8	33.8
Finland	Best practice	9.1	4.1	14.2	22.3	18.5	26.1
France	Best practice	10.3	4.7	16.5	34.6	33.7	35.5
Georgia	Less restrictive	14.4	5.9	24.5	31.8	7.6	55.9
Germany	Best practice	11.8	5.3	18.6	21.3	19.3	23.2
Greece	Best practice	5.8	2.5	9.3	32.8	30.6	35.0
Hungary	Best practice	9.9	4.4	16.1	32.2	28.1	36.3
Iceland	Best practice	7.9	3.6	12.1	9.4	9.4	9.3
Ireland	Best practice	10.8	5.1	16.6	19.3	17.0	21.5
Israel	Other complimentary	2.8	1.2	4.5	20.4	13.8	27.0
Italy	Best practice	7.0	3.1	11.1	22.4	19.1	25.7

Table A2.4(b). contd

	Best practice policy implemented for industrially produced trans-fatty acids	Pure alcohol consumption (litres per capita, aged 15+ years)			Prevalence of tobacco use (age ≥ 15 years) (%)		
		Both sexes	Females	Males	Both sexes	Females	Males
Kazakhstan	Less restrictive	4.5	1.4	8.1	22.2	7.0	37.4
Kyrgyzstan	Less restrictive	3.6	1.0	6.4	27.3	3.3	51.3
Latvia	Best practice	12.9	5.9	21.3	33.9	21.1	46.6
Lithuania	Best practice	12.1	5.5	19.8	31.4	21.6	41.1
Luxembourg	Best practice	10.8	5.1	16.5	23.0	21.6	24.4
Malta	Best practice	7.1	3.1	10.8	24.7	23.2	26.3
Monaco	–	–	–	–	–	–	–
Montenegro	Best practice	10.3	4.3	16.9	32.0	33.2	30.9
Netherlands	Best practice	8.7	4.0	13.6	21.3	19.0	23.5
North Macedonia	Best practice	4.4	1.5	7.3	–	–	–
Norway	Best practice	7.4	3.3	11.4	14.2	13.5	14.9
Poland	Best practice	11.7	5.2	18.7	23.6	20.1	27.1
Portugal	Best practice	8.9	4.1	14.4	25.6	20.7	30.5
Republic of Moldova	Best practice	11.1	4.9	18.1	29.7	7.0	52.4
Romania	Best practice	16.8	7.4	27.0	30.0	21.5	38.6
Russian Federation	Less restrictive	10.5	4.2	18.1	29.2	17.4	41.1
San Marino	–	–	–	–	–	–	–

Table A2.4(b). contd

	Best practice policy implemented for industrially produced trans-fatty acids	Pure alcohol consumption (litres per capita, aged 15+ years)			Prevalence of tobacco use (age ≥ 15 years) (%)		
		Both sexes	Females	Males	Both sexes	Females	Males
Serbia	–	7.9	3.4	12.9	39.5	39.1	39.9
Slovakia	Best practice	10.7	4.7	17.1	32.4	28.5	36.3
Slovenia	Best practice	10.4	4.4	16.4	20.1	18.5	21.8
Spain	Best practice	9.2	4.1	14.5	28.4	27.5	29.4
Sweden	Best practice	9.6	4.3	14.8	22.7	16.4	28.9
Switzerland	Less restrictive	10.1	4.6	15.7	25.5	22.9	28.2
Tajikistan	Other complimentary	0.7	0.2	1.3	–	–	–
Türkiye	Best practice	1.7	0.4	3.0	30.5	19.8	41.2
Turkmenistan	Less restrictive measure	2.6	0.7	4.6	5.6	0.5	10.7
Ukraine	Best practice	9.2	4.0	15.5	24.9	11.5	38.4
United Kingdom	Best practice	10.7	4.9	16.8	14.2	12.4	16.1
Uzbekistan	Less restrictive	2.1	0.6	3.7	16.7	1.0	32.4
No. Member States with no available data	4	2	2	2	4	4	4

Notes: GMF-NCD: Global Monitoring Framework on NCDs; NCD: noncommunicable disease; u.p.: unapplicable.

Table A2.5. Member State level data used for Chapter 6: mental health

(a) Well-being, depression, dementia and suicide

	Mean mental well-being score (WHO-5 tool) among 15-year-old girls[a]	Mean mental well-being score (WHO-5 tool) among 15-year-old boys[a]	Prevalence of depressive disorders (%)	Estimated DALYs (thousands) for Alzheimer's disease and other dementias, all age groups and both sexes	Age-standardized suicide mortality (per 100 000 population) all ages, both sexes	Age-standardized suicide mortality (per 100 000 population) all ages, females	Age-standardized suicide mortality (per 100 000 population) all ages, males
Type of indicator	**Development**	**Development**	**Development**	**Development**	**Core**	**Core**	**Core**
Policy framework from which indicator was taken or adapted	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**SDG 3.4.2**	**SDG 3.4.2**	**SDG 3.4.2**
Data source	**MRC/CSO Unit *(35)***	**MRC/CSO Unit *(35)***	**IHME *(36)***	**WHO *(37)***	**WHO *(38)***	**WHO *(38)***	**WHO *(38)***
Year of data	**2022**	**2022**	**2021**	**2021**	**2021**	**2021**	**2021**
Regional average	n.a.	n.a.	n.a.	n.a.	**12.4**	**5.7**	**19.5**
Albania	60	72	3.7	16.5	2.1	1.7	2.6
Andorra	–	–	5.5	–	–	–	–
Armenia	62	70	4.6	6.3	1.9	0.7	3.6
Austria	45	59	4.3	74.9	10.2	4.1	16.7
Azerbaijan	–	–	3.9	21.8	1.6	0.8	2.4

Table A2.5(a). contd

	Mean mental well-being score (WHO-5 tool) among 15-year-old girls[a]	Mean mental well-being score (WHO-5 tool) among 15-year-old boys[a]	Prevalence of depressive disorders (%)	Estimated DALYs (thousands) for Alzheimer's disease and other dementias, all age groups and both sexes	Age-standardized suicide mortality (per 100 000 population) all ages, both sexes	Age-standardized suicide mortality (per 100 000 population) all ages, females	Age-standardized suicide mortality (per 100 000 population) all ages, males
Belarus	–	–	6.6	57.5	11.7	3.3	22.1
Belgium	48 (Wallonia); 49 (Flanders)	59 (Wallonia); 64 (Flanders)	5.1	121.2	14.3	8.0	20.8
Bosnia and Herzegovina	–	–	4.4	28.9	5.7	2.4	9.5
Bulgaria	–	–	4.7	22.8	6.3	2.6	10.4
Croatia	52	68	4.8	29.1	10.6	4.2	17.6
Cyprus	48	62	4.4	7.9	2.7	1.6	3.7
Czechia	46	59	4.6	78.7	10.3	4.6	16.3
Denmark	57 (Greenland 65)	67 (Greenland 69)	5.0	70.5	7.6	4.3	11.0
Estonia	43	56	6.2	7.7	12.5	5.3	20.4
Finland	52	66	6.0	90.2	12.6	7.9	17.4
France	46	59	5.6	610.6	11.8	6.0	18.0
Georgia	–	–	5.2	12.4	4.6	1.0	8.9
Germany	47	58	5.0	1087.7	8.2	4.2	12.2

Table A2.5(a). contd

	Mean mental well-being score (WHO-5 tool) among 15-year-old girls[a]	Mean mental well-being score (WHO-5 tool) among 15-year-old boys[a]	Prevalence of depressive disorders (%)	Estimated DALYs (thousands) for Alzheimer's disease and other dementias, all age groups and both sexes	Age-standardized suicide mortality (per 100 000 population) all ages, both sexes	Age-standardized suicide mortality (per 100 000 population) all ages, females	Age-standardized suicide mortality (per 100 000 population) all ages, males
Greece	44	61	7.6	102.5	3.4	1.2	5.8
Hungary	46	60	4.6	80.8	11.4	4.8	19.0
Iceland	53	66	3.9	4.0	10.8	8.4	13.0
Ireland	46	57	5.9	39.1	7.7	4.2	11.3
Israel	–	–	5.4	51.6	4.4	2.3	6.5
Italy	40	56	5.5	725.0	4.6	2.2	7.1
Kazakhstan	63	73	4.2	50.7	15.2	5.5	26.2
Kyrgyzstan	61	72	4.0	11.7	7.8	3.6	12.4
Latvia	47	61	6.5	14.5	12.0	3.0	22.1
Lithuania	48	63	7.0	17.6	16.8	5.9	28.8
Luxembourg	48	61	4.7	4.7	6.2	2.9	9.6
Malta	44	58	4.4	5.4	5.6	3.3	7.5
Monaco	–	–	6.0	–	–	–	–
Montenegro	–	–	4.4	3.1	8.9	4.3	14.1

Table A2.5(a). contd

	Mean mental well-being score (WHO-5 tool) among 15-year-old girls[a]	Mean mental well-being score (WHO-5 tool) among 15-year-old boys[a]	Prevalence of depressive disorders (%)	Estimated DALYs (thousands) for Alzheimer's disease and other dementias, all age groups and both sexes	Age-standardized suicide mortality (per 100 000 population) all ages, both sexes	Age-standardized suicide mortality (per 100 000 population) all ages, females	Age-standardized suicide mortality (per 100 000 population) all ages, males
Netherlands	50	64	5.2	221.8	9.1	5.9	12.5
North Macedonia	57	71	4.1	12.9	4.6	3.0	6.4
Norway	53	64	5.1	63.4	11.4	6.3	16.3
Poland	40	54	3.5	168.7	11.5	3.2	20.2
Portugal	49	63	7.1	132.1	7.2	3.5	11.4
Republic of Moldova	57	67	5.2	5.8	11.9	4.0	22.1
Romania	49	62	4.2	91.6	7.2	2.3	12.5
Russian Federation	–	–	4.9	944.3	17.9	6.1	31.6
San Marino	–	–	6.2	–	–	–	–
Serbia	–	–	4.4	50.6	9.4	4.4	15.0
Slovakia	48	62	4.4	22.7	7.6	2.3	13.5
Slovenia	40	54	5.0	10.8	13.2	5.1	21.4
Spain	47	61	6.7	502.3	6.2	3.2	9.4
Sweden	49	64	5.9	134.3	11.7	7.1	16.2

Table A2.5(a). contd

	Mean mental well-being score (WHO-5 tool) among 15-year-old girls[a]	Mean mental well-being score (WHO-5 tool) among 15-year-old boys[a]	Prevalence of depressive disorders (%)	Estimated DALYs (thousands) for Alzheimer's disease and other dementias, all age groups and both sexes	Age-standardized suicide mortality (per 100 000 population) all ages, both sexes	Age-standardized suicide mortality (per 100 000 population) all ages, females	Age-standardized suicide mortality (per 100 000 population) all ages, males
Switzerland	48	61	5.8	91.8	9.9	6.0	13.9
Tajikistan	–	–	3.1	12.2	3.1	1.7	4.5
Türkiye	–	–	5.3	9.3	2.6	1.0	4.2
Turkmenistan	–	–	3.7	382.3	7.5	3.9	11.7
Ukraine	–	–	6.5	322.6	17.0	4.7	30.9
United Kingdom	39 (England); 47 (Scotland); 47 (Wales)	57 (England); 59 (Scotland); 58 (Wales)	6.2	1060.1	8.8	4.1	13.5
Uzbekistan	–	–	3.7	77.5	9.1	6.5	11.8
No. Member States with no available data	15	15	0	3	3	3	3

(b) Interventions for substance abuse and mental health strategies

	Coverage of treatment interventions for substance use disorders (%)[b]	Coverage of treatment interventions for alcohol use disorders (%)	Service Capacity Index for Substance Use Disorders[c]	National mental health policy, strategy or action plan in place (Yes/No)[d]	Strategy or action plan that guides implementation of the mental health policy exists (Yes/No)[d]	National mental health policies or plans development/ revision in progress (Yes/No)[d]	Mental health policy or action plan(s) mention measurable objectives and indicators (Yes/No)[d]	Evaluation of national mental health policy/ strategy/ action plan undertaken (Yes/No)[d]
Type of indicator	**Development**	**Development**	**Development**	**Flagship**	**Flagship**	**Flagship**	**Flagship**	**Flagship**
Policy framework from which indicator was taken or adapted	**SDG 3.5.1**	**SDG 3.5.1**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**
Data source	**WHO *(39)***	**WHO *(39)***	**WHO *(39)***	**WHO Regional Office for Europe *(40)***	**WHO Regional Office for Europe *(40)***	**WHO Regional Office for Europe *(40)***	**WHO Regional Office for Europe *(40)***	**WHO Regional Office for Europe *(40)***
Year of data	**2015–2018**	**2016 (Belgium 2018)**	**2024**	**2023**	**2023**	**2023**	**2023**	**2023**
Regional average	n.a.	n.a.	n.a.	u.p.	u.p.	u.p.	u.p.	u.p.
Albania	–	–	0.41	–	–	–	–	–
Andorra	–	–	0.35	Yes	Yes	Yes	Yes	Yes
Armenia	–	–	0.21	Yes	Yes	Yes	Yes	Yes
Austria	–	–	0.33	Yes	Yes	Yes	Unsure/other	Unsure/other
Azerbaijan	–	–	0.46	–	–	–	–	–
Belarus	10.0	–	0.52	Yes	Yes	Yes	Yes	Unsure/other
Belgium	7.8	1.2	0.67	Yes	Yes	Yes	Yes	Yes

Table A2.5(b). contd

	Coverage of treatment interventions for substance use disorders (%)[b]	Coverage of treatment interventions for alcohol use disorders (%)	Service Capacity Index for Substance Use Disorders[c]	National mental health policy, strategy or action plan in place (Yes/No)[d]	Strategy or action plan that guides implementation of the mental health policy exists (Yes/No)[d]	National mental health policies or plans development/ revision in progress (Yes/No)[d]	Mental health policy or action plan(s) mention measurable objectives and indicators (Yes/No)[d]	Evaluation of national mental health policy/ strategy/ action plan undertaken (Yes/No)[d]
Bosnia and Herzegovina	–	–	0.38	–	–	–	–	–
Bulgaria	–	–	0.41	Yes	Yes	Yes	Yes	Yes
Croatia	23.5	–	0.55	Unsured/other	Yes	Unsure/other	Unsure/other	Unsure/other
Cyprus	–	–	0.56	Yes	Yes	Yes	Yes	Yes
Czechia	14.8	4.0	0.80	Yes	Yes	Yes	Yes	Yes
Denmark	–	–	0.50	Yes	Yes	Yes	Yes	Yes
Estonia	–	–	0.38	Yes	Yes	Unsure/other	Unsure/other	No
Finland	–	–	0.70	Yes	Yes	No	Yes	Yes
France	–	–	0.67	Yes	Yes	Yes	Yes	Yes
Georgia	–	–	0.15	Yes	Yes	No	Yes	Yes
Germany	–	–	0.58	Yes	No	Yes	No	Unsure/other
Greece	–	–	0.61	Yes	Yes	No	No	No
Hungary	–	–	0.40	Yes	Yes	Yes	Yes	Unsure/other
Iceland	35.0	4.2	0.49	Yes	Yes	Yes	Yes	Yes
Ireland	–	–	0.48	Yes	Yes	No	Yes	Yes
Israel	–	–	0.46	Yes	Yes	Yes	Yes	Yes
Italy	26.6	10.0	0.62	Yes	Yes	Yes	Yes	Yes
Kazakhstan	–	–	0.48	Yes	Yes	Yes	Yes	Yes

Table A2.5(b). contd

	Coverage of treatment interventions for substance use disorders (%)[b]	Coverage of treatment interventions for alcohol use disorders (%)	Service Capacity Index for Substance Use Disorders[c]	National mental health policy, strategy or action plan in place (Yes/No)[d]	Strategy or action plan that guides implementation of the mental health policy exists (Yes/No)[d]	National mental health policies or plans development/ revision in progress (Yes/No)[d]	Mental health policy or action plan(s) mention measurable objectives and indicators (Yes/No)[d]	Evaluation of national mental health policy/ strategy/ action plan undertaken (Yes/No)[d]
Kyrgyzstan	–	–	0.34	Yes	Yes	No	Yes	No
Latvia	2.1	–	0.57	Yes	Yes	No	Yes	Yes
Lithuania	–	–	0.29	Yes	Yes	Yes	Yes	Yes
Luxembourg	–	–	0.24	Yes	Unsure/other	Yes	Yes	Yes
Malta	–	–	0.54	Yes	No	No	Unsure/other	No
Monaco	–	–	0.51	Yes	Yes	Yes	Yes	No
Montenegro	–	–	0.40	–	–	–	–	–
Netherlands	20.0	13.8	0.70	Yes	Yes	No	No	No
North Macedonia	–	–	0.44	Yes	Yes	Yes	Yes	No
Norway	–	–	0.48	Yes	Yes	Yes	Yes	Yes
Poland	–	–	0.15	Yes	Yes	Yes	Yes	Yes
Portugal	–	–	0.79	Yes	Yes	Yes	Yes	Yes
Republic of Moldova	2.2	3.0	0.68	–	–	–	–	–
Romania	–	–	0.23	Yes	Yes	Yes	No	No
Russian Federation	–	–	0.41	–	–	–	–	–
San Marino	–	–	0.26	–	–	–	–	–

Table A2.5(b). contd

	Coverage of treatment interventions for substance use disorders (%)[b]	Coverage of treatment interventions for alcohol use disorders (%)	Service Capacity Index for Substance Use Disorders[c]	National mental health policy, strategy or action plan in place (Yes/No)[d]	Strategy or action plan that guides implementation of the mental health policy exists (Yes/No)[d]	National mental health policies or plans development/ revision in progress (Yes/No)[d]	Mental health policy or action plan(s) mention measurable objectives and indicators (Yes/No)[d]	Evaluation of national mental health policy/ strategy/ action plan undertaken (Yes/No)[d]
Serbia	–	–	0.21	Yes	Yes	Unsure/other	Yes	No
Slovakia	8.4	5.3	0.48	No	No	Yes	Unsure/other	Unsure/other
Slovenia	–	–	0.55	Yes	Yes	No	Yes	Yes
Spain	–	–	0.77	Yes	Yes	Yes	Yes	Yes
Sweden	35.4	–	0.75	Yes	Yes	Yes	Yes	Yes
Switzerland	–	–	0.58	Yes	Yes	No	Unsure/other	Yes
Tajikistan	3.4	1.3	0.73	–	–	–	–	–
Türkiye	–	1.4	0.61	Yes	Yes	Yes	Yes	No
Turkmenistan	–	–	0.36	Yes	Yes	No	Yes	Yes
Ukraine	8.0	10.6	0.53	Yes	Yes	Yes	No	Yes
United Kingdom	–	–	0.62	–	–	–	–	–
Uzbekistan	–	–	0.43	Yes	Yes	Yes	Yes	Yes
No. Member States with no available data	40	43	0	9.0	9.0	9.0	9.0	9.0

Notes: IHME: Institute for Health Metrics and Evaluation; MRC/CSO Unit: MRC/CSO Social and Public Health Sciences Unit, School of Health and Wellbeing; n.a.: not available; u.p.: not applicable.

[a] Data for Belgium provided separately for Flanders and Wallonia; data for the United Kingdom provided separately for England, Scotland and Wales.

[b] Data for 2018, except for Italy, Latvia and Slovakia (2017) and the Netherlands (2015).

[c] Estimation is direct for all countries apart from Albania, Bosnia and Herzegovina, Bulgaria, Montenegro and Uzbekistan (where it is based on imputation).

[d] Data for European Union Member States in the European Union, Iceland and Norway as published in WHO *(40)* were complemented with data collected by WHO Regional Office for Europe for the other Member States in the WHO European Region.

Table A2.6. Member State level data used for Chapter 7: health systems

(a) Affordable access to health care

	Share of households with impoverishing health spending, latest available year (%)[a,b]	Share of households with further impoverishing health spending, latest available year (%)[a,b]	Share of households with catastrophic health spending, by quintile, latest available year (%)[a]				
			Poorest income quintile	Second income quintile	Third income quintile	Fourth income quintile	Richest income quintile
Type	**Core**	**Core**	**Core**	**Core**	**Core**	**Core**	**Core**
Policy framework from which indicator was taken or adapted	**Tallinn Charter; Regional Committee for Europe resolution EUR/RC65/13**	**Tallinn Charter; Regional Committee for Europe resolution EUR/RC65/13**	**Tallinn Charter; Regional Committee for Europe resolution EUR/RC65/13; SDG 3.8.2**	**Tallinn Charter; Regional Committee for Europe resolution EUR/RC65/13; SDG 3.8.2**	**Tallinn Charter; Regional Committee for Europe resolution EUR/RC65/13; SDG 3.8.2**	**Tallinn Charter; Regional Committee for Europe resolution EUR/RC65/13; SDG 3.8.2**	**Tallinn Charter; Regional Committee for Europe resolution EUR/RC65/13; SDG 3.8.2**
Data source	**WHO *(41)***	**WHO *(41)***	**WHO *(41)***	**WHO *(41)***	**WHO *(41)***	**WHO *(41)***	**WHO *(41)***
Year of data	**2014–2023**	**2014–2023**	**2015–2023**	**2015–2023**	**2015–2023**	**2015–2023**	**2015–2023**
Regional average	u.p.	u.p.	u.p.	u.p.	u.p.	u.p.	u.p.
Albania	1.5	6.7	8.14	2.69	0.93	0.47	0.22
Andorra	–	–	–	–	–	–	–
Armenia	2.8	5.0	8.58	3.23	1.92	1.30	2.07
Austria	0.5	1.5	2.97	0.39	0.32	0.26	0.21
Azerbaijan	–	–	–	–	–	–	–
Belarus	–	–	–	–	–	–	–

Table A2.6(a). contd

	Share of households with impoverishing health spending, latest available year (%)[a,b]	Share of households with further impoverishing health spending, latest available year (%)[a,b]	Share of households with catastrophic health spending, by quintile, latest available year (%)[a]				
			Poorest income quintile	Second income quintile	Third income quintile	Fourth income quintile	Richest income quintile
Belgium	0.4	0.7	2.43	0.73	0.57	0.48	0.99
Bosnia and Herzegovina	1.2	3.1	5.44	1.52	0.78	0.43	0.61
Bulgaria	3.6	4.3	12.74	3.69	1.60	0.63	0.56
Croatia	0.4	1.4	2.78	0.10	0.19	0.06	0.45
Cyprus	0.5	1.3	3.37	0.61	0.35	0.30	0.37
Czechia	0.5	1.8	3.28	0.28	0.24	0.12	0.25
Denmark	0.7	1.1	1.57	0.20	0.14	0.37	0.30
Estonia	1.0	1.2	3.79	1.93	0.92	0.49	0.07
Finland	0.6	0.6	2.36	0.95	0.25	0.09	0.17
France	0.1	1.3	1.84	0.03	0.07	0.09	0.04
Georgia	3.8	6.8	11.56	4.74	2.43	1.56	1.12
Germany	0.2	0.8	1.50	0.19	0.15	0.19	0.40
Greece	1.3	2.3	6.02	1.59	0.93	0.69	0.61
Hungary	2.1	3.8	8.84	1.81	0.54	0.29	0.14
Iceland	–	–	–	–	–	–	–
Ireland	0.1	0.8	1.03	0.03	0.06	0.04	0.07
Israel	0.6	1.7	3.11	1.06	0.39	0.36	0.49

Table A2.6(a). contd

	Share of households with impoverishing health spending, latest available year (%)[a,b]	Share of households with further impoverishing health spending, latest available year (%)[a,b]	Share of households with catastrophic health spending, by quintile, latest available year (%)[a]				
			Poorest income quintile	Second income quintile	Third income quintile	Fourth income quintile	Richest income quintile
Italy	1.6	3.1	6.71	1.95	0.86	0.57	0.57
Kazakhstan	0.3	1.8	–	–	–	–	–
Kyrgyzstan	1.5	2.2	–	–	–	–	–
Latvia	2.0	2.2	5.92	3.98	2.77	1.59	0.71
Lithuania	3.4	2.2	6.44	3.99	2.57	1.44	0.78
Luxembourg	0.3	1.1	2.11	0.14	0.02	0.00	0.08
Malta	1.1	1.0	4.34	0.70	0.49	0.57	0.79
Monaco	–	–	–	–	–	–	–
Montenegro	0.9	3.1	6.54	1.38	0.28	0.25	0.20
Netherlands	0.0	0.1	0.21	0.10	0.07	0.05	0.07
North Macedonia	1.7	2.2	3.12	1.82	0.96	0.24	0.36
Norway	–	–	–	–	–	–	–
Poland	1.2	2.1	5.72	1.49	0.76	0.71	0.68
Portugal	1.6	2.2	7.20	2.01	0.98	0.41	0.05
Republic of Moldova	1.5	2.4	5.40	2.40	1.28	0.98	1.15
Romania	1.9	3.7	7.29	2.43	1.31	0.82	0.67

Table A2.6(a). contd

	Share of households with impoverishing health spending, latest available year (%)[a,b]	Share of households with further impoverishing health spending, latest available year (%)[a,b]	Share of households with catastrophic health spending, by quintile, latest available year (%)[a]				
			Poorest income quintile	Second income quintile	Third income quintile	Fourth income quintile	Richest income quintile
Russian Federation	–	–	–	–	–	–	–
San Marino	–	–	–	–	–	–	–
Serbia	1.4	5.9	9.86	1.27	0.52	0.37	0.19
Slovakia	0.6	2.6	4.68	0.29	0.07	0.00	0.05
Slovenia	0.1	0.1	0.46	0.11	0.11	0.04	0.09
Spain	0.3	1.3	2.15	0.12	0.12	0.22	0.24
Sweden	0.1	0.9	1.17	0.07	0.08	0.17	0.12
Switzerland	0.4	1.1	2.27	0.22	0.01	0.09	0.09
Tajikistan	2.4	12.1	14.80	1.80	0.27	0.30	0.57
Türkiye	0.3	2.3	3.24	0.40	0.32	0.11	0.19
Turkmenistan	–	–	–	–	–	–	–
Ukraine	2.8	8.2	12.84	2.17	0.91	0.76	0.46
United Kingdom	0	0.7	0.93	0.11	0.12	0.19	0.12
Uzbekistan	–	–	–	–	–	–	–
Number of countries for which data are unavailable	10	10	12	12	12	12	12

(b) Unmet need for care and spending on health

	Self-reported unmet needs for medical examination due to it being too expensive, too far to travel or waiting list, both sexes aged ≥ 16 years[c]			Self-reported unmet needs for dental examination due to it being too expensive, too far to travel or waiting list, both sexes aged ≥ 16 years[c]			Out-of-pocket payments as a percentage of current spending on health	Public spending on health as percentage of gross domestic product
	Poorest income quintile	Richest income quintile	Average income quintile	Poorest income quintile	Richest income quintile	Average income quintile		
Type	**Development**	**Development**	**Development**	**Development**	**Development**	**Development**	**Additional**	**Additional**
Policy framework from which indicator was taken or adapted	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**
Data source	**European Commission *(42)***	**European Commission *(42)***	**European Commission *(42)***	**European Commission *(43)***	**European Commission *(43)***	**European Commission *(43)***	**WHO *(44)***	**WHO *(44)***
Year of data	**2018–2023**	**2018–2023**	**2018–2023**	**2018–2023**	**2018–2023**	**2018–2023**	**2021**	**2021**
Regional average	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	27	n.a.
Albania	16.7	2.5	10.7	27.1	0.1	15.6	60	9.1
Andorra	–	–	–	–	–	–	12	15.7
Armenia	–	–	–	–	–	–	79	7.6
Austria	0.8	0.3	0.6	1.9	0.3	0.9	16	16.9
Azerbaijan	–	–	–	–	–	–	66	4.6
Belarus	–	–	–	–	–	–	22	13.2
Belgium	2.8	0.2	1.1	7.0	0.7	3.2	18	15.5
Bosnia and Herzegovina	–	–	–	–	–	–	31	16.4

Table A2.6(b). contd

	Self-reported unmet needs for medical examination due to it being too expensive, too far to travel or waiting list, both sexes aged ≥ 16 years[c]			Self-reported unmet needs for dental examination due to it being too expensive, too far to travel or waiting list, both sexes aged ≥ 16 years[c]			Out-of-pocket payments as a percentage of current spending on health	Public spending on health as percentage of gross domestic product
	Poorest income quintile	Richest income quintile	Average income quintile	Poorest income quintile	Richest income quintile	Average income quintile		
Bulgaria	2.5	0.3	1.1	3.5	0.8	1.9	35	12.9
Croatia	3.1	0.3	1.0	1.0	0.1	0.5	9	14.0
Cyprus	0.3	0.0	0.1	2.5	0.2	1.1	10	18.4
Czechia	0.6	0.2	0.4	1.8	0.5	1.1	13	17.6
Denmark	4.5	1.8	2.7	16.9	2.1	8.4	13	18.2
Estonia	15.6	11.1	12.9	4.7	2.4	3.2	22	13.8
Finland	10.0	4.9	7.9	10.6	5.4	7.7	16	15.1
France	5.3	1.9	3.7	10.8	2.5	6.6	9	15.8
Georgia	–	–	–	–	–	–	31	14.2
Germany	0.2	0.1	0.2	0.6	0.1	0.3	12	20.0
Greece	23.0	3.4	11.6	21.2	4.8	12.9	33	9.4
Hungary	1.8	0.6	1.0	1.5	0.2	0.6	25	11.0
Iceland	9.9	1.4	5.2	16.1	2.7	9.4	15	16.4
Ireland	4.7	1.4	2.7	4.9	0.6	1.9	11	21.0
Israel	–	–	–	–	–	–	20	13.2
Italy	3.8	0.4	1.8	3.9	0.3	1.8	22	12.4
Kazakhstan	–	–	–	–	–	–	25	11.6
Kyrgyzstan	–	–	–	–	–	–	41	8.6

Table A2.6(b). contd

	Self-reported unmet needs for medical examination due to it being too expensive, too far to travel or waiting list, both sexes aged ≥ 16 years[c]			Self-reported unmet needs for dental examination due to it being too expensive, too far to travel or waiting list, both sexes aged ≥ 16 years[c]			Out-of-pocket payments as a percentage of current spending on health	Public spending on health as percentage of gross domestic product
	Poorest income quintile	Richest income quintile	Average income quintile	Poorest income quintile	Richest income quintile	Average income quintile		
Latvia	13.9	3.8	7.8	15.8	3.7	10.0	27	14.2
Lithuania	4.6	3.9	3.8	3.4	1.0	2.2	30	14.0
Luxembourg	1.6	0.5	0.8	3.0	0.2	1.2	9	11.5
Malta	0.2	0.0	0.1	0.3	0.0	0.1	30	16.2
Monaco	–	–	–	–	–	–	7	13.7
Montenegro	3.8	1.4	2.6	4.2	0.1	2.0	38	14.4
Netherlands	0.2	0.2	0.3	1.2	0.1	0.4	9	16.9
North Macedonia	3.9	0.9	1.7	3.4	0.9	1.7	42	13.0
Norway	–	–	–	–	–	–	14	17.9
Poland	4.0	3.0	3.6	1.7	1.3	1.5	20	10.5
Portugal	5.9	0.9	2.8	19.3	1.4	8.7	29	14.7
Republic of Moldova	–	–	–	–	–	–	29	14.6
Romania	9.3	2.3	5.2	10.5	3.3	6.3	21	12.3
Russian Federation	–	–	–	–	–	–	27	15.1
San Marino	–	–	–	–	–	–	12	17.9
Serbia	6.3	1.6	3.1	5.0	0.5	2.0	36	13.5

Table A2.6(b). contd

	Self-reported unmet needs for medical examination due to it being too expensive, too far to travel or waiting list, both sexes aged ≥ 16 years[c]			Self-reported unmet needs for dental examination due to it being too expensive, too far to travel or waiting list, both sexes aged ≥ 16 years[c]			Out-of-pocket payments as a percentage of current spending on health	Public spending on health as percentage of gross domestic product
	Poorest income quintile	Richest income quintile	Average income quintile	Poorest income quintile	Richest income quintile	Average income quintile		
Slovakia	5.3	2.2	3.2	4.0	1.5	2.2	19	13.6
Slovenia	3.9	3.3	3.8	4.4	2.4	4.0	13	14.0
Spain	1.8	1.3	1.8	11.4	1.0	5.1	21	15.2
Sweden	3.1	2.0	2.1	6.1	1.2	2.7	13	19.6
Switzerland	1.4	0.1	0.8	5.7	0.7	2.8	23	11.7
Tajikistan	–	–	–	–	–	–	64	7.0
Türkiye	5.0	0.3	1.7	3.5	0.6	1.8	16	11.5
Turkmenistan	–	–	–	–	–	–	79	8.7
Ukraine	–	–	–	–	–	–	46	10.2
United Kingdom	4.9	3.3	4.5	3.2	1.4	2.5	14	22.4
Uzbekistan	–	–	–	–	–	–	60	9.9
Number of countries for which data are unavailable	18	18	18	18	18	18	0	0

(c) Health and care workforce and health system capacity and digital, policies/strategies

	Health worker density (per 10 000 population): medical doctors[d]	Health worker density (per 10 000 population): nurses[d]	Medical doctors graduates (per 100 000) in 2021[e]	Medical doctors graduates (per 100 000) in 2010[f]	Nurse graduates (per 100 000) in 2021[g]	Nurse graduates (per 100 000) in 2010[h]	WHO European Region Member States with policies or strategies addressing digital health	WHO European Region Member States with digital health education action plan, policy or strategy
Type	Core	Core	Core		Core		Development & Flagship	Development & Flagship
Policy framework from which indicator was taken or adapted	SDG 3.c.1	SDG 3.c.1	SDG 3.c.1	SDG 3.c.1	SDG 3.c.1	SDG 3.c.1	n.a.	n.a.
Data source	WHO *(2)*	WHO *(2)*	WHO *(2)*	WHO *(2)*	WHO *(2)*	WHO *(2)*	WHO Regional Office for Europe *(45)*	WHO Regional Office for Europe *(45)*
Year of data	2023 or latest year available	2023 or latest year available	2021 or nearest year with available data	2010 or nearest year with available data	2021 or nearest year with available data	2010 or nearest year with available data	2022	2022
Regional average	**38.4**	**80.8**	n.a.	n.a.	n.a.	n.a.	u.p.	u.p.
Albania	18.8	54.7	13.8	9.0	81.6	9.4	No separate policy or strategy, but included in national health strategy or policy	Yes

Table A2.6(c). contd

	Health worker density (per 10 000 population): medical doctors[d]	Health worker density (per 10 000 population): nurses[d]	Medical doctors graduates (per 100 000) in 2021[e]	Medical doctors graduates (per 100 000) in 2010[f]	Nurse graduates (per 100 000) in 2021[g]	Nurse graduates (per 100 000) in 2010[h]	WHO European Region Member States with policies or strategies addressing digital health	WHO European Region Member States with digital health education action plan, policy or strategy
Andorra	53.1	47.2	–	2.4	–	–	No separate policy or strategy, but included in national health strategy or policy	Yes
Armenia	32.7	42.8	28.9	14.9	16.9	–	No	No
Austria	56.5	111.7	14.0	20.7	33.1	34.9	No separate policy or strategy, but included in national health strategy or policy	No
Azerbaijan	32.4	53.2	11.2	12.8	–	–	Yes	Yes
Belarus	45.7	100.1	26.4	18.7	–	–	Yes	No, but one is under development
Belgium	36.0	109.5	16.6	9.0	45.1	41.8	Yes	Yes

Table A2.6(c). contd

	Health worker density (per 10 000 population): medical doctors[d]	Health worker density (per 10 000 population): nurses[d]	Medical doctors graduates (per 100 000) in 2021[e]	Medical doctors graduates (per 100 000) in 2010[f]	Nurse graduates (per 100 000) in 2021[g]	Nurse graduates (per 100 000) in 2010[h]	WHO European Region Member States with policies or strategies addressing digital health	WHO European Region Member States with digital health education action plan, policy or strategy
Bosnia and Herzegovina	23.7	62.3	–	–	13	22.2	No	No
Bulgaria	42.6	41.6	12.0	8.0	7.1	4.0	No	Do not know
Croatia	37.7	73.3	15.8	12.0	61.4	8.1	No separate policy or strategy, but included in national health strategy or policy	No
Cyprus	39.2	40.1	3.5	–	9.4	24.8	Yes	No, but one is under development
Czechia	41.8	87.9	16.3	14.0	13.3	12.3	Yes	No
Denmark	43.8	102.4	22.9	16.5	44.4	40.3	Yes	Yes
Estonia	35.2	66.7	10.4	11.2	27.6	28.4	Yes	No
Finland	34.7	135.3	11.9	12.3	81.8	60.7	Yes	No
France	32.3	88.9	9.7	5.9	41.1	37.8	Yes	Yes

Table A2.6(c). contd

	Health worker density (per 10 000 population): medical doctors[d]	Health worker density (per 10 000 population): nurses[d]	Medical doctors graduates (per 100 000) in 2021[e]	Medical doctors graduates (per 100 000) in 2010[f]	Nurse graduates (per 100 000) in 2021[g]	Nurse graduates (per 100 000) in 2010[h]	WHO European Region Member States with policies or strategies addressing digital health	WHO European Region Member States with digital health education action plan, policy or strategy
Georgia	57.8	60.2	11.1	25.7	0.2	0.9	No separate policy or strategy, but included in national health strategy or policy	No, but one is under development
Germany	45.3	120.6	12.2	12.2	43.6	37.9	No separate policy or strategy, but included in national health strategy or policy	No
Greece	63.9	37.4	12.5	9.3	14.2	14.3	No separate policy or strategy, but included in national health strategy or policy	No
Hungary	34.3	53.9	15.8	10.4	24.9	11.8	Yes	Yes

Table A2.6(c). contd

	Health worker density (per 10 000 population): medical doctors[d]	Health worker density (per 10 000 population): nurses[d]	Medical doctors graduates (per 100 000) in 2021[e]	Medical doctors graduates (per 100 000) in 2010[f]	Nurse graduates (per 100 000) in 2021[g]	Nurse graduates (per 100 000) in 2010[h]	WHO European Region Member States with policies or strategies addressing digital health	WHO European Region Member States with digital health education action plan, policy or strategy
Iceland	38.3	151.2	11.3	13.8	32.1	40.0	Yes	No
Ireland	40.3	145.2	24.7	17.3	28.8	36.1	Yes	No
Israel	33.1	51.4	7.5	4.3	30.7	11.7	Yes	No
Italy	42.0	64.6	17.5	11.2	18.3	16.3	Yes	No, but one is under development
Kazakhstan	31.0	63.2	40.9	21.3	34.4	56.9	Yes	No, but one is under development
Kyrgyzstan	16.8	41.6	25.6	20.9	26.6	–	Yes	No
Latvia	33.3	41.5	23.8	8.4	29.2	38.0	No separate policy or strategy, but included in national health strategy or policy	No, but one is under development
Lithuania	45.0	76.0	20.4	12.4	22.0	18.5	Yes	No
Luxembourg	28.2	110.6	–	–	10.5	20.1	No	No

Table A2.6(c). contd

	Health worker density (per 10 000 population): medical doctors[d]	Health worker density (per 10 000 population): nurses[d]	Medical doctors graduates (per 100 000) in 2021[e]	Medical doctors graduates (per 100 000) in 2010[f]	Nurse graduates (per 100 000) in 2021[g]	Nurse graduates (per 100 000) in 2010[h]	WHO European Region Member States with policies or strategies addressing digital health	WHO European Region Member States with digital health education action plan, policy or strategy
Malta	45.4	78.7	31.9	14.0	25.7	11.4	No separate policy or strategy, but included in national health strategy or policy	No
Monaco	88.7	202.7	–	–	76.8	82.4	No	No
Montenegro	27.7	50.2	5.2	–	10	–	Yes	No
Netherlands	39.8	117.0	14.9	13.6	24.4	15.1	Yes	Yes
North Macedonia	29.6	44.0	13.8	9.8	–	9.9	No	No
Norway	51.9	184.2	10.9	11.3	75.8	67.1	Yes	Yes
Poland	34.2	56.5	10.5	8.1	23.7	25.4	No separate policy or strategy, but included in national health strategy or policy	No, but one is under development

Table A2.6(c). contd

	Health worker density (per 10 000 population): medical doctors[d]	Health worker density (per 10 000 population): nurses[d]	Medical doctors graduates (per 100 000) in 2021[e]	Medical doctors graduates (per 100 000) in 2010[f]	Nurse graduates (per 100 000) in 2021[g]	Nurse graduates (per 100 000) in 2010[h]	WHO European Region Member States with policies or strategies addressing digital health	WHO European Region Member States with digital health education action plan, policy or strategy
Portugal	57.9	76.2	15.7	11.9	26.4	35.0	Yes	Yes
Republic of Moldova	38.0	73.5	25.3	10.1	21.2	21.3	No	No
Romania	36.0	80.4	26.1	14.1	95.9	10.2	No separate policy or strategy, but included in national health strategy or policy	No
Russian Federation	42.3	83.1	–	10.7	–	–	Yes	Yes
San Marino	46.0	89.3	–	–	–	–	No separate policy or strategy, but included in national health strategy or policy	No

Table A2.6(c). contd

	Health worker density (per 10 000 population): medical doctors[d]	Health worker density (per 10 000 population): nurses[d]	Medical doctors graduates (per 100 000) in 2021[e]	Medical doctors graduates (per 100 000) in 2010[f]	Nurse graduates (per 100 000) in 2021[g]	Nurse graduates (per 100 000) in 2010[h]	WHO European Region Member States with policies or strategies addressing digital health	WHO European Region Member States with digital health education action plan, policy or strategy
Serbia	30.5	64.1	17.7	18.8	58.5	8.6	Yes	No, but one is under development
Slovakia	37.1	57.1	17.2	11.8	21.7	45.9	No	No
Slovenia	33.6	105.3	13.8	11.2	29.2	20.3	No	No
Spain	43.4	62.0	13.8	9.2	21.5	21.6	Yes	Yes
Sweden	44.3	109.6	13.4	10.4	43.0	43.7	Yes	No
Switzerland	44.7	185.4	11.8	10.5	42.8	35.8	Yes	Yes
Tajikistan	17.3	47.5	9.3	10.0	114.7	–	No separate policy or strategy, but included in national health strategy or policy	Yes

Table A2.6(c). contd

	Health worker density (per 10 000 population): medical doctors[d]	Health worker density (per 10 000 population): nurses[d]	Medical doctors graduates (per 100 000) in 2021[e]	Medical doctors graduates (per 100 000) in 2010[f]	Nurse graduates (per 100 000) in 2021[g]	Nurse graduates (per 100 000) in 2010[h]	WHO European Region Member States with policies or strategies addressing digital health	WHO European Region Member States with digital health education action plan, policy or strategy
Türkiye	23.1	28.9	13.9	7.0	17.5	15.9	No separate policy or strategy, but included in national health strategy or policy	No, but one is under development
Turkmenistan	25.1	40.7	6.6	5.0	5.5	5.4	No separate policy or strategy, but included in national health strategy or policy	Yes
Ukraine	30.6	64.4	8.4	9.8	32.4	33.7	Yes	No, but one is under development
United Kingdom	31.8	86.9	13.0	13.5	30.5	27.6	Yes	Yes

Table A2.6(c). contd

	Health worker density (per 10 000 population): medical doctors[d]	Health worker density (per 10 000 population): nurses[d]	Medical doctors graduates (per 100 000) in 2021[e]	Medical doctors graduates (per 100 000) in 2010[f]	Nurse graduates (per 100 000) in 2021[g]	Nurse graduates (per 100 000) in 2010[h]	WHO European Region Member States with policies or strategies addressing digital health	WHO European Region Member States with digital health education action plan, policy or strategy
Uzbekistan	19.9	52.4	10.4	11.1	–	186.8	No separate policy or strategy, but included in national health strategy or policy	Yes
Number of countries for which data are unavailable	0	0	6	6	7	9	0	0

(d) Need for help with personal care or household activities

	Percentage of people aged ≥ 65 years experiencing moderate level of difficulty with personal care or household activities			Percentage of people aged ≥ 65 years experiencing severe level of difficulty with personal care or household activities			Percentage of people aged ≥ 75 years experiencing moderate level of difficulty with personal care or household activities			Percentage of people aged ≥ 75 years experiencing severe level of difficulty with personal care or household activities		
	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance
Type	Development	Development	Development	Development	Development	Development	Development	Development	Development	Development	Development	Development
Policy framework from which indicator was taken or adapted	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data source	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*
Year of data	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019
Regional average	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Albania	–	–	–	–	–	–	–	–	–	–	–	–
Andorra	–	–	–	–	–	–	–	–	–	–	–	–
Armenia	–	–	–	–	–	–	–	–	–	–	–	–
Austria	41.4	51.1	7.5	7.2	60.4	32.4	42.7	50.2	7.1	6.8	59.7	33.5
Azerbaijan	–	–	–	–	–	–	–	–	–	–	–	–
Belarus	–	–	–	–	–	–	–	–	–	–	–	–
Belgium	88.9	0.0	11.1	–	–	–	90.4	0.0	9.6	–	–	–

Table A2.6(d). contd

	Percentage of people aged ≥ 65 years experiencing moderate level of difficulty with personal care or household activities			Percentage of people aged ≥ 65 years experiencing severe level of difficulty with personal care or household activities			Percentage of people aged ≥ 75 years experiencing moderate level of difficulty with personal care or household activities			Percentage of people aged ≥ 75 years experiencing severe level of difficulty with personal care or household activities		
	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance
Bosnia and Herzegovina	–	–	–	–	–	–	–	–	–	–	–	–
Bulgaria	38.2	24.3	37.4	9.5	22.9	67.5	34.8	24.5	40.8	6.8	21.8	71.4
Croatia	33.8	25.4	40.8	5.6	23.3	71.0	28.3	28.3	43.3	4.7	22.9	72.4
Cyprus	43.2	44.0	12.7	11.4	58.1	30.4	40.8	45.5	13.7	7.2	62.5	30.3
Czechia	85.1	9.2	5.7	31.9	30.2	37.9	79.1	13.8	7.1	25.6	34.0	40.4
Denmark	66.2	17.7	16.2	21.2	35.8	43.0	61.2	19.2	19.6	17.9	38.1	44.1
Estonia	20.0	45.6	34.3	1.9	39.6	58.4	15.6	41.4	43.0	1.9	40.7	57.4
Finland	46.8	21.5	31.8	13.6	16.0	70.4	39.7	21.6	38.8	11.2	15.9	72.8
France	47.1	36.2	16.7	15.4	45.9	38.7	43.4	39.9	16.7	15.2	46.9	38.0
Georgia	–	–	–	–	–	–	–	–	–	–	–	–
Germany	42.0	37.6	20.4	6.0	44.3	49.7	38.2	40.6	21.2	5.9	47.4	46.7
Greece	19.9	62.7	17.4	3.9	53.0	43.1	15.2	66.3	18.5	3.9	52.7	43.4
Hungary	69.0	17.3	13.8	24.8	26.2	49.0	60.9	24.2	14.9	23.5	25.8	50.8
Iceland	51.2	38.3	10.5	5.2	63.9	30.9	40.0	52.0	8.0	7.1	65.5	27.4
Ireland	53.7	31.1	15.2	13.2	38.3	48.5	44.6	35.3	20.2	9.8	37.6	52.6
Israel	–	–	–	–	–	–	–	–	–	–	–	–
Italy	54.4	33.3	12.3	13.0	42.9	44.2	46.6	39.1	14.3	10.7	43.7	45.6

Table A2.6(d). contd

	Percentage of people aged ≥ 65 years experiencing moderate level of difficulty with personal care or household activities			Percentage of people aged ≥ 65 years experiencing severe level of difficulty with personal care or household activities			Percentage of people aged ≥ 75 years experiencing moderate level of difficulty with personal care or household activities			Percentage of people aged ≥ 75 years experiencing severe level of difficulty with personal care or household activities		
	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance
Kazakhstan	–	–	–	–	–	–	–	–	–	–	–	–
Kyrgyzstan	–	–	–	–	–	–	–	–	–	–	–	–
Latvia	49.4	42.2	8.4	15.7	60.9	23.4	53.0	39.0	8.0	12.1	62.4	25.5
Lithuania	31.5	56.9	11.7	5.0	57.8	37.2	27.1	59.1	13.9	2.5	57.7	39.8
Luxembourg	38.9	31.8	29.2	6.4	18.9	74.6	36.6	34.4	29.0	2.4	23.5	74.0
Malta	61.6	12.2	26.2	26.9	16.9	56.3	53.5	12.4	34.1	23.0	17.8	59.2
Monaco	–	–	–	–	–	–	–	–	–	–	–	–
Montenegro	–	–	–	–	–	–	–	–	–	–	–	–
Netherlands	62.8	31.5	5.7	17.2	58.3	24.5	51.9	42.6	5.5	12.7	66.1	21.3
North Macedonia	–	–	–	–	–	–	–	–	–	–	–	–
Norway	36.8	42.4	20.8	6.6	57.1	36.3	30.1	45.2	24.8	3.1	61.2	35.6
Poland	67.2	20.7	12.1	22.7	30.6	46.7	61.1	23.4	15.5	17.2	32.1	50.8
Portugal	52.6	34.3	13.0	16.7	44.4	38.9	44.5	39.2	16.3	12.7	45.3	42.0
Republic of Moldova	–	–	–	–	–	–	–	–	–	–	–	–
Romania	24.9	37.4	37.7	11.9	26.5	61.6	22.6	37.5	39.9	7.9	25.6	66.6
Russian Federation	–	–	–	–	–	–	–	–	–	–	–	–

Table A2.6(d). contd

	Percentage of people aged ≥ 65 years experiencing moderate level of difficulty with personal care or household activities			Percentage of people aged ≥ 65 years experiencing severe level of difficulty with personal care or household activities			Percentage of people aged ≥ 75 years experiencing moderate level of difficulty with personal care or household activities			Percentage of people aged ≥ 75 years experiencing severe level of difficulty with personal care or household activities		
	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance	Report no need for assistance	Report receiving sufficient assistance	Report lack of assistance
San Marino	–	–	–	–	–	–	–	–	–	–	–	–
Serbia	49.7	26.9	23.3	12.9	36.7	50.4	42.4	27.9	29.7	9.1	36.3	54.6
Slovakia	40.3	38.9	20.8	6.1	43.0	50.9	32.1	46.0	21.9	4.3	42.0	53.7
Slovenia	46.0	38.0	16.0	14.9	46.4	38.8	33.7	42.4	23.9	9.4	51.0	39.6
Spain	25.6	47.5	26.8	6.6	45.3	48.0	21.3	49.0	29.7	5.7	43.9	50.4
Sweden	45.9	34.6	19.5	8.1	38.3	53.6	41.7	38.6	19.7	4.6	42.4	53.0
Switzerland	–	–	–	–	–	–	–	–	–	–	–	–
Tajikistan	–	–	–	–	–	–	–	–	–	–	–	–
Türkiye	41.9	11.7	46.5	16.2	7.4	76.5	40.1	13.1	46.8	14.5	7.6	77.9
Turkmenistan	–	–	–	–	–	–	–	–	–	–	–	–
Ukraine	–	–	–	–	–	–	–	–	–	–	–	–
United Kingdom	–	–	–	–	–	–	–	–	–	–	–	–
Uzbekistan	–	–	–	–	–	–	–	–	–	–	–	–
Number of countries for which data are unavailable	22	22	22	22	22	22	22	22	22	22	22	22

(e) Use of home care services

	Percentage of people who used home care services for personal needs in the past 12 months by level of disability (activity limitation) and age								
	All age groups, no disability	All age groups, moderate disability	All age groups; severe disability	≥ 65 years, no disability	≥ 65 years, moderate disability	≥ 65 years, severe disability	≥ 75 years, no disability	≥ 75 years, moderate disability	≥ 75 years, severe disability
Type	Development	Development	Development	Development	Development	Development	Development	Development	Development
Policy framework from which indicator was taken or adapted	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Data source	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*	European Commission *(46)*
Year of data	2019	2019	2019	2019	2019	2019	2019	2019	2019
Regional average	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Albania	–	–	–	–	–	–	–	–	–
Andorra	–	–	–	–	–	–	–	–	–
Armenia	–	–	–	–	–	–	–	–	–
Austria	0.7	3.7	19.6	1.8	7.6	31.1	4.2	13.3	38.5
Azerbaijan	–	–	–	–	–	–	–	–	–
Belarus	–	–	–	–	–	–	–	–	–
Belgium	7.8	25.0	39.1	12.7	36.7	56.9	19.4	42.7	67.0
Bosnia and Herzegovina	–	–	–	–	–	–	–	–	
Bulgaria	0.5	3.0	14.3	1.4	3.9	16.7	1.3	4.4	19.3
Croatia	0.6	5.2	25.3	1.4	7.6	29.6	1.2	8.8	32.6

Table A2.6(e). contd

	Percentage of people who used home care services for personal needs in the past 12 months by level of disability (activity limitation) and age								
	All age groups, no disability	All age groups, moderate disability	All age groups; severe disability	≥ 65 years, no disability	≥ 65 years, moderate disability	≥ 65 years, severe disability	≥ 75 years, no disability	≥ 75 years, moderate disability	≥ 75 years, severe disability
Cyprus	0.1	3.3	22.5	0.8	6.2	27.4	2.0	8.8	38.3
Czechia	0.1	3.1	13.7	0.6	6.0	18.3	0.8	10.2	24.3
Denmark	2.2	9.5	32.3	4.7	19.7	50.2	9.0	29.7	70.7
Estonia	0.5	1.7	6.0	0.4	2.7	8.9	0.5	4.3	12.4
Finland	1.3	4.6	16.3	3.3	10.2	32.9	8.2	17.0	38.2
France	3.2	10.9	31.6	5.5	15.8	44.1	8.8	20.1	55.6
Georgia	–	–	–	–	–	–	–	–	–
Germany	2.2	7.0	25.0	3.0	11.4	38.5	5.5	15.5	47.0
Greece	1.4	3.6	21.2	3.1	4.8	25.5	4.3	5.2	26.8
Hungary	1.0	4.8	18.7	2.0	8.3	26.7	3.4	14.0	33.5
Iceland	4.1	8.3	15.8	8.7	15.2	27.4	19.1	29.7	41.5
Ireland	1.3	6.8	23.4	4.1	14.5	37.7	9.1	26.9	54.6
Israel	–	–	–	–	–	–	–	–	–
Italy	0.6	4.5	28.8	1.1	7.1	35.4	2.1	10.2	41.1
Kazakhstan	–	–	–	–	–	–	–	–	–
Kyrgyzstan	–	–	–	–	–	–	–	–	–
Latvia	0.1	1.8	13.6	0.0	3.9	16.9	0.0	6.6	19.1
Lithuania	0.4	2.4	17.0	1.1	3.3	21.8	1.6	4.9	24.7
Luxembourg	1.7	9.7	23.2	2.8	12.7	42.0	6.8	19.3	47.5
Malta	1.5	6.8	17.5	5.8	12.5	28.3	11.3	19.9	35.5

Table A2.6(e). contd

	Percentage of people who used home care services for personal needs in the past 12 months by level of disability (activity limitation) and age								
	All age groups, no disability	All age groups, moderate disability	All age groups; severe disability	≥ 65 years, no disability	≥ 65 years, moderate disability	≥ 65 years, severe disability	≥ 75 years, no disability	≥ 75 years, moderate disability	≥ 75 years, severe disability
Monaco	–	–	–	–	–	–	–	–	–
Montenegro	–	–	–	–	–	–	–	–	–
Netherlands	2.8	11.7	35.7	6.5	22.6	58.5	15.8	39.2	67.6
North Macedonia	–	–	–	–	–	–	–	–	–
Norway	6.4	14.6	20.4	8.2	21.4	32.5	12.9	29.9	44.7
Poland	0.5	4.0	18.9	1.2	6.2	24.2	2.7	11.9	30.1
Portugal	0.7	4.0	16.7	1.4	6.0	20.5	1.7	9.1	25.2
Republic of Moldova	–	–	–	–	–	–	–	–	–
Romania	0.1	1.6	12.0	0.4	2.1	12.5	0.8	3.4	14.0
Russian Federation	–	–	–	–	–	–	–	–	–
San Marino	–	–	–	–	–	–	–	–	–
Serbia	0.6	2.4	14.6	1.2	3.9	17.8	2.0	5.7	24.4
Slovakia	0.2	1.2	10.0	1.4	2.4	15.0	3.9	5.1	19.9
Slovenia	1.3	2.9	12.3	2.3	4.7	17.4	3.8	7.8	20.6
Spain	0.7	7.6	28.3	2.5	13.6	42.0	4.9	19.3	47.6
Sweden	0.5	2.8	12.0	0.6	5.3	20.8	1.1	7.6	27.4
Switzerland	–	–	–	–	–	–	–	–	–
Tajikistan	–	–	–	–	–	–	–	–	–

Table A2.6(e). contd

	Percentage of people who used home care services for personal needs in the past 12 months by level of disability (activity limitation) and age								
	All age groups, no disability	All age groups, moderate disability	All age groups; severe disability	≥ 65 years, no disability	≥ 65 years, moderate disability	≥ 65 years, severe disability	≥ 75 years, no disability	≥ 75 years, moderate disability	≥ 75 years, severe disability
Türkiye	0.4	0.8	3.7	1.2	2.1	5.8	1.8	4.9	8.8
Turkmenistan	–	–	–	–	–	–	–	–	–
Ukraine	–	–	–	–	–	–	–	–	–
United Kingdom	–	–	–	–	–	–	–	–	–
Uzbekistan	–	–	–	–	–	–	–	–	–
Number of countries for which data are unavailable	22	22	22	22	22	22	22	22	22

Notes: n.a.: not available; u.p.: unapplicable.

[a] Data Georgia (2023); Greece, Israel, Tajikistan (2022); Armenia, Italy, Montenegro, Poland, Republic of Moldova, Ukraine (2021); Austria, Belgium, Estonia, Spain (2020); Croatia, Czechia, Kazakhstan, Serbia, United Kingdom (2019); Bulgaria, Germany, North Macedonia, Slovenia, Türkiye (2018); France, Luxembourg, Switzerland (2017); Finland, Ireland, Latvia, Lithuania (2016); Albania, Bosnia and Herzegovina, Cyprus, Denmark, Hungary, Malta, Netherlands, Portugal, Romania, Slovakia, Sweden (2015).

[b] Data also for Kyrgyzstan (2014).

[c] Data for 2023, except for Montenegro, Serbia, Switzerland, Türkiye (2022); Albania (2021); North Macedonia (2020); Iceland (2019); United Kingdom (2018).

[d] Data for 2023, except for Armenia Azerbaijan, Belgium, Bulgaria, Croatia, Cyprus, Estonia, France, Greece, Hungary, Italy, Lithuania, Malta, Netherlands, Poland, Romania, Serbia, Slovakia, Spain, Türkiye (2022); Czechia, Germany, Latvia, Norway, Republic of Moldova, Slovenia, Sweden, Switzerland, United Kingdom (2021); Albania, Denmark, Israel, Monaco, Montenegro, North Macedonia, Russian Federation, Tajikistan, Uzbekistan (2020); Bosnia and Herzegovina, Iceland (2019); Finland (2018); Luxembourg (2017); and Ukraine (2014).

[e] Data for 2021 except for Belgium, Estonia, Kazakhstan, Latvia, Norway, Türkiye (2020); Albania, Armenia, Austria, Cyprus, Czechia, Finland, Germany, Hungary, Iceland, Ireland, Israel, Italy, Lithuania, Montenegro, Netherlands, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom (2019); Croatia, Denmark, France, Greece, Malta, Poland, Romania, Serbia (2018); Bulgaria, Georgia (2015); Azerbaijan, Tajikistan, Ukraine, Uzbekistan (2014); and North Macedonia (2012); no available data for Bosnia and Herzegovina, Luxembourg, Monaco and San Marino.

[f] Data for 2010, except Albania and Andorra (2009).

[g] Data for 2021 except for Belgium, Estonia, Israel, Kazakhstan, Kyrgyzstan, Latvia, Norway, Türkiye (2020); Albania, Armenia, Austria, Cyprus, Czechia, Finland, Germany, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Montenegro, Netherlands, Portugal, Slovakia, Spain, Sweden, Switzerland (2019); Bosnia and Herzegovina, Bulgaria, Croatia, Denmark, France, Greece, Malta, Poland, Romania, Serbia, Slovenia, Tajikistan, United Kingdom (2018); Georgia (2015); Monaco, Ukraine (2014); no available data for Andorra, Azerbaijan, Belarus, North Macedonia, Russian Federation, San Marino, and Uzbekistan.

[h] Data for 2010, except for Uzbekistan and Bosnia and Herzegovina (2013); Monaco (2011); Kazakhstan (2008).

Table A2.7. Member State level data used for Chapter 8: health emergency preparedness and response

	Average of all International Health Regulation capacities reported by year	Availability of preparedness plans and guidelines to mitigate risk of high-threat or emerging pathogens: planning for health emergencies	Minimum package of health services in emergencies: continuity of essential health services
Type of indicator	**Core**	**Development**	**Development**
Policy framework from which indicator was taken or adapted	**SDG 3.d.1**	**n.a.**	**n.a.**
Data source	**WHO *(47)***	**WHO *(47)***	**WHO *(47)***
Year of data	**2023**	**2023**	**2023**
Regional average	**73**	**70**	**76**
Albania	95	100	100
Andorra	–	–	–
Armenia	57	80	60
Austria	67	20	40
Azerbaijan	65	80	80
Belarus	96	100	100
Belgium	76	80	80
Bosnia and Herzegovina	34	20	40
Bulgaria	74	80	80
Croatia	76	60	80
Cyprus	66	80	80
Czechia	77	80	80
Denmark	97	80	80
Estonia	72	20	80
Finland	84	20	80
France	86	100	100
Georgia	72	80	100
Germany	85	80	80
Greece	60	60	60
Hungary	71	80	80
Iceland	74	80	80
Ireland	70	60	80
Israel	86	100	80
Italy	71	60	80

Table A2.7. contd

	Average of all International Health Regulation capacities reported by year	Availability of preparedness plans and guidelines to mitigate risk of high-threat or emerging pathogens: planning for health emergencies	Minimum package of health services in emergencies: continuity of essential health services
Kazakhstan	67	60	80
Kyrgyzstan	48	60	60
Latvia	68	100	80
Lithuania	86	100	80
Luxembourg	67	100	60
Malta	69	20	80
Monaco	78	100	100
Montenegro	55	60	80
Netherlands	84	80	80
North Macedonia	68	80	40
Norway	96	100	100
Poland	73	80	–
Portugal	83	80	80
Republic of Moldova	62	80	80
Romania	61	60	60
Russian Federation	100	100	100
San Marino	29	20	40
Serbia	73	40	80
Slovakia	50	40	40
Slovenia	81	60	80
Spain	81	60	80
Sweden	88	80	80
Switzerland	91	60	80
Tajikistan	65	60	80
Türkiye	75	60	80
Turkmenistan	81	80	80
Ukraine	75	80	100
United Kingdom	95	100	100
Uzbekistan	62	60	60
No. Member States with no available data	1	1	2

Note: n.a.: not available.

Table A2.8. Member State level data used for Chapter 9: climate change and other environmental impacts

	Estimated absolute annual heat-related deaths of people aged over 65 years		Health sector greenhouse gas emissions (per capita carbon footprint, total kg greenhouse gas emissions)	Annual mean concentrations of fine particulate matter ($PM_{2.5}$) in urban areas (µg/m³)	Age-standardized mortality attributed to ambient air pollution (per 100 000 population)	Estimated road traffic mortality (per 100 000 population)
	Change in absolute number of deaths from 2000–2004 to 2018–2022	Percentage change from 2000–2004 to 2018–2022				
Type of indicator	**Development**	**Development**	**Development**	**Core**	**Core**	**Core**
Policy framework from which indicator was taken or adapted	**n.a.**	**n.a.**	**n.a.**	**SDG 11.6.2**	**SDG 3.9.1**	**SDG 3.6.1**
Data source	**Romanello et al. *(48)***	**Romanello et al. *(48)***	**Romanello et al. *(48)***	**WHO *(49)***	**WHO *(50)***	**WHO *(51)***
Year of data	**2022**	**2022**	**2023**	**2019**	**2019 (2020 Switzerland)**	**2021**
Regional average	**n.a.**	**n.a.**	**n.a.**	**14.7**	**35.3**	**6.7**
Albania	97	102	–	16.6	59.1	10.8
Andorra	–	–	1648	8.9	–	2.5
Armenia	83	42	272	36.2	69.8	13.6
Austria	199	23	442	12.4	17.5	4.6
Azerbaijan	307	116	94	26.2	113.6	17.2
Belarus	307	27	201	17.2	67.6	7.4
Belgium	479	45	888	11.6	15.3	4.6
Bosnia and Herzegovina	253	83	292	29.7	55.0	13.7

Table A2.8. contd

	Estimated absolute annual heat-related deaths of people aged over 65 years		Health sector greenhouse gas emissions (per capita carbon footprint, total kg greenhouse gas emissions)	Annual mean concentrations of fine particulate matter ($PM_{2.5}$) in urban areas (µg/m³)	Age-standardized mortality attributed to ambient air pollution (per 100 000 population)	Estimated road traffic mortality (per 100 000 population)
	Change in absolute number of deaths from 2000–2004 to 2018–2022	Percentage change from 2000–2004 to 2018–2022				
Bulgaria	283	27	370	18.6	62.9	8.4
Croatia	154	30	146	15.5	31.3	8.1
Cyprus	9	29	930	15.5	15.8	3.9
Czechia	408	37	414	14.9	32.5	5.2
Denmark	98	24	550	10.1	12.9	2.3
Estonia	29	20	1382	6.6	12.8	4.4
Finland	233	55	644	6.2	7.4	4.2
France	3068	60	322	11.3	10.0	4.7
Georgia	198	49	158	20.9	69.2	12.7
Germany	6213	65	691	11.2	14.7	3.3
Greece	365	62	256	15.6	23.1	7.3
Hungary	339	25	404	14.8	42.3	7.4
Iceland	−2	−21	2783	6.2	8.2	2.4
Ireland	68	47	226	8.7	12.8	2.8
Israel	55	58	1909	19.7	15.1	4.2
Italy	2264	54	421	14.7	15.0	5.0
Kazakhstan	509	64	169	35.4	68.4	12.2
Kyrgyzstan	11	7	31	39.7	88.8	13.3

Table A2.8. contd

	Estimated absolute annual heat-related deaths of people aged over 65 years		Health sector greenhouse gas emissions (per capita carbon footprint, total kg greenhouse gas emissions)	Annual mean concentrations of fine particulate matter ($PM_{2.5}$) in urban areas (µg/m³)	Age-standardized mortality attributed to ambient air pollution (per 100 000 population)	Estimated road traffic mortality (per 100 000 population)
	Change in absolute number of deaths from 2000–2004 to 2018–2022	Percentage change from 2000–2004 to 2018–2022				
Latvia	108	45	371	14.1	40.1	9.8
Lithuania	251	72	190	11.7	38.8	6.3
Luxembourg	11	36	2934	9.1	12.5	3.9
Malta	–	–	3379	12.9	20.9	1.9
Monaco	–	–	1523	9.2	–	0.0
Montenegro	43	97	428	17.9	59.9	9.1
Netherlands	693	53	590	10.9	13.2	3.4
North Macedonia	126	113	224	28.7	62.2	5.7
Norway	68	18	277	7.2	7.9	1.5
Poland	2579	79	281	19.9	40.9	6.5
Portugal	37	7	379	7.6	10.0	7.2
Republic of Moldova	29	7	151	12.7	58.1	9.1
Romania	842	36	175	14.1	45.9	9.6
Russian Federation	3713	22	192	9.9	39.3	10.6
San Marino	–	–	1944	9.9	–	5.9
Serbia	280	30	332	22.3	45.4	7.4
Slovakia	232	37	289	16.3	30.3	6.4

Table A2.8. contd

	Estimated absolute annual heat-related deaths of people aged over 65 years		Health sector greenhouse gas emissions (per capita carbon footprint, total kg greenhouse gas emissions)	Annual mean concentrations of fine particulate matter ($PM_{2.5}$) in urban areas (µg/m³)	Age-standardized mortality attributed to ambient air pollution (per 100 000 population)	Estimated road traffic mortality (per 100 000 population)
	Change in absolute number of deaths from 2000–2004 to 2018–2022	Percentage change from 2000–2004 to 2018–2022				
Slovenia	108	50	478	14.6	18.8	5.8
Spain	1532	61	310	9.8	10.1	3.5
Sweden	310	40	238	6.4	8.1	2.1
Switzerland	240	48	745	9.3	10.4	2.4
Tajikistan	199	185	34	56.8	159.6	13.9
Türkiye	1632	126	223	23.3	39.4	6.5
Turkmenistan	114	82	239	26.4	87.0	8.0
Ukraine	3239	57	133	14.5	66.0	10.5
United Kingdom	2566	57	593	9.7	13.4	2.4
Uzbekistan	885	112	59	44.6	117.0	9.3
No. Member States with no available data	4	4	1	0	3	0

Note: n.a.: not available.

Table A2.9 shows age-standardized mortality rates per 100 000 population by Member State for the top 20 causes of death in the WHO European Region. These estimates are from the fifth round of WHO Global Health Estimates, based on latest available national mortality levels and cause distributions (as of mid-2020), together with latest information from WHO programmes for causes of public health importance *(38)*. Population estimates are from the 2024 United Nations World Population Prospects *(52)*. Due to methodological changes, current estimates are not comparable with previous WHO releases. Data for Andorra, Monaco and San Marino were not available. At the time of writing, these latest estimates had not been made available online in the Global Health Observatory yet. Details on data sources, estimation methods, uncertainty intervals, and evidence levels are available in a technical paper *(53)*.

Table A2.9. Top 20 causes of death in the WHO European Region (ranked 1–20), age-standardized rate per 100 000 population by cause and Member State, both sexes, all ages

(a) All causes and causes 1–9

		Age-standardized mortality per 100 000 population by cause, both sexes, all ages									
	Population (million)	All causes	1. Ischaemic heart disease	2. COVID-19	3. Stroke	4. Alzheimer's disease and other dementias	5. Trachea, bronchus, lung cancers	6. Chronic obstructive pulmonary disease	7. Colon and rectum cancers	8. Hypertensive heart disease	9. Lower respiratory infections
Albania	2850	648.7	116.9	140.3	114.7	16.1	22.6	11.4	5.0	8.0	8.7
Armenia	2870	841.6	255.6	171.6	58.5	1.3	29.7	14.4	12.6	20.4	24.4
Austria	8967	398.7	62.6	33.9	18.7	13.5	22.4	15.2	10.6	13.2	2.8
Azerbaijan	10 234	758.7	178.9	188.6	62.3	10.8	15.8	8.9	9.3	12.1	9.1
Belarus	9251	788.9	267.7	116.1	77.0	13.8	22.3	6.6	16.5	0.9	5.3
Belgium	11 571	376.2	34.4	28.6	19.3	18.5	24.4	18.9	10.5	1.4	17.9
Bosnia and Herzegovina	3245	709.9	124.2	152.5	103.4	16.4	31.9	14.6	15.9	13.2	5.5
Bulgaria	6877	926.1	237.8	195.7	134.5	0.6	24.0	22.6	18.2	49.8	10.1
Croatia	3925	588.3	82.7	80.7	42.7	10.5	30.8	14.3	22.5	32.7	6.8
Cyprus	1317	364.8	43.7	28.3	19.9	18.1	18.1	8.7	7.5	5.5	4.4
Czechia	10 531	584.3	118.5	106.2	29.4	14.2	21.6	15.3	16.0	9.4	15.6
Denmark	5857	392.1	34.2	10.4	22.0	28.7	28.9	27.7	16.3	6.0	9.5
Estonia	1332	563.7	78.3	51.1	30.9	5.8	21.4	7.4	15.7	77.5	9.8
Finland	5541	376.2	58.4	6.9	25.8	32.6	17.8	8.1	10.9	19.2	0.4
France	66 084	358.2	30.2	27.2	17.5	15.3	24.8	8.2	12.3	2.8	5.4

Table A2.9(a). contd

Georgia	3788	942.7	115.8	201.6	168.9	3.5	19.8	7.4	11.4	34.0	44.0
Germany	83 697	418.0	60.3	29.4	20.9	18.4	24.0	16.8	12.1	11.6	5.3
Greece	10 580	459.3	72.1	57.3	38.6	11.8	27.9	13.7	11.3	10.7	17.2
Hungary	9708	716.7	156.6	120.9	48.1	15.4	39.1	22.6	23.8	36.6	6.9
Iceland	373	339.1	46.9	1.0	17.2	33.5	20.2	17.1	11.3	3.9	8.2
Ireland	5028	376.2	52.1	31.7	17.0	22.2	22.8	20.8	12.4	3.1	13.3
Israel	8943	371.7	33.3	44.0	17.1	19.8	15.3	9.6	11.8	3.4	10.3
Italy	59 729	353.3	37.0	32.5	23.7	14.7	21.6	12.7	12.1	11.1	7.5
Kazakhstan	19 744	983.7	173.2	234.7	122.4	12.6	18.0	36.3	10.1	6.8	15.2
Kyrgyzstan	6820	805.8	215.2	145.7	76.7	13.9	13.5	23.0	6.2	14.4	10.2
Latvia	1886	765.4	153.2	92.0	97.0	10.0	23.5	6.6	15.0	30.0	11.2
Lithuania	2794	714.3	177.5	101.5	66.3	7.4	18.3	5.3	13.7	26.5	9.8
Luxembourg	640	332.8	33.1	32.7	16.1	21.2	19.1	16.6	10.6	3.4	5.6
Malta	524	362.6	61.3	17.8	17.6	24.5	17.8	9.4	11.8	3.1	16.9
Montenegro	604	730.9	110.2	189.1	117.6	9.1	33.2	3.1	14.6	6.4	3.9
Netherlands	17 731	394.7	35.3	44.4	20.7	28.5	28.1	17.7	13.3	1.7	5.9
North Macedonia	1851	843.4	98.7	222.8	120.5	18.2	24.6	22.3	17.0	1.8	4.0
Norway	5408	329.2	35.8	6.8	16.5	29.1	20.1	19.3	15.1	4.7	6.0
Poland	38 040	650.4	131.6	122.0	40.4	5.4	29.7	10.8	17.1	12.9	23.9
Portugal	10 391	391.1	36.4	34.6	32.1	19.5	19.1	10.7	15.5	4.8	14.8
Republic of Moldova	3024	1031.2	300.0	197.0	120.7	0.1	18.1	10.6	20.0	57.2	29.7

Table A2.9(a). contd

Romania	19 248	810.2	158.5	155.0	104.8	5.8	28.6	16.7	17.8	22.7	31.6
Russian Federation	145 836	968.0	179.2	224.7	107.8	15.9	21.1	11.3	15.8	5.2	9.6
Serbia	6835	861.0	114.8	186.1	87.3	12.8	35.3	16.9	20.2	14.1	25.9
Slovakia	5443	718.0	168.6	175.8	45.0	6.9	20.0	8.9	19.9	8.2	20.2
Slovenia	2113	423.6	51.7	52.8	29.8	5.4	26.9	9.8	14.8	10.1	6.6
Spain	47736	335.1	33.6	29.8	17.8	18.2	22.5	9.8	13.5	5.2	4.8
Sweden	10416	336.2	43.7	19.7	18.1	25.8	14.7	11.2	12.4	5.3	4.1
Switzerland	8707	310.8	36.5	25.3	14.5	20.7	18.7	9.8	8.9	8.3	4.1
Tajikistan	9967	796.0	211.1	111.6	114.5	17.3	6.1	24.7	3.8	28.7	23.6
Türkiye	86 686	686.8	106.0	128.8	57.8	20.1	41.0	32.1	11.9	20.8	14.3
Turkmenistan	7092	864.3	271.7	20.0	131.7	14.3	9.0	8.5	4.3	17.0	17.3
Ukraine	44 299	896.1	303.2	136.7	87.0	13.7	18.0	8.3	14.2	6.0	8.5
United Kingdom	67 669	430.5	43.0	39.5	19.8	38.4	24.0	21.8	13.1	3.6	19.8
Uzbekistan	34 244	867.2	364.3	53.2	113.0	21.3	7.9	9.3	5.6	21.2	10.7

(b) Causes 10–20

	Age-standardized mortality per 100 000 population by cause, both sexes, all ages										
	10. Diabetes mellitus	11. Liver cirrhosis	12. Kidney diseases	13. Breast cancer	14. Cardiomyopathy, myocarditis, endocarditis	15. Pancreatic cancer	16. Prostate cancer	17. Stomach cancer	18. Self-harm	19. Falls	20. Lymphomas, multiple myeloma
Albania	3.7	4.2	7.6	7.6	6.8	5.5	4.7	9.5	2.1	1.7	2.0
Armenia	8.5	11.9	6.2	11.8	4.2	9.5	5.7	11.5	1.9	2.5	2.6
Austria	10.5	9.1	8.2	8.9	5.0	9.5	5.8	3.7	10.2	4.2	4.9
Azerbaijan	12.2	17.3	6.7	7.9	8.9	3.3	2.6	13.2	1.6	1.5	4.2
Belarus	3.7	11.3	2.0	8.5	8.3	7.2	6.0	12.5	11.7	7.1	4.9
Belgium	3.8	7.0	6.8	9.3	3.2	7.3	5.4	2.8	14.3	5.7	5.0
Bosnia and Herzegovina	30.7	8.6	10.0	9.7	14.0	7.5	5.3	8.5	5.7	1.8	3.3
Bulgaria	10.1	17.3	12.8	10.2	4.3	7.3	6.2	7.4	6.3	3.6	3.1
Croatia	35.9	12.8	11.5	9.4	12.1	7.9	7.0	6.8	10.6	9.4	5.4
Cyprus	21.4	3.8	10.5	8.8	3.3	5.6	5.0	2.7	2.7	3.2	6.4
Czechia	19.1	14.4	7.4	9.3	4.1	10.6	6.0	4.9	10.3	3.0	4.9
Denmark	8.2	7.7	5.0	11.3	2.3	9.9	10.2	4.8	7.6	4.1	5.7
Estonia	8.4	25.8	5.5	9.2	8.8	8.4	7.5	8.7	12.5	5.8	6.0
Finland	4.5	13.4	2.0	8.0	4.7	9.9	6.4	3.1	12.6	7.2	6.2
France	5.9	7.0	5.4	10.6	3.4	9.2	5.3	3.5	11.8	4.5	5.6
Georgia	18.1	8.4	8.9	14.5	8.5	6.6	8.3	9.6	4.6	9.3	5.1
Germany	8.0	10.4	8.5	10.2	4.5	9.3	6.4	4.6	8.2	6.5	5.7
Greece	5.1	3.5	13.3	10.7	4.0	8.2	5.3	5.2	3.4	3.8	4.9
Hungary	16.3	19.5	3.9	11.0	9.5	9.7	5.8	6.2	11.4	7.2	4.5

Table A2.9(b). contd

Iceland	5.5	2.5	4.5	9.6	3.5	6.7	8.8	2.5	10.8	3.3	4.8
Ireland	4.6	4.4	5.0	9.8	3.1	6.6	6.6	3.8	7.7	2.9	5.9
Israel	14.5	2.7	15.4	11.8	1.8	8.2	3.2	4.4	4.4	0.9	8.0
Italy	9.0	3.9	5.2	9.7	2.8	8.1	3.9	5.8	4.6	2.2	5.9
Kazakhstan	7.7	31.9	9.8	8.2	32.8	5.8	3.0	11.4	15.2	3.3	2.6
Kyrgyzstan	6.6	26.7	8.0	5.1	7.9	5.3	2.3	17.2	7.8	2.6	1.6
Latvia	14.1	19.1	6.5	11.3	37.5	8.7	9.0	9.2	12.0	4.9	6.4
Lithuania	10.0	21.6	3.8	10.0	12.4	8.6	7.6	10.8	16.8	8.2	5.0
Luxembourg	3.9	7.9	6.3	8.6	3.2	7.4	5.5	3.7	6.2	5.1	4.2
Malta	17.1	4.0	6.0	9.0	2.1	9.7	3.8	3.7	5.6	5.5	4.7
Montenegro	11.8	5.0	10.6	15.0	15.4	7.6	6.9	5.1	8.9	3.9	4.8
Netherlands	5.9	3.1	5.6	10.2	2.9	8.1	7.4	3.6	9.1	9.1	6.2
North Macedonia	44.8	7.6	26.8	13.2	50.8	6.9	6.1	9.6	4.6	0.5	3.3
Norway	5.6	2.6	5.0	6.0	1.8	7.6	6.8	2.6	11.4	6.9	5.0
Poland	13.0	17.7	4.8	10.1	4.8	6.8	7.2	6.7	11.5	7.5	4.7
Portugal	9.4	5.8	7.2	8.5	3.6	6.5	6.1	9.8	7.2	3.5	6.1
Republic of Moldova	9.2	43.9	5.9	11.6	10.7	7.2	5.8	8.8	11.9	1.7	3.0
Romania	6.7	29.8	14.1	11.1	12.4	8.1	5.6	9.1	7.2	5.2	4.0
Russian Federation	14.2	22.1	5.5	9.4	25.2	8.1	5.3	10.8	17.9	5.4	4.2
Serbia	20.2	7.3	21.6	15.2	75.7	8.5	6.5	6.0	9.4	3.5	4.9
Slovakia	7.0	23.3	9.4	11.2	4.6	9.1	6.7	5.9	7.6	7.9	6.2

Table A2.9(b). contd

Slovenia	5.4	11.1	1.9	10.0	4.8	8.5	8.0	7.0	13.2	12.2	8.1
Spain	5.4	4.7	6.4	6.8	4.3	7.1	4.4	4.8	6.2	2.8	4.5
Sweden	6.7	4.0	4.8	6.7	2.6	8.5	7.5	2.7	11.7	3.6	4.7
Switzerland	3.7	3.6	4.6	7.9	3.9	8.5	5.6	3.1	9.9	7.1	4.9
Tajikistan	13.2	20.2	2.1	4.6	1.0	1.7	1.0	20.9	3.1	3.8	2.0
Türkiye	21.6	7.2	23.4	7.7	1.7	8.8	5.7	11.4	2.6	5.5	5.9
Turkmenistan	18.9	46.2	14.5	10.4	12.9	2.8	1.3	10.3	7.5	2.1	2.2
Ukraine	3.3	23.3	2.3	9.0	19.5	6.7	4.9	8.3	17.0	4.1	3.6
United Kingdom	4.2	9.4	3.2	10.0	2.9	6.9	7.3	3.1	8.8	4.4	6.2
Uzbekistan	27.0	29.0	14.9	7.7	2.5	3.4	2.3	8.6	9.1	2.3	1.7

Source: WHO *(38)*.

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