



World Health
Organization

REGIONAL OFFICE FOR Europe



Healthy, prosperous lives for all:

the European Health Equity Status Report



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Abstract

The adoption of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals have provided a framework within which to strengthen actions to improve health and well-being for all and ensure no one is left behind. Despite overall improvements in health and well-being in the WHO European Region, inequities within countries persist. This report identifies five essential conditions needed to create and sustain a healthy life for all: good quality and accessible health services; income security and social protection; decent living conditions; social and human capital and decent work and employment conditions. Policy actions are needed to address all five conditions. The Health Equity Status Report also considers the drivers of health equity, namely the factors fundamental to creating more equitable societies: policy coherence, accountability, social participation and empowerment. The report provides evidence of the indicators driving health inequities in each of the 53 Member States of the Region as well as the solutions to reducing these inequities.

Keywords

HEALTH INEQUITIES
HEALTH MANAGEMENT AND PLANNING
SOCIAL DETERMINANTS OF HEALTH
SOCIOECONOMIC FACTORS
SUSTAINABLE DEVELOPMENT

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ISBN 978 92 890 5425 6

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Suggested citation. Healthy, prosperous lives for all: the European Health Equity Status Report. Copenhagen: WHO Regional Office for Europe; 2019. Licence: CC BY-NC-SA 3.0 IGO.

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Edited by Nicole Satterley

Book design by Marta Pasqualato

Printed in Italy by AREAGRAFICA SNC DI TREVISO GIANCARLO & FIGLI - LITOSTAMPA VENETA

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List of abbreviations

CDoH	commercial determinants of health
CI	confidence interval
CSDH	Commission on the Social Determinants of Health
CVD	cardiovascular disease
eHiAP	equity in Health in All Policies
EHIS	European Health Interview Survey
ESCS	Economic, Social and Cultural Status
ESS	European Social Survey
EQLS	European Quality of Life Survey
EU	European Union
EU-LFS	European Union Labour Force Survey
EU-SILC	European Union Statistics on Income and Living Conditions
EWCS	European Working Conditions Survey
FAS	Family Affluence Scale
GBD	Global Burden of Disease (Collaborative Network)
GDL	Global Data Lab
GDP	gross domestic product
GHED	(WHO) Global Health Expenditure Database
GHO	Global Health Observatory
HBSC	Health Behaviour in School-aged Children
HDI	Human Development Index
HESR(i)	Health Equity Status Report (initiative)
IHME	Institute for Health Metrics and Evaluation
ILO	International Labour Organization
ISCED	International Standard Classification of Education
ISEI	International Socio-Economic Index of Occupational Status
JMP	Joint Monitoring Programme
LMPs	labour market policies
MDR-TB	multidrug-resistant tuberculosis
MICS	Multiple Indicator Cluster Surveys
NCDs	noncommunicable diseases
NEET	not in education, employment or training
OECD	Organisation for Economic Co-operation and Development
OOP	out-of-pocket (payment/spending)
PISA	Programme for International Student Assessment
PPP	purchasing power parity
PPS	purchasing power standard
SDGs	Sustainable Development Goals
SDH	social determinants of health
STEPS	STEPwise approach to Surveillance
TB	tuberculosis
TIP	tailoring immunization programmes
UHC	universal health coverage
UNICEF	United Nations Children's Fund
WJP	World Justice Project
WVS	World Values Survey

Acknowledgements

The WHO report on healthy, prosperous lives for all – the European Health Equity Status Report – is led by the WHO European Office for Investment for Health and Development of the WHO Regional Office for Europe, based in Venice, Italy. Chris Brown, Head of the WHO Venice Office, is responsible for the strategic development and coordination of the Health Equity Status Report, which is a key product in the portfolio of work of the Division of Policy and Governance for Health and Well-being, under the overall direction of Dr Piroska Östlin. Support for this report was provided in part by the Robert Wood Johnson Foundation. The views expressed here do not necessarily reflect the views of the Foundation.

Extensive technical content was provided by Chris Brown, Lin Yang and Tammy Boyce of the WHO Venice Office, and Ben Barr and Tanith Rose from the WHO Collaborating Centre for Policy Research on Determinants of Health Equity at the University of Liverpool, England.

Substantial contributions were provided by members of the Scientific Expert Working Group: Isabel Yordi Aguirre (Gender and Human Rights, WHO Regional Office for Europe); Clare Bambra (Institute of Health and Society, Newcastle University); Ben Barr (Institute of Population Health Sciences, University of Liverpool); Paula Braveman (School of Medicine, University of California, San Francisco); Matthias Braubach (WHO European Centre for Environment and Health, WHO Regional Office for Europe); Giuseppe Costa (Department of Clinical Science and Biology, University of Turin); Paula Franklin (Research and Policy Consultant, Belgium); Peter Goldblatt (Institute of Health Equity, University College London); Scott Greer (School of Public Health, University of Michigan); Louise Haagh (Department of Politics, University of York); Rachel Hammonds (Law Faculty, University of Antwerp); Johanna Hanefeld (Health Policy and Systems Research, London School of Hygiene & Tropical Medicine); Gorik Ooms (Global Health Law & Governance, London School of Hygiene & Tropical Medicine); Daniel La Parra (Department of Sociology,

University of Alicante); Enrique Gerardo Loyola Elizondo (Research and Policy Consultant); Julia Lynch (Ronald O. Perelman Center for Political Science and Economics, University of Pennsylvania); Asa Nihlén (Gender and Human Rights, WHO Regional Office for Europe); Jennie Popay (Department of Sociology and Public Health, Lancaster University); Aaron Reeves (Department of Sociology, Oxford University); Barbara Rohregger (Research and Policy Consultant, Italy); Marc Suhrcke (Health & Health Systems, Luxembourg Institute of Socio-Economic Research); Denny Vågerö (Centre for Health Equity Studies, Stockholm University); Carmen Vives-Cases (Research Institute for Gender Studies, University of Alicante); Margaret Whitehead (Department of Public Health and Policy, University of Liverpool).

The report also benefited from contributions provided by: Andrej Belák, Sara Barragan Montes, Jonny Currie, Séverine Deguen, Anna Giné March, Phil McHale, David Mosler, Jan Peloza, Dwayne Proctor, Ritu Sadana, Matthew Saunders, Steven Senior, Shixin (Cindy) Shen, Johannes Siegrist, Pia Vracko, the National Institute for Health Research North West Coast Collaboration for Applied Health Research and Care, and the WHO Collaborating Centre for Policy Research on Determinants of Health Equity at the University of Liverpool.

Several Venice Office and Regional Office staff members from all divisions and various country offices contributed throughout the process, including: Emilia Aragon De Leon, Andrea Bertola, Antonella Biasiotto, João Breda, Maria Luisa Buzelli, Tatjana Buzeti, Snezhana Chichevalieva, Dan Chisholm, Tina Dannemann Purnat, Masoud Dara, Tamás Gyula Evetovits, Jill Farrington, Carina Ferreira-Borges, Manfred Huber, Gabrielle Jacob, Dorota Jarosinska, Monika Kosinska, Joana Madureira Lima, Lorenzo Lionello, Marco Martuzzi, Bettina Menne, Kristina Mauer-Stender, Lazar Nikolic, David Novillo Ortiz, Piroska Östlin, Ivo Rakovac, Oliver Schmoll, Sarah Thomson, Adam Tiliouine, Nicole Britt Valentine, Martin Weber, Hanna Yang and Francesco Zambon.

Foreword

The WHO European Region has a long history and tradition of upholding universal policies, welfare and rights-based approaches to health, and to prioritizing the conditions needed to live a healthy life. Inspired by the Health 2020 goal to reduce health inequities, many countries, regions and communities have taken actions to reduce health gaps.

However, the trends in reducing health gaps are mixed, the rate of improvement is slower than anticipated and new groups are emerging with disproportionately higher risk of poor health and premature morbidity. The result is that many in our societies continue to lag behind in health and well-being, and this in turn holds back their opportunities to live full and prosperous lives.

The polarizing effects of major gaps in health and well-being within all countries across the WHO European Region threaten the very core of European values of solidarity and stability, upon which prosperity and peace are built. We need a better understanding of what is driving gaps in health over time and clearer signposting to the policies and approaches that will produce the best results for equity in health. This knowledge is crucial to foster political support for action, to focus government attention on solutions and to enable honest and inclusive dialogue with the public on why reducing health inequities matters for the health and well-being of everyone in Europe in the 21st century.

The Health Equity Status Report has been written with these goals in mind. It brings forward innovations in the analysis of the relationships between health status and the security and quality of the conditions which are essential for every child or adult to be able to live a healthy life. It goes beyond describing the problem and shows how policies and investment decisions are having an impact, positively or

negatively, on achieving equity in health and well-being across the life-course. Never before have we had such a clear picture of the factors that drive and compound health inequities in our societies or of the policy options and solutions that can deliver positive changes.

A comprehensive basket of interventions that are delivered as part of mainstream public policies has the highest chance of succeeding to level up health status between social groups and between girls and boys, women and men, within all of our countries. The Health Equity Status Report demonstrates that this approach can deliver reductions in health inequities even within 2–4 years; the same time frame of a typical government mandate. There is also overwhelming empirical evidence showing how the basket of interventions that will increase equity in health comprises the same interventions for achieving inclusive growth. This means our efforts to increase equity in health are investments in the well-being and development of all of society, in line with realizing the United Nations Goals for Sustainable Development by 2030.

Real progress means engaging new partners and breaking down the key barriers to progress. Our most important partner is the child, the young person, the woman or man who is not able to thrive and prosper. It is their voice, their lived experience, their passion, drive and resilience that we must nurture to make equitable progress in health and for sustainable development.

This WHO European report on healthy, prosperous lives for all is above all a valuable tool to inform debates, inspire action and strengthen alliances for health equity within and across countries of the WHO European Region.

Dr Zsuzsanna Jakab
WHO Regional Director for Europe

Executive summary

- The Health Equity Status Report (HESR) is a comprehensive review of the status and trends in health inequities and of the essential conditions needed for all to be able to live a healthy life in the WHO European Region.
- Improving health and well-being for all, reducing health inequities and ensuring no one is left behind will bring wider economic, social and environmental benefits to Member States.
- This report seeks to change the common perceptions that health inequity is too complex to address and that it is unclear what actions to take and which policies and approaches will be effective.
- The HESR captures the progress made in implementing a range of policies with a strong effect on reducing inequities and demonstrates the link between levels of investment, coverage and uptake of these policies, as well as the gaps in the essential conditions needed to live a healthy, prosperous life.
- The report is part of the HESR initiative (HESRi), which includes new evidence and tools for Member States to use to accelerate progress in reducing health inequities.

Health equity and prosperity

The HESR analysis reinforces evidence on how health and prosperity are strongly linked and highlights the imperative to ensure the social values of solidarity, equity and rights are brought into fiscal and growth policies

- In many communities the effects of deindustrialization and globalization have not led to success for all, but instead to high unemployment levels, rising inequalities, and poor health outcomes. This is visible at all stages throughout the life-course.

Efforts to reduce health inequities are core investments for achieving inclusive growth and vice versa

- A scenario of a 50% reduction in inequities in life expectancy between social groups would provide monetized benefits to countries ranging from 0.3% to 4.3% of gross domestic product (GDP). Interventions to remove the barriers created by poor health and well-being are good for both human and economic well-being.

The health sector is pivotal to driving equity, prosperity and inclusive economies but many other sectors, such as finance, housing, employment and education, also have important roles to play

- If health systems are partners when economic development plans are created and monitored, this can drive virtuous circles of inclusive growth and equity. Responsible practices by the health system in the areas of employment and the purchasing of goods and services are generating good jobs, new employment and directly contributing to income security, gender equity and increased human capital at the local and national levels.

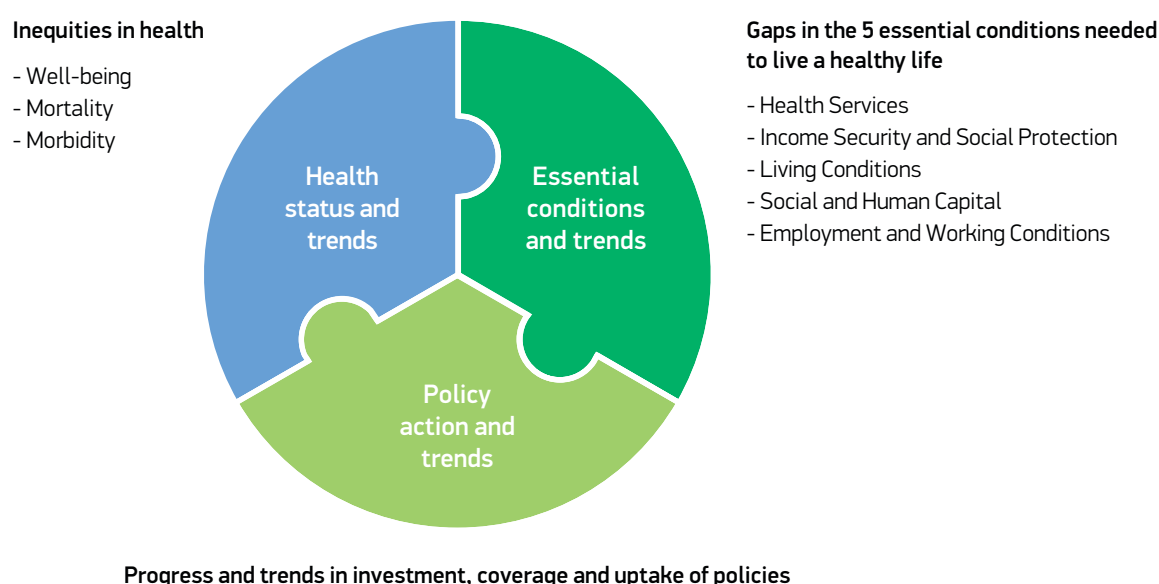
There is strong support from the public for a more equal society and to invest in the necessary conditions to enable all people to prosper and flourish in life and health

- In the WHO European Region the majority of people want to live in a more equitable society. They believe income differences in their countries are too great and that reducing income inequalities should be a priority for national governments.
- Those who are being left behind are feeling just that: left behind. Not having the same opportunities, stigmatization and living in a chronic state of insecurity (whether social, financial and/or cultural) increases stress and anxiety and reduces the sense of trust and belonging in society. This has impacts on all of society.

HESRi innovations

- The HESR analysis and findings are generated from a new dataset. It brings together three types of data (Fig. O.1) and uses innovations in analytical methodologies to provide a better understanding of health equity, the pathways that generate equity and inequities, and how policy interventions are associated with the rate of progress to reduce gaps in health and well-being, across the countries of the WHO European Region (Annex 1).
- The HESR data and analysis provide the following benefits.
 1. Country-specific data allow governments to strengthen decision-making, tailoring their action and investment for health equity accordingly.
 2. Analysis supports ministries of health to demonstrate how decisions made in other sectors contribute to and interact with inequities in health and well-being.
 3. Evidence enables national and subnational governments and health authorities to improve policy coherence, leading to improved equity in health and in life chances.

Fig. O.1. Piecing together three types of information in the HESR



- The HESR uses a range of data analysis and visualizations to support a robust understanding of the current status of health inequities within countries. It also captures whether there have been significant reductions or increases in these inequities over a period of 10–15 years (trend analysis data) (Annex 1).
- **Gradient charts** are used to show the socioeconomic gradient for an indicator, such as life expectancy, by examining how levels of the indicator vary between subgroups of people. Either three or five subgroups are defined, according to markers of socioeconomic status; for example, number of years of education (Fig. O.2), or levels of income or wealth. For people belonging to each subgroup, the average level of the indicator is calculated and represented in the chart by a different coloured dot.
- **Gap charts** are used to show the difference, or gap, in average levels of the indicator in the most advantaged subgroup compared to the most disadvantaged subgroup. For example, the charts show the difference between those in the highest and lowest income quintiles or between those with most years of education (university level) and those with least years (lower-secondary level). The traffic light symbols in these figures also show whether the size of the gap for each country has narrowed, widened, or stayed the same over a specified time frame (e.g. Fig O.3).

- **Summary wheel charts** are used to summarize the inequities for several indicators for countries across the WHO European Region, providing a profile of the average magnitude of inequities in Member States. While the gap charts use the **difference** in levels of indicators between subgroups, the summary wheel charts use the **ratio** of levels of indicators between subgroups to make side-by-side comparisons of different indicators easier to interpret.

- **Decomposition charts** are used to show how shortcomings in each of the five essential conditions, when combined, contribute to the gap for a given health indicator, such as mental health or limiting illness. The decomposition charts enable policy-makers to see more clearly the relative weight of each condition in contributing to (in)equity in a specific health indicator (Annex 2).

Health equity status and trends

Fig. O.2. Life expectancy at birth, by education level, 2016 (or latest available year)



Notes. F = females. M = males. Data for Malta are from 2011. High education level data are missing for Malta.
Source: authors' own compilation based on data extracted from Eurostat.

Average life expectancy across the Region is increasing but in every country health inequities remain between adults from different social groups

- Average life expectancy in the WHO European Region increased from 76.7 years in 2010 to 77.8 years in 2015. However, this obscures within-country differences, as shown in Fig. O.2 for 19 countries (with education-disaggregated data).

- Table 0.1 summarizes the data presented in Fig. 0.2, showing how life expectancy and gaps in life expectancy by education level differ between men and women within those 19 countries.

Table 0.1. Averages and ranges for life expectancy and the gaps in life expectancy for 19 countries of the WHO European Region, 2016 (or latest available year)

	Life expectancy (years)		Gaps in life expectancy (years)	
	Average	Range	Average	Range
Women	82.0	78.1–86.0	3.9	2.3–7.4
Men	76.2	71.1–81.8	7.6	3.4–15.5

Source: authors' own compilation based on data extracted from Eurostat.

- The average life expectancy across these 19 countries is lower for men than for women and the gap in life expectancy for men of different social groups is wider than for women.
- Gaps in life expectancy between women with most and fewest years of education remained the same or increased in all 19 countries between 2013 and 2016. For men, the gaps remained the same in almost all countries.

There are large gaps in life expectancy between men of different social groups and between women of different social groups, within the same country (Fig. 0.2)

- Women with fewer years of education are likely to die between 2.3 and 7.4 years earlier than women with more years of education.
- Men with fewer years of education are likely to die between 3.4 and 15.5 years earlier than men with more years of education.
- In four countries, men with lower-secondary education live more than 10 years less than those with university education.

Where you are born and live in a country can influence your chance of thriving, even in the early years of life

- The severity of geographical inequities in infant mortality varies widely across countries of the WHO European Region.

- Based on infant mortality data for 35 countries, Fig. 0.3 shows that for every 1000 babies born, as many as 41 more babies do not survive their first year if born in the most deprived areas, compared to those born in the most advantaged ones.
- These inequities are comparable in magnitude to the absolute rates of infant mortality across the Region: average infant mortality rates within WHO European Region countries range from 1.9 to 47.8 deaths per 1000 live births.
- There are notable differences in infant mortality levels between geographical areas when comparing countries with similar economies and cultural traditions. This shows that inequities in infant mortality are avoidable.

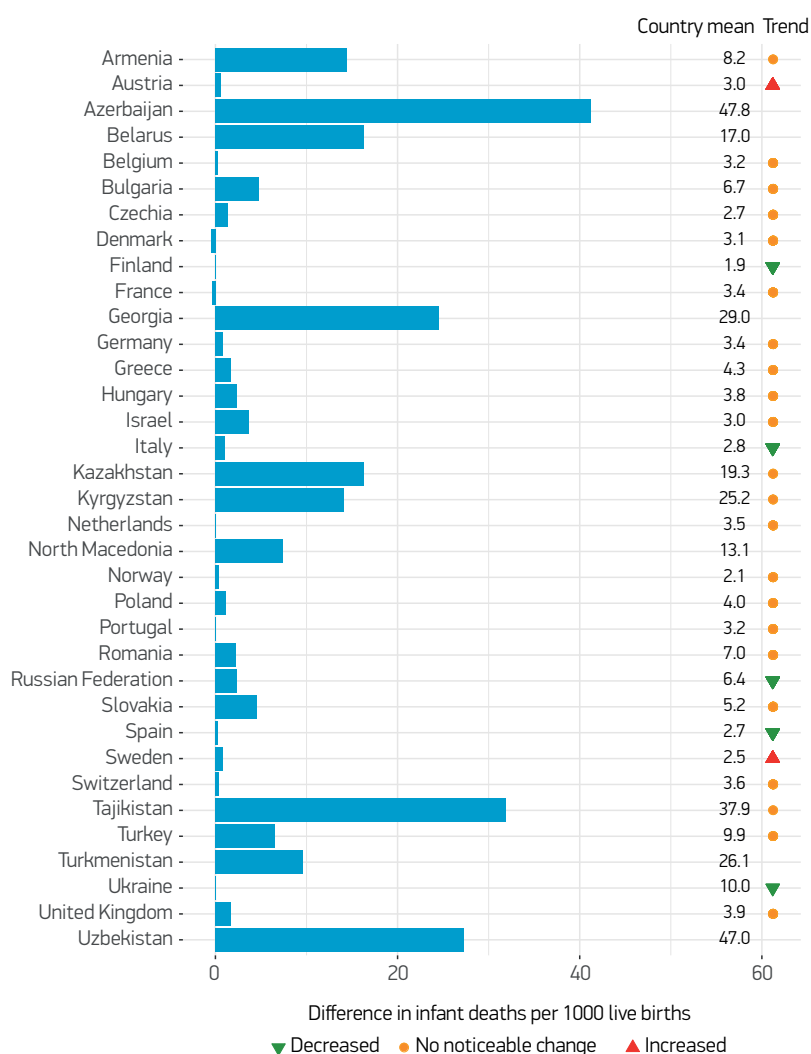
In many countries, the gaps in infant mortality remain the same as they were in the late 2000s

- In 23 out of 35 countries across the WHO European Region, these gaps in infant mortality rates between the most disadvantaged and most advantaged subnational regions stayed the same or widened between 2005 and 2016 (Fig. 0.3).

Inequities in long-standing illness limit participation in daily activities and hold many adults back from being able to live a decent life

- Inequities in limiting illness impact not only on opportunities to live a high-quality home and family life, but also on the overall productivity of a country's workers and therefore its economic performance.

Fig. O.3. The difference in infant deaths per 1000 live births in the most disadvantaged subnational regions compared to the most advantaged subnational regions, 2016 (or latest available year; with trends since 2005)



Notes. Most recent data year for most countries was 2016, with the following exceptions: Azerbaijan 2006; Belarus 2005; Georgia 2005; Kyrgyzstan 2014; Kazakhstan 2015; North Macedonia 2005; Russian Federation 2015; Tajikistan 2015; Ukraine 2012; Uzbekistan 2006.

Sources: authors' own compilation based on data extracted from Eurostat, the Organisation for Economic Co-operation and Development (OECD) and the Global Data Lab (GDL).

- Inequities in limiting illness are prevalent among all countries across the WHO European Region. Among the 38 countries in Fig. O.4, the percentage of both women and men reporting limitations in being able to carry out daily activities due to poor health follows a strong social gradient by income quintile.
- Data for the 38 countries show that out of every 100 women, between four and 20 more women in the lowest income quintile report limitations in daily life due to poor health compared to those in the highest income quintile.
- For men, between four and 22 more men in every 100 in the lowest income quintile report such limitations, compared to the highest income quintile.
- The gaps in limiting illness have remained the same or increased for women between 2005 and 2016 in

32 of the 38 countries in Fig. O.4, and in 31 of the 38 countries for men.

Gaps in self-reported health and well-being are the early warning signs of the unequal risk of becoming ill

- Gaps in self-reported health and well-being exist across all stages of the life-course, and trends show the gaps between social groups in the same country are widening.
- Self-reported measures of health and well-being are increasingly recognized as early detectors of mortality and morbidity risk, and are widely regarded as reliable indicators of objective health status.
- Percentages of children, working-age adults, and adults aged 65 years and over reporting poor health, disaggregated by household income or affluence

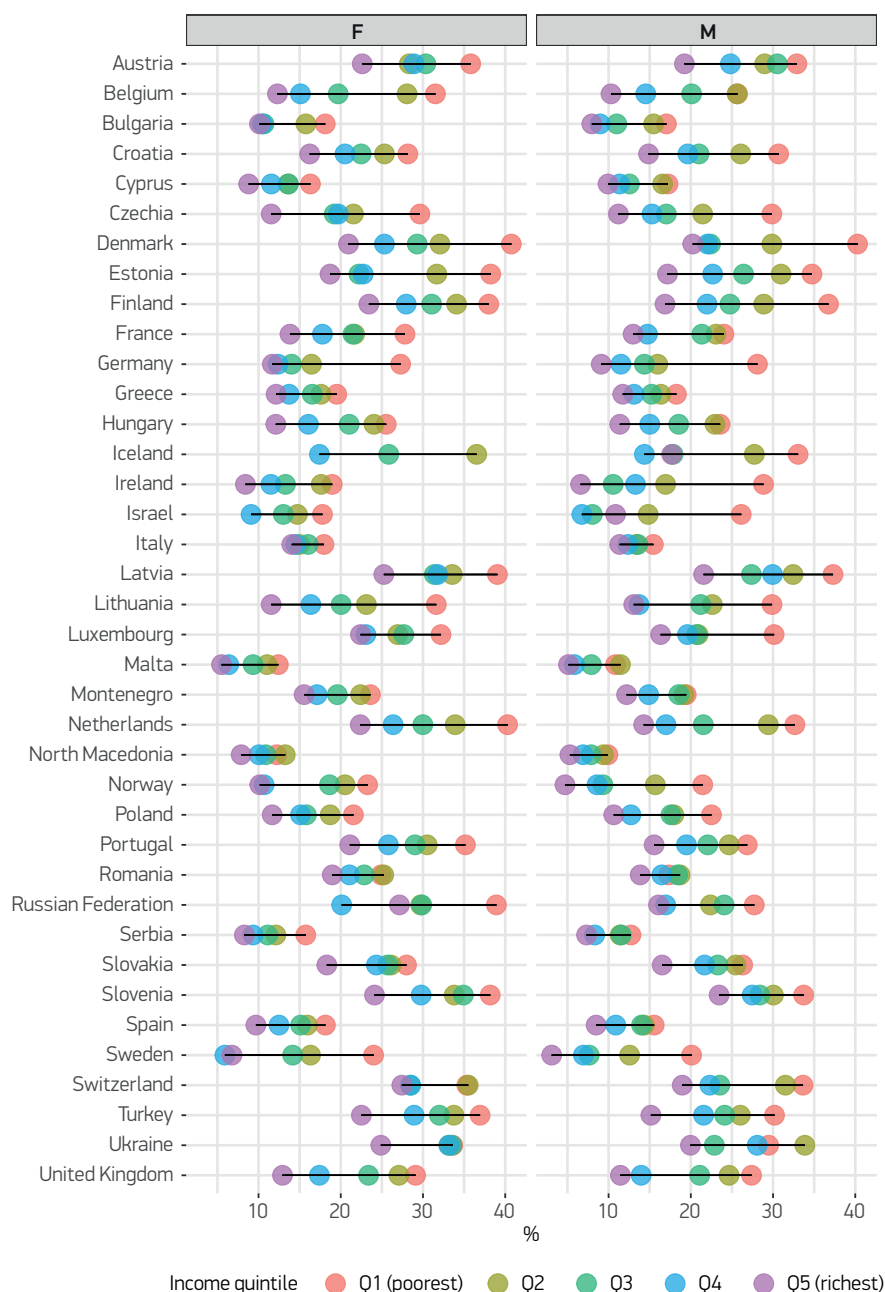
level, show that the socioeconomic gradient in health widens over the progressive stages of the life-course.

- Data for the 38 countries studied show that out of every 100 girls, there are on average six more girls in the lowest income quintile reporting only poor or fair health compared to the highest income quintile. For boys, there are on average five more boys in every

100 in the lowest income quintile compared to the highest income quintile.

- For working-age adults, these gaps increase. On average 19 more women and 17 more men out of every 100 in the lowest income quintile report only poor or fair health, compared to the highest income quintile.

Fig. O.4. Percentage of adults reporting long-standing limitations in daily activities due to health problems (age adjusted), by income quintile



Notes. F = females. M = males. Data missing due to small sample size for women in Iceland (Q1 and Q5) and Israel (Q5).

Sources: authors' own compilation based on data extracted for the years 2012–2017 from the European Union Statistics on Income and Living Conditions (EU-SILC) survey and the European Social Survey (ESS).

Without effective interventions, the gaps in health persist and widen into later life

- This is of increasing concern given the demographic shifts towards ageing societies that are taking place across the WHO European Region. For adults

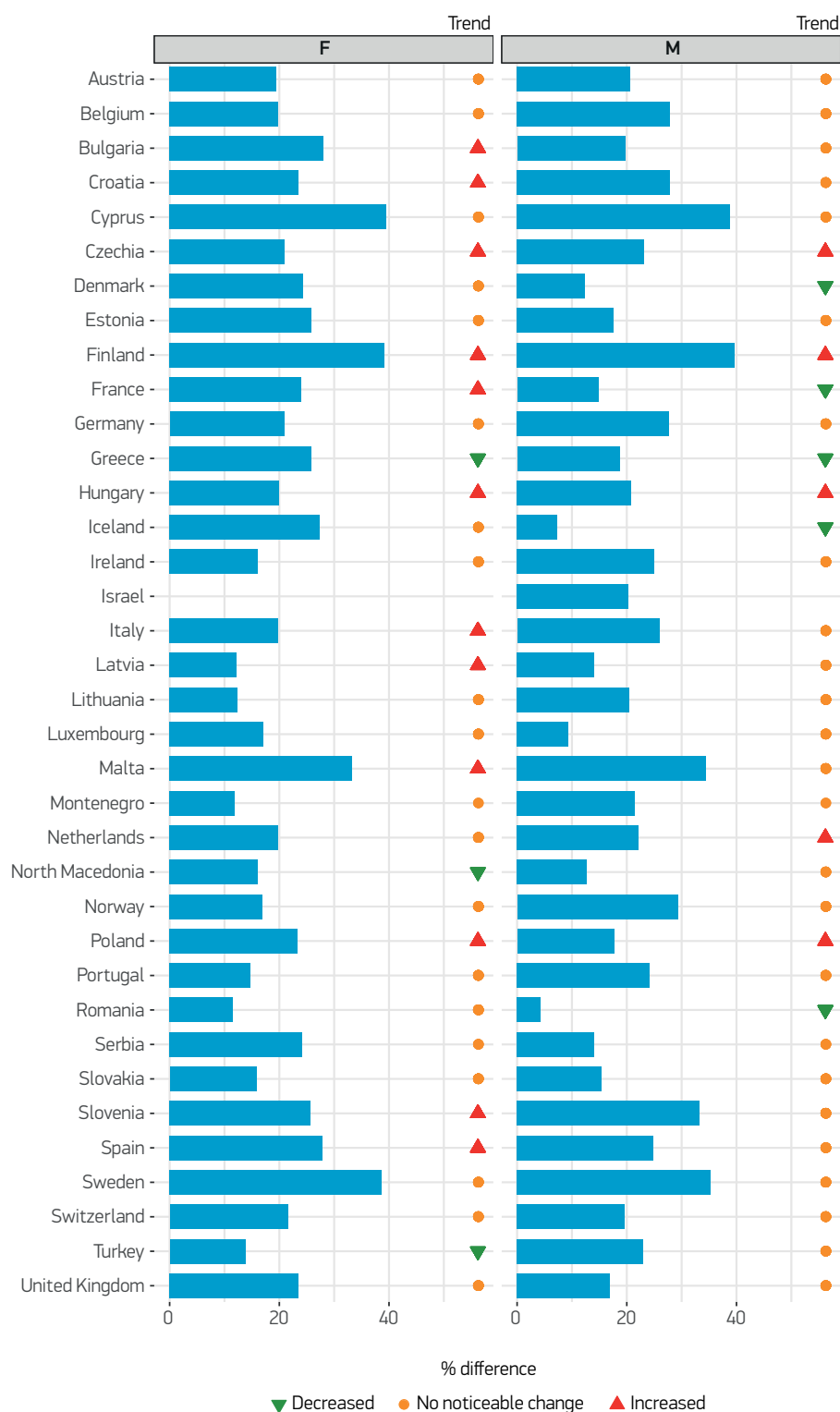
aged 65 years and over, the above-mentioned gaps increase again to an average of 22 more women and 21 more men out of every 100 in the lowest income quintile reporting only poor or fair health, compared to the highest income quintile (Fig. O.5).

- Although these data originate from different individuals at different stages of life at a given point

in time, rather than the same individuals over time, it is evident from this static snapshot of the life-course that inequities become wider as the stages of life progress.

- These equity gaps throughout the life-course represent a missed opportunity to enable people to prosper and flourish.

Fig. O.5. The percentage difference in adults aged 65 years or over reporting poor or fair health per 100 people in the lowest income quintile compared to the highest income quintile, 2017 (and trends since 2005)



Notes. F = females. M = males.

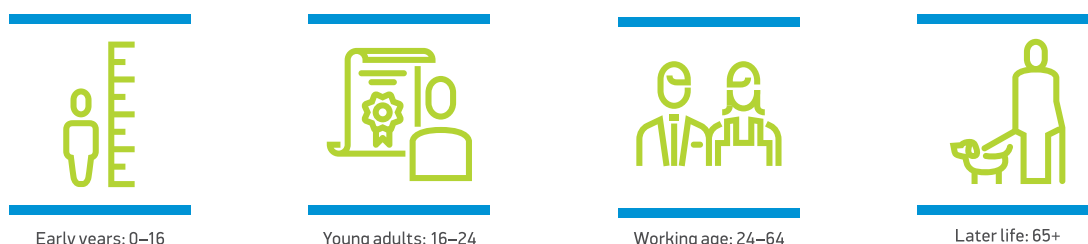
Sources: authors' own compilation based on 2017 data extracted from the EU-SILC survey and the ESS.

Left unchecked, inequities in health accumulate across the life-course

- Table 0.2 shows the gaps in numbers of people reporting poor health between the highest and lowest income quintiles at different stages throughout the life-course (out of every 100 people).

Table 0.2. Gaps in numbers of people reporting poor health between the highest and lowest income quintiles, per 100 people

	Childhood	Working years	Later life
Women	6	19	22
Men	5	17	22



Sources: authors' own compilation based on data from the 2014 Health Behaviour in School-aged Children (HBSC) survey for children; and data for the years 2012–2017 from the EU-SILC survey and the ESS for adults.

Inequities in mental health are just as prevalent in the WHO European Region as inequities in physical health

- Men and women living on the lowest incomes within countries across the Region are, on average, twice as likely to report poor mental health compared to those with the highest incomes.
- Mental health is a major public health priority because of its co-morbidity rates with cardiovascular disease (CVD) and communicable diseases such as tuberculosis (TB).
- Depression and anxiety disorders are among the top five causes of the overall disease burden in the Region (measured in terms of disability-adjusted life years).
- Analysis of the data for the 35 countries used to compile Fig. 0.6, grouped by clusters of countries with similar policy and political landscapes (Annex 3), shows that out of every 100 women, between 12 and 16 more women in the lowest income quintile report poor mental health compared to women in the highest income quintile. For men, between 9 and 17 more men in every 100 in the lowest income quintile report poor mental health compared to those in the highest income quintile.

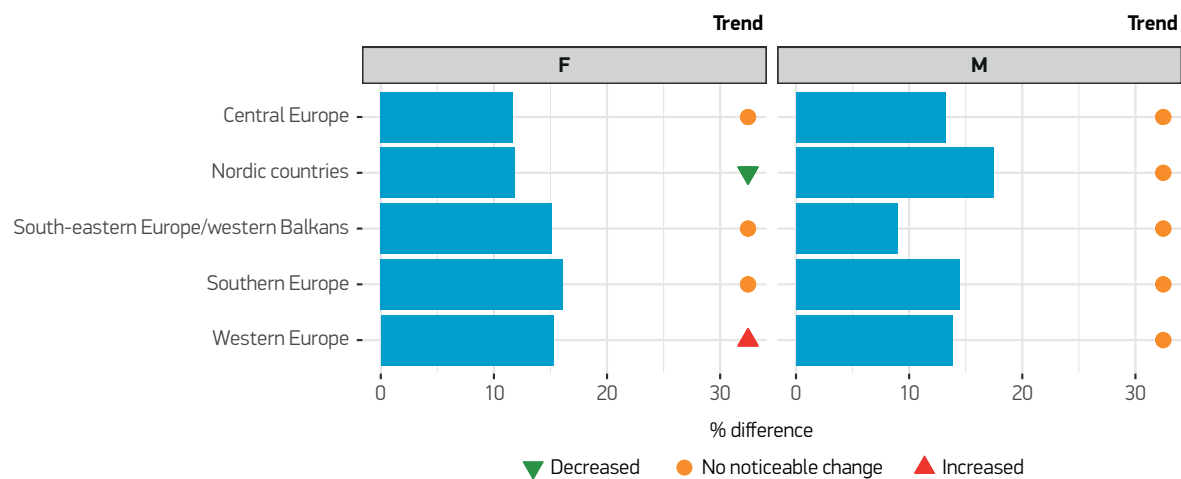
Gender differences in inequities in mental health vary in different parts of the WHO European Region and have not decreased significantly from 2007 to 2016

- The clustering of countries used in Fig. 0.6 highlights that gender differences in the severity of mental health inequities vary in different parts of the Region.

Inequities in noncommunicable diseases (NCDs) and the associated risk factors exist across the Region

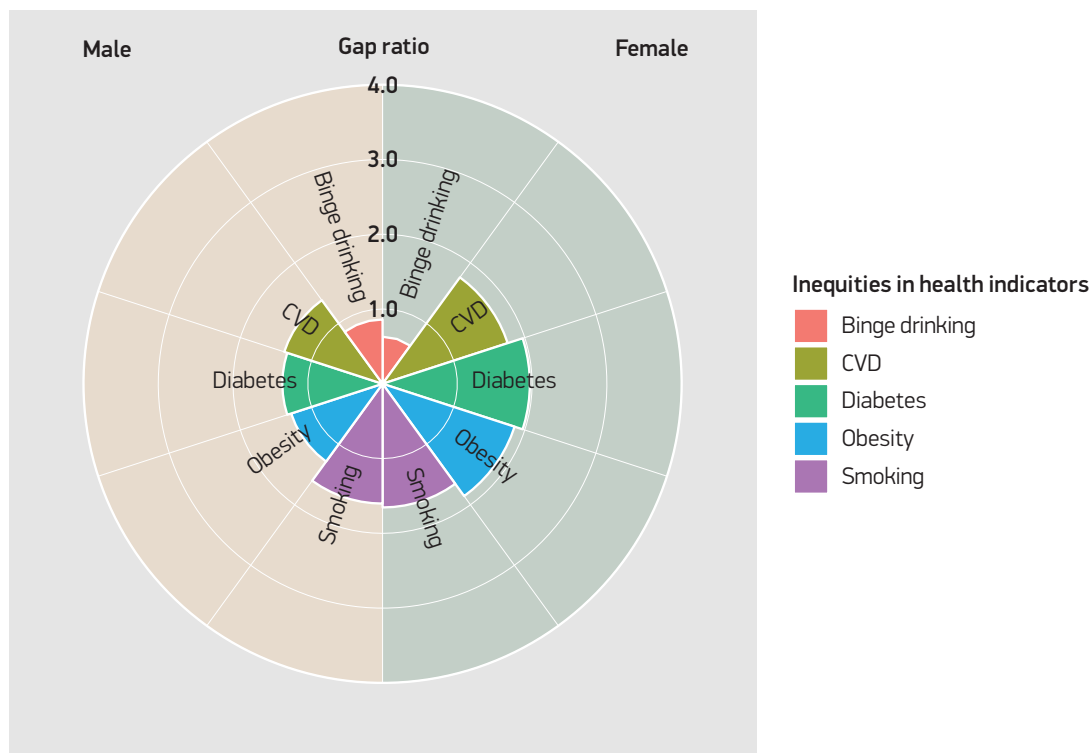
- Inequities in four out of five risk factors for NCDs follow a socioeconomic gradient (Fig. 0.7).
- The progressively more social and economic resources and opportunities a person has, the lower the likelihood of developing a risk factor for NCDs (with the exception of alcohol consumption).
- Fig. 0.7 compares the average inequities in several indicators of NCDs and risk factors between men and women with most and fewest years of education (university and lower-secondary level education, respectively) within countries across the WHO European Region.
- The additional risk of CVD, diabetes, obesity and smoking among women with the fewest years of education compared to those with the most years of education is more pronounced than the additional risk among men, when making the same comparison between education levels.
- On average across the Region, women with the fewest years of education are almost twice as likely to have diabetes as women with the most years of education, while this ratio is less than 1.5 times for men. Diabetes is reported among 4.3% of women with the fewest years of education and among 2.2% with the most years of education. For men, these rates are 3.8% and 2.8%, respectively.

Fig. O.6. The percentage difference in adults reporting poor mental health on the WHO-5 Well-Being Index per 100 adults in the lowest income quintile compared to the highest income quintile (various years and trends), by country cluster



Notes. F = females. M = males.
 Source: authors' own compilation based on data extracted for the years 2007–2016 from the European Quality of Life Survey (EQLS)..

Fig. O.7. Average within-country inequities in NCDs and NCD risk factors (gap ratio between the highest and lowest number of years in education)



Source: authors' own compilation using the Health Equity Dataset.

Understanding the gaps: what is contributing to health inequities within countries of the WHO European Region?

The HESR uses new methods to understand what is driving the trends and status of health inequities within countries across the Region

- Measuring health status and trends is important, but without understanding what factors and decisions are driving inequities, the focus would remain on describing the problem, not on identifying solutions and taking action.
- The HESR has captured and analysed for the first time the relationships between health inequities, the conditions that are essential to be able to live a healthy life, and the degree of investment, coverage and uptake of policies that influence health equity outcomes.
- This is a major advancement in being able to accelerate systematic, whole-of-government and whole-of-society action to increase equity in health.
- The HESR has identified five conditions (Fig. 0.8) that have impacts on health equity; shortcomings in each of the areas are significant in their own right in explaining health inequities between men and women across social groups and geographical areas.

Fig. 0.8. HESR health equity conditions



To increase equity in health within countries, actions are needed across all five conditions through a combination of targeted and universal policy approaches

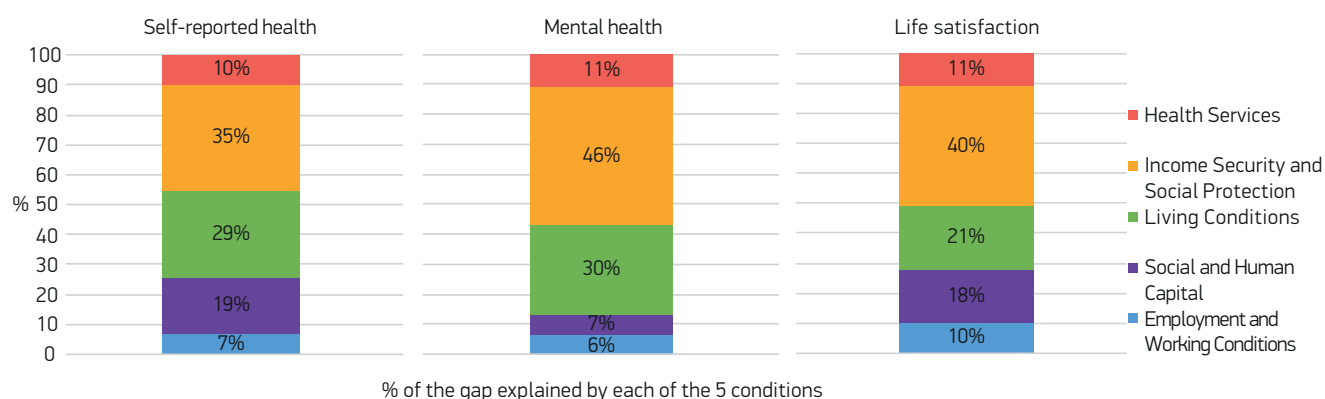
- Combining policy interventions that are proportionate to the degree of inequity between social groups has the effect of improving the health of all, while at the same time accelerating the rate of improvement for those who would otherwise be left behind.
- Fig. 0.9 shows the relative contribution of shortcomings in each of the five essential conditions to explaining health inequities within countries for three major public health priorities that are relevant across the whole WHO European Region.
- These five essential conditions are needed for people to live healthy, prosperous lives, and public policies contribute to creating these conditions
- The HESR uses decomposition analysis to quantify the (extent of the) contribution of each of the five conditions to health inequities, relative to each other. Given the data available, the analysis shows that all five conditions are statistically significant in contributing to the inequities in the three health indicators, and that the relative size of their contributions are largely consistent across the indicators.¹
- Differences between socioeconomic groups in terms of *Income Security and Living Conditions* are the largest contributors to inequities in self-reported health, mental health and life satisfaction within countries of the WHO European Region,

¹ Due to demanding data requirements for the decomposition analysis, some factors influencing health equity are not captured (e.g. it was not possible to include a direct measure of job quality or working conditions; only whether individuals work excessive hours) (see Annex 2).

contributing to almost 2/3 of the health inequities between socioeconomic groups within countries (Annex 4).

- Each of these five essential conditions needed to create and sustain a healthy life for all are individually explored in detail in the pages that follow.

Fig. O.9. The five conditions' contributions to inequities in self-reported health, mental health and life satisfaction (EU countries)



Note. Analysis controls for age and sex of individuals.

Source: authors' own compilation, based on 2003–2016 data from the EQLS.

Achieving health equity in the short term is possible, even within political cycles

The HESR models the solutions needed to reduce health inequities by examining the relationship between health equity and the implementation, coverage and uptake of key public policies over time

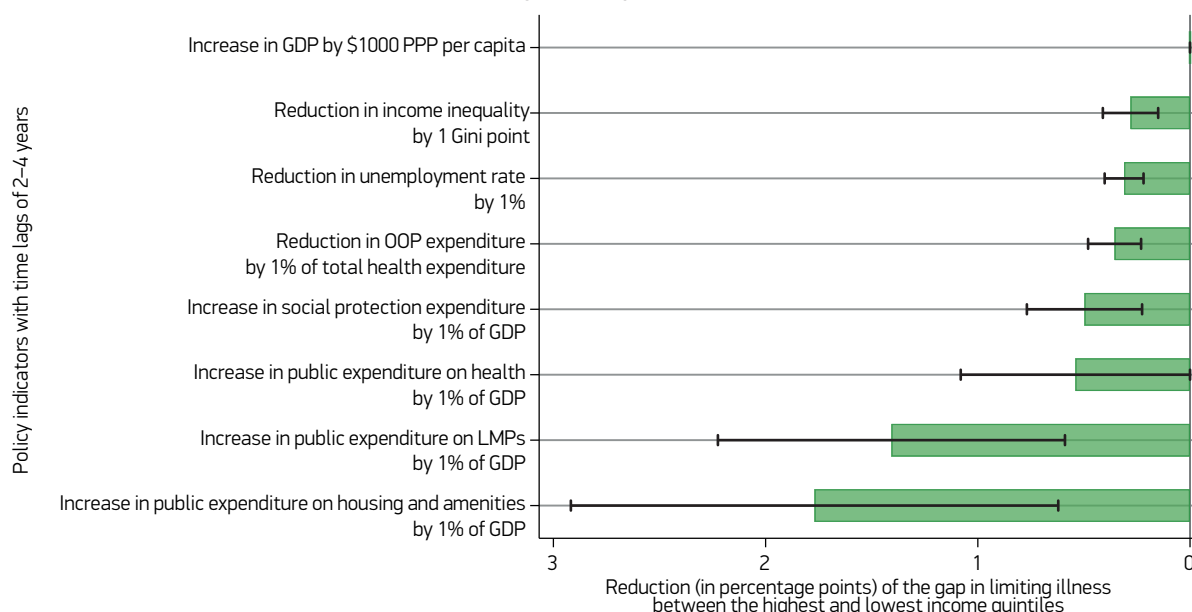
- The gaps in health between socioeconomic groups can be reduced, even within political mandates of 2–4 years (Fig. O.10). Policy-makers can feel confident that with the right investments and interventions it is possible to reduce inequities in health, even in the short term.
- A scenario of a 50% reduction in inequities in life expectancy between social groups would provide monetized benefits to countries ranging from 0.3% to 4.3% of GDP. Interventions to remove the barriers created by poor health and well-being are good for both human and economic well-being.
- Fig. O.10 shows the potential effects of eight macroeconomic policies in reducing health inequities. The improvement is measured by the percentage reduction in limiting illness reported among adults in the highest and lowest income quintiles (within countries).

- The green bars represent the average reductions in health inequities that have been achieved 2–4 years after countries have implemented each of the eight policies listed on the left side of the chart. More detail can be found in Section 3.1.

Seven of the policies show a positive association with reductions in health inequities

- Increasing per-capita income is the only policy which shows no association with reducing health inequities.
- The magnitude of the association with health inequity of each of these policies is different.
- Six of the policies each have statistically significant potential to reduce inequities in limiting illness among adults in the short term: increasing public expenditure on housing and community amenities; increasing expenditure on labour market policies (LMPs); reducing income inequality; increasing social protection expenditure; reducing unemployment; and reducing out-of-pocket (OOP) payments for health.
- It is important to note that this is not a causal analysis or predictive model.

Fig. O.10. The potential for 8 macroeconomic policies to reduce inequities in limiting illness among adults with a time lag of 2–4 years in 24 countries

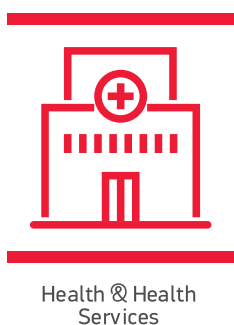


Note. PPP: purchasing power parity.

Source: authors' own compilation, based on data for 2008–2014 from the Health Equity Dataset.

The five essential conditions for creating and sustaining a healthy life for all – solutions and policy progress

Health and Health Services



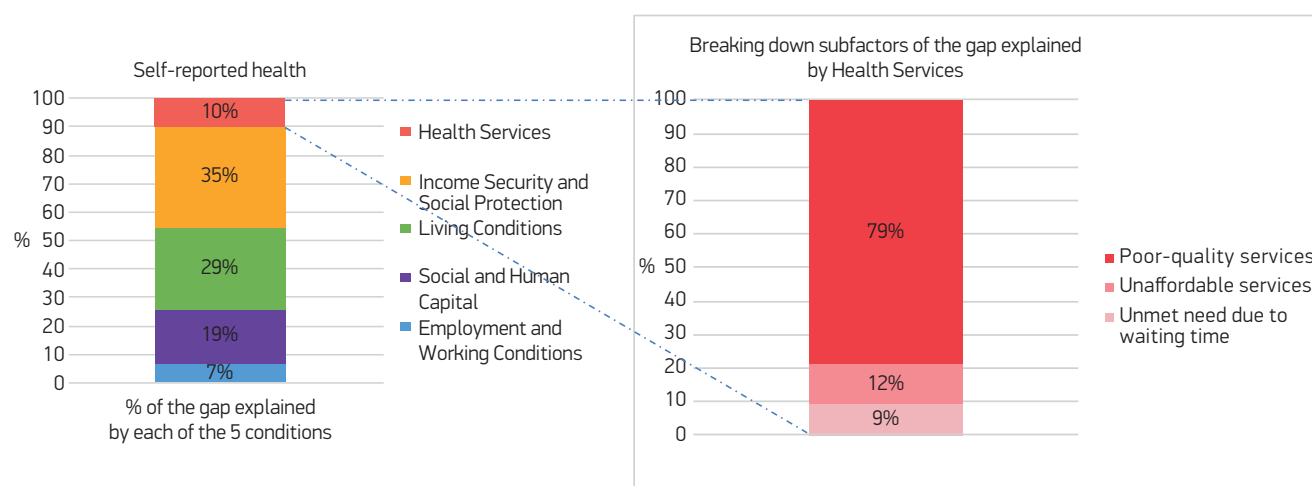
On average, 10% of the inequity in self-reported health between the most and least affluent 20% of adults within European countries is the result of systematic differences in the quality, availability and affordability of health services (Fig. O.11)

- Inequities in unmet need for health care have not changed significantly since the late 2000s. In the majority of countries across the WHO European Region, inequities in unmet need for health care

either remained unchanged or increased between 2008 and 2017. The mean difference in rates of unmet need for health care between men and women with the most and fewest years of education in countries across the Region was 2.7% in 2017, while in 2008 it was 2.6%.

- The drive for universal health coverage (UHC) is a vital step towards reducing health inequity.
- This means ensuring that every child, woman and man can have access to and be guaranteed the quality of health services they need, without experiencing financial hardship.

Fig. O.11. Health Services' contribution to inequities in self-reported health (EU countries)



Source: authors' own compilation based on data extracted for the years 2003–2016 from the EQLS.

Solutions and policy progress

- Reductions in OOP payments for health have a statistically significant association with reduced inequities in limiting illness between adults in the highest and lowest income quintiles over a period of 2–4 years (Fig. O.10).
- However, reforms to reduce unmet need for health care can increase OOP payments for health; therefore, it is important to ensure that policies to improve access to health services do not also lead to increased financial hardship, particularly for those who are already being left behind.
- Countries can reduce unmet need for health care and financial hardship by identifying and addressing gaps in the coverage of universal health services and implementing interventions proportionate to need to ensure everyone has equitable access to good-quality health care services.
- In the WHO European Region, levels of OOP payments for health range from 7.1% to 80.6% of current total health expenditure. In over half of the Region's countries, OOP payments for health as a proportion of current health expenditure increased or remained similar between 2000 and 2016.
- Expenditure on health as a percentage of GDP ranges from 2.1% to 11.9% across the Region. This expenditure increased in 32 of the 53 countries between 2005 and 2014, but in 13 countries expenditure on health did not change, and in eight countries spending decreased.
- Similarly, there is a mixed picture for trends in expenditure on public health. Levels of public health expenditure in the Region range from 0.03% to 0.5% of GDP and, while nearly half of countries increased their expenditure among the 34 countries for which data were available between 2000 and 2017, in the other half of those countries, public health budgets have not risen to meet increasing needs.

Health and Income Security and Social Protection



Health & Income
Security and Social
Protection

On average, 35% of the inequity in self-reported health between the most and least affluent 20% of adults within European countries is due to systematic differences in risk and exposure to income insecurity and the lack or inadequacy of social protection

- The struggle to make ends meet, including being able to afford to pay for the goods and services considered essential to living a dignified, decent and independent life (such as fuel, food and housing) is a major factor explaining inequities in self-reported health between social groups in countries across the WHO European Region.

- The risk of poverty is directly correlated with early-onset morbidity and premature mortality. Young people, those in temporary or part-time employment, individuals with caring responsibilities, and older people are at higher risk of poor health associated with poverty risk (1, 2).
- The risk of living in poverty influences mental health and psychosocial pathways. Research repeatedly links income inequality with worse health and social capital outcomes.
- The effects of living in poverty during the early years and childhood are strongly associated with increased risks of adopting health-harming behaviours, such

as smoking, harmful alcohol consumption and drug use during adolescence. This association extends to increased development of chronic ill health, including diabetes, cancer, CVD and respiratory disease in later life.

Child poverty is still a problem across the WHO European Region

- Across 34 countries for which data were available in the WHO European Region, children are more likely to live in poverty than adults (3). On average 20 in every 100 children live in relative poverty, compared to an average of 17 in every 100 adults.

Solutions and policy progress

Reductions in income inequality and relative poverty, as well as investments in social protection expenditure have a statistically significant association with reduced inequities in limiting illness between adults in the lowest and highest income quintiles over a period of 2–4 years (Fig. 0.10)

- Non-stigmatizing social protection policies have positive effects on reducing health inequities relating to income insecurity and poverty. Robust, multilevel, inclusive income security systems – with an unconditional tier at the base and supplemented by state-supported contributory schemes – have the highest effect in terms of reducing health inequities. These schemes include well-designed parental leave policies, statutory pensions, social protection for early years and families, and unemployment benefits.

In the majority of WHO European Region countries, trends in social protection spending have not significantly changed or have worsened over recent years

- Between 2000 and 2012, the average country expenditure on social protection fell from 12.9% to 6.1% of GDP. This represents an average 50% reduction in countries' expenditure on social protection as a proportion of GDP across the Region over a decade.
- In 2017, on average 17 in every 100 people lived in relative poverty across the Region; an increase from 15 in every 100 in 2005.
- Social protection expenditure on people of working age (family allowance and unemployment benefits) also decreased, from an average of 3.8% of GDP across the Region in 2008 to 1.6% in 2011 (the most recent year for which data were available).

- Changes to mechanisms for receiving social welfare payments in many countries have given rise to delays and conditionalities, which have increased financial insecurity for families and contributed to increased rates of poor well-being and mental illness (often manifesting in stress, anxiety and depression).

There is wide variation between countries in the levels and trends in progress to reduce income inequality

- In the 35 European countries for which 2017 data were available, between nine and 26 people out of every 100 live in relative poverty (as measured by the percentage of the population living below 60% of median equalized disposable income).
- In 15 countries, such income inequality increased from 2005 to 2017, while it decreased in only six countries.
- For 14 countries, including some among the western Balkans, central Asian countries and the Caucasus, where poverty is measured using national poverty lines, between three and 31 out of every 100 people live below that line.
- In eight of these 14 countries, these poverty rates declined between 2005 and 2016. However, these trends are not directly comparable to the trends in relative poverty, which are better able to capture those left behind relative to the middle of the population.

Health and Living Conditions



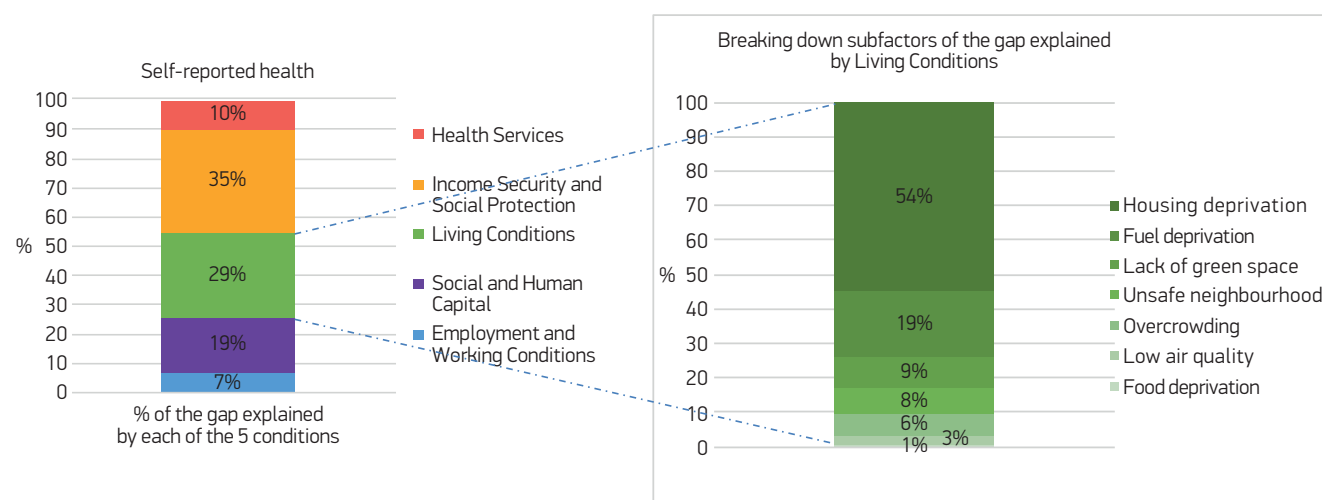
Health & Living Conditions

On average, 29% of the inequity in self-reported health between the most and least affluent 20% of adults within European countries is the result of systematic differences in people's living environment and conditions

- Insecure housing tenure, poor-quality homes, fuel deprivation, unsafe neighbourhoods and lack of community amenities are all statistically significant in explaining inequities in health within countries across the WHO European Region (Fig. O.12).
- Shelter is a fundamental human need, and poor-quality homes and poor health are inextricably linked. People in low-income households are more likely to face multiple housing problems; that is, they are not only cold in the winter, they are also more likely to have mould growing indoors and poor indoor air quality.

- Across the Region, there is a strong association between countries with higher rates of housing deprivation and lower life expectancy.
- Those living in economically underdeveloped areas within countries have disproportionately higher exposure to air pollution (indoor and outdoor), flooding, noise pollution and high road traffic density.
- Inequities in sanitation and water scarcity between income quintiles persist in some countries of the Region.
- Out of every 100 households, on average 20 more with the lowest 20% of incomes experience food insecurity than among households with the highest 20% of incomes. People in these poorer households are unable to afford a protein-rich meal every other day.

Fig. O.12. Living Conditions' contribution to inequities in self-reported health (EU countries)



Source: authors' own compilation based on data extracted for the years 2003–2016 from the EQLS.

Solutions and policy progress

Housing is more than where you live; it provides a sense of belonging, and feelings of safety, security and privacy

- Increases in public expenditure on housing and community amenities, such as street lighting, green spaces and public facilities, have a statistically significant association with reduced inequities in

limiting illness between adults in the lowest and highest income quintiles over a period of 2–4 years (Fig. O.10).

- Housing can be insecure for many reasons: costs, weak security of tenure, fuel deprivation, and overcrowding (4, 5).

- Increasing the availability of good-quality, affordable new homes benefits the health of everyone. When policy-makers invest in the provision of new housing in low-resource areas and involve local people and communities in the development process, this produces an accelerated effect in terms of helping to reduce health inequities for those falling behind.
- Setting standards, through laws and regulations together with incentives – including subsidies to homeowners and landlords to improve housing availability, affordability, tenure and quality – are effective solutions to reducing health inequities.
- Compared to the highest income quintile, people in the lowest income quintile are: almost eight times more likely to suffer from severe housing deprivation; more than twice as likely to live in an overcrowded home; and more than five times more likely to suffer from fuel insecurity.
- Expenditure on housing and community amenities in the WHO European Region (including street lighting, safety, green spaces, and public facilities) ranged from €39 per head to €543 per head in 2017.
- In the majority of countries, expenditure on housing and community amenities remained the same or decreased between 2006 and 2017 (Fig. O.13).

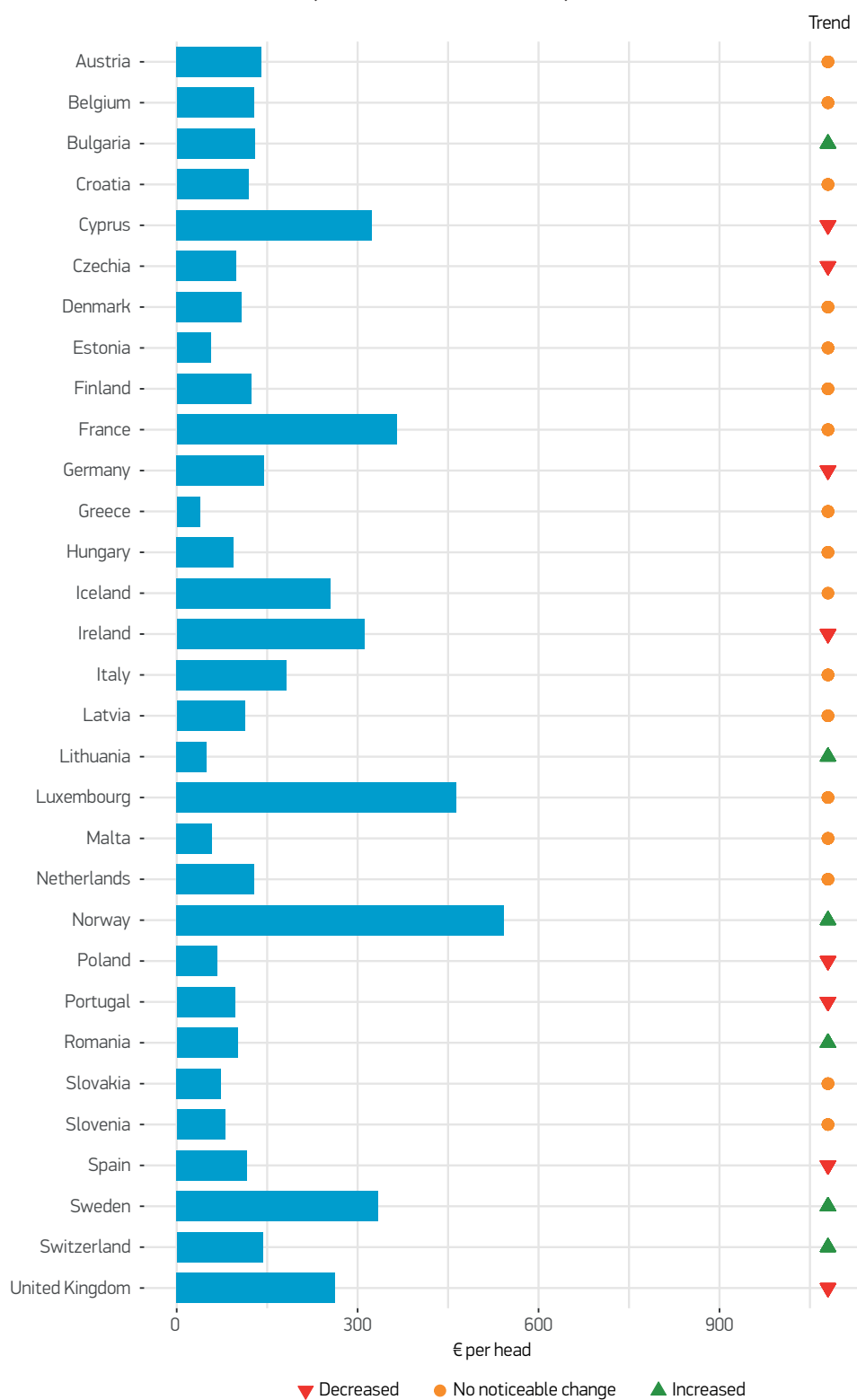
Policies aiming to increase the affordability of homes with fuel-efficient heating systems and indoor sanitation facilities are key to reducing inequities in mental health, respiratory illnesses and waterborne infections across the social gradient

- Using an equity formula to guide the provision and maintenance of essential public services for clean water, fuel and sanitation can ensure that investments benefit those most at risk and will contribute to accelerating improvements in health equity related to living conditions.

Regulating commercial interests is key to reducing inequities related to fuel insecurity and inadequate water and sanitation services

- The provision and pricing of essential services such as fuel, water, and sanitation can draw on the lessons learned from the approach used for the pricing of essential medicines.
- Inequities in basic drinking-water and sanitation services persist in some countries in the Region. In 11 transition economies for which wealth-disaggregated data were available, people in the lowest wealth quintile are least likely to have access to basic drinking-water services.
- In nine of these 11 transition economies, families in the lowest wealth quintile are least likely to have access to basic sanitation services.

**Fig. O.13. Government expenditure per head on housing and community amenities, 2017
(and trends since 2006)**



Source: authors' own compilation based on 2017 data from Eurostat.

Health and Social and Human Capital

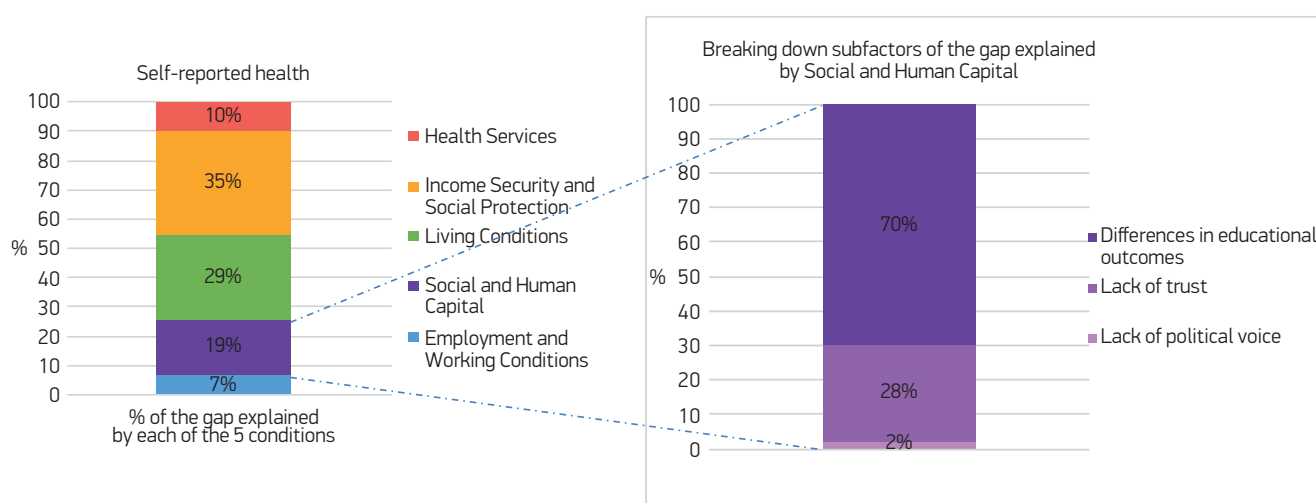


Health & Social and Human Capital

Lack of control, trust in others and low educational outcomes, when combined, are statistically significant in explaining 19% of the gap in poor health between the most and least affluent 20% of adults within European countries (Fig. O.14)

- Educational outcomes, levels of trust in others and a sense of control over the factors that influence a person's opportunities and choices in life are critical to well-being and health.
- Exposure to low-trust environments – characterized by higher risk of crime, social isolation, not having someone to ask for help, and a lack of voice – are strongly associated with poor mental health and higher risk of morbidity.

Fig. O.14. Social and Human Capital's contribution to inequities in self-reported health (EU countries)



Source: authors' own compilation based on data extracted for the years 2003–2016 from the EQLS.

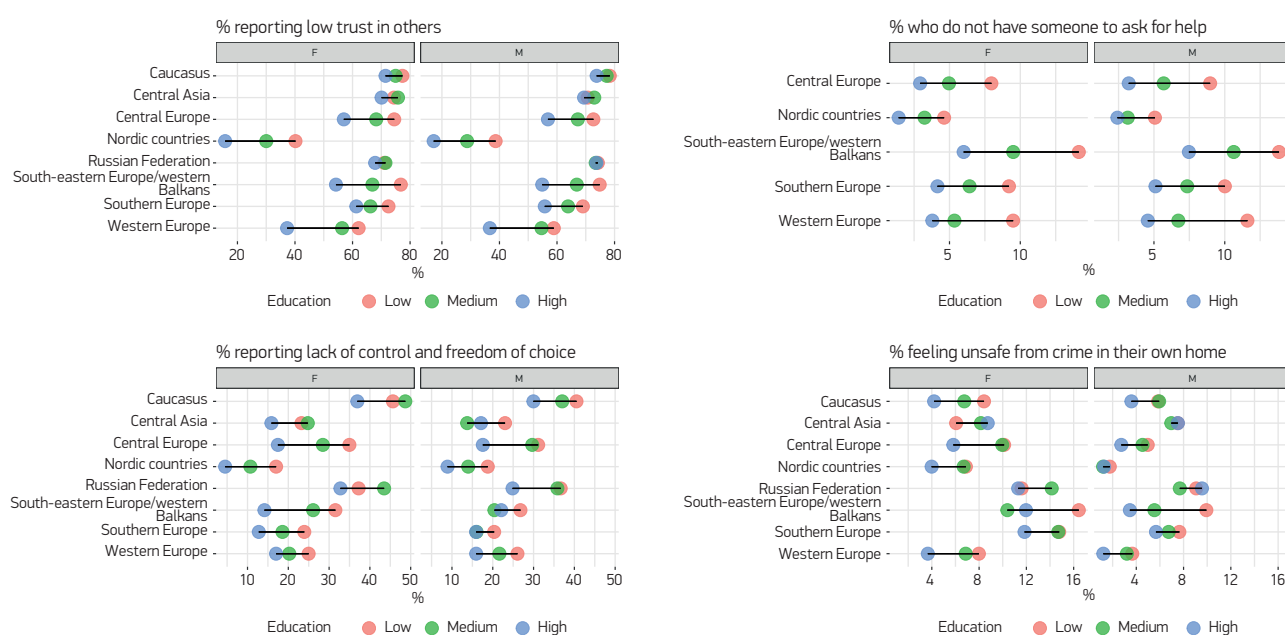
Solutions and policy progress

Policies that work to increase educational opportunities and reduce gaps in education outcomes from early years into later life are crucial to achieving greater health equity

- Policy actions to break the intergenerational transmission of education differences can also help to break the subsequent transmission of differences in well-being, such as targeted investment in early childhood education and in the provision of appropriate and accessible learning for adults having had limited formal education in early life.
- Across the WHO European Region, the children of parents with the fewest years of education are much less likely to meet minimum proficiency levels in mathematics and reading at the age of 15 years, compared with the children of parents with the most years of education.
- The gap in rates of proficiency across the Region range from 10.6% to 67.7% for girls, and 12.6% to 51.8% for boys.
- Government expenditure on pre-primary education rose in two thirds of countries (21/32), where data were available, between 2012 and 2015 (see Section 2.5).
- When increasing expenditure rates, it is important to understand if there are inequities in the allocation of investments, as resource-poor geographical areas often receive less investment than resource-rich areas.

- Adults who have the most years of formal education are also most likely to participate in learning throughout life, such as vocational training, informal learning and adult education. This impacts social and health literacy, sense of control over destiny, and ability to cope with economic and social shocks (such as loss of employment).
 - In more than two thirds of countries with available data, the gap between socioeconomic groups in rates of participation in formal and informal education and training stayed the same or increased between 2005 and 2017. For women, this gap is observed in 23 out of 31 countries and for men it is evident in 21 out of 31 countries.
- Policies promoting social capital contribute to improved health and well-being, strengthen communities and reduce corruption and social isolation**
- Meaningful participation in society, trust in others, and ability to influence decisions contribute to stronger individual and social resilience, higher levels of mental well-being, and lower levels of morbidity.
 - Trust is one of the most widely used measures of social capital and is a strong marker of well-being at both individual and society levels.
 - Higher levels of trust are found in societies in which physical and mental health are better for all and where incomes are more equally distributed.
 - Lack of trust in others accounts for 28% of the health inequities explained by the essential condition of *Social and Human Capital*.
 - In most countries, grouped by clusters of countries with similar policy and political landscapes (Annex 3), men and women with the fewest years of education are most likely to report low feelings of trust and safety, lack of someone to ask for help, and lack of choice and control over life (Fig. O.15).

Fig. O.15. Percentages of adults reporting experiences of poor social capital, as measured by lack of trust, agency, safety, and sense of isolation, various years, by education level and by country cluster



Notes. F = females. M = males.

Sources: authors' own compilation based on data extracted for the years 2005–2016 from the EQLS, the ESS, the EU-SILO survey and the World Values Survey (WVS).

Health and Employment and Working Conditions



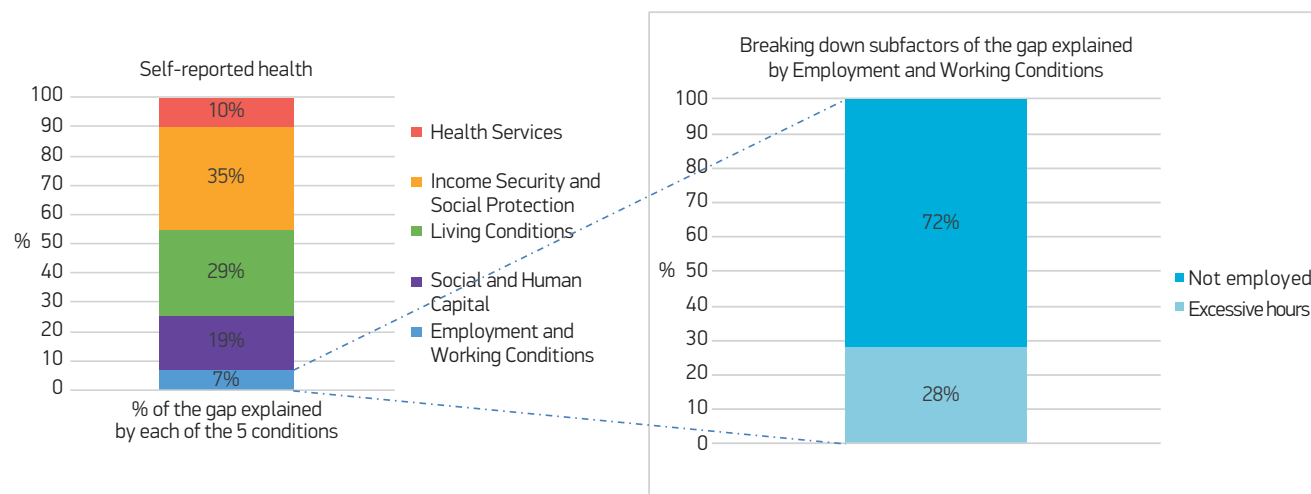
On average, 7% of the inequity in self-reported health between the most and least affluent 20% of adults within European countries is due to systematic differences in employment and working conditions (Fig. O.16)

Health & Employment and Working Conditions

- Job insecurity, temporary employment and poor working conditions are associated with poor mental health, self-reported ill health, and increased risk of fatal and non-fatal cardiovascular events. These work-related stressors follow a social gradient.

- Exclusion from good-quality work can significantly affect health and well-being. The largest contributor to the gap in self-reported health status linked to employment and working conditions is explained by differences in employment status.
- Being out of employment, training or education when aged between 18 and 28 years is a risk factor for poor mental health and early-onset CVD in later life.
- However, being in employment is not necessarily sufficient to reduce health-harming conditions. Working excessive hours and the quality of work also substantially influence health inequities.

Fig. O.16. Employment and Working Conditions' contribution to inequities in self-reported health (EU countries)



Source: authors' own compilation based on data extracted for the years 2003–2016 from the EQLS.

Solutions and policy progress

Reductions in unemployment, together with increases in expenditure on LMPs, have statistically significant associations with reduced inequities in limiting illness between the highest and lowest income quintiles within European countries over a period of 2–4 years

- Improving wages improves health and reduces inequities. Income support and financial protection mechanisms, such as social transfers, enable people earning low wages to reduce their risk of poverty and social exclusion. In addition, decent minimum wages guarantee those in employment a basic level of resources for meeting health and other basic needs, reducing stress and improving well-being and mental health.

- Good-quality active LMPs and effective lifelong learning and vocational training, along with equitable employment legislation and adequate social security systems can improve health equity, as well as increase employment and contribute to economic growth.
- Expenditure on LMPs across the WHO European Region ranges from 0.5% to 3.2% of GDP. In 19 of the 25 countries for which data were available, expenditure on LMPs either stayed the same or decreased between 2005 and 2016.

- Men tend to benefit more from LMPs than women across the Region. In 28 countries for which sex-disaggregated data were available, out of every 100 people wanting work, on average 35 are male LMP programme participants, whereas only 30 are female LMP programme participants.

Social values and impacts need to be systematically addressed in decisions made nationally and at the pan-European level

- Decisions taken at the pan-European level have significant impacts within countries. For example, the deregulation of employment contracts (circa 2008) was primarily designed to stimulate the growth of new jobs. This did happen; however, more than 50% of all the new jobs created are classified as temporary or insecure contractually and the majority of these poor-quality, low-paid or insecure positions have been occupied by individuals who were already falling behind, both economically and in terms of health.



Healthy, prosperous lives for all:

the European Health Equity Status Report

Introduction

- This report is intended for anyone wanting to understand how good health and well-being can be achieved for **all** in society and **how to create the conditions** for every person to have an equal opportunity to flourish in health and in life.
- The HESR is the first comprehensive **review of trends in health inequities and policy progress** to address these inequities in the WHO European Region.
- It allows countries to better understand what is **driving inequities, comparing countries against their own performance** and showing trends when possible.
- The HESR shifts political and policy focus away from simply describing the problem of health inequities to **identifying solutions and enabling actions** to increase equity in health.

Health equity and prosperity

- Globalization has led to worldwide flows of information and goods. Yet the much-heralded **beneficial effects of globalization have not equitably reached everyone**. The public can see that the gains and benefits of globalization are not reaching them; instead, they see the rich getting richer and the poor becoming poorer (6).
- These factors matter to health and well-being. In many communities the effects of deindustrialization and globalization have not led to success for all, but to high unemployment levels, rising inequalities, and poor health outcomes (7).
- Finding a way out of poverty and giving their children better opportunities seems impossible for many people. In OECD countries it is estimated to take at least five generations – 150 years – for the child of a poor family to reach the average OECD income (8).
- The transition to working life and independent living is hampered for many young men and women, especially those from less-affluent families, who have higher exposure to unemployment and poor working conditions than any other age group across the WHO European Region. Gender norms and stereotypes compound social and economic factors, such that young women from less-affluent families with caring and home responsibilities experience fewer opportunities to find decent work and achieve financial independence and security.
- Wide-ranging policy decisions taken at the pan-European level, such as with the deregulation of employment contracts (since 2008), have stimulated the growth of jobs, but more than 50% of all the new jobs created are temporary or insecure. Since the late 2000s **the majority of poor-quality, low-paid and insecure jobs have been occupied by individuals who were already falling behind economically**, compounding existing financial insecurity and giving rise to a new group facing impoverishment – the working poor.
- **Reducing health inequalities and stimulating inclusive growth are deeply interconnected**, and health services should be partners in creating and monitoring economic development plans.
- In the WHO European Region the **majority of citizens want to live in a more equitable society**: 84% of Europeans believe income differences in their countries are too great and that reducing income inequalities should be a priority for national governments (9).
- They are correct in believing that these **growing inequities are having an impact**: in 2018 the world's 2200 billionaires grew 12% wealthier, yet the income of the poorest half of the world fell by 11% (10).
- These inequities contribute to **feeling left behind**; seeing others take the majority of the riches affects health and well-being, **increases stress and anxiety and reduces the sense of trust and belonging in society, thus hampering social development**.
- Europeans consistently state that **health should be a political and policy priority**. They rank health and social security as the second most important issue at national level in the European Union (EU).
- National, European and international organizations have pledged strong commitments to reduce inequities in health and to prioritize action and investments for more equitable lives for all.

- A report carried out for the HESri identified that achieving equitable lives is a core goal and investment area for many governments, regional organizations and international agencies. Equal opportunities, poverty reduction, social inclusion, combatting discrimination and stigma, and

promoting economic, social and cultural rights are the goals that are being pursued. There is significant value in harnessing these synergies through stronger alliances and collaborative models of working in order to accelerate investments for healthy, prosperous lives for all (11).

The HESR provides evidence on the factors contributing to health inequity across the WHO European Region, including interventions and policy approaches implemented.

It sets a baseline for countries to understand the impact of their subsequent actions and policies to improve health equity.

Progress in the WHO European Region

- There is good news: across the WHO European Region average life expectancy is increasing, infant mortality is falling and the implementation of Health 2020 is progressing significantly in Member States.
- However, **despite these achievements and advances in policy and research, in every country health inequities persist.** Progress to reduce health inequities has not been as fast as expected.
- The groundbreaking work of the WHO Commission on the Social Determinants of Health (CSDH) continues to have an impact around the world, providing evidence of why health inequalities arise, and of their fundamental drivers (12) (see Box 0.1). Since the CSDH report and the *European Review of social determinants and the health divide* (2) were published, Member States around the world have published their own analysis of health inequities and have implemented national, regional and local actions and policies.

Box 0.1. The four drivers for reducing health inequities

Other factors also drive the ability to lead a healthy and prosperous life. Levels of **social participation and empowerment**, along with governance issues such as **policy coherence and accountability**, influence the availability of and access to: equitable health services; more secure and fair income; healthier living conditions; improved sense of place, trust, belonging and safety; and fairer and safer employment and working conditions (13). Social participation empowers people and communities where they are involved, where they are able to define the conditions that shape their lives and health. Participation positively impacts individual and population health and also has wider benefits. Empowerment of communities is essential to health equity, bringing people together and providing a sense of collective destiny and control, which increases health and health equity (13).

Gender equality is recognized as one of the drivers of health and well-being and, while some European countries are in the top ranking of any measurement, no country in the WHO European Region has achieved gender equality. Moreover, progress since the late 2000s has been slow (14).



- The 2030 Agenda for Sustainable Development (15) and its 17 Sustainable Development Goals (SDGs) are a framework for action for a better and more sustainable future for all. They are a call to act to end poverty and inequality, protect the planet, and ensure that all people enjoy health, justice and prosperity. It is critical that no one is left behind. The SDGs provide a new impetus to address health inequities in an integrated and coherent way across all sectors of government and society (16).
- The WHO 13th General Programme of Work and its "triple billion" goals represent a strategic plan from WHO to support countries in achieving the SDGs. By promoting health, keeping the world safe and serving those most at risk of being left behind, WHO is aiming to increase its impact on global health and place health high on national and subnational political agendas (17).
- The new evidence and equity-focused metrics in the HESR give reason to be confident that the **SDGs and triple billion goals are attainable**. It is possible to break the cycle of health inequities, to reduce the social gradient and improve health and well-being for everyone, creating the essential conditions needed for all to prosper and flourish in health and in life. This can be achieved by implementing a basket of policies and accelerating action to place health equity at the centre of sustainable development.

Key to health equity: UHC

- Across the WHO European Region **health systems are demonstrating new ways of tackling inequities**, ensuring adequate public spending on health and innovating in the delivery of high-quality local health services.
- **UHC is key to addressing health equity**: no one should experience unmet need for health care or financial hardship when they use health services. Yet **several million people in the Region experience financial hardship driven by OOP payments for health**. Such payments may prevent people from spending enough on other basic needs, such as food, housing and heating, contributing to increased risk of poverty and social exclusion (18).
- People experience financial hardship when OOP payments are large in relation to their ability to pay. Even small OOP payments can cause financial hardship for poor households, or those who have to pay for long-term treatment (such as medicines for chronic illness).

Proportionate universalism

- The task of "levelling up the gradient in health" cannot be achieved by providing a common universal offer to everyone equally. At best, this will improve health equally for everyone, but the gradient will persist (see Box 0.2). At worst, demand for what is on offer will be greatest among those who already have the most access to resources, and health inequalities will be widened as a result.
- Similarly, **the whole of the gradient in health cannot be reduced by only targeting those who are most deprived**, since this will not improve the health of those who are moderately disadvantaged, but outside the target group. This is often referred to as a cliff-edge scenario in policy-making terms.
- To address these two contrasting forms of implementation failure, the **approach of proportionate universalism aims to provide a universal offer to all, supplemented by additional resources that are distributed on the basis of level of need**. The approach relies on having a sufficiently sensitive indicator of risk of subsequent ill health to both identify need and enable any intervention to be delivered sufficiently early in the causal pathway (to disease) to make a difference.
- A proportionate universal approach can be implemented in a number of ways – through service delivery, service commissioning, allocation of financial resources or through the design of and rules around the system for making payments from an insurance fund or welfare budget.

Box 0.2. Key definitions

- Equity is the absence of avoidable, unfair, or remediable differences among groups of people, whether those groups are defined socially, economically, demographically or geographically, or by other means of stratification. "Health equity" or "equity in health" implies that ideally everyone should have a fair opportunity to attain their full health potential and that no one should be disadvantaged in achieving this potential (19).
- Health and well-being outcomes **are determined by the conditions** in which people are **born, grow, live, work and age**, genetic and biological determinants, as well as the **social determinants of health (SDH)** – the political, social, economic, institutional and environmental factors which shape the conditions of daily life (20, 12). The crucial question is whether society and governments are doing all they can do to avoid or reduce health inequities.
- The social gradient in health means people and communities have **progressively better health, the higher their socioeconomic position/conditions**. The gradient is consistently being observed, whether examining differences in years of education, income, wealth or affluence level, or regional level of human development. Each of these factors can be used as markers of socioeconomic position.
- Accelerating actions to meet the needs of the very poorest individuals is vital, but the next income quintile also requires action, or those people may fall into the lowest quintile. Universal policies and interventions should focus on everyone, from the lowest quintile to the highest, and **accelerate actions among the people and communities who are most at risk of being left behind** (2).

Better evidence, better policies

- Attention to health equity, gender equality and the right to the highest attainable standard of health has never been more important, yet inequities remain. Too often, efforts to reduce health inequities **depend on single policy measures** (e.g. education) and at times, the impact of these policies has been overestimated (21) (Box 0.3).

Box 0.3. Evidence, facts and arguments

Evidence is one of many factors that can help enable politicians to act. Reliable, disaggregated data are needed to demonstrate the impact of poverty on health at the subnational and local levels, to "make it real" for politicians and the public. Without such data, it is not possible to identify obstacles and barriers to advancing health equity.

Monitoring health equity and the distribution of health determinants is important, as it:

- shows whether situations are improving, worsening or staying the same;
- provides evidence to better plan, develop strategies and identify priorities for action;
- informs governments and the public whether policies, programmes and practices are successful.

Disaggregated national data are fundamental to accountability for health equity, as they highlight the health needs of people whose lives are typically hidden or invisible in national statistics. Having better disaggregated data is central to achieving the triple billion goals, which state that health information systems are the foundation for monitoring health inequities and that reporting should be disaggregated by: sex, income, disability, ethnicity and age-group categories in surveys, routine data, and other data sources.

Sharing disaggregated data with the public in a way that is accessible enables them to have a voice in national discussions on health, well-being and sustainable development.

- Scaling up action on health equity and enabling the conditions necessary to lead healthy and prosperous lives requires a combination of policies and interventions.
- The HESri identifies five policy action areas, all with a strong evidence base and evolving from the CSDH and the European *Review of social determinants and the health divide*, needed to be able to live a healthy, prosperous life (2, 12) (Fig. O.17).
 1. Health Services
 2. Income Security and Social Protection
 3. Living Conditions
 4. Social and Human Capital
 5. Employment and Working Conditions

Fig. O.17. HESR health equity conditions



Reducing health inequities: the economic gains

- **Health inequities have significant economic costs**, accounting for 15% of the costs of social security systems and 20% of the costs of health services in middle- and high-income countries (15).
- There are substantial economic benefits to reducing differences in mortality between higher and lower socioeconomic groups.
- If interventions to remove the barriers to good health and well-being were realized, the benefits would be considerable.
- An economic analysis, based on the least ambitious scenario, estimated that removing barriers would provide monetized benefits to countries ranging from 0.3% of GDP in Denmark to 4.3% of GDP (equivalent to €60 billion) in Italy (22).
- In addition, gender inequities have high economic costs. There would be substantial economic benefits to reducing the gap in gender equality. The total cost of a lower female employment rate was €370 billion in 2013, worth 2.8% of the EU GDP. This would be the estimated savings if women's participation in employment were to increase to 75% (as per the Europe 2020 strategy target) (23).

Achieve: remove barriers and create the conditions needed to achieve health equity

- An essential set of conditions are needed for all to prosper and flourish in health and in life. These conditions are the foundations for achieving effective and sustainable progress towards reducing health inequities and creating more inclusive prosperity.
- Policy action for health equity is needed to create and protect each of these essential conditions: *Health Services, Income Security and Social Protection, Living Conditions, Social and Human Capital and Employment and Working Conditions*.
- Measuring and monitoring the status and trends in health equity in relation to these essential conditions are key steps in understanding which policy actions are effective.
- The HESri suite of tools enables Member States to track, measure, and make the case for implementing policies to reduce inequities.
- We have the knowledge to achieve progress; accelerating this progress is now a matter of political will and choice.

Accelerate: fast-track progress by implementing a basket of policies built on inclusive and empowering approaches

- Action to achieve and accelerate progress means shifting from identifying and explaining the problem of health inequities to implementing solutions.
- Policies and interventions are more effective when actions needed to create the conditions for health equity are coordinated in a transparent and inclusive political environment. This requires greater accountability, participation and empowerment, as well as policy coherence within and across all sectors.
- Policy baskets can accelerate progress when they “level up” everyone’s health proportionate to need. Levelling up is possible by providing a common universal offer to everyone equally and by accelerating actions for those who are most deprived.
- Approaches should aim to benefit everyone’s health and prosperity and accelerate the rate of improvement of those left furthest behind.
- Solutions need to be comprehensive, which means shifting from fragmented and short-term or single-policy interventions to a comprehensive basket of policies.

Influence: place health equity at the centre of sustainable and inclusive development strategies

- Eradicating health inequities has an influence that extends beyond health alone; health equity has a crucial role in making the ambitions of sustainable and inclusive development achievable.
- Embedding social values – such as fairness, equality, gender equality, trust, belonging, resilience, and respect for human dignity – into economic policy-making is essential to removing the barriers to achieving sustainable development and inclusive societies, so that all can prosper and flourish.
- New partners and alliances are vital to maximizing the impact of actions in sectors outside of health on inclusive development, improving health and well-being for all.
- Achieving these ambitions involves conversations with the public, politicians, policy-makers and civil society about why equity matters.
- The realization of human rights, including the right to health, is an essential aspect of this.

Outline

The Health Equity Dataset

This tool:

- enables the analysis of within-country inequities;
- creates a routinely updated data bank from internationally recognized sources, including household survey data, disaggregated by stratifiers of sex, level of economic resources (income, human development level, or wealth) and education.

The HESR

Section 1 outlines health inequities in the WHO European Region using the Health Equity Dataset. As such, it:

- looks at the current status and the trends in differences in health within countries;
- explains the reasons for differences in health and well-being within countries;
- examines the difference in health inequity between clusters of countries with similar economies.

Section 2 uses the Health Equity Dataset and additional microdata to look at the status and trends in the essential conditions needed to live a health life in Europe in the 21st century. It analyses the association between the essential conditions and the status and trends in health equity over a 10–15 year period.

The essential conditions to achieve equity in health cover five public policy areas: *Health Services, Income and Social Protection, Living Conditions, Social and Human Capital and Employment and Working Conditions*.

- A decomposition analysis identifies the largest contributors driving health inequities based on the five essential conditions. This analysis highlights the multiple factors that impact health and well-being and shows the pathways leading to health inequities that can be targeted by policy action across the WHO European Region.

Section 3 summarizes the evidence and outlines the policies and approaches with the strongest potential to achieve the conditions needed for all to prosper and flourish in health and in life.

1. Status and trends in health equity and well-being in the WHO European Region

1.1 The Health Equity Dataset

- The following section is based on the HESR dataset (the Health Equity Dataset). It includes **108 indicators disaggregated by sex, age, socioeconomic status and geography**. The selection of these indicators was based on a review by the scientific advisory group of the publicly available data to identify measures reflecting the evidence base for action on health equity (see Annex 1 for detail on how the data were collected and analysed and the steps taken to make the data and analysis robust).
- The 108 indicators cover the **current status and trends over the last 10–15 years** in the WHO European Region in: health and well-being, determinants of health and coverage uptake, and investment in policies with a known and strong evidence base for impacting on health equity and underlying determinants.
- This report analyses selected highlights from the 108 indicators of the Health Equity Dataset, including those with broad coverage across countries.
- Even with 108 indicators, there are limitations to the level of detail that is possible while analysing inequities. This is due to **less data availability for some countries and lack of disaggregated data for some indicators**, emphasizing the call of SDG 17.18 to: “enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, sex, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts” (16).
- The **full Health Equity Dataset will be made freely available online**, and WHO European Region Member States will be able to explore the full range of indicators for their country.
- The **dataset covers all 53 Member States of the WHO European Region** and uses a combination of stratifiers including income quintiles, levels of education classified according to the International Standard Classification of Education (ISCED) (for simplicity referred to as “years of education”),² age and sex to show inequities within countries and progress to reduce them.
- It provides evidence, disaggregated at the national level, for all 53 Member States. The charts in the report present the data in a way that makes it possible to see who is being left behind and in what areas, and to understand the magnitude of the socioeconomic gradients in inequities. The ultimate aim is consistent with the SDGs, Health 2020 and the WHO’s triple billion mandate: all seek to leave no one behind and to ensure healthy lives and well-being for all people at all ages (16, 17).

Five essential conditions within the Health Equity Dataset

As well as indicators of health, the Health Equity Dataset contains indicators of the five essential conditions needed to live a healthy life and indicators of policy action across these essential conditions (analysed in Section 2).

- **Health Services.** This involves policies that ensure the availability, accessibility, affordability, and quality of prevention, treatment, and health services and programmes.

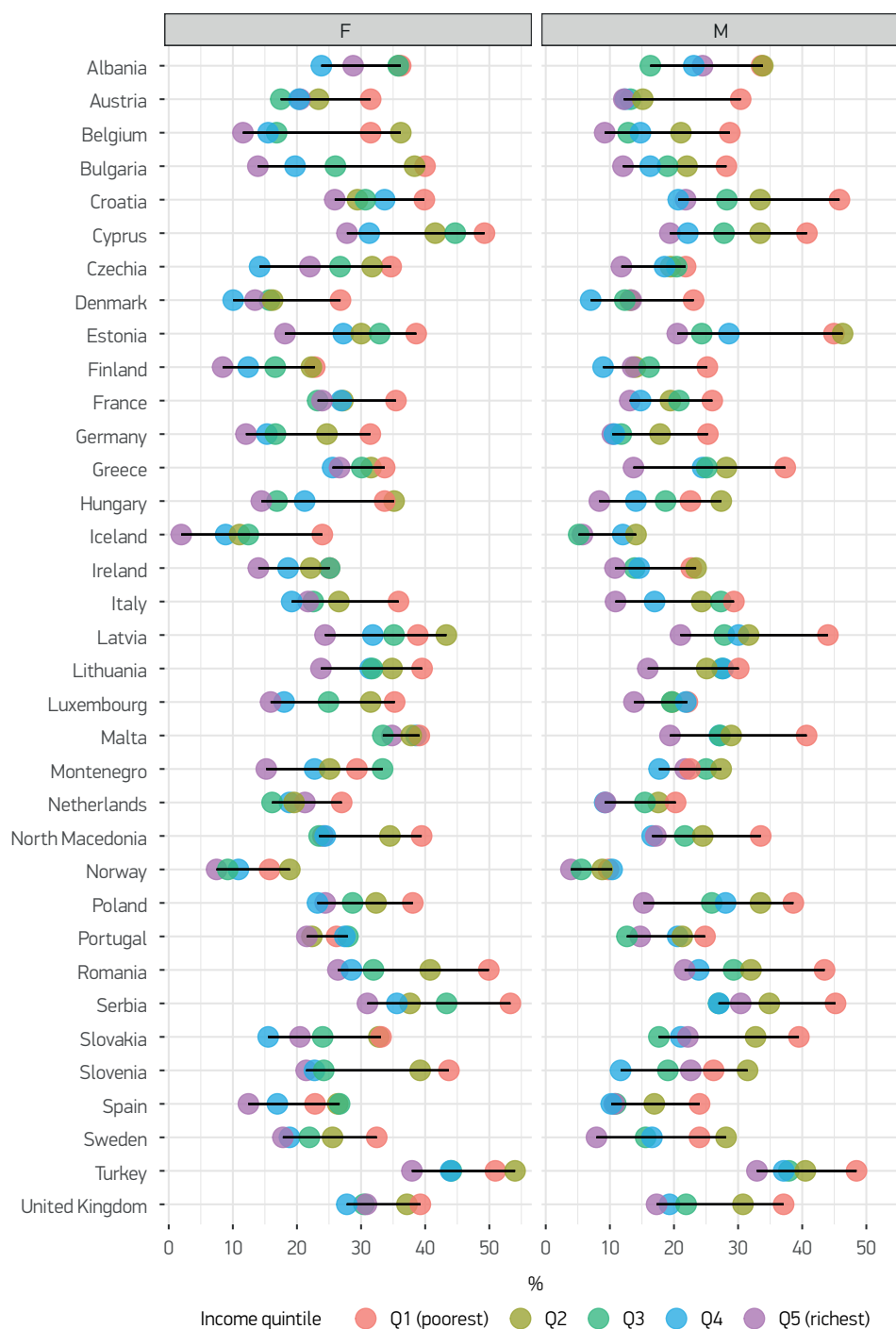
² The education categories are based on ISCED categories, which are aggregated to form a three-category education variable: (1) low-level education (pre-primary to lower-secondary education only); (2) mid-level education (upper-secondary to post-secondary non-tertiary education); and (3) high-level education (tertiary-level education). The applicable age range for lower-secondary, upper-secondary, and higher education may differ across countries.

- **Income Security and Social Protection.** These policies ensure basic income security and reduce the adverse health and social consequences of poverty over the life-course.
- **Living Conditions.** Policies related to this aspect equalize differential opportunities, access, and exposure to living conditions which each have an impact on health and well-being.
- **Social and Human Capital.** Policies in this area improve social and human capital for health through education, learning, and literacy, as well as improving the social capital of individuals and communities in a way that protects and promotes health and well-being.
- **Employment and Working Conditions.** This involves policies that improve the health impact of employment and working conditions, including availability, accessibility, security, wages, physical and mental demands, and exposure to unsafe work.

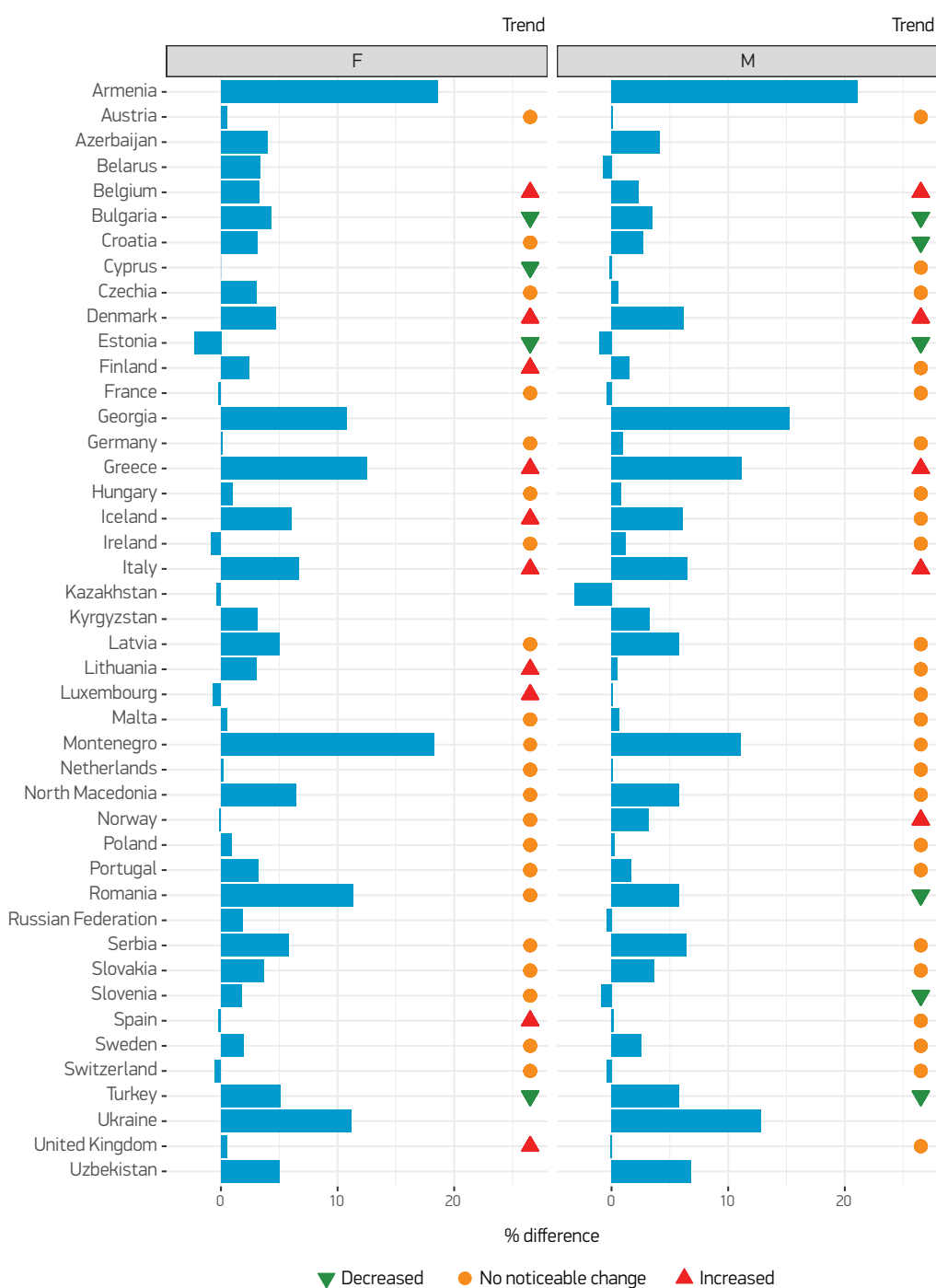
Understanding the Health Equity Dataset

- The HESR uses a range of data visualizations to support a robust understanding of the current status of health inequities within countries. It also captures whether there have been significant reductions or increases in these inequities over a period of 10–15 years (trend analysis data) (Annex 1).
- **Gradient charts** are used to show the socioeconomic gradient for an indicator, such as life expectancy or poor self-reported health, by examining how levels of the indicator vary between subgroups of people. Either three or five subgroups are defined, according to markers of socioeconomic status; for example, number of years of education, or levels of income or wealth. For people belonging to each subgroup, the average level of the indicator is calculated and represented in the chart by a different coloured dot.
- The red dots in the charts always represent the group with the lowest socioeconomic resources, such as income or years of education.
- For example, for the sample indicator in Fig. 1.1 where higher levels represent worse outcomes, most of the red dots cluster to the right of the graph, indicating worse outcomes for those with the lowest incomes.
- **Gap charts** in the form of blue bar charts are used to show the difference – or gap – in average levels of an indicator in the most advantaged subgroup compared to the most disadvantaged one. For example, the charts show the difference between those in the highest and lowest income quintiles or between those with most years of education (university level) and those with fewest years (lower-secondary level).
- These charts also show the change in outcomes over a specified number of years, referred to as the trend. **The trends show where progress has been achieved and where it can be accelerated.**
- For example, assume Fig. 1.2 shows the difference between those with the most years of education and those with the fewest. In Ukraine, the difference between those with the fewest years of education and those with the most is just over 10% and there is no trend result, as data are only available for the most recent year.

Fig. 1.1. Sample HESR chart showing gaps by income quintile



Notes. F = females. M = males.

Fig. 1.2. Sample HESR chart showing differences between two groups (and trends)

Notes. F = females. M = males.

- Blue bar charts are also used to show overall levels of indicators that are not disaggregated by subgroup, such as health expenditure.
- Section 1.2 first analyses child mortality, morbidity and well-being, followed by adult mortality, morbidity and well-being in Section 1.3.
- The chapter then ends by presenting WHO European Region health inequity profiles (Section 1.4).

Key findings on health equity status and trends within European countries

- For children and adults across the WHO European Region there is a clear **socioeconomic gradient in health and life chances**, as shown by **multiple indicators** of mortality, morbidity, and well-being.
- The socioeconomic gradient is consistent in most countries across the **key markers of socioeconomic position**:
 - number of years in **education**;
 - **income, wealth and affluence** levels;
 - level of **human development** (measured by three dimensions: a long and healthy life, access to knowledge, and a decent standard of living), in subnational regions.
- **Numerous factors indicate inequities in health and well-being**. For example, those with lower incomes or with lower education levels are more likely to have: poor health in childhood and as adults; higher infant mortality; more limiting illness; increased likelihood of smoking and being obese; and higher levels of poor mental health.
- **The Health Equity Dataset includes over 100 indicators to better understand the causes of and solutions to health inequities.**
- The majority of the health equity indicators in the Health Equity Dataset have not changed or have worsened in WHO European Region Member States since the mid-2000s.
- Average life expectancy across the Region is increasing but in every country **health inequities remain between adults from different social groups**. Life expectancy – often the key tool used to measure health – is important but not sufficient as an indicator to understand fully the causes and solutions of health inequities.
- Limitations to daily activities due to long-standing illness hold many adults back from being able to live a decent life.
- **Without effective interventions the gaps in health persist and widen into later life.**

1.2 Child health differences: status and trends

Gaps in children reporting poor or fair health are not changing

- Data for the 38 countries in Fig. 1.3 show that out of every 100 girls, there are on average seven more girls in the least affluent families reporting only poor or fair health, compared to the most affluent families.
- For boys, there are on average six more reporting only poor or fair health in every 100 boys in the least affluent families, compared to the most affluent families.
- In most countries, these gaps in the percentages of children reporting poor or fair health did not change noticeably between 2002 and 2014 (Fig. 1.3). In countries in which the gap narrowed, this mainly occurred among girls.

Health and well-being differences in early years last into adulthood

- Despite almost all countries in the WHO European Region offering universal and accessible primary-level education, inequities still occur at an early age. This suggests universal programmes are powerful, but to tackle inequities successfully, accelerated programmes are needed, including support during pregnancy and the early years of life (24).
- For long-term, inclusive economic growth, it is vital that every child has good health and well-being, as well as equal opportunities to succeed.

Children's early development lays the foundation for their later lives

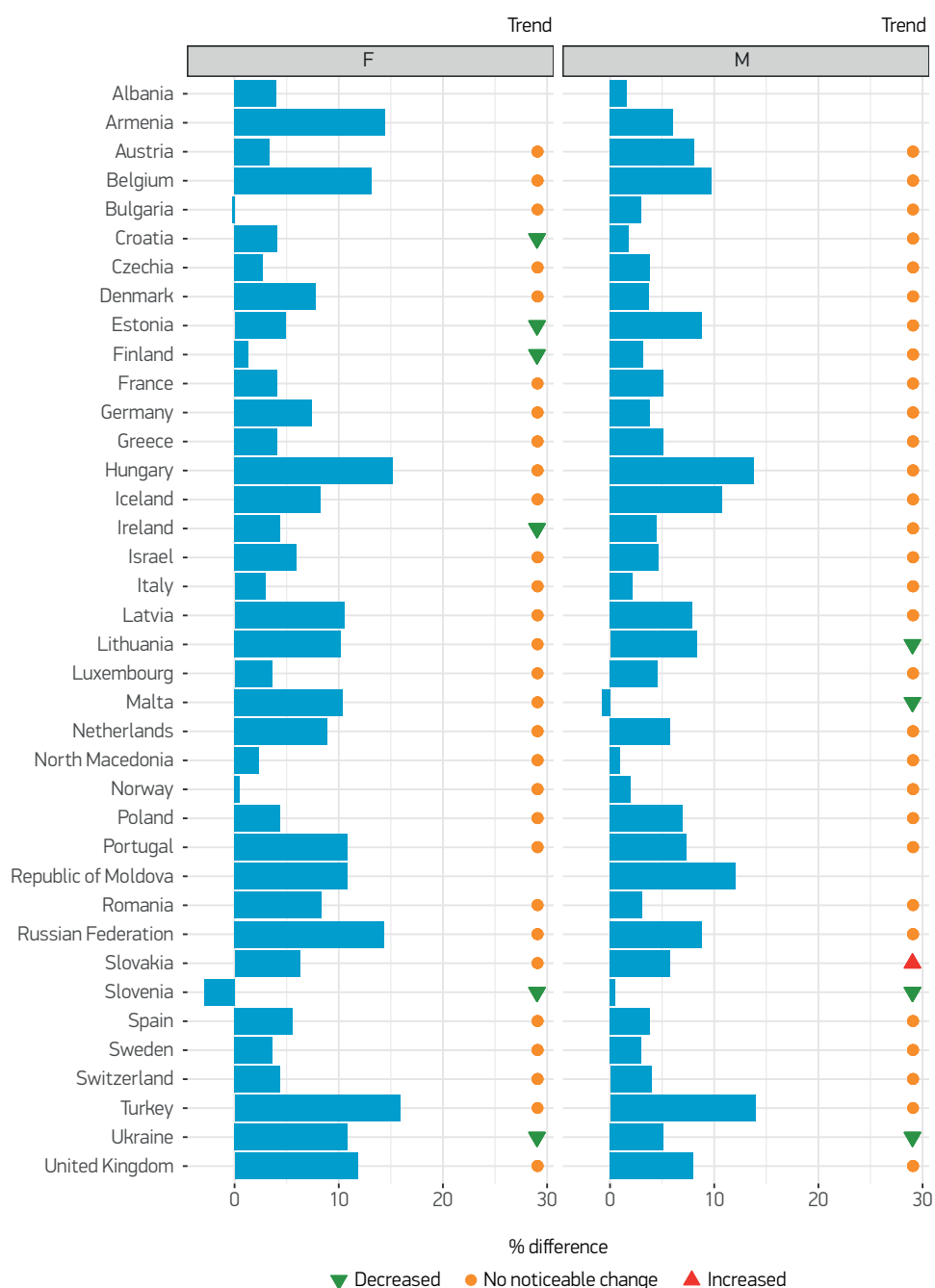
- Children who report good health have better health and well-being as adults, better results at school, and attain better paid employment (24).
- Addressing the underlying causes of inequities, and influencing the many ways in which children develop involves implementing wide-ranging approaches alongside accelerated strategies for those most likely to be left behind (24).

Children from more affluent households have better well-being across the Region

- In countries across the WHO European Region, children from the least affluent households are more likely than children from the most affluent households to report poor well-being, as measured by life satisfaction (Fig. 1.4). They are also more likely to report poor health (Fig. 1.3), and to be less physically active (Fig. 1.5).
- Analysis of data for 39 countries, grouped by clusters of countries with similar policy and political landscapes in Fig. 1.4,³ shows that out of every 100 girls, between eight and 17 more in the least affluent quintile report poor life satisfaction, compared to girls in the most affluent quintile. For boys, between nine and 18 out of every 100 in the least affluent quintile report poor life satisfaction, compared to those in the most affluent quintile.
- In country clusters such as the Nordic countries, south-eastern Europe/western Balkans and western Europe, these differences in the percentage of children reporting poor well-being did not change noticeably between 2002 and 2015 (Fig. 1.4).

³ Details of the clustering of countries used in the report are provided in Annex 3.

Fig. 1.3. The percentage difference in children reporting poor or fair health per 100 children in the least affluent families compared to the most affluent families, 2014 (and trends since 2002)



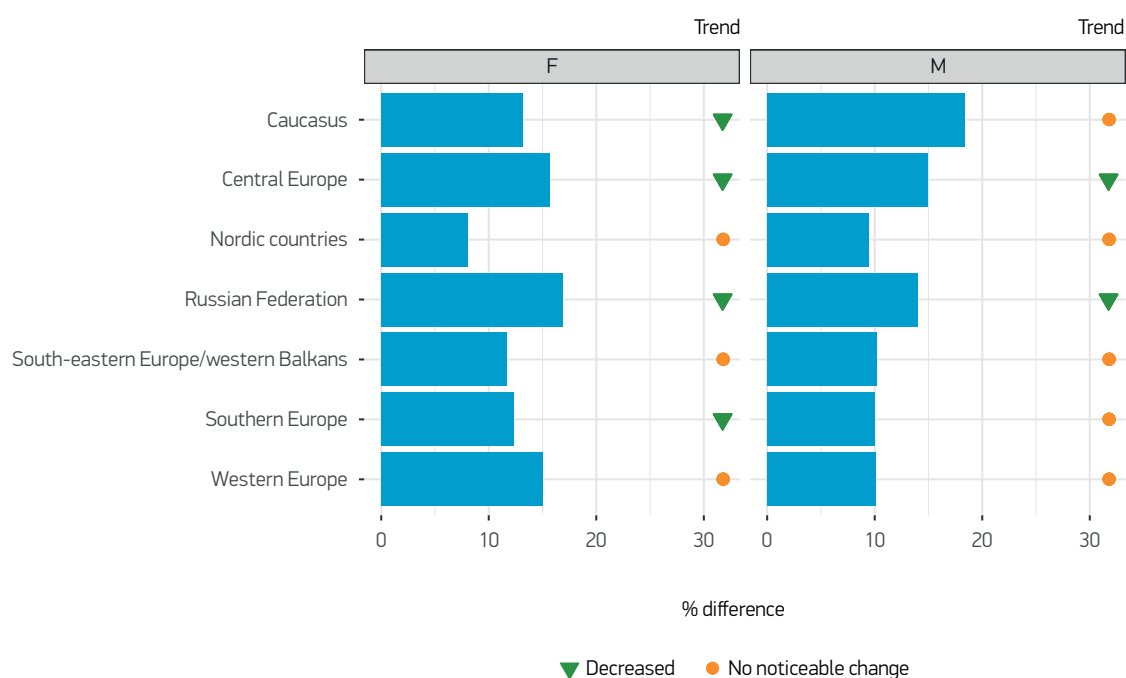
Notes. F = females. M = males. Affluence established according to the FAS.⁴

Sources: authors' own compilation based on data from the 2014 HBSC survey, among other country-level data.⁵

⁴ The Health Behaviour in School-aged Children (HBSC) study developed the Family Affluence Scale (FAS) to measure material affluence, a proxy for socioeconomic status (more frequently measured by parental occupation or years of parental education). The FAS includes items such as ownership of a vehicle, dishwasher and computer, having one's own bedroom, the number of bathrooms in a dwelling, and various travel factors. These elements reflect a family's patterns of consumption and purchasing power.

⁵ Much of the data used are derived from surveys and administrative systems within Member States, and these data can fluctuate from year to year. Trends are based on a statistical test, establishing that there is less than 10% chance that the trend was due to random fluctuations in the data. As such, if a trend is labelled "increased", this indicates likelihood of a real increasing trend in the country, rather than random fluctuations between years.

Fig. 1.4. The percentage difference in children in the least affluent families reporting poor life satisfaction compared to the most affluent families, per 100 children, 2014 (or latest available year; and trends since 2002), by country cluster



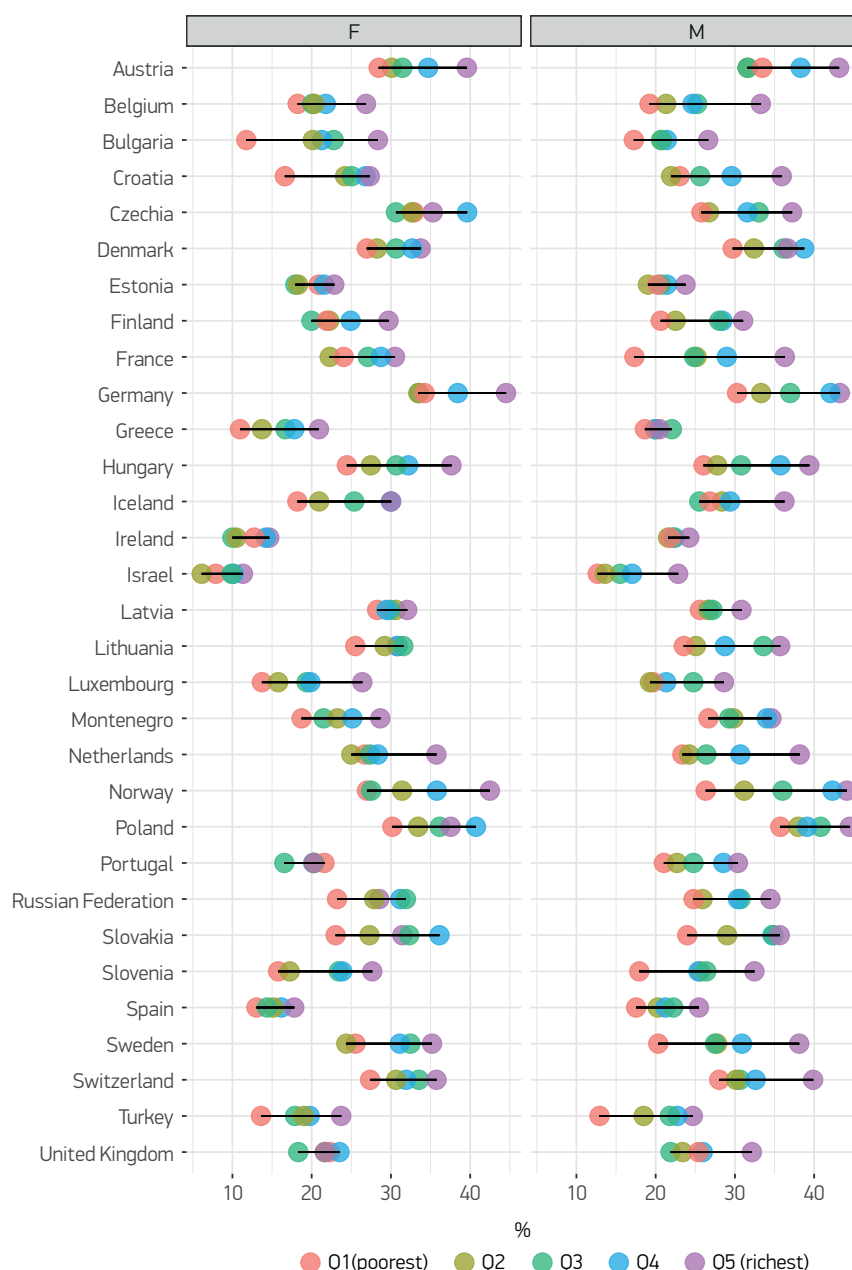
Notes. F = females. M = males.

Sources: authors' own compilation based on data from the 2014 HBSC survey, except Lithuania, North Macedonia and Turkey, for which the source is 2015 data from the OECD's Programme for International Student Assessment (PISA).⁶

The social gradient in children who are physically active

- Both girls and boys in more affluent households, as measured by the PISA ESCS index,⁶ are more likely to be physically active (Fig. 1.5).
- In 65% of countries (20/31) girls in the least affluent households (demarcated by the red dots in Fig. 1.5) are least likely to exercise, compared to girls in more affluent households.
- In 77% of countries (24/31) boys in the least affluent households are least likely to exercise, compared to boys in more affluent households.
- In all but two of the 31 countries in Fig. 1.5, fewer girls are physically active in the least affluent households than in the most affluent ones (up to 17 fewer girls in every 100).
- For boys, across these 31 countries, between 2 and 19 fewer boys out of every 100 in the least affluent households are physically active, compared to the most affluent households.
- Across the WHO European Region, boys tend to be more physically active than girls on average. Average percentages of physically active girls within countries range from 9.1% to 36.8%, while this range is from 16.3% to 39.6% for boys.
- Inequities in obesity are also discussed with regard to the social gradient, at the end of this section.

⁶ The OECD PISA index of Economic, Social and Cultural Status (ESCS) was created on the basis of the following variables: the International Socio-Economic Index of Occupational Status (ISEI); the highest level of education of the student's parents, converted into years of schooling; the PISA index of family wealth; the PISA index of home educational resources; and the PISA index of possessions related to classical culture in the family home.

Fig. 1.5. Percentage of children aged 15 years who are physically active according to the PISA ESCS index


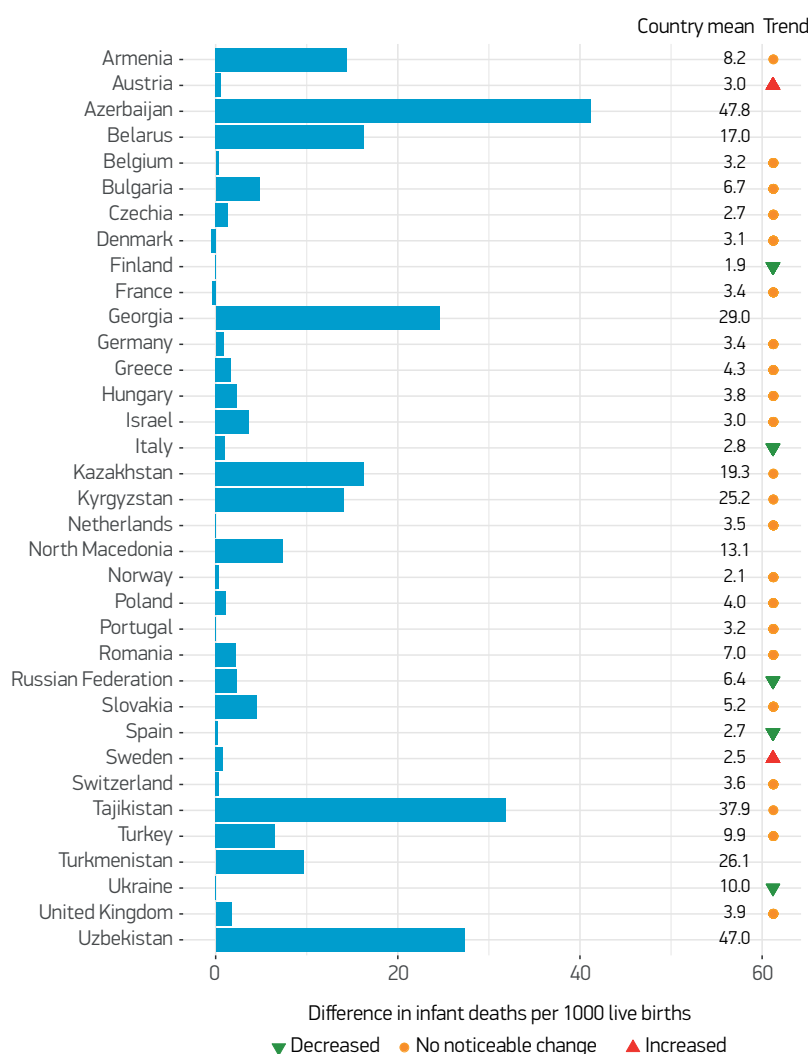
Notes. F = females. M = males. Q = quintile.

Source: authors' own compilation based on data from the 2015 PISA ESCS index.

Where a person is born and lives in a country can influence their chance of thriving, even in the first years of life

- The severity of geographical inequities in infant mortality within countries varies widely across the WHO European Region.
- Data from 2016 for the 35 countries in Fig. 1.6 show that for every 1000 babies born, as many as 41 more babies do not survive their first year of life in the most deprived areas, compared to babies born in the most advantaged areas.
- These inequities are comparable in magnitude to the absolute rates of infant mortality across the Region: average infant mortality rates within countries range from 1.9 to 47.8 deaths per 1000 live births.
- There are notable differences in infant mortality between geographical areas when comparing countries with similar economies and cultural traditions. This shows that inequities in infant mortality are avoidable.

Fig. 1.6. The difference in infant deaths per 1000 live births in the most disadvantaged subnational regions compared to the most advantaged subnational regions, various years (and trends since 2005)



Notes. Most recent data year for most countries was 2016, with the following exceptions: Azerbaijan 2006; Belarus 2005; Georgia 2005; Kyrgyzstan 2014; Kazakhstan 2015; North Macedonia 2005; Russian Federation 2015; Tajikistan 2015; Ukraine 2012; Uzbekistan 2006.

Sources: authors' own compilation based on data for the years 2005–2016 extracted from Eurostat, OECD and the GDL.

In many countries, the gaps in infant mortality remain the same as they were 10 years ago

- In 23 out of 35 countries across the Region, these gaps in infant mortality rates between the most disadvantaged and most advantaged subnational regions stayed the same or widened between 2005 and 2016.

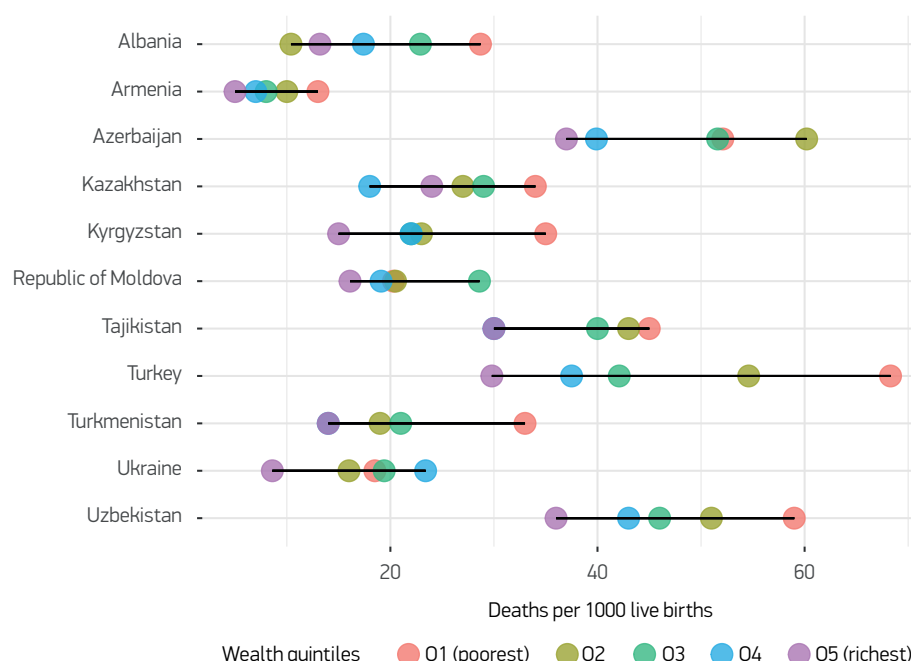
Infant mortality is associated with household wealth

- Fig. 1.7 shows the differences in infant mortality rates between those with the lowest and highest levels of wealth among 10 countries for which wealth-disaggregated data were available.⁷
- Children born into the least wealthy families are more likely to die in their first year of life than children born into the wealthiest families.

⁷ The wealth index is a composite measure of a household's cumulative living standard. It is calculated and its quintiles established using easy-to-collect data on a household's ownership of selected assets, such as televisions and bicycles, materials used for housing construction, and types of access to water and sanitation facilities.

- In these 10 countries, the data show that for every 1000 babies born, between four and 23 more babies do not survive the first year of life in the least wealthy households, compared to babies born in the wealthiest households.
- This is in comparison to an average across the WHO European Region of 27 babies in every 1000 who do not survive the first year of life.

Fig. 1.7. Number of deaths per 1000 live births in children aged under 12 months, by wealth quintile, various years



Notes. Most recent data available varied by country: Albania 2009, Armenia 2016, Azerbaijan 2006, Kazakhstan 2011, Kyrgyzstan 2014, Republic of Moldova 2005, Tajikistan 2012, Turkmenistan 2016, Ukraine 2007, Uzbekistan 2006.
Source: authors' own compilation based on data for the years 2006–2016 from the World Bank.

SDGs and infant mortality

Target 3.1. By 2030, reduce the global maternal mortality ratio to less than 70 per 100 000 live births.

Target 3.2. By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1000 live births and under-5 mortality to at least as low as 25 per 1000 live births.

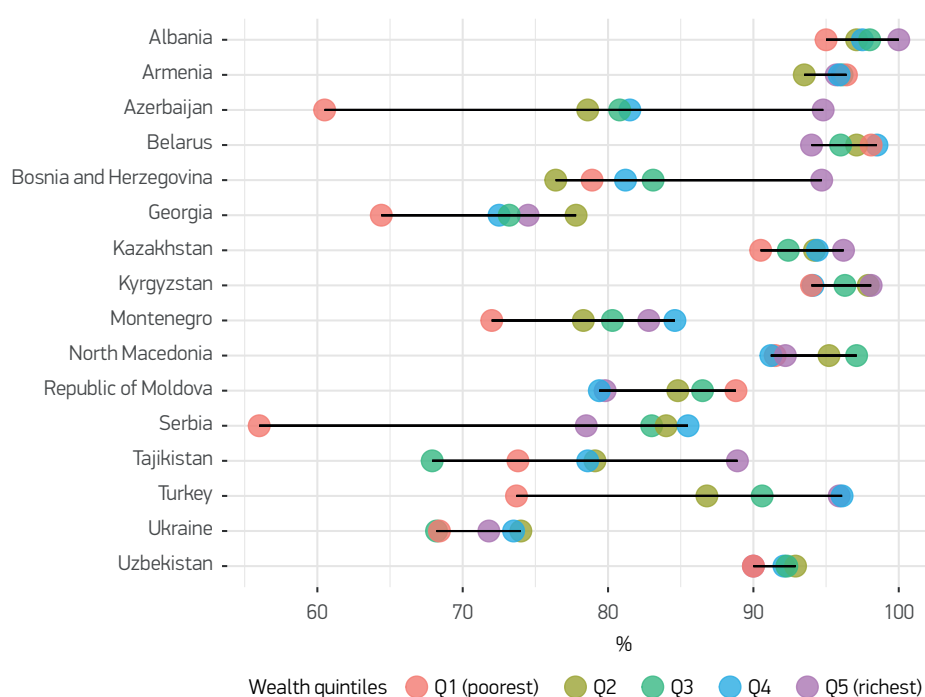
The socioeconomic health gradient is seen in other indicators of health in the early years

- Fig. 1.8 shows that there are differences in uptake for the measles vaccine. In 11 out of 16 countries for which wealth-disaggregated data were available, children from households in one of the lowest two wealth quintiles are least likely to have had the measles vaccine.
- Across these countries, out of every 100 children on average nine fewer children have received the measles vaccine in the least wealthy quintile, compared to the wealthiest quintile. Average rates of vaccination uptake range from 71 to 98 children in every 100.
- The data presented are the most up-to-date disaggregated data available. More recent data on vaccine uptake are available but have not been disaggregated by wealth quintiles.

Guidance is provided to reduce inequities in immunization

- The European Vaccine Action Plan aims for a "European Region free of vaccine-preventable diseases, where all countries provide equitable access to high-quality, safe, affordable vaccines and immunization services throughout the life-course" (25).
- Vaccine hesitancy is the delay in acceptance or the refusal of vaccines despite availability of vaccination services and it includes health inequities as a reason for hesitancy (26). It was identified by WHO as one of the 10 threats to global health in 2019 (27).
- In some countries in the WHO European Region, children of parents with a higher number of years in education have lower rates of immunization uptake. This relationship is not consistent, and low uptake in these groups is often associated with specific vaccines (e.g. the human papillomavirus (HPV) vaccine; see for example Feiring et al., 2015 (28)).
- Tailoring immunization programmes (TIP) provides guidance on accelerating actions to reduce gaps in immunization uptake. The TIP approach recommends Member States identify, diagnose and design bespoke interventions to increase uptake for certain vaccines (26).

Fig. 1.8. Percentage of children aged 12–59 months who have received at least one dose of a measles-containing vaccine, by wealth quintile, various years



Notes. Most recent data available varied by country: Albania 2008, Armenia 2010, Azerbaijan 2006, Bosnia and Herzegovina 2011, Belarus 2005, Georgia 2005, Kazakhstan 2010, Kyrgyzstan 2012, Republic of Moldova 2012, North Macedonia 2011, Serbia 2005, Tajikistan 2006, Turkey 2003, Ukraine 2012, Uzbekistan 2006.

Source: authors' own compilation based on data for the years 2003–2012 from the WHO Global Health Observatory (GHO).

SDGs and vaccinations

Target 3.8. Achieve UHC, including financial risk protection, access to quality essential health care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.

1.3 Adult health differences: status and trends

Gaps in adult health in the WHO European Region are not improving

- Self-reported measures of overall health, mental health and well-being are increasingly recognized as early detectors of mortality and morbidity risk, and are widely regarded as reliable indicators of objective health status (29, 30) (see Annex 4).
- In 45 of the 48 countries in Fig. 1.9, women with the fewest years of education report higher rates of poor or fair health, compared to women with the most years of education, with the same pattern for men in 47 of the 48 countries.
- Among these countries, out of every 100 women as many as 31 more women with the fewest years of education report only poor or fair health, compared to women with the most years of education. For men, there are as many as 33 out of every 100.
- Average rates of women reporting poor or fair health range from 16 to 66 out of every 100. For men, this range is from 15 to 56 out of every 100.
- Within-country inequities in self-reported poor health either remained unchanged or widened between 2005 and 2017 in most parts of the Region (Fig. 1.9, Fig. 1.10, Fig. 1.11).
- Self-reported health provides insight into the impact of policies and interventions not captured by mortality or morbidity measures (which take longer for effects to be seen) (31).

Gender differences in self-reported poor or fair health

- There is a smaller education gradient in health for men than women in Andorra, Kyrgyzstan, Lithuania and Romania. In these countries, inequity in self-reported health is less pronounced between high and low education levels among men than it is among women, suggesting that education level has less of an effect on the health of men than women.
- However, in Azerbaijan, Denmark, Iceland, Israel, Republic of Moldova and Ukraine the opposite occurs; that is, a smaller education gradient in health exists for women than for men. In these countries, inequity in self-reported health is less pronounced between high and low education levels among women than it is among men, suggesting that education level has less impact on the health of women than men.

Inequities in self-reported poor health are found based on education and income differences

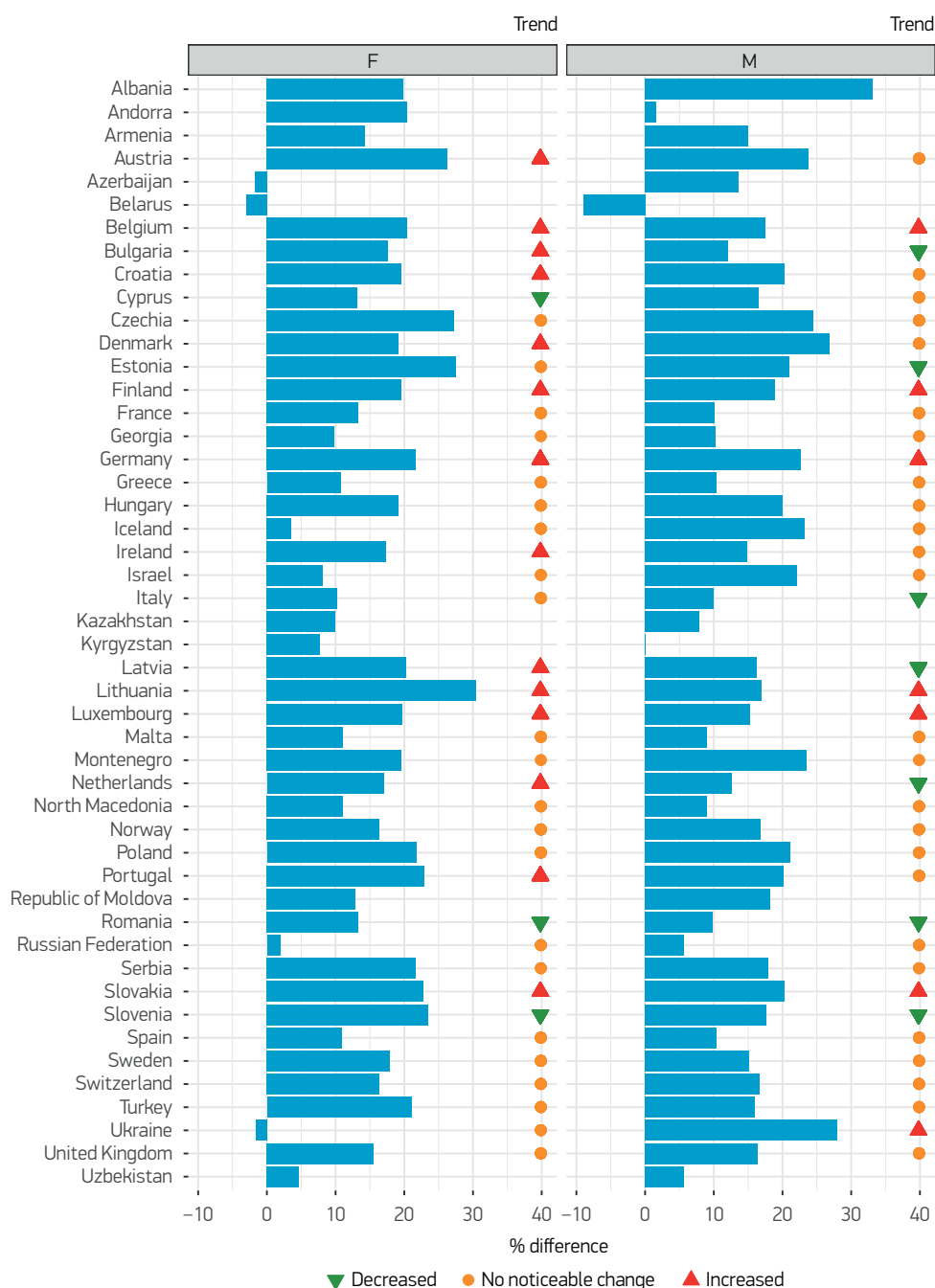
- Fig. 1.9 shows inequities in poor health by number of years in education, while Fig. 1.10 shows inequities in poor health by income quintile. People with the lowest incomes are more likely to report poor health than those with the highest incomes.
- In 37 of the 38 countries in Fig. 1.10 there is a clear socioeconomic gradient, with the percentage of adults reporting only poor or fair health being higher in lower income quintiles, for both men and women.
- Among these countries, out of every 100 women between two and 29 more women in the lowest income quintile report only fair or poor health compared to women in the highest income quintile. For men, between six and 29 more men out of every 100 in the lowest income quintile report only fair or poor health compared to the highest quintile.
- The average rates of reporting only poor or fair health range from 15 to 60 out of every 100 women, and 15 to 50 out of every 100 men.

Across the board, indicators of health follow a social gradient

- The socioeconomic gradients in self-reported health status (Fig. 1.9, Fig. 1.10), WHO's five-point mental health score (the WHO-5 Well-Being Index)⁸ and life satisfaction follow a similar pattern of socioeconomic gradients to those found in mortality and morbidity indicators (discussed in more detail in Section 2).

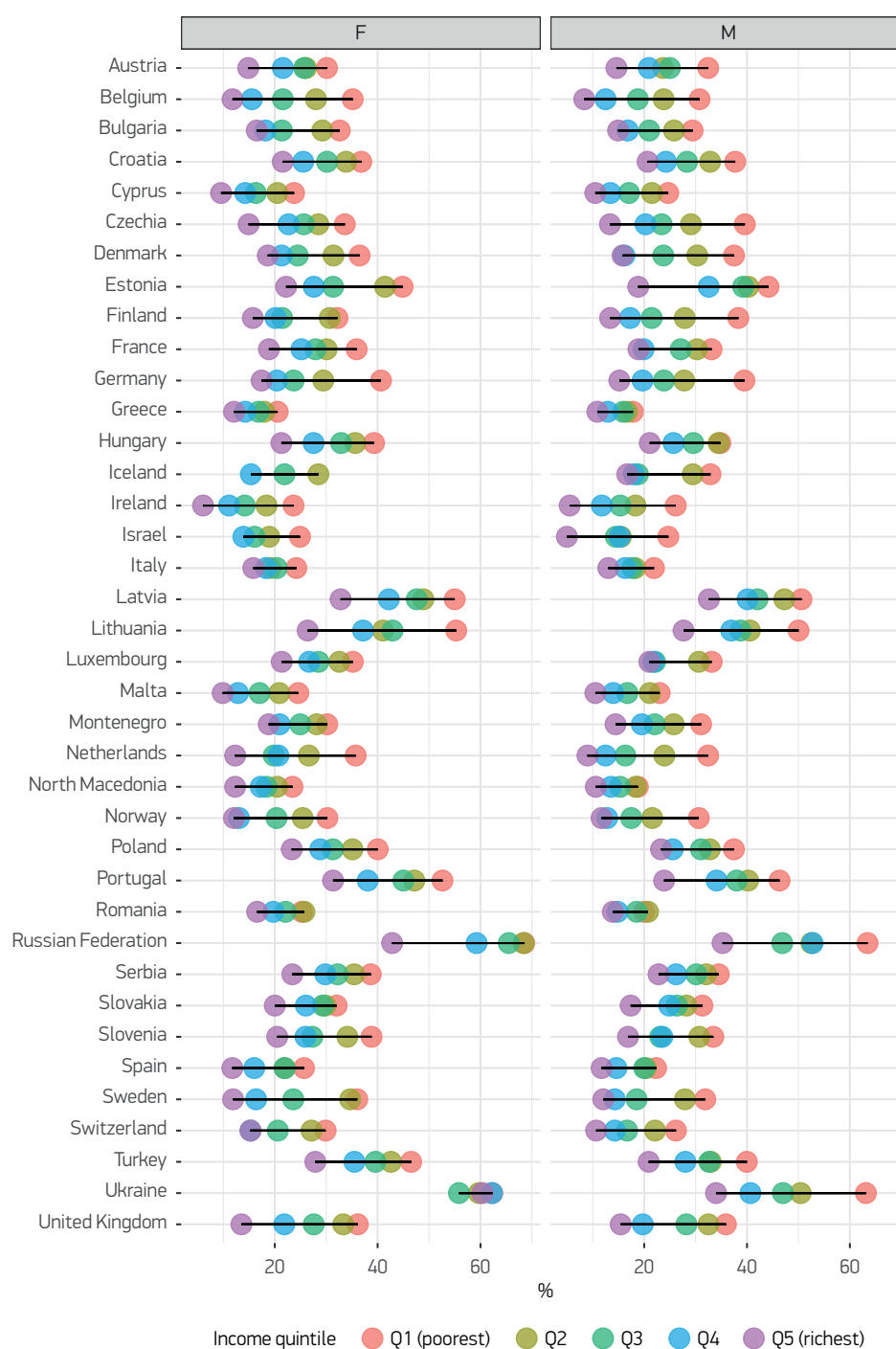
⁸ Respondents are asked how often over the last two weeks they have felt: (1) cheerful and in good spirits; (2) calm and relaxed; (3) active and vigorous; (4) fresh and rested upon waking up; and (5) that their daily life is filled with things that interest them (32).

Fig. 1.9. The percentage difference in adults reporting poor or fair health per 100 adults with the fewest years of education compared to those with the most years of education, 2017 (and trends since 2005)



Notes. F = females. M = males. The negative percentages mean that there are fewer people reporting poor/fair health among those with the fewest years of education/low education levels than among those with the most years of education.

Sources: authors' own compilation based on data extracted for the years 2005–2017 from the ESS, the EU-SILC survey and the WVS.

Fig. 1.10. Percentage of adults reporting poor or fair health (age adjusted), by income quintile, various years


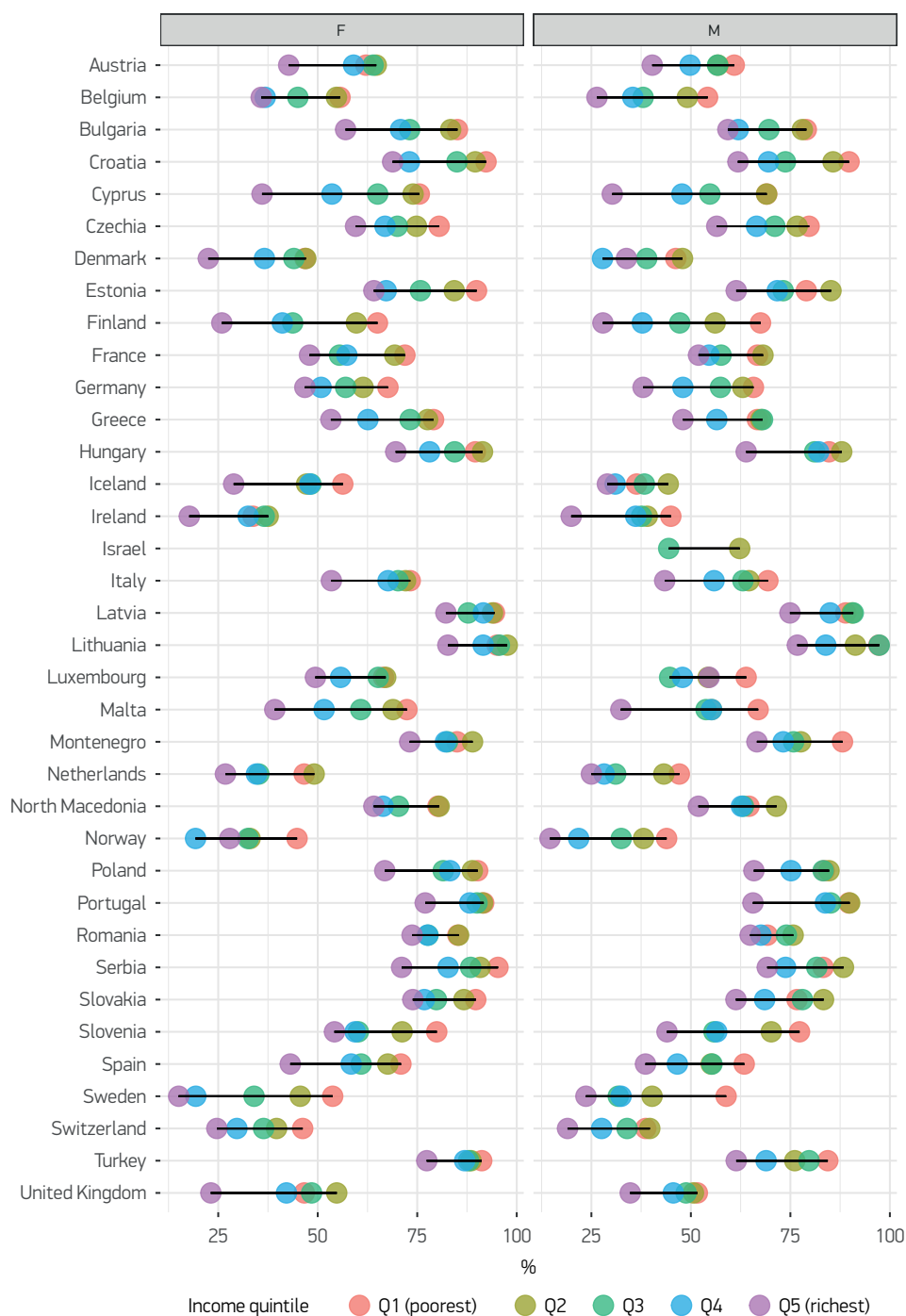
Notes. F = females. M = males. Data missing due to small sample size for women in Iceland (Q1 and Q5) and Israel (Q5).

Sources: authors' own compilation based on data extracted for the years 2012–2017 from the EU-SILC survey and the ESS.

Inequities last into later life

- There are differences in self-reported health in most countries in the WHO European Region for people aged 65 years and over (Fig. 1.11).
- In all countries for women aged 65 years and over and in 33 of the 36 countries for men in the same age group, there is a clear socioeconomic gradient, with those in the lowest or second-lowest income quintiles most likely to self-report poor or fair health.

Fig. 1.11. Percentage of adults aged 65 years and over reporting poor or fair health, by income quintile, various years



Notes. F = females. M = males. Data missing due to small sample size for men in Israel (Q1, Q4 and Q5) and women in Israel (Q5).

Sources: authors' own compilation based on data extracted for the years 2014–2017 from the EU-SILC survey and the ESS.

Gaps in self-reported health and well-being are evident at different stages of the life-course

- Percentages of children, working-age adults, and adults aged 65 years and over reporting poor health, disaggregated by household income or affluence level, show that the socioeconomic gradient in health widens progressively throughout the life-course.
- While among children, on average six more girls and five more boys in every 100 from the least affluent families report only poor or fair health compared to the most affluent families, among adults this increases to 19 more women and 17 more men in every 100.
- For adults aged 65 years and over, these gaps increase again to an average of 22 more women and 21 more men out of every 100 in the lowest income quintile reporting only poor or fair health, compared to the highest income quintile.

Those entering later life in poorer health are at risk of falling further behind

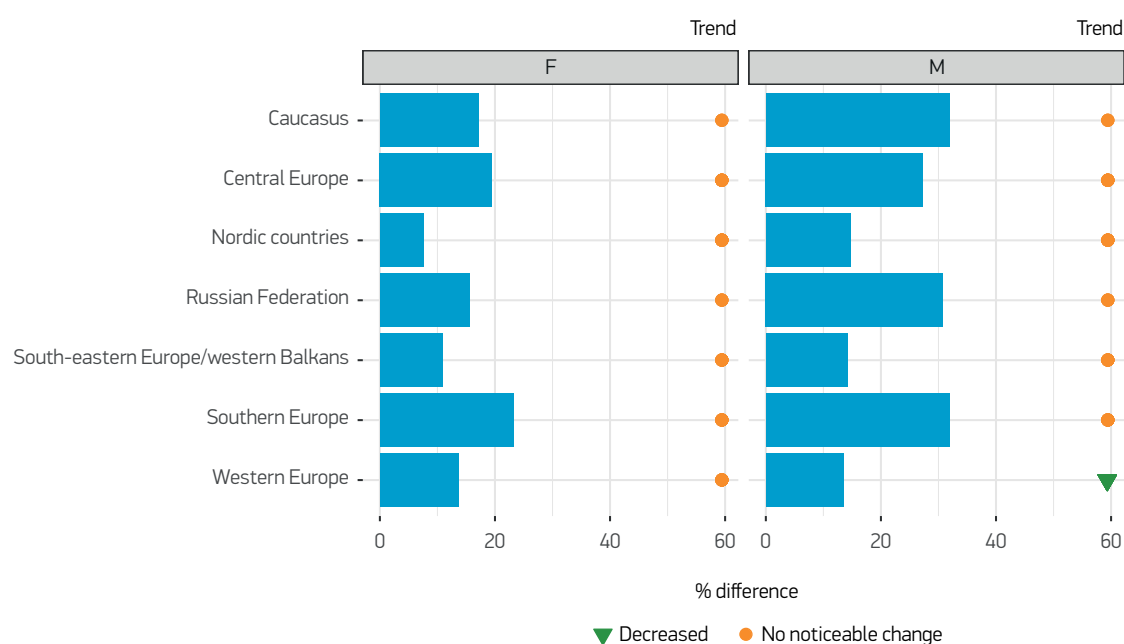
- Accumulated advantage or disadvantage influences the number of years of life lived in good health, particularly after retirement age.

Adults from wealthier households have better well-being across the WHO European Region

- Similar to the situation of children (see Fig. 1.3), adults from the least affluent households across the Region are more likely than adults from more affluent households to report poor well-being, as measured by life satisfaction⁹ (Fig. 1.12).
- Inequities in life satisfaction are lowest in Nordic countries and highest in southern Europe (Fig. 1.12).
- In every country cluster, except for among men in western Europe, the differences in percentages of adults reporting poor life satisfaction did not change noticeably between 2003 and 2016.
- In all country clusters except western Europe, differences in life satisfaction between those in the lowest and highest income quintiles are larger among men than among women. In four of the seven country clusters the difference between the men with the lowest incomes and those with the highest incomes is more than 20%.

⁹ To assess overall quality of life, surveys (such as the EQLS) ask populations to provide a personal assessment of one person's health and well-being, measuring life satisfaction by asking questions such as: "All things considered, how satisfied would you say you are with your life these days?" This subjective assessment complements other questions found in other surveys and is an important component of assessing overall well-being.

Fig. 1.12. The percentage difference in adults reporting poor life satisfaction per 100 adults in the lowest income quintile compared to the highest income quintile, 2003–2016 (and trends), by country cluster



Notes. F = females. M = males.

Sources: authors' own compilation based on data extracted for the years 2003–2016 from the EU-SILC survey and the ESS.

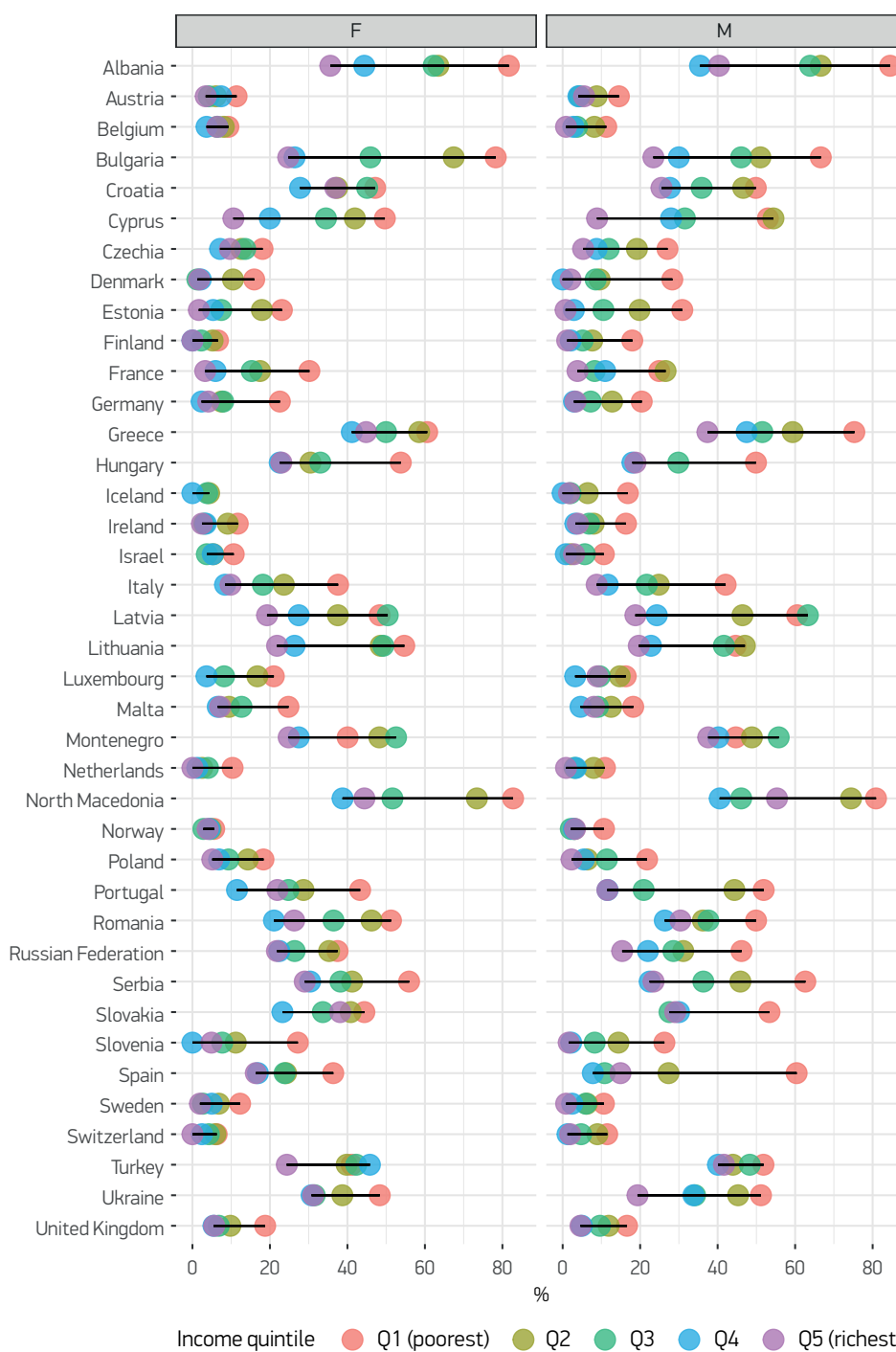
People in the lowest income quintiles have the lowest life satisfaction across the WHO European Region

- There are substantial differences in percentages of adults reporting poor life satisfaction across the Region (Fig. 1.13). A total of 15 out of 39 countries have a difference in prevalence of poor life satisfaction of more than 20% between women in the lowest and highest income quintiles (and in 21 out of 39 countries for men).
- In 36 out of 39 countries, women most likely to report poor life satisfaction are those with the lowest income. The same is true of men in 34 out of 39 countries.
- Among these countries, out of every 100 women, between two and 54 more women report poor life satisfaction in the lowest income quintile compared to the highest income quintile. For men, this ranges from seven to 46 more men out of every 100.
- The average rate of reporting poor life satisfaction across the Region is 23 out of every 100 for both women and men.

Average life expectancy across the WHO European Region is increasing, but in every country health inequities persist between adults from different social groups

- Average life expectancy in the Region increased from 76.7 years in 2010 to 77.8 years in 2015. However, this obscures within-country differences, as shown in Fig. 1.14 for 19 countries with education-disaggregated data.
- Table 1.1 shows how life expectancy and gaps in life expectancy by education level differ between men and women within these 19 countries.
- The average life expectancy across those 19 countries is lower for men than for women. However, the gap in life expectancy for men of different social groups is wider than for women.
- Gaps in life expectancy between women with most and fewest years of education remained the same or increased in all 19 countries between 2013 and 2016. For men, the gaps remained the same in almost all countries across the same period.

**Fig. 1.13. Percentage of adults reporting poor life satisfaction, by income quintile, 2016
(or latest available year)**



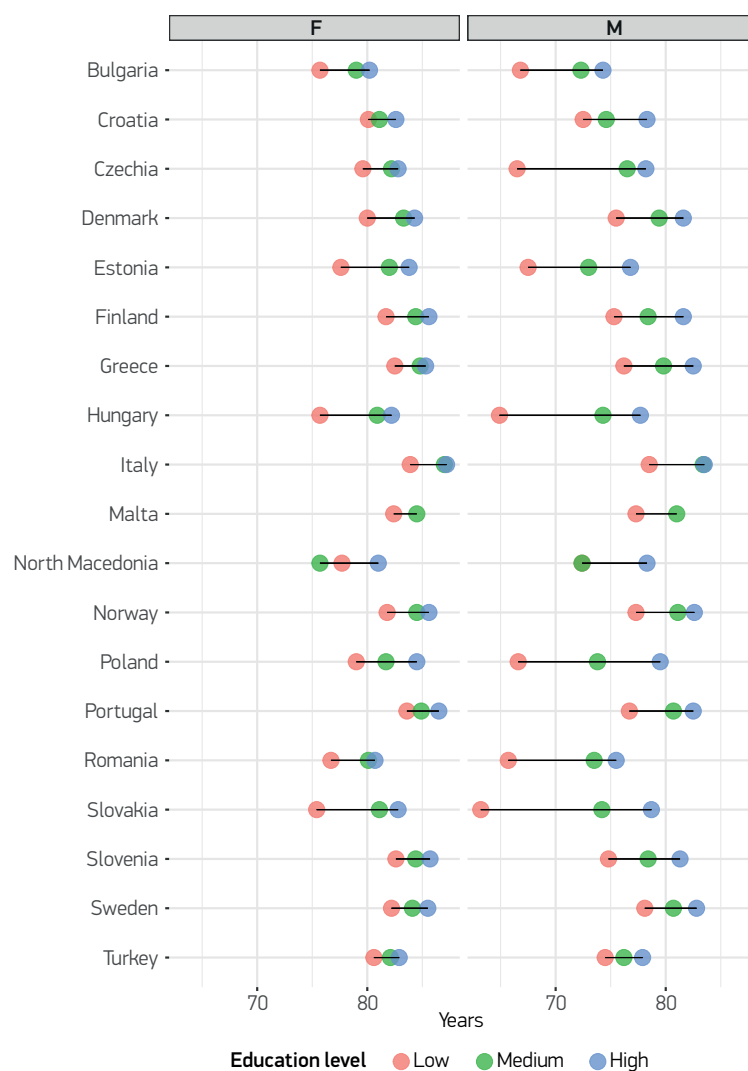
Notes. F = females. M = males. Data missing due to small sample size for: men in Hungary and Slovakia (Q2); women in Iceland (Q1 and Q5); women in Israel (Q5); and women in Luxembourg (Q5).

Sources: authors' own compilation based on data extracted for 2016 (except Ukraine: 2012) from the EU-SILC survey and the ESS.

Table 1.1. Averages and ranges for life expectancy and the gaps in life expectancy for 19 countries of the WHO European Region, 2016 (or latest available year)

	Life expectancy (years)		Gaps in life expectancy (years)	
	Average	Range	Average	Range
Women	82.0	78.1–86.0	3.9	2.3–7.4
Men	76.2	71.1–81.8	7.6	3.4–15.5

Source: authors' own compilation based on data extracted from Eurostat.

Fig. 1.14. Life expectancy at birth, by education level, 2016 (or latest available year)

Notes. F = females. M = males. Data for Malta are from 2011. High education level data are missing for Malta. The education categories are based on ISCED categories, which are aggregated to form a three-category education variable (see Section 1.1 for an explanation of the ISCED categories). The applicable age range for lower-secondary, upper-secondary, and higher education may vary across countries.

Source: authors' own compilation based on data extracted from Eurostat.

The in-country gaps in life expectancy between men and women of different social groups are significant

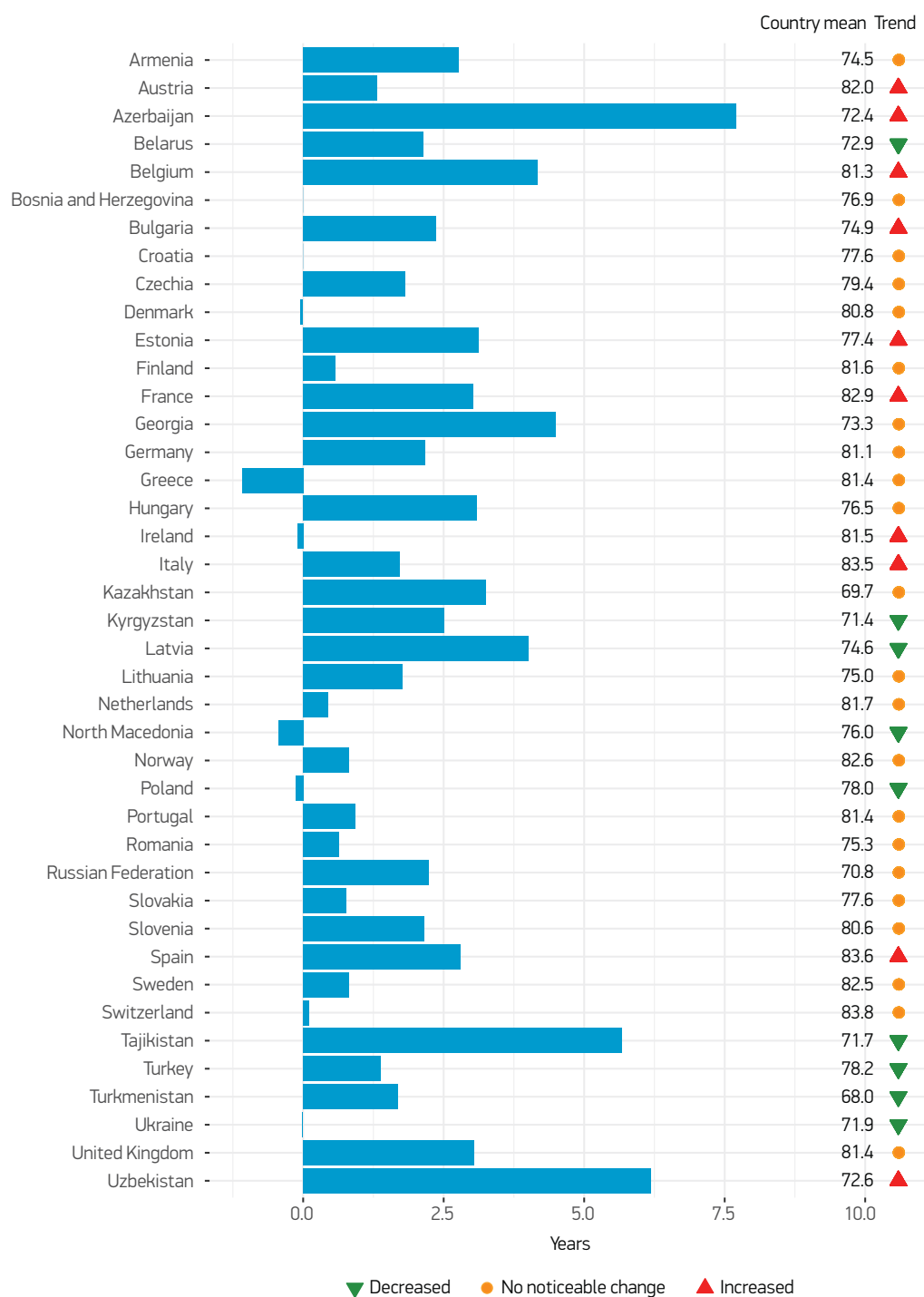
- Women with fewer years in education are more likely to die between 2.3 and 7.4 years earlier than women with more years in education.
- Men with fewer years in education are most likely to die between 3.4 and 15.5 years earlier than men with more years in education.
- In four countries, men with lower-secondary education live more than 10 years less than those with university education.

Progress has been limited in reducing subnational regional health inequities in life expectancy

- Progress towards reducing subnational regional health inequities in life expectancy between 2005 and 2016 is disappointing (Fig. 1.15).
- The trends show that in 32 out of 41 countries the differences in life expectancy between the most and least advantaged subnational regions have remained similar or increased across that period (Fig. 1.15).
- In these 41 countries, average life expectancies range from 68.0 to 83.8 years.
- In 34 out of 41 countries, life expectancy in the most deprived subnational regions is lower than in the most advantaged regions. In these countries, men and women die on average 7.7 years earlier in the most deprived regions compared to those in the most advantaged ones.
- In seven countries, however, life expectancy in the most deprived regions is higher than in the most advantaged ones (in 2016).

Limitations to daily activities resulting from long-standing illness hold many back from being able to live a decent life

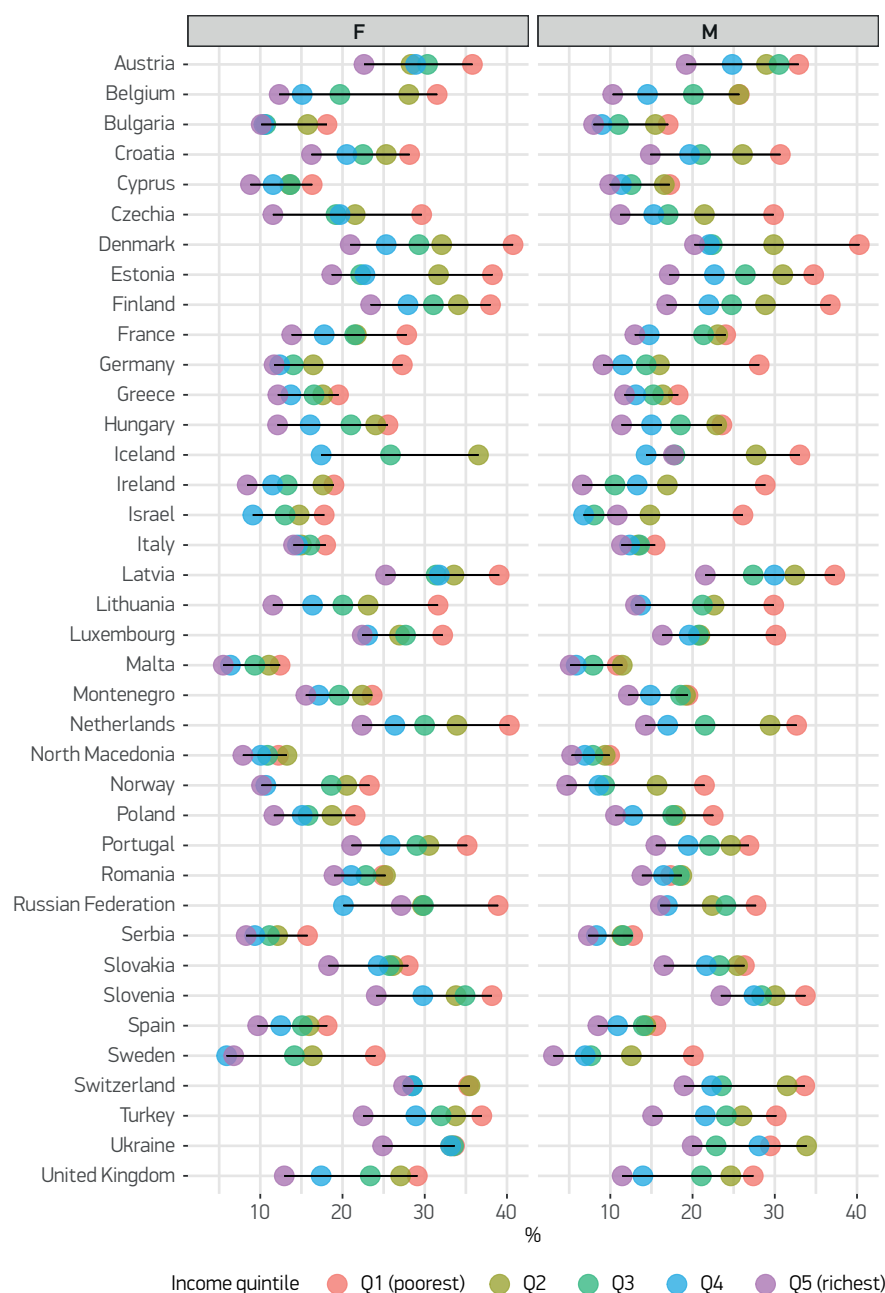
- Inequities in limiting illness impact not only opportunities to live a high-quality home and family life, but also the overall productivity of a country's workers and its economic performance. Limiting illness refers to the limitations people experience in their usual activities for a duration of at least six months as a result of health problems (33).
- Inequities in limiting illness are prevalent in all countries across the WHO European Region (specifically those with income-disaggregated data). Among the 38 countries in Fig. 1.16, the percentage of women and men reporting limitations in being able to carry out daily activities due to poor health follows a strong social gradient by income quintile.
- Data for these 38 countries show that out of every 100 women, between four and 20 more women in the lowest income quintile report limitations in daily life due to poor health, compared to the highest income quintile.
- For men, between four and 22 more men out of every 100 report this situation in the lowest income quintile, compared to the highest income quintile.
- The gaps in limiting illness remained the same or increased for women between 2005 and 2016 in 32 of the 38 countries in Fig. 1.16, and the same is true for men in 31 of the 38 countries.
- These inequities establish a vicious cycle of poor health, as limiting illness holds people back from participating in social, economic and cultural activities, such as paid and voluntary work, learning and training, and having a social life and friendship groups. Risk of economic and social exclusion and vulnerability increase, and this has an immediate impact on families in terms of increased burden on caring and household income security.

Fig. 1.15. Life expectancy differences between the most disadvantaged compared to the most advantaged subnational regions, 2016 (and trends since 2005)

Notes. Based on slope index of inequality. Differences between most disadvantaged subnational regions and most advantaged subnational regions estimated as the slope index of inequality over subnational Human Development Index (HDI) scores. In seven countries in 2016 the wealthiest regions had lower life expectancy than the poorest regions.

Sources: authors' own compilation based on data extracted for the years 2005–2016 from Eurostat, OECD and the GDL.

Fig. 1.16. Percentage of adults reporting long-standing limitations in daily activities due to health problems (age adjusted), by income quintile, various years



Notes. F = females. M = males. Data missing due to small sample size for women in Iceland (Q1 and Q5) and Israel (Q5).

Sources: authors' own compilation based on data extracted for the years 2012–2017 from the EU-SILC survey and the ESS.

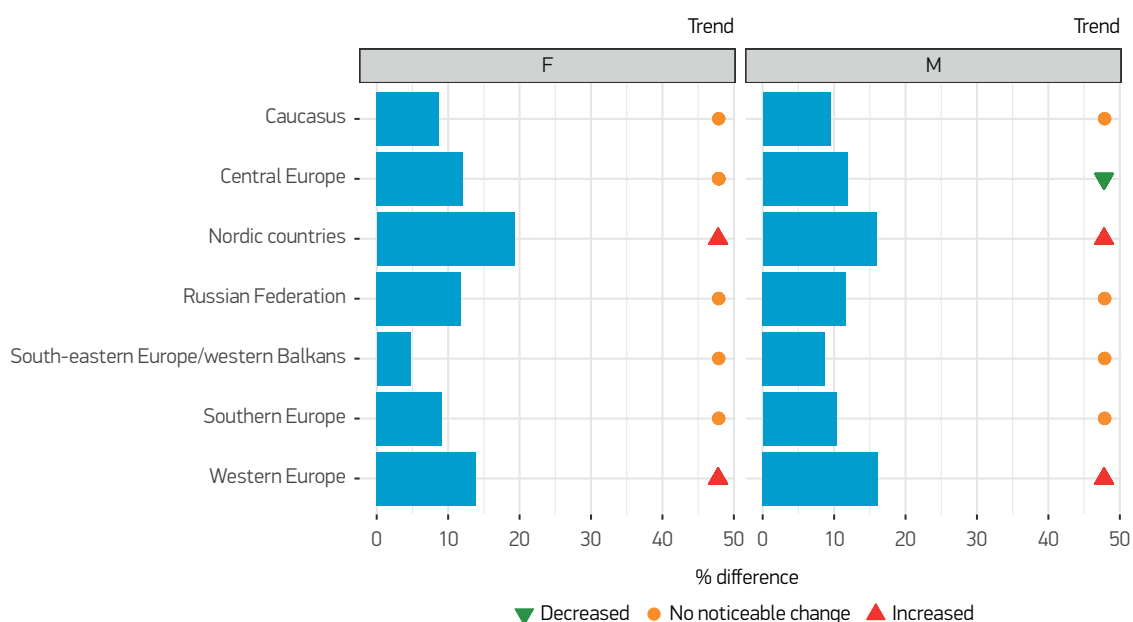
Regional comparisons show little progress in reducing differences in long-standing limitations to daily life due to health problems

- Examining regional trends by country cluster, across most of the WHO European Region the inequities in long-standing limitations due to health problems between those in the lowest and highest income quintiles remained similar between 2004 and 2016 (Fig. 1.17).
- The gap narrowed, however, for men in central Europe, while the gap increased for men and women in western Europe and Nordic countries.

- In western Europe, southern Europe, south-eastern Europe/western Balkans, and the Caucasus, differences in illness that limits daily activities between those in the lowest and highest income

quintiles are larger among men than among women. In central Europe, Nordic countries and the Russian Federation, differences are larger among women.

Fig. 1.17. The percentage difference in adults reporting long-standing limitations in daily activities due to health problems, per 100 adults in the lowest income quintile compared to the highest income quintile, 2016 (and trends since 2004), by country cluster



Notes. F = females. M = males.

Sources: authors' own compilation based on data extracted from the EU-SILC survey and the ESS.

People in the lowest income quintiles are most likely to report poor mental health across the WHO European Region

- Differences in rates of poor mental health between the lowest and highest income quintiles exist in most countries (Fig. 1.18). In a quarter of countries in the Region the differences in the prevalence of self-reported mental health problems between those with the lowest and highest incomes is over 20%. People with the lowest incomes are twice as likely to have poor mental health as those earning the highest incomes.
- In 32 of the 35 countries in Fig. 1.18, women in the lowest or second-lowest income quintiles have the highest rates of poor mental health. In 34 of the 35 countries, men in the lowest or second-lowest income quintiles have the highest rates of poor mental health.
- Among these countries, out of every 100 women between one and 24 more women report poor mental health in the lowest income quintile compared to the highest quintile. For men, this gap ranges from four to 26 more men out of every 100.
- Poor mental health is reported on average among 23 out of every 100 women and among 27 out of every 100 men across the Region.
- The onset of half of all mental health problems in adulthood takes place during or before adolescence (34).

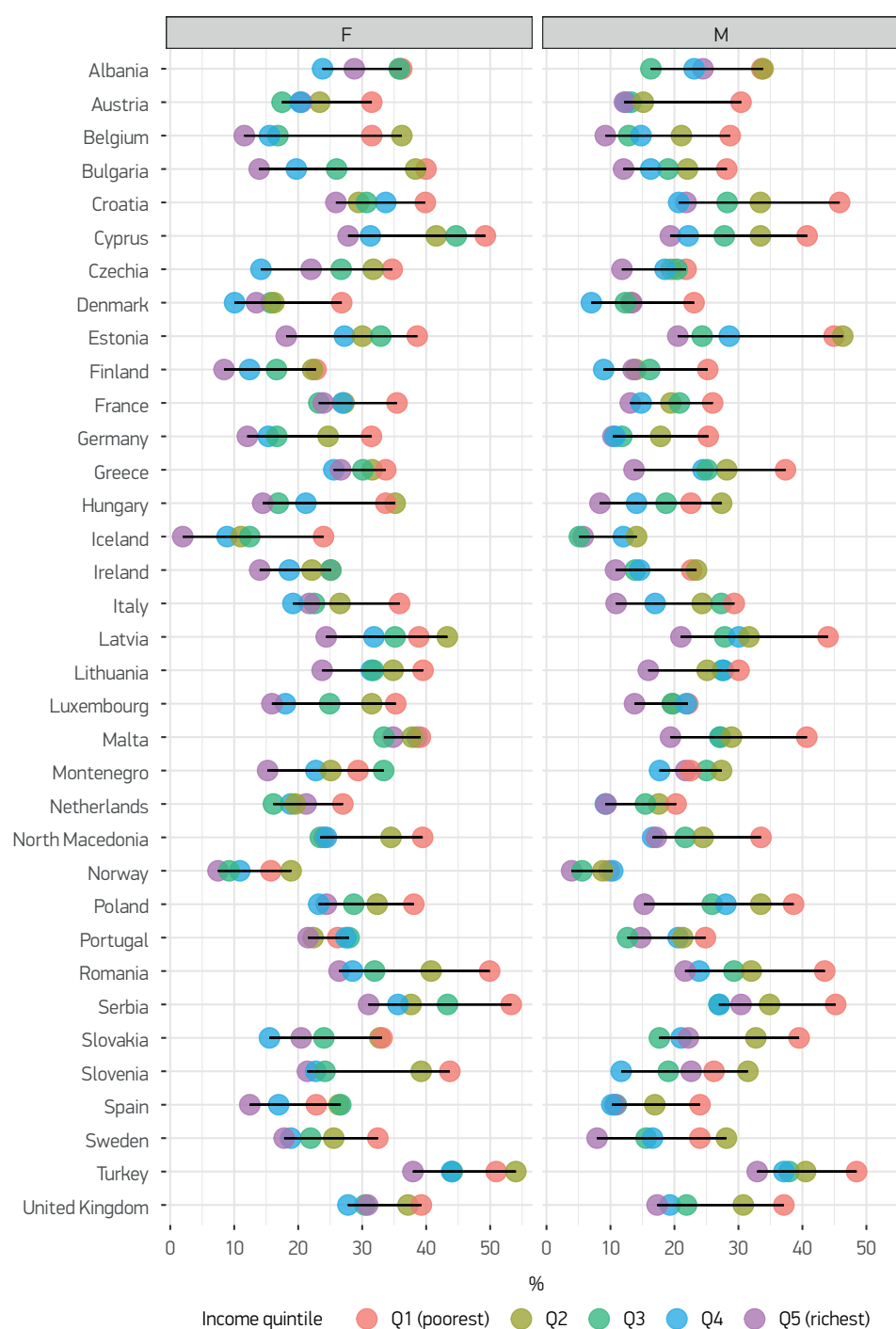
SDGs and mental health

Target 3.4. By 2030, reduce by one third premature mortality from NCDs through prevention and treatment and promote mental health and well-being.

Indicator 3.4.1. Mortality rate attributed to CVD, cancer, diabetes or chronic respiratory disease.

Indicator 3.4.2. Suicide mortality rate.

Fig. 1.18. Percentage of adults reporting poor mental health on the WHO-5 Well-Being Index (age adjusted), by income quintile, various years



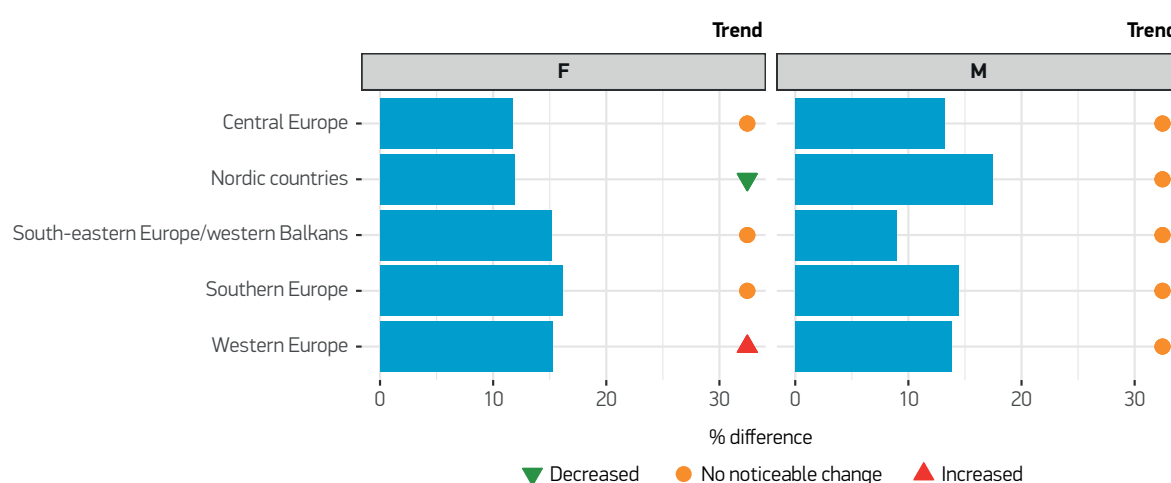
Notes. F = females. M = males. Respondents scoring less than 50 out of 100 on the WHO-5 Mental Well-Being Index. Data missing due to small sample size for men in Iceland (Q1).

Source: authors' own compilation based on data extracted for the years 2007, 2011 and 2016 from the EQLS.

Inequities in mental health are just as prevalent in the Region as inequities in physical health

- Men and women living on the lowest incomes within countries across the WHO European Region are, on average, twice as likely to report poor mental health compared to those with the highest incomes.
- Mental health is a major public health priority in the Region because of its co-morbidity rates with CVD and communicable diseases (such as TB).
- The link between communicable diseases and mental health, as well as other socioeconomic factors (see Box 1.1) can be useful from an analytical perspective, since disaggregated data on communicable diseases are not widely available in the Region to enable direct assessment of inequities. The link between poor mental health and incarceration is one area of particular concern (see Box 1.2).
- Depression and anxiety disorders are among the top five causes of the overall disease burden in the WHO European Region (measured in terms of disability-adjusted life years).
- Analysis of data for 35 countries, grouped by clusters of countries with similar policy and political landscapes in Fig. 1.19 (see Annex 3 for details), shows that out of every 100 women, between 12 and 16 more women in the lowest income quintile report poor mental health compared to women in the highest income quintile. For men, between nine and 17 more men out of every 100 in the lowest income quintile report poor mental health compared to the highest income quintile.
- The clustering of countries in Fig. 1.19 highlights that gender differences in the severity of mental health inequities vary in different parts of the Region.

Fig. 1.19. The percentage difference in adults reporting poor mental health on the WHO-5 Well-Being Index, per 100 adults in the lowest income quintile compared to the highest income quintile, 2007–2016 (and trends), by country cluster



Notes. F = females. M = males.

Source: authors' own compilation based on data extracted for the years 2003–2016 from the EQLS.

SDGs and communicable diseases

Target 3.3. By 2030, end the epidemics of AIDS, TB, malaria and neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable diseases.

SDG 1. End poverty in all its forms everywhere.

SDG 10. Reduce inequality within and among countries.

Box 1.1. Communicable diseases and health inequities

- Infectious diseases, such as TB, HIV and viral hepatitis disproportionately affect those who are most likely to be left behind (35).
- Despite the fastest decline in TB incidence in the world, the WHO European Region bears the highest proportion of multidrug-resistant TB (MDR-TB) globally, with only 60% of these patients being successfully treated. Of the 30 countries in the world with the highest burden of MDR-TB, nine are in the European Region (Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, Ukraine and Uzbekistan).
- TB, and particularly its drug-resistant form, is linked to social determinants such as housing/homelessness, nutrition, and stigma associated with social marginalization. It is more often seen in prisons and overcrowded living and/or working conditions.
- In many countries in the Region, surveillance systems do not collect data on health inequities in relation to communicable diseases (36).
- Equitable access to prevention, early diagnosis and full treatment and care, as well as addressing stigma and discrimination are crucial to decreasing the TB, HIV and the viral hepatitis burden (37).
- Increasing prevention activities and improving UHC through actions to reduce TB prevalence include reducing the number of people living in overcrowded housing or settings where people congregate (such as prisons), and combating poverty. Reducing TB requires action on poverty and the associated social and structural factors that contribute to inequities in diagnosis and treatment (38–40). It is estimated that TB would decline by 76% if social protection policies were expanded (41, 42).
- Multisectoral action is pivotal to reducing these three diseases and the United Nations common position on ending HIV, TB and viral hepatitis supports activities within and across sectors to end these epidemics (41). Such action is necessary to ensure the right to health for all, without discrimination, stigma and regardless of age, sex, race or ethnicity, health status, disability or vulnerability to ill health, sexual orientation or gender identity, nationality, asylum or migration status, or criminal record. Under WHO's leadership the United Nations common position on ending HIV, TB and viral hepatitis through intersectoral collaboration has been endorsed by 14 United Nations agencies in Europe and central Asia.

Box 1.2. Universal and accelerated interventions to improve mental health in prisons

- Adequately reducing health inequities in mental health should include both universal policies and accelerated actions to improve the outcomes of those people most likely to be left behind. People who experience incarceration are distinguished by remarkably poor health status, including elevated rates of mental illness, substance use disorders, communicable diseases and NCDs, as well as elevated rates of self-harm and suicide. Incarceration is disproportionately concentrated among young men with few years of education.
- Detention facilities are a critical place where health inequalities can be addressed; they provide access to health services for people with significant health needs, who may face substantial barriers to accessing health care if they were living in the community.
- The benefits of health services that are delivered (and the consequences of inadequate health service delivery) in prison are often only realized after the individuals concerned return to their communities. Given the number of people who experience imprisonment or youth detention each year globally, improving the health of those who are incarcerated is important to global health, to public health, and to reducing health inequalities.

Trends in expenditure on public health vary

- Levels of expenditure on public health in countries across the Region range from 0.03% to 0.52% of GDP.
- Between 2000 and 2017 expenditure on public health remained the same or fell in 18 of 33 countries in the WHO European Region (Fig. 1.20). In 15 of 33 countries, expenditure on public health increased.
- Fig. 1.20 provides evidence that in over half of countries where data were available, public health budgets are not rising to meet increasing needs.

Reducing spending on public health negatively affects life expectancy

- Budget reductions in primary care and public health have been found to impact negatively on health outcomes, including life expectancy (2, 43, 44).

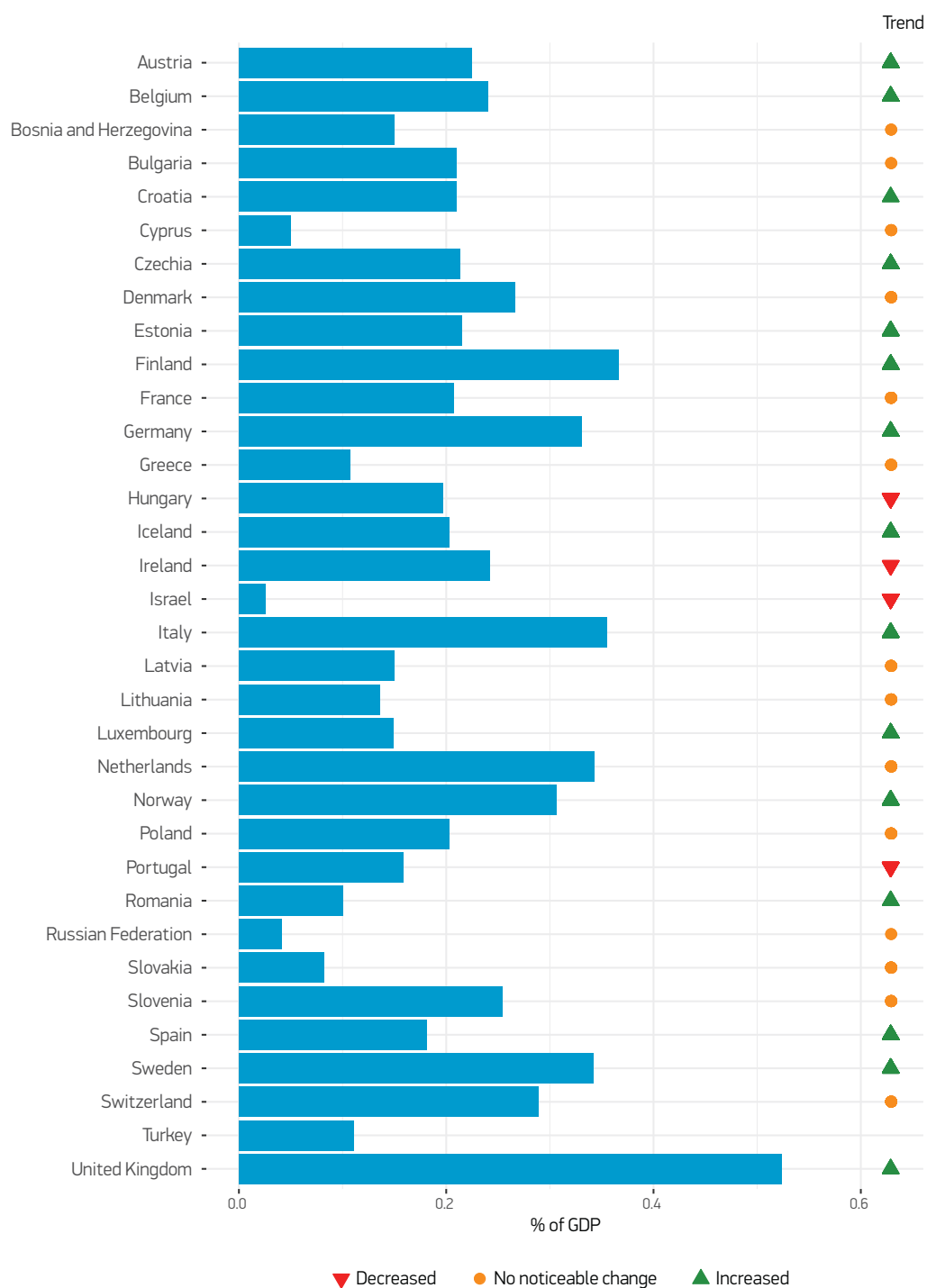
Public health interventions are impactful and cost-effective tools to reduce health inequities

- Many health promotion and disease prevention interventions are highly cost-effective and save money and other resources in the short, medium and long term – when they are designed to address the realities of the lives of those who are falling behind and when they are delivered both within health services and in partnership with other sectors (45).¹⁰
- Aggregate expenditure figures mask decisions about where the funding goes. For example, in terms of expenditure on public health, investment in prevention tends to be lower than in curative care.
- Policies that distribute more resources to areas with greater health, social and economic need have a positive impact in terms of reducing health differences between social groups and geographic areas (46).
- For example, close to half of OECD countries have either introduced or plan to introduce gender budgeting. This involves analysing, executing and monitoring budgets in a gender-sensitive way. It can identify biases in the distribution of resources, which could unintentionally influence health outcomes (47).

Regional analysis is needed

- Fig. 1.20 examines national expenditure, but in many countries public health budgets are devolved to subnational levels. Therefore, to understand whether expenditure within and across countries is equity focused, it should be analysed at subnational level.
- Allocating more public health resources to those subnational regions that have greater need can help to reduce health inequities (48).

¹⁰ It is worth noting that there is very little evidence to support this from the eastern part of the WHO European Region.

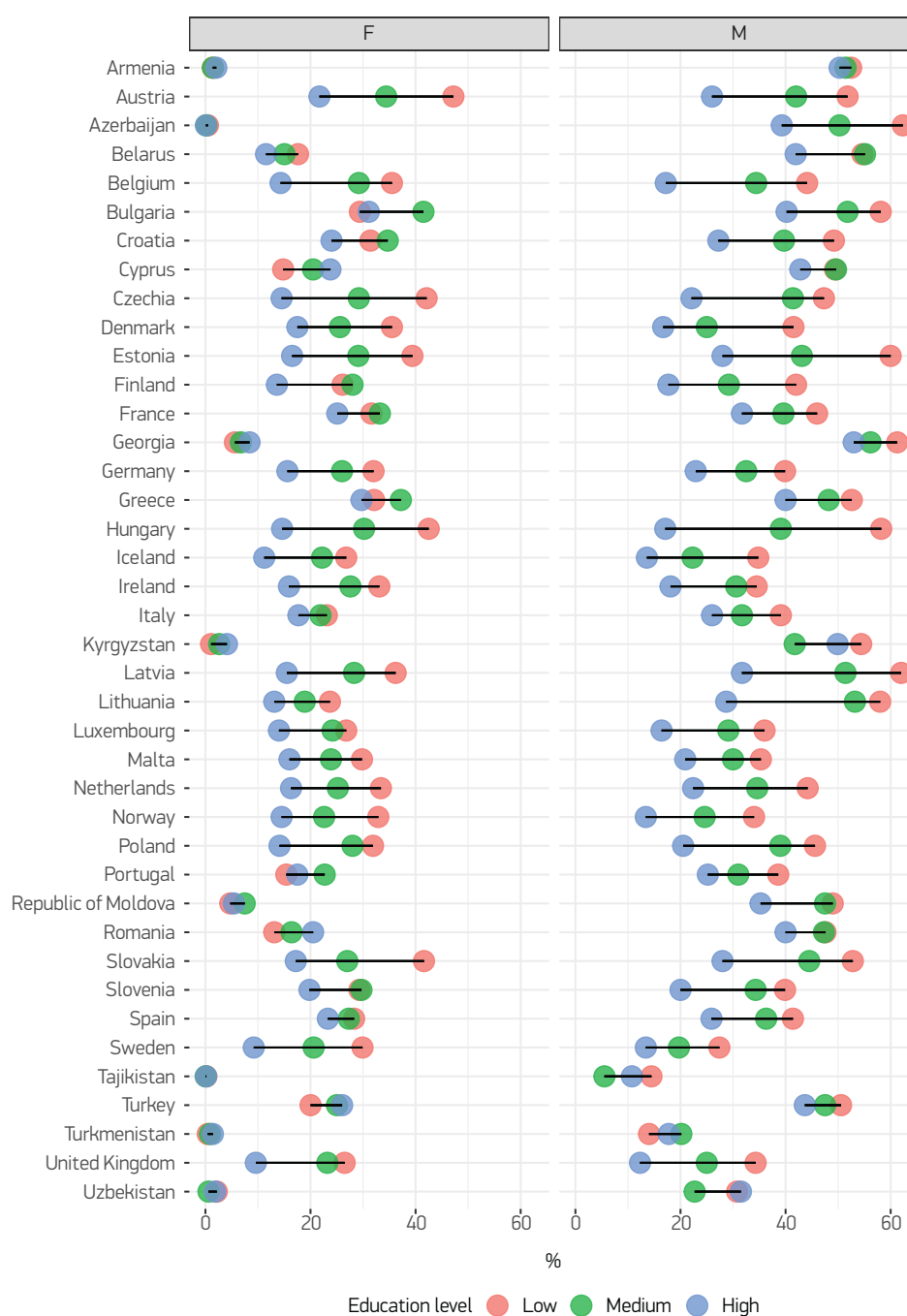
Fig. 1.20. Expenditure on public health as a percentage of GDP, 2017 (and trends since 2000)


Sources: authors' own compilation based on data extracted for the years 2000–2017 from the Eurostat and OECD databases.

Those with the fewest years of education are most likely to be current smokers

- In almost all countries, for men and women, smoking prevalence is highest among people with the fewest years of education, and lowest among those with most years of education (Fig. 1.21).
- In the majority of countries – 25 out of 40 for women; 36 out of 40 for men – people with the fewest years in education are most likely to smoke and in many countries the differences in smoking rates are notably large (over 20% difference).

Fig. 1.21. Percentage of adults aged 18–64 years who are current smokers, by education level, various years



Notes. F = females. M = males. Most recent data year for most countries was 2014, with the following exceptions: Armenia 2016, Azerbaijan 2017, Belarus 2016, Georgia 2016, Kyrgyzstan 2013, Republic of Moldova 2013, Tajikistan 2016, Turkmenistan 2013, Turkey 2017, Uzbekistan 2013.

Sources: authors' own compilation based on data extracted for the years 2013–2017 from the European Health Interview Survey (EHIS) and using the WHO STEPwise approach to Surveillance (STEPS) tool.

- Among these countries, out of every 100 women as many as 28 more women smoke among women with the fewest years of education compared to women with most years of education. For men, this gap ranges from two to 41 more men out of every 100 with the fewest years of education compared to those with the most years of education
- Average rates of smoking within countries are higher among men than women, with up to 34 women out of every 100, and from 10 to 57 men out of every 100.
- In countries where it is not culturally acceptable for women to smoke, there is very low self-reported prevalence and, as a result, there is no gradient (as has been the case for many years) (20, 49).

Smoking is recognized as a key risk factor in exacerbating inequities in health

- Smoking plays a critical role in determining life expectancy.
- Many countries in the WHO European Region have implemented interventions to reduce smoking, such as tobacco taxes, smoke-free public places and cessation programmes, strong packaging and labelling policy, and bans on advertising, promotion and sponsorship (50), but more work is needed to understand the effectiveness of these measures to reduce inequities in smoking, as well as to reduce the overall number of smokers.

Smoking and the commercial determinants of health (CDoH)

- Along with alcohol consumption (see Box 1.3), tobacco consumption is one of the behavioural health risk factors most targeted by non-State actors, such as the tobacco industry. The actions of these non-State actors have a significant and strategic role in advancing, or undermining, health equity. The State's role is to ensure that civil society can fulfil a monitoring or watchdog function by establishing a transparent regulatory framework for civil society organizations to flourish (see Box 1.4).
- Action on the SDH and CDoH requires public health scholars and practitioners to be ready to engage in accountability processes beyond the health sphere.

SDGs and tobacco

Target 3.a. Strengthen implementation of the Framework Convention on Tobacco Control in all countries as appropriate.

SDGs and consumption

SDG 12. Ensure sustainable consumption and production patterns.

SDGs and alcohol

Target 3.5. Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.

Indicator 3.5.1. Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders.

Indicator 3.5.2. Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol.

Box 1.3. Alcohol and health inequities

- The WHO European Region has the highest level of alcohol consumption and alcohol-related harm in the world. Harmful use of alcohol accounted for over 1 million deaths in Europe in 2016. Analysis of excess mortality due to alcohol consumption in 17 European countries showed the mortality of people with low education levels to be double that of those with the highest level of education, in most countries (51).
- This burden of disease is felt differently in certain countries and for certain groups within countries. In eastern Europe, alcohol use accounts for almost a quarter of the disease burden (52). In the eastern part of the WHO European Region men have the highest proportion of disorders resulting from alcohol use (47).
- Alcohol is an important risk factor for both women and men in the Region. However, alcohol consumption affects women and men differently; women develop higher blood alcohol concentrations than men for the same alcohol intake. Women experiencing intimate partner violence have double the risk of alcohol-use problems (14).
- Focusing only on consumption will not reveal all alcohol-related inequities. People with lower incomes consume less alcohol and are more likely to abstain from alcohol; however, they experience higher levels of alcohol-related harm than wealthier groups with the same level of consumption (53). People with lower incomes are also more likely to have higher levels of harmful and hazardous drinking, to binge drink and to live in closer proximity to alcohol outlets, compared to those who are financially better off and living in areas that are better resourced (52–54).
- Interventions to reduce alcohol consumption can also exacerbate inequities, such as health education and traditional public health campaigns aiming to persuade people to change their behaviour. Interventions are more effective when multisectoral actions are taken and partners work together to address differences in availability of alcohol (e.g. planning, licensing) (52, 53). As such, policy coherence is an important aspect of addressing inequities in the use and effects of alcohol in the WHO European Region. In addition, improving disaggregated data on alcohol consumption (by income quintile and years of education) would help to gain a better understanding of the impact of inequities on alcohol consumption in the Region.

Box 1.4. CDoH, NCDs and equity

- CDoH are the **strategies or approaches the private sector uses to promote products and choices**, including those that are detrimental to people's health (55). These CDoH directly contribute to the growing burden of NCDs. Close to 70% of all deaths worldwide are attributable to NCDs and half of these deaths are premature and in individuals of working age (56). These deaths are therefore preventable, as NCDs are highly preventable (57).
- At national level, the capacity for prevention and control of NCDs varies greatly; however, the **State has ultimate responsibility for protecting health rights**. This responsibility and accountability involves ensuring that non-State actors – including those beyond health services – comply with regulations that have an impact on health. For example, the WHO's Framework Convention on Tobacco Control states "In setting and implementing their public health policies with respect to tobacco control, Parties shall act to protect these policies from commercial and other vested interests of the tobacco industry in accordance with national law" (58). WHO recommends "best buys" to reduce NCDs, and many of these measures are legislative acts that can be implemented and enforced only by governments (59).
- The alcohol, food, tobacco and gambling industries use marketing, lobbying and other influences, which, in the long term, undermine policies to reduce NCDs and health inequities (60). In England, areas in which people with low socioeconomic status live have five times the number of fast-food outlets compared to wealthier areas (61).

Box 1.4. Cont.

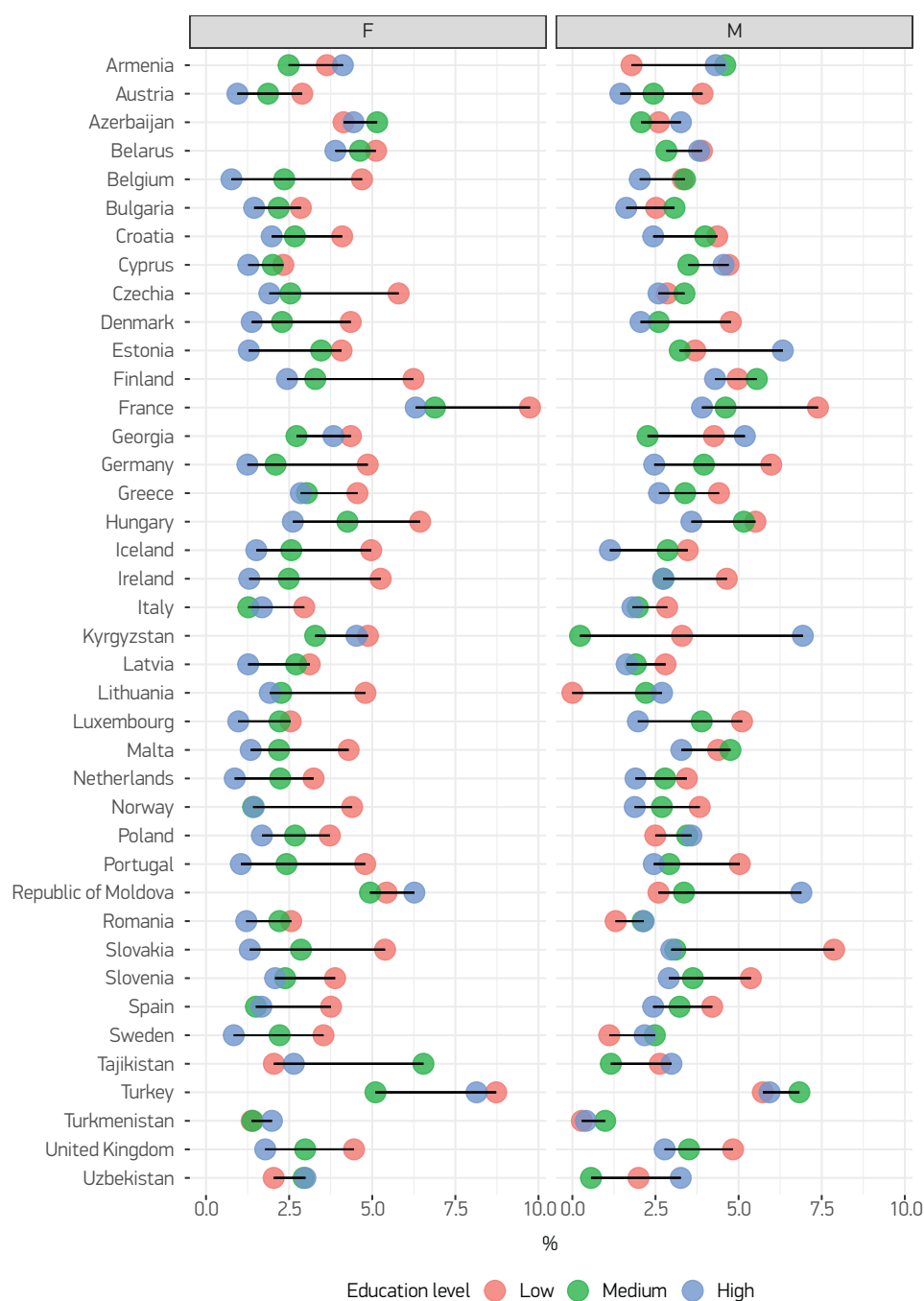
- Without actions to address the impact of CDoH on health equity, there is a risk that certain people will be “legislatively” left behind, as they are not equally protected by the laws and regulations affecting their health and well-being.
- Reducing the effects of CDoH on health inequities and the burden of NCDs involves a **whole-of-society and multisectoral approach** that places action on the causes of the causes, at the centre of the issue (62). **Policy coherence** is needed to create the conditions for people to thrive, as well as to prohibit and regulate when needed. Several factors contribute to the illegal market for tobacco products, including higher taxes on cigarette companies. Combating the illicit tobacco trade requires population-level measures targeting both the supply side (e.g. by strengthening international customs cooperation) and the demand side (e.g. by raising consumer awareness) of the illicit market (63).
- To address the economic, political and cultural systems affected by CDoH, **multisectoral work is crucial**, involving the public and private sectors as well as establishing and enforcing national regulatory frameworks dealing with health-harming products (60). Political, social and democratic **accountability mechanisms** are useful tools to assess the multiple SDH and CDoH that drive health equity (64). System-wide approaches, such as price policies and taxation, are effective methods to reduce inequities and risk factors for NCDs, such as smoking and unhealthy diets (65).

There is a socioeconomic gradient in diabetes among women

- In 34 out of the 40 countries in Fig. 1.22, women with the fewest years of education are more likely to report having diabetes than those with the most years of education (Fig. 1.22).
- Among these countries, out of every 100 women as many as four more women with the fewest years of education report having diabetes compared to women with the most years of education. For men, there are as many as five more men in every 100 with the fewest years of education compared to those with the most years of education.
- Average rates of reported diabetes within countries are higher among women than men, ranging from two to eight women reporting diabetes out of every 100, and one to six men out of every 100 doing so.

The gradient is weaker among men but still apparent

- In 21 of the 40 countries for which data were available, men with the fewest years of education are more likely to report diabetes than those with the most years of education.
- CVD and cancer are two of the major causes of mortality in the WHO European Region and diabetes is one of the four major NCDs.
- NCDs and the social gradient in health are interconnected, with the key contributors to the social gradient in health outcomes being NCDs (62).

Fig. 1.22. Percentage of adults aged 18–64 years reporting diabetes (age adjusted), by education level, various years

Notes. Obesity is defined as Body Mass Index (BMI) of 30 or more, calculated with height and weight measurements. These measurements are self-reported for the EHIS data and the WHO STEPS data are based on physical measurements. F = females. M = males. Most recent data year for most countries was 2014, with the following exceptions: Armenia 2016, Austria 2013, Azerbaijan 2017, Belgium 2013, Belarus 2016, Denmark 2015, Georgia 2016, Iceland 2015, Italy 2015, Kyrgyzstan 2013, Republic of Moldova 2013, Norway 2015, Tajikistan 2016, Turkmenistan 2013, Turkey 2017, United Kingdom 2013, Uzbekistan 2013.

Sources: authors' own compilation based on data extracted for the years 2013–2017 from the EHIS and using the WHO STEPS tool.

SDGs and NCDs

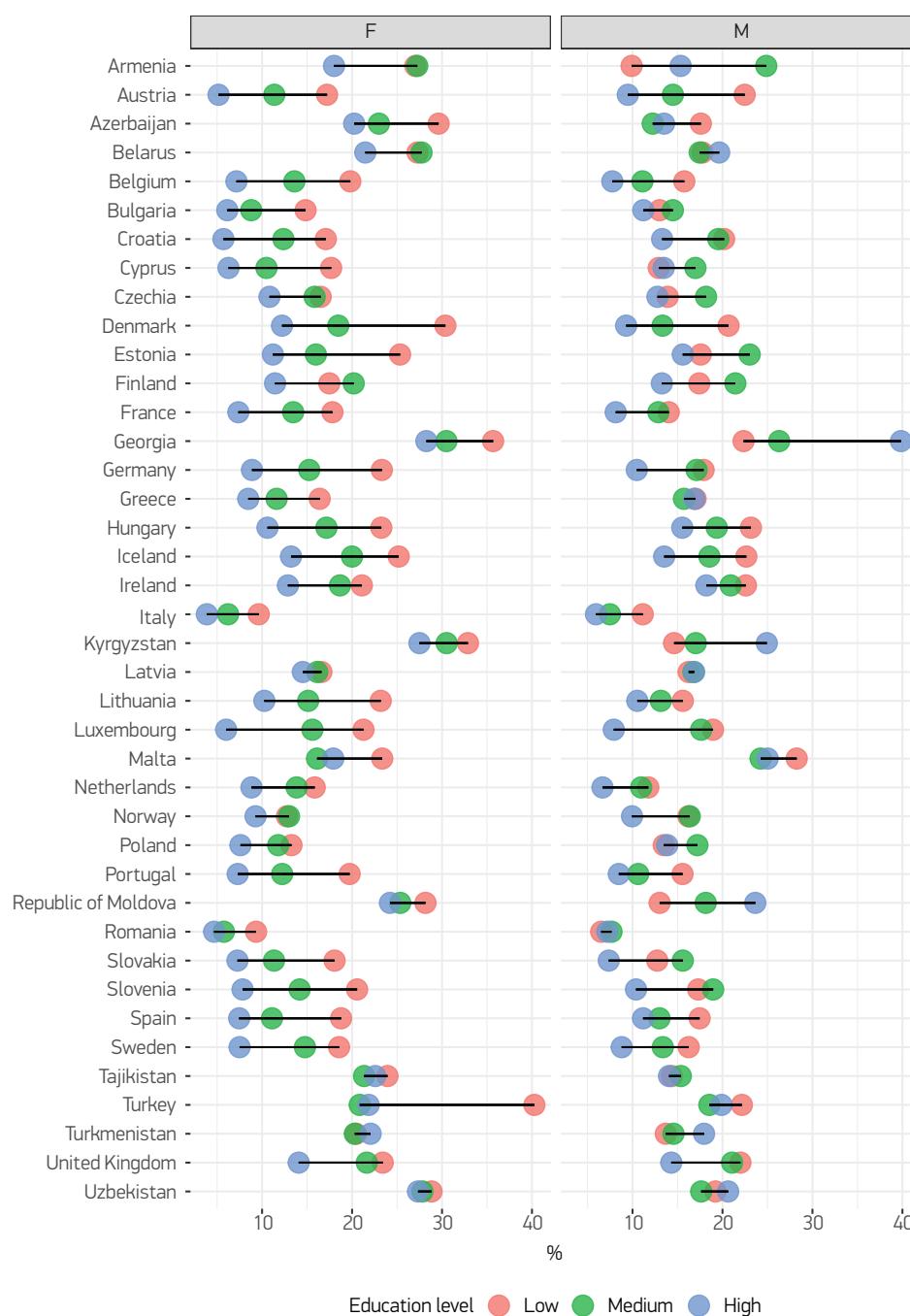
Target 3.4. By 2030 reduce by one third premature mortality from NCDs through prevention and treatment, and promote mental health and well-being.

Obesity and the social gradient

- In almost every country, for both women and men, those with the most years in education are least likely to be obese (Fig. 1.23).
- This mirrors inequities in rates of obesity for young men and women by income quintile, with rates of obesity lowest among those with the highest incomes (66).
- Among these countries, out of every 100 women, as many as 18 more women with the fewest years of education are obese compared to women with the most years of education. For men, this gap is as many as 13 more men out of every 100.
- Average rates of obesity within countries range from seven to 32 women out of every 100 and from eight to 26 men out of every 100.
- In the WHO European Region, 21% of men and 24% of women aged over 18 years are obese, and obesity rates are rising among children (15).

Policy coherence and reducing inequities in obesity

- The WHO European Region Food and Nutrition Action Plan 2015–2020 recommends that Member States adopt whole-of-government approaches to address the “inequitable access to proper nutrition throughout the life-course and the inequitable distribution of overweight, obesity, diet-related NCDs and malnutrition” (67) (see Box 1.4). For example, children are exposed to many online marketing messages, and self-regulation and pledges by private companies have not succeeded in preventing this exposure, which most often conveys messages about unhealthy products (68).
- Governments cannot be held accountable in a court of law for failing to implement such recommendations. They are free to choose whether to fund (or not) public health information campaigns and to regulate advertising (64).

Fig. 1.23. Percentage of adults aged 18–64 years who are obese (age adjusted), by education level, various years

Notes. F = females. M = males. Most recent data year for most countries was 2014, with the following exceptions: Armenia 2016, Austria 2013, Azerbaijan 2017, Belgium 2013, Belarus 2016, Denmark 2015, Georgia 2016, Iceland 2015, Italy 2015, Kyrgyzstan 2013, Republic of Moldova 2013, Norway 2015, Tajikistan 2016, Turkmenistan 2013, Turkey 2017, United Kingdom 2013, Uzbekistan 2013.

Sources: authors' own compilation based on data extracted for the years 2013–2017 from the EHIS and using the WHO STEPS tool.

1.4 Summary wheel profiles of health inequities

Understanding the regional picture

- To understand the overall scope of the health differences in the WHO European Region, average within-country differences are analysed for a number of health indicators with the greatest country coverage.
- Fig. 1.24 and Fig. 1.25 compare the differences in health and well-being indicators for adults across the Region.
- Fig. 1.24 examines differences between the **highest and lowest income quintiles**, analysing all countries across the Region for which data were available: 38 countries for limiting illness, 39 for life satisfaction, 35 for mental health and 38 for self-reported health.
- Fig. 1.25 examines difference between the **highest and lowest numbers of years of education**, covering 39 countries for limiting illness, 49 for life satisfaction, 35 for mental health and 49 for self-reported health.

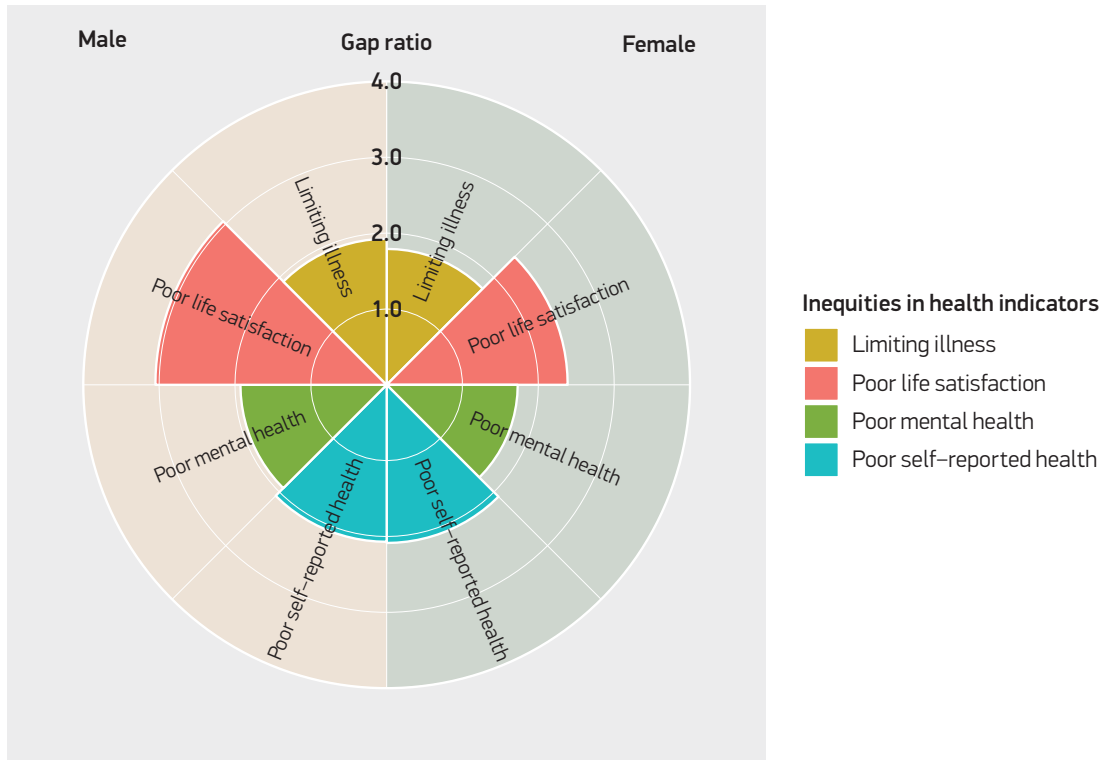
Understanding the wheels

- Each circular gridline indicates how many times **more at risk** the people in the least advantaged group are in comparison to those in the most advantaged group, for each indicator.
- A score of 1.0 means that there is equality between the two groups; less than 1.0 would mean that the least advantaged group fares better in terms of that indicator than the most advantaged group.
- Fig. 1.24 and Fig. 1.25 show that this is not the case for any indicator, and reinforces the fact that there is a socioeconomic gradient in not only health, but also in the underlying determinants of health, across the board.
- To allow comparability across indicators, **gap ratios** are shown, rather than absolute differences; this is because the variation in absolute prevalence levels varies from indicator to indicator, making this a difficult comparison across indicators. Gap ratios are the ratio between the percentage of people in the lowest quintile/education group that experience indicator **x** and the percentage of people in the highest quintile/education group that experience indicator **x**. For example, indicator **x** could be "limiting illness" or "poor self-reported health". This ratio is widely used in health equity literature.

The effect of income inequities in the WHO European Region

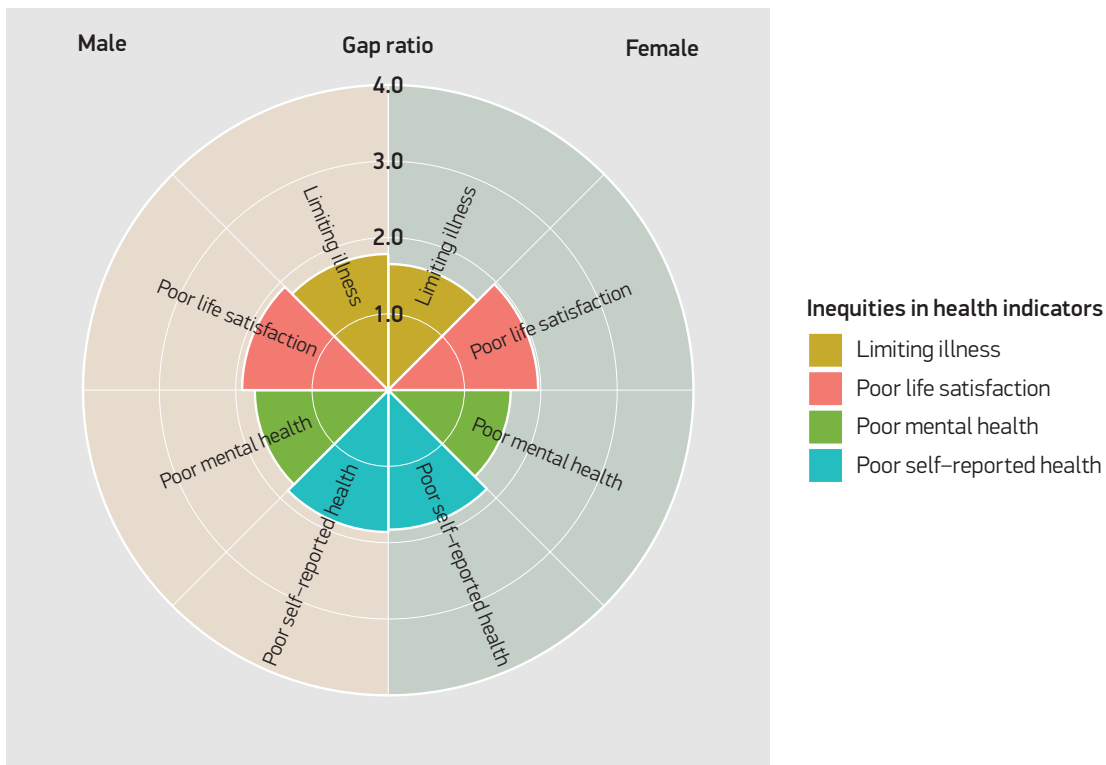
- Fig. 1.24 summarizes inequities in health indicators for which income-disaggregated data were available.
- The least advantaged are the people represented in the lowest income quintile and the most advantaged are those in the highest income quintile.
- On average across the Region, **men and women in the lowest income quintile in a country are more than twice as likely to report poor health as those in the highest quintile.**
- Men and women in the lowest income quintile are **also almost twice as likely to report limiting illness and poor mental health** as those in the highest income quintile.

Fig. 1.24. Average within-country inequities in health indicators (gap ratio between the lowest and highest income quintiles)



Source: authors' own compilation based on the Health Equity Dataset.

Fig. 1.25. Average within-country inequities in health indicators (gap ratio between the highest and lowest number of years in education)



Source: authors' own compilation based on the Health Equity Dataset.

Gender, low incomes and inequities

- Inequities in life satisfaction are even more prominent. On average across the WHO European Region, men with lower incomes are particularly prone to low levels of well-being, relative to men who have higher incomes. **Men in the lowest income quintile are over three times as likely to report poor life satisfaction as men in the highest quintile.** The well-being of men is affected by gender expectations and persistent stereotypes of men's roles in society, generating higher inequities in well-being between low-earning and high-earning men than among women (47).
- **Women in the lowest income quintile are also more likely to report poor life satisfaction than their counterparts in the highest quintile** (almost 2.5 times more likely to do so).

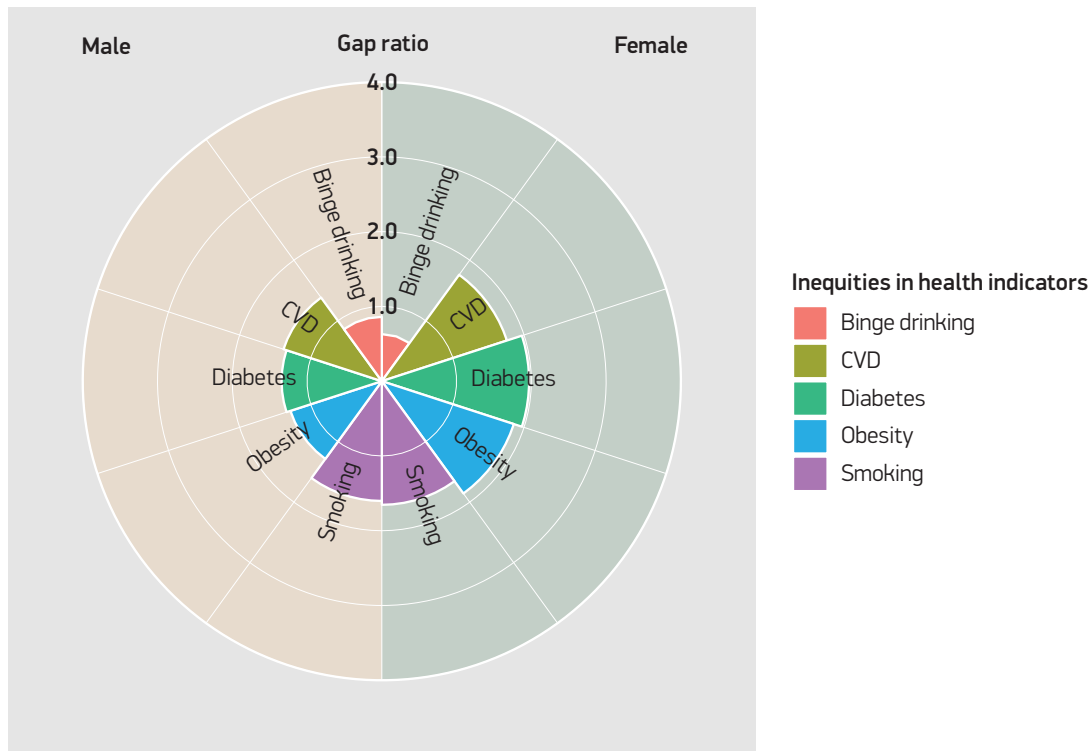
The effect of education inequities in the WHO European Region

- Fig. 1.25 summarizes the same four health indicators as Fig. 1.24; however, here the data are disaggregated by **education** rather than by income. In Fig. 1.25 the least advantaged are represented by the group with the fewest years of education and the most advantaged are those with most years of education.
- There are inequities in all four selected health indicators across the Region, with **men and women with lower levels of education being more likely to report limiting illness and poor life satisfaction, health and mental health than their counterparts** with a higher number of years of education.
- The **differences in life satisfaction and self-reported health are slightly more prominent** than the other two indicators, in that:
 - **both men and women with the lowest education levels are almost twice as likely to self-report poor health and poor life satisfaction** as those with the most years of education;
 - **those with the fewest years in education are more than one and a half times as prone to limiting illness and poor mental health** than those with most years of education.

Inequities in NCDs and the associated risk factors

- Inequities in four out of five risk factors for NCDs follow a socioeconomic gradient.
- The progressively more social and economic resources and opportunities a person has, the lower their likelihood of developing a risk factor for NCDs (with the exception of alcohol consumption).
- Women with fewer years in education face the most inequality, in terms of being at risk of CVD (Fig. 1.26).
- Fig. 1.26 compares the average inequities in several indicators of NCDs and risk factors for NCDs between men and women with most and fewest years of education (university and lower-secondary education, respectively) in countries of the WHO European Region.
- The additional risk of CVD, diabetes, obesity and smoking among women with the fewest years of education compared to those with the most years of education is more pronounced than the additional risk among men, when making the same comparison between education levels.
- On average across the Region, women with the fewest years of education are almost twice as likely to have diabetes as women with the most years of education, while this ratio is less than 1.5 times for men. Diabetes is reported among 4.3% of women with the fewest years of education and 2.2% with the most years of education. For men, these rates are 3.8% and 2.8%, respectively.

Fig. 1.26. Average within-country inequities in NCDs and NCD risk factors (gap ratio between the highest and lowest number of years in education)



Source: authors' own compilation based on the Health Equity Dataset.

As there is **no single indicator** to measure inequities, there is **no single solution**.

A basket of solutions is needed to reduce health inequities and to create the conditions and remove barriers for all to prosper and flourish.

This is discussed in detail in Section 2.

2. The five essential conditions underlying health inequities

• Section 2 analyses the five essential conditions identified in the HESri that have impacts on health equity and are required to enable people to live a healthy, prosperous life; shortcomings in each of the areas contribute to the underlying causes of health inequities.¹¹

• The conditions underpinning and areas for policy action to target health inequities (Fig. 2.1) are listed here.

– **Health Services** – indicators and interventions relating to the availability, accessibility, affordability, and quality of prevention, treatment, and health care services and programmes.

– **Income Security and Social Protection** – indicators and interventions relating to basic income security and the reduction of health-related risks and consequences of poverty over the life-course.

– **Living Conditions** – indicators and interventions

relating to differential opportunities, access and exposure to environmental and living conditions, which each have an impact on health and well-being.

– **Social and Human Capital** – indicators and interventions relating to human capital for health through education, learning and literacy, and relating to the social capital of individuals and communities in ways that protect and promote health and well-being.

– **Employment and Working Conditions** – indicators and interventions relating to the health impact of employment and working conditions, including availability, accessibility, security, wages, physical and mental demands, and risks of work.

• The CSDH identified a set of conditions to “close the gap in a generation” (69); the conditions in the CSDH report broadly match the five HESri conditions.

Fig. 2.1. HESR health equity conditions



Decomposition analysis

• The decomposition analysis uses an econometric regression technique, aiming to explain statistically the differences in health indicators that were observed between socioeconomic groups in Section 1 by a set of contributing factors that differ systematically between these groups (see Box 2.1).

• The analysis helps to understand the multisectoral conditions driving health inequities even when

effective health systems are in place. For example, differences in health may be explained by differences in housing conditions and working conditions, as well as differences in quality of health care. Even if countries are able to narrow inequities in relation to one factor, inequities may still remain in others, emphasizing the importance of taking a multisectoral approach to tackling health inequity.¹²

¹¹ The indicators were selected on the basis of a review by the Scientific Expert Advisory Group; for a more detailed explanation, see Annex 1.

¹² The analysis presented in this report focuses on inequities in self-reported health between income quintiles; this type of analysis can be applied to inequities in other health indicators, with disaggregations using other stratifiers.

Box 2.1. Why does the HESR use decomposition analysis?

- Decomposition analysis is a powerful method for understanding what contributes to health inequities, by breaking down the association between health gaps according to key underlying conditions and then analysing the relative weight of each of the conditions in contributing to inequities for a range of health indicators, such as mental health, limiting illness and well-being. This provides better and more accurate analysis to support decision-makers and the public in identifying what factors are producing inequities in the country in question, what policy actions can be taken to reduce the gaps, and the sectors and stakeholders both within and outside of government that are key to accelerating progress towards healthy, prosperous lives for all in their country (see Annex 2).
- Decomposition analysis is a widely used method to itemize and examine factors that influence differences in socioeconomic outcomes, such as the gender wage gap or the gap in health. The idea behind the decomposition analysis is to explain the differences in health indicators that were observed between socioeconomic groups in Section 1 by a set of contributing factors that differ systematically between these groups.
- This helps to understand the multisectoral conditions behind why health inequities exist between groups of people within countries, even when effective health services are in place that aim to narrow or eliminate inequities in health and health care.
- The decomposition analysis reveals the extent to which each factor contributes to health inequities compared to each of the other factors. Using the data available, it shows which factors in each of the five conditions are statistically significant in explaining the differences in health, along with the relative size of their contributions.

Key findings

- **No single factor explains health inequities. Each of the five conditions essential to live a healthy life shows a clear socioeconomic gradient, and these all contribute to health inequity.**
- There are differences in each of the underlying conditions – *Health Services, Income Security and Social Protection, Living Conditions, Social and Human Capital and Employment and Working Conditions* – which contribute to health inequities in every Member State of the WHO European Region.
- No single intervention or policy will eliminate health inequities; a **basket of policies is needed to address and improve equity in each of the five areas**. Policy baskets are effective in accelerating progress because they have strong potential to level up everyone's health proportionate to need. Levelling up is not possible by only providing a common universal offer to everyone, equally, nor by targeting those who are most deprived.
- Solutions need to be comprehensive, which means shifting from fragmented and short-term or single-policy interventions to a comprehensive basket of policies.
- All sectors, including health, are responsible for reducing health inequities. Multisectoral action is necessary to create the conditions for health equity and prosperity for all.
- Policies addressing the underlying conditions that are comprehensive, coherent and sustained can accelerate reductions in health inequities.
- **More comprehensive disaggregated data** are needed in many areas in the Region to better understand the underlying causes of health inequities and improve priority-setting and identification of the optimal mix of policy options.

2.1 The five conditions contributing to health inequities in well-being

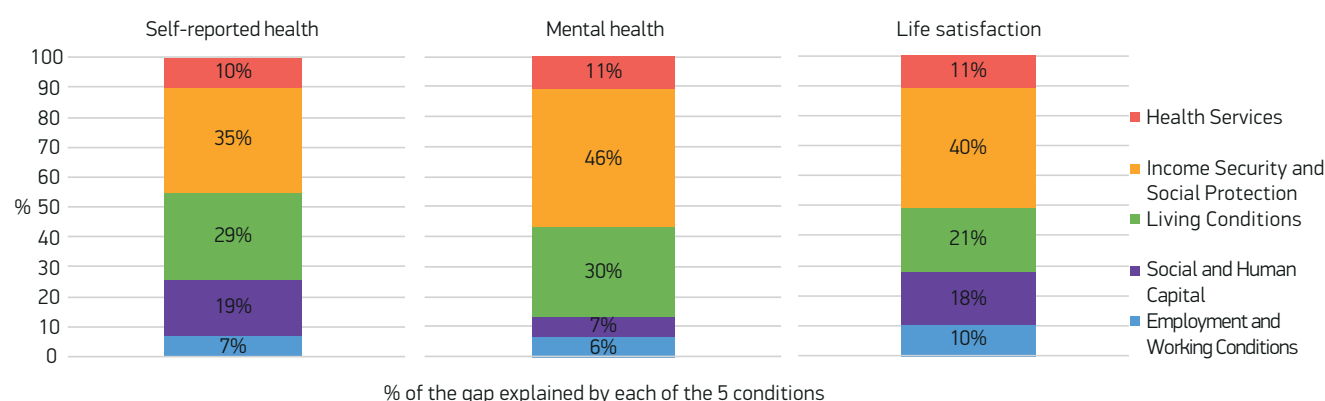
All conditions influence health inequities

- Each of the five essential conditions contributes to health inequities (Fig. 2.2).
- Differences in *Income Security and Social Protection* and in *Living Conditions* are the largest contributors to inequities in self-reported health, mental health and life satisfaction; they are responsible for more than two thirds of inequities in these areas.
- However, all five conditions are statistically significant in contributing to health inequities in self-reported health, mental health and life satisfaction.¹³

Understanding the decomposition analysis methodology

- The factors included in the decomposition analysis (Fig. 2.2) include the broadest range of indicators possible that come from a single European microdata source (the EQLS).¹⁴
- The decomposition provides a statistically robust analysis of the underlying contributors to health inequity (see Annex 2).
- Due to data requirements for the decomposition analysis, some factors influencing health equity are not captured in the decompositions (for example, it has not been possible to include a direct measure of job quality or working conditions, only whether individuals work excessive hours).

Fig. 2.2. The five conditions' contributions to inequities in self-reported health, mental health and life satisfaction (EU countries)



Notes. The estimated contribution of each condition in this analysis takes into account differences the other conditions as well as differences in age and sex. Data points controlled for age and sex.

Source: authors' own compilation, based on 2003–2016 data from the EQLS.

¹³ The unexplained portion of the gap is statistically insignificant, here. However, this is not the case in Fig. 2.3, whereby 54% of the gap in health remains unexplained (discussed in the following subsection).

¹⁴ This data requirement (to have a single microdata source) is necessary because the Oaxaca decomposition method requires that each of the indicators is matched at the individual or household level.

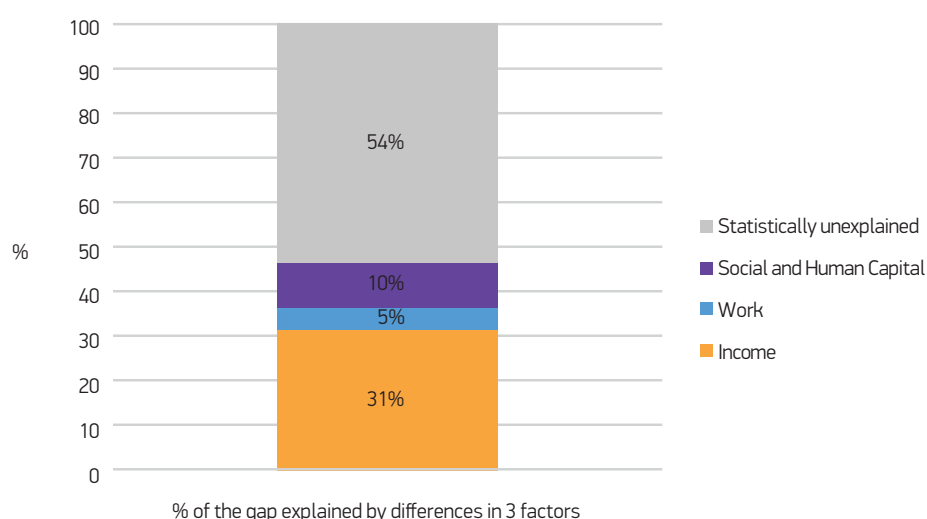
Decomposition analysis in non-EU countries

- Fig. 2.3 examines the underlying conditions shown to contribute to health inequities in non-EU countries.
- Of the five HESR conditions only three are included: *Income Security and Social Protection*, *Employment and Working Conditions*, and *Social and Human Capital*. These are the only conditions for which sufficient countries had data to include in the analysis.
- All three underlying conditions are statistically significant in contributing to inequities in self-reported health.
- As non-EU countries do not collect the same disaggregated data as EU countries, the grey box shown in Fig. 2.3 represents this unexplained portion, reflecting the lack of indicators with good coverage in non-EU countries.¹⁵
- The HESR provides new insights about the state of health equity and its underlying drivers across the WHO European Region, but it also provides insights into the differences in data that inhibit robust analysis for all countries. This is one such case, indicating a need for more comprehensive data collection in central Asia, the Caucasus, and the western Balkans, to enable better understanding of the underlying causes of health inequities.

Where data were available, the conditions affecting health inequities are the same in non-EU countries

- Consistent with analysis of Fig. 2.2, the largest contributor to the gap in self-reported health is differences in *Income Security and Social Protection*.
- The size of the contributions from differences in *Social and Human Capital*, and from differences in *Employment and Working Conditions* are also comparable to EU countries, though slightly smaller. It is likely that this reflects the smaller number of available relevant indicators.

Fig. 2.3. How three conditions contribute to health inequities in self-reported health in 18 non-EU countries



Notes. Sufficient data only available for three conditions. Analysis controlled for the effects of each of the other conditions as well as age and sex, using the same method as the EQLS decomposition shown in Fig. 2.2. Data points controlled for age and sex.

Source: authors' own compilation based on data from the WVS for the years 2001–2014.

The rest of this section examines each of the five conditions (shown in Fig. 2.2). Each condition is analysed and broken down to identify the relevant indicators driving health inequities within it. These detailed decompositions are based on analysis of

EQLS data, and further analyses of these results (including trends in the underlying conditions and policy interventions) draw on data from the Health Equity Dataset, which combines many more data sources in addition to the EQLS.¹⁶

¹⁵ This naturally reduces the statistical power of the decomposition model.

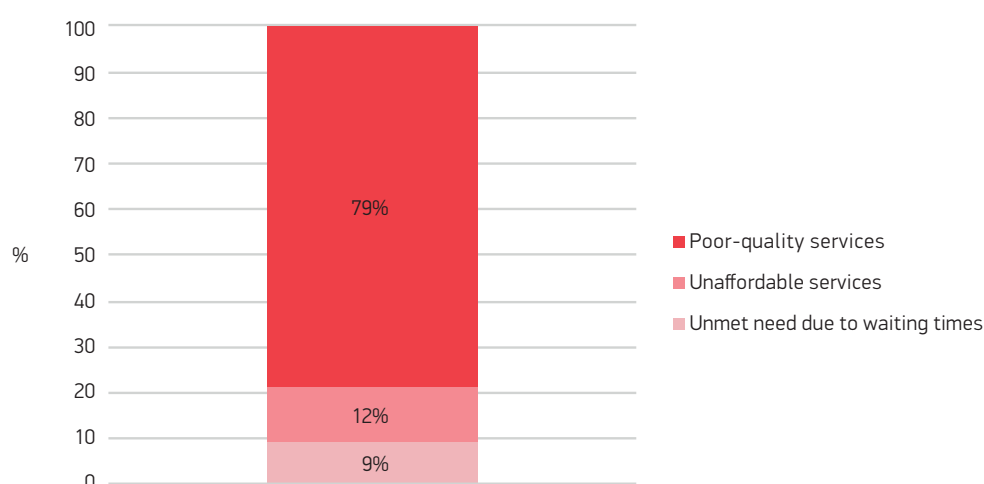
¹⁶ This data requirement (to have a single microdata source) is necessary because the Oaxaca decomposition method requires that each of the indicators is matched at the individual or household level.

2.2 Underlying conditions and policy actions: Health Services

Health Services drive inequities

- Between 10% and 12% of the health inequities in self-reported health, mental health and life satisfaction are associated with health services.
- Fig. 2.4 further analyses the factors contributing to the 10% gap in self-reported health explained by health services; these relate to quality and affordability of health care services, as well as waiting times to access them.

Fig. 2.4. Factors contributing to health inequities in Health Services (based on self-reported health)



Notes. Due to data requirements for the decomposition analysis, some factors influencing health equity are not captured (see Annex 2).

Source: decomposition analysis using data from the EQLS (see Annex 2).

Key findings

- Inequities in the quality, affordability and accessibility of health care services are key contributors to health inequities.
- The drive for UHC is a vital step towards reducing health inequity due to health services. This means ensuring everyone can use the high-quality health services they need without experiencing financial hardship.

Quality of health services and inequities

- Differences in prevalence of poor-quality health services are the main contributor to health inequities in self-reported health.¹⁷
- People with lower socioeconomic status are more likely to report receiving poor-quality services than those in higher socioeconomic groups.

¹⁷ Survey participants were asked about how they rate the quality of various public services, including specific health care services such as general practitioner/family doctor practices or health centres, and hospital or medical specialist services.

- Differences in quality of services involve the unfair distribution of health care, where some individuals receive more or better care than others.
- Quality of health services should be scrutinized to assess if those who are at risk of being left behind (such as people with disabilities, poorer households, single-parent households, migrants, ethnic minorities) face higher risks from poor-quality health services (70).
- As the *European Review of social determinants and the health divide* concluded, inequity in access to health services is an issue influencing health inequities in the eastern part of the WHO European Region (2). Whilst access is not a factor in the north, south and west of the Region, better quality disaggregated data are needed to better understand this factor in the east of the Region.

SDGs and universal health

Target 3.7. By 2030, ensure universal access to sexual and reproductive health care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.

Target 3.8. Achieve UHC, including financial risk protection, access to quality essential health care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.

Mixed picture on trends in expenditure on health

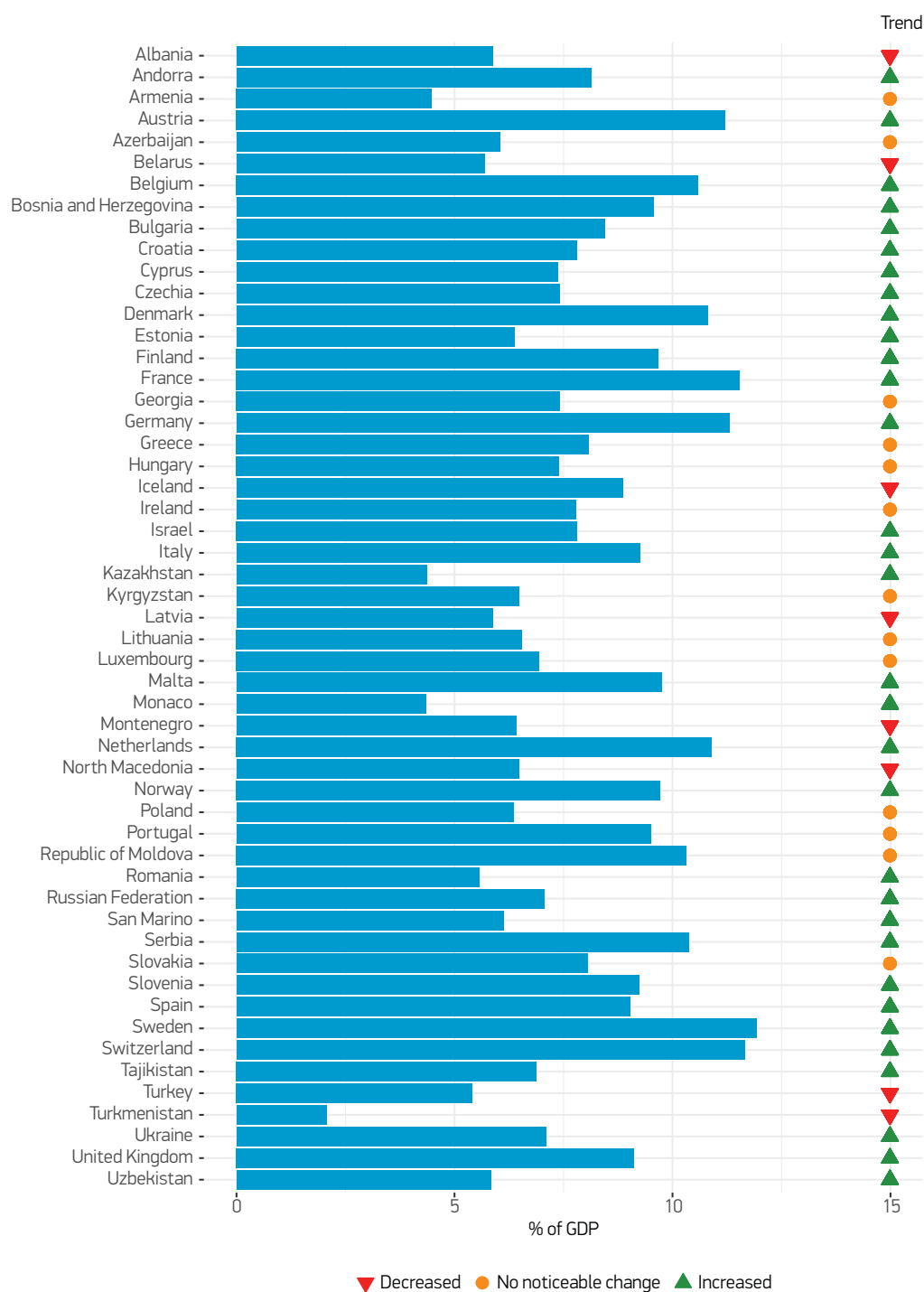
- Expenditure on health as a percentage of GDP ranges from 2.1% to 11.9% of GDP across the WHO European Region (Fig. 2.5).
- This expenditure increased in 32 of the 53 countries in the Region between 2005 and 2014. However, in 13 countries expenditure on health did not change and in eight countries spending decreased.

Understanding inequities in unaffordable services

- In the WHO European Region, levels of OOP payments for health range from 7.1% to 80.6% of current total health expenditure.
- In over half of countries (32/52) OOP payments for health as a proportion of current health expenditure increased or remained similar between 2000 and 2016 (Fig. 2.6).
- 38% of countries (20/52) reduced OOP payments for health as a proportion of current health expenditure between 2000 and 2016.

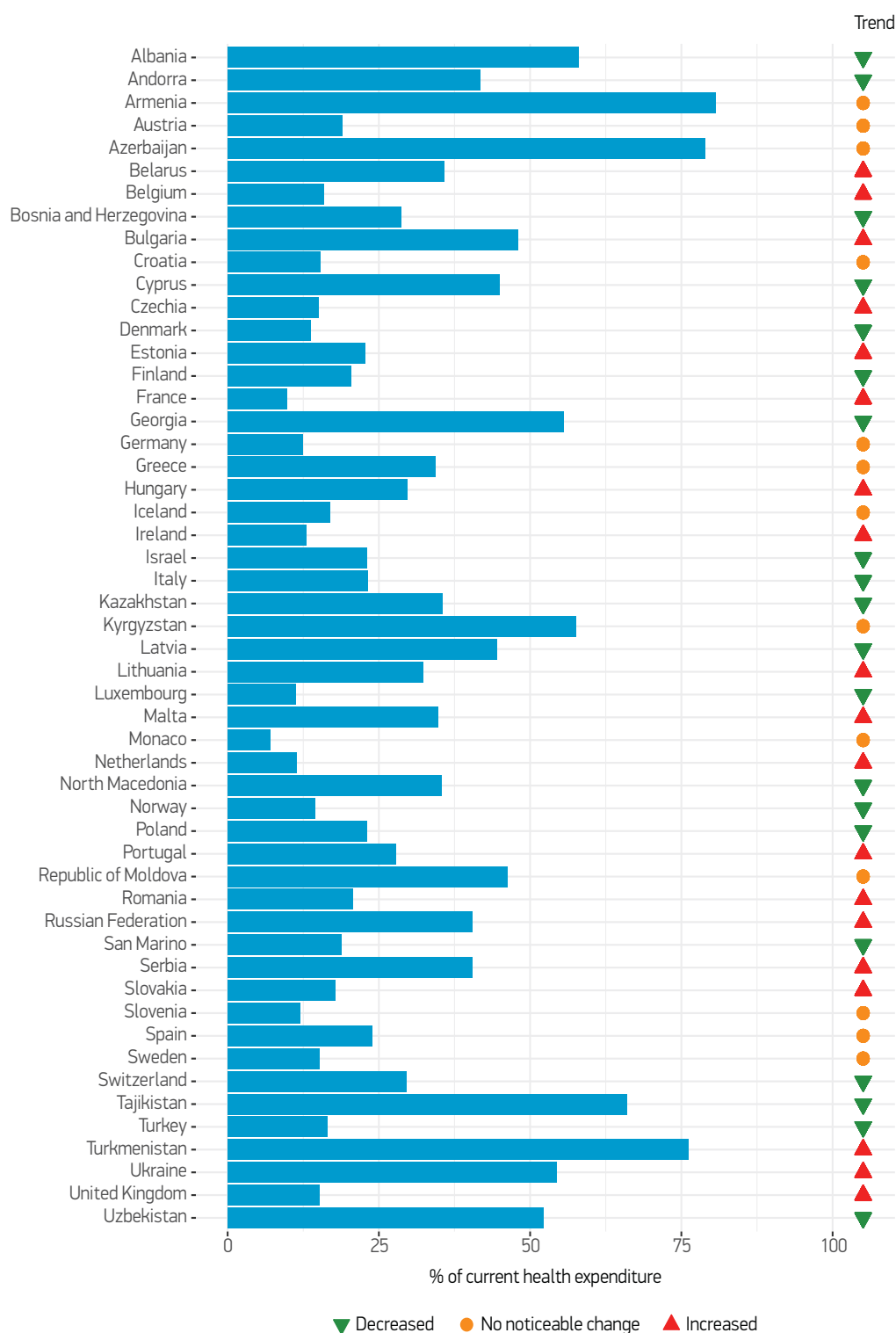
OOP payments for health in the WHO European Region

- OOP payments for health are a significant deterrent to seeking and accessing services for those living on lower incomes (71).
- OOP payments for health comprise formal and informal payments made at the time of using any health care good or service provided by any type of provider, including user charges (co-payments) for covered services and direct payments for non-covered services, and excluding any prepayment in the form of taxes, contributions or insurance premiums and any reimbursement by a third party, such as the government, a health insurance fund or a private insurance company.
- There is a difference in the impact of OOP health payments on women and men. Women pay more in OOP payments for health expenses than men. For example, family planning services (including antenatal care) are often not included in essential benefits packages (72).
- For men there is a strong correlation between a higher level of OOP payments for health and premature mortality from CVD, suggesting that costs may prevent men from seeking care or taking up treatment (including medicines) (47).

Fig. 2.5. Total expenditure on health (public and private) as a percentage of GDP, 2014 (and trends since 2005)


Source: authors' own compilation based on data on WHO indicators for monitoring Health 2020 policy targets extracted for the years 2005–2014 from the WHO European Health for All database.

Fig. 2.6. Private household OOP expenditure on health as a percentage of current health expenditure, 2016 (and trends since 2000)



Source: authors' own compilation based on data for the years 2000–2016 from the WHO Global Health Expenditure Database (GHED).

Reducing inequities in OOP payments for health

- UHC extends health services coverage to the whole population, ensures services are of equally sufficient quality, expands the range of effective services and reduces user charges (18).
- Reforms to reduce unmet need for health care can increase OOP payments for health; therefore, it is important to ensure that policies to improve access to health services do not also lead to increased financial hardship, particularly for those who are already being left behind (18).
- Even small OOP payments for health can lead to financial hardships for those already living on low incomes (18).

Catastrophic health spending in the Region

- Levels of catastrophic health spending are used to monitor progress towards achieving UHC. Catastrophic health spending is defined as spending on health that exceeds a threshold of a household's ability to pay for health care (73).
- Fig. 2.7 shows a social gradient in catastrophic health spending, with those in the poorest consumption quintile being more likely to experience catastrophic health spending compared to those in higher consumption quintiles.¹⁸
- For the 24 countries in Fig. 2.7, on average four more people out of every 100 in the poorest consumption quintile experience catastrophic health spending compared to those in the highest consumption quintile.
- In many countries the difference between the lowest quintile and the next income quintile is large, showing it is the poorest in society who are experiencing the worst effects of catastrophic health spending.

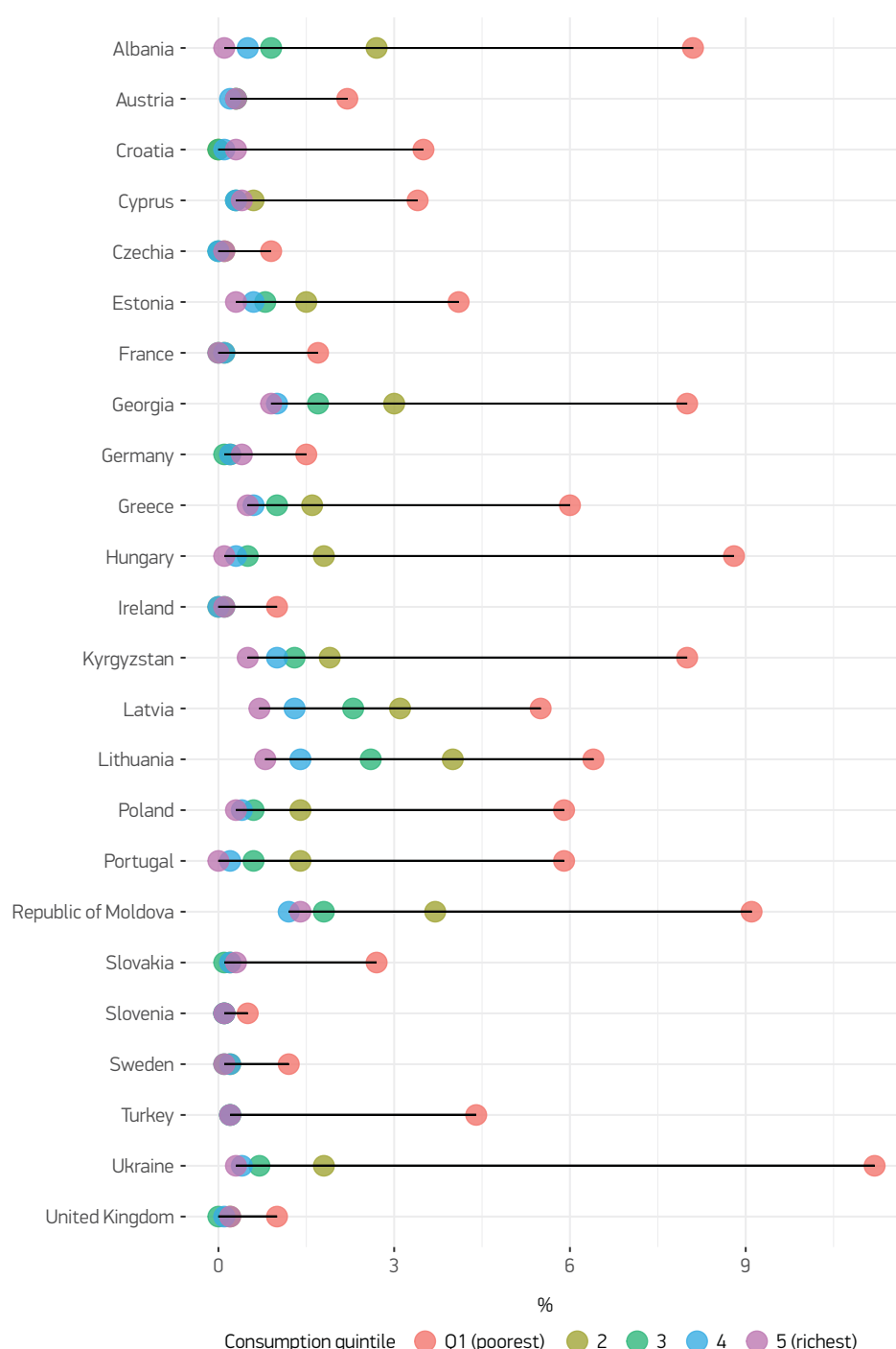
Reducing OOP payments for health and catastrophic health spending

- The WHO European Region reaffirmed its commitment to accelerate actions for a Europe free of impoverishing payments for health, and to: systematically monitor financial protection and unmet need for health care at national and regional levels; extend coverage of cost-effective health services to the whole population (including prevention and promotion); and align policies to improve access to health services and reduce OOP payments for health (75).

SDGs on OOP health expenditure

Indicator 3.8.2. Proportion of population with large household expenditure on health as a share of total household expenditure or income.

¹⁸ In the OECD equivalence scales, the first quintile is labelled "poorest" and the fifth quintile "richest". Some households may appear to be richer than they actually are because they have borrowed money to finance spending on health (or other items). One can safely assume, however, that households in the poorest quintile are genuinely poor.

Fig. 2.7. Percentage of households with catastrophic health spending, by consumption quintile, various years

Notes. Consumption quintiles are based on per-person consumption using OECD equivalence scales. Data years vary between 2011 and 2016 according to country.

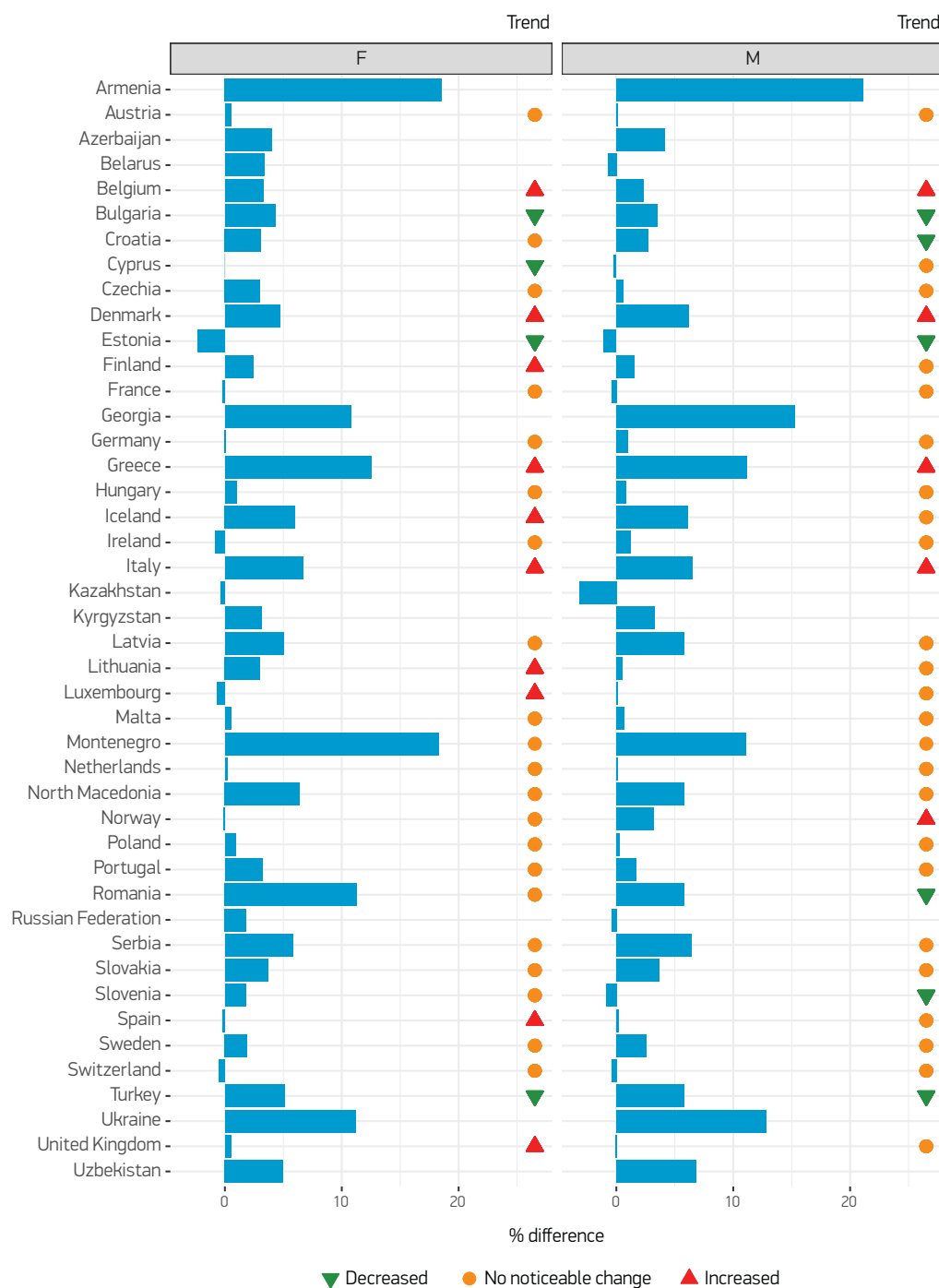
Source: Thomson, Cylus & Evetovits, 2019 (74).

Inequities in unmet need are contributing to health inequities

- The last factor contributing to health inequities in the Health Services condition is unmet need due to length of waiting times for services.
- The indicator for unmet need in Fig. 2.8 is defined as when an individual has not had a medical examination, treatment or medicine that they needed in the last 12 months. It does not distinguish between primary and specialist care.¹⁹

¹⁹ The indicator is a combined measure taken from two surveys: the EU-SILC survey, and the WVS. EU-SILC respondents reported whether they had experienced at least one occasion on which they did not have a medical examination or treatment (excluding dental) that they really needed in the previous 12 months; WVS respondents reported whether they or their family had either often or sometimes gone without needed medicine or medical treatment in the previous 12 months.

Fig. 2.8. The percentage difference in adults reporting unmet need for health care per 100 adults with low education levels compared to those with high education levels, various years (and trends since 2008)



Notes. F = females. M = males. Most recent data year was 2017 from the EU-SILC survey, with the exception of the following countries, for which data were gathered from the 2011 WVS: Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Russian Federation, Ukraine and Uzbekistan.

Sources: authors' own compilation based on the 2017 EU-SILC survey and the 2011 WVS.

Inequities in unmet need are not shifting

- Fig. 2.8 shows overall unmet need in the WHO European Region. In the majority of countries, inequities in unmet need for health care either remained unchanged or increased between 2008 and 2017.
- Unmet need for health care is higher among women with fewer years of education, compared to those with the most years of education in 36 of the 44 countries in Fig. 2.8, and in 35 out of the 44 for men. Among these countries, out of every 100 people (both men and women) on average five more with the fewest years of education report unmet need for health care compared to those with the most years of education.

Informed investment in health systems and the health workforce

- Countries can reduce unmet need for health care and financial hardship by identifying and addressing gaps in the coverage of health services (18).
- Policy measures to improve the quantity and quality of health care services should encompass measures that increase the affordability of medicines, devices and examinations. This includes increasing the services covered – for example, dental care, mental health services, or physical therapy, which are often paid for out of pocket.
- In addition, investment in the health workforce and in health systems infrastructure can address factors that contribute to unmet need for health care, such as long waiting lists (76).
- Effective policies to attract, recruit and retain health workers in underserved areas, and to increase the density of primary health care facilities include: more effective and appropriate education; regulatory interventions; financial incentives; and personal and professional support (77).

SDG on health financing

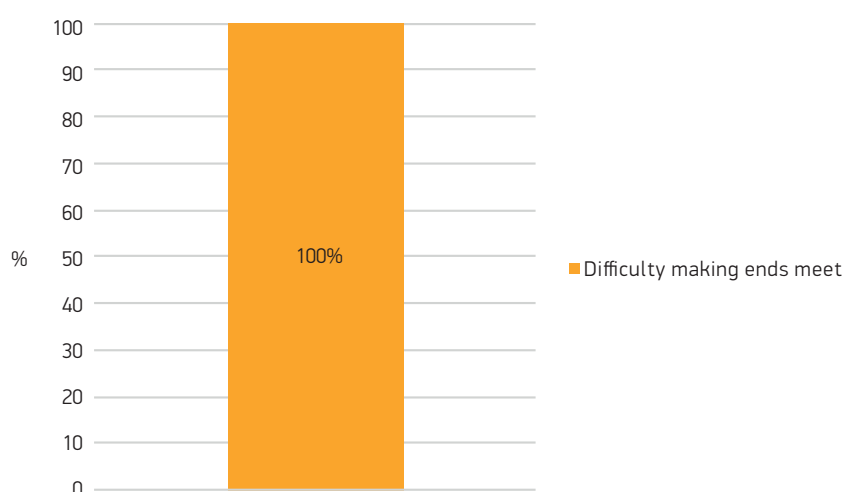
Target 3.c. Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States.

2.3 Underlying conditions and policy actions: *Income Security and Social Protection*

Income insecurity is a the largest contributor to health inequities

- Inequities in income security consistently contribute the largest portion of the gap in health inequities across health indicators (Fig. 2.2). Between 35% and 46% of the health inequities in self-reported health, mental health and life satisfaction are associated with income security and social protection.
- The 35% gap in self-reported health explained by the *Income Security and Social Protection* condition is explained by one single indicator – income – namely, the inability to make ends meet (Fig. 2.9).
- There was only one variable that could be used to capture the condition *Income Security and Social Protection* in the EQLS microdata (on which the decompositions are based).
- Receipt of benefits is not used because individuals and households in receipt of certain benefits tend to be on lower incomes overall and it has already been observed that lower-income individuals tend to have worse health. Including receipt of benefits could make it appear as though this contributes to health inequity, which confounds what is being measured; namely, income security.

Fig. 2.9. Factor contributing to health inequities in *Income Security and Social Protection* (based on self-reported health)



Note. Due to data requirements for the decomposition analysis, some factors influencing health equity are not captured (see Annex 2).

Source: decomposition analysis using data from the EQLS (see Annex 2).

Key findings

- Differences in *Income Security and Social Protection* and in *Living Conditions* are the largest contributors to inequities in self-reported health, mental health and life satisfaction.
- Income and employment are closely linked. Section 2.3 examines income security in relation to income and social protection, whereas Section 2.6 discusses factors associated with in-work poverty and low-wage employment in the WHO European Region.
- In the majority of countries, trends in two key factors affecting income security and social protection have not changed or have worsened: social protection spending and rates of relative poverty.
- The overall trend across the WHO European Region shows declining income security among people that are least well-off; therefore, actions need to be taken now to halt the long-term impact on health and well-being.

The relationship between income and poor health is well understood

- There is strong cross-country evidence of a link between income insecurity and poor health.
 - Fiscal constraints and rising bureaucratic barriers to access to basic income security and social protection exacerbate these negative health outcomes (78, 79).
 - The aim of social protection policies is to ensure, as a minimum, that all people have access to income security throughout their lives, through: access to essential health care, including maternity care; basic income security for children, providing access to nutrition, education, care and any other necessary goods and services; basic income security for people of active (working) age who are unable to earn sufficient income, in particular in cases of sickness, unemployment, maternity and disability; and basic income security for older people (80).

Social protection for people of working age is declining, whilst pensions are increasing

- Spending on pensions is the largest part of social spending in OECD countries (public expenditure on health is second). Since the mid-2000s, spending on pensions has increased by 1% per year.
- In contrast, spending on the working-age population (in terms of family cash benefits, unemployment benefits) has decreased over the same period (81).

SDGs on social protection

Target 1.3. Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.

Target 3.8. Achieve UHC, including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all.

Target 5.4. Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.

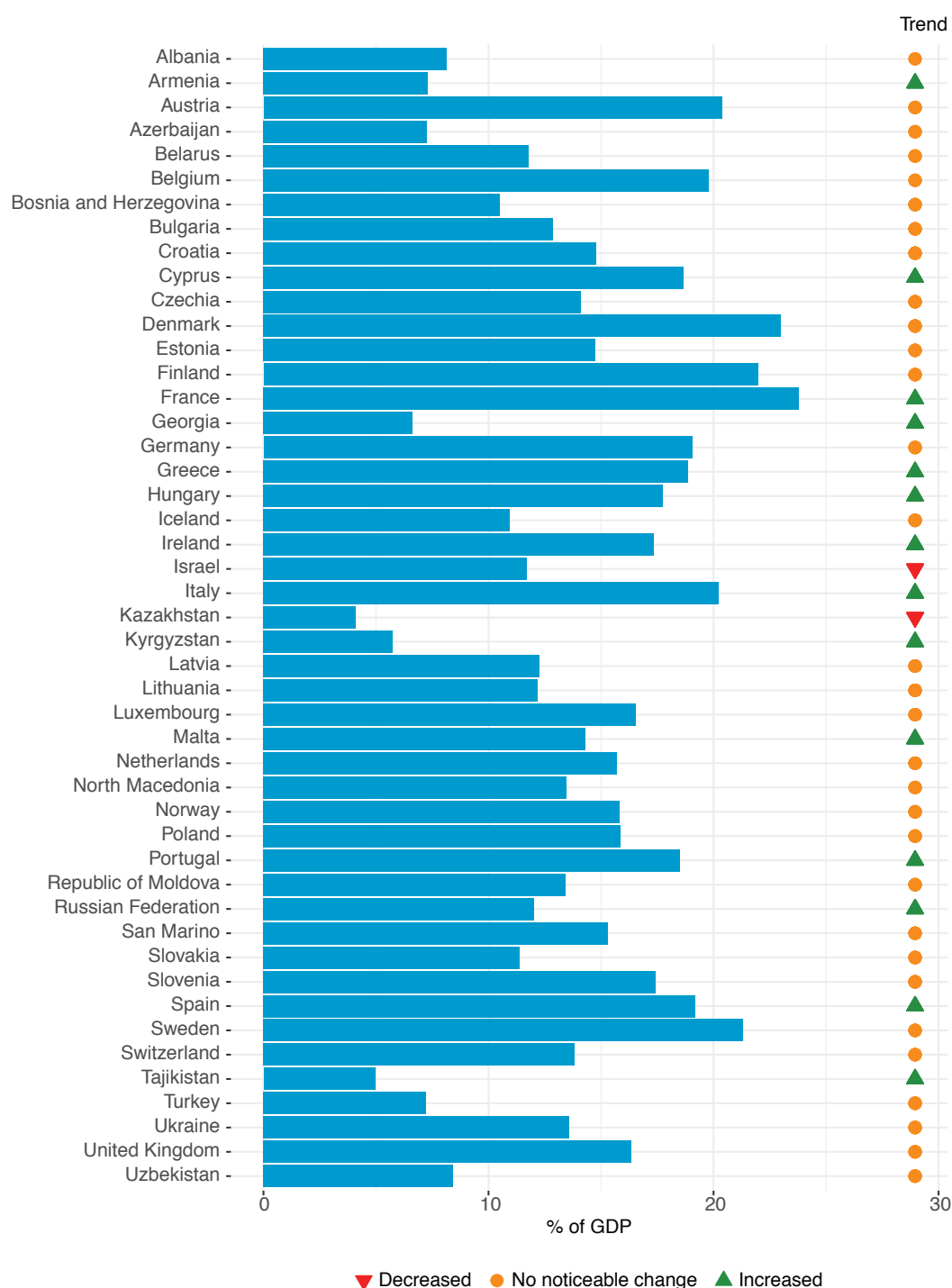
Target 8.5. By 2030 achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

Target 10.4. Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality.

Social protection expenditure has not increased in the majority of countries

- Each country has different types of social protection programmes and systems and, subsequently, different levels of social protection.
- Between 2000 and 2012, the average country expenditure on social protection fell from 12.9% to 6.1% of GDP (Fig. 2.10). This represents an average 50% reduction as a proportion of GDP across the WHO European Region over a period of 12 years.

**Fig. 2.10. Social protection expenditure (excluding health care) as a percentage of GDP, 2012
(and trends since 2000)**



Source: authors' own compilation based on data extracted for the years 2000–2012 from the International Labour Organization (ILO) database (ILOSTAT).

Social protection is vital to improving health inequities

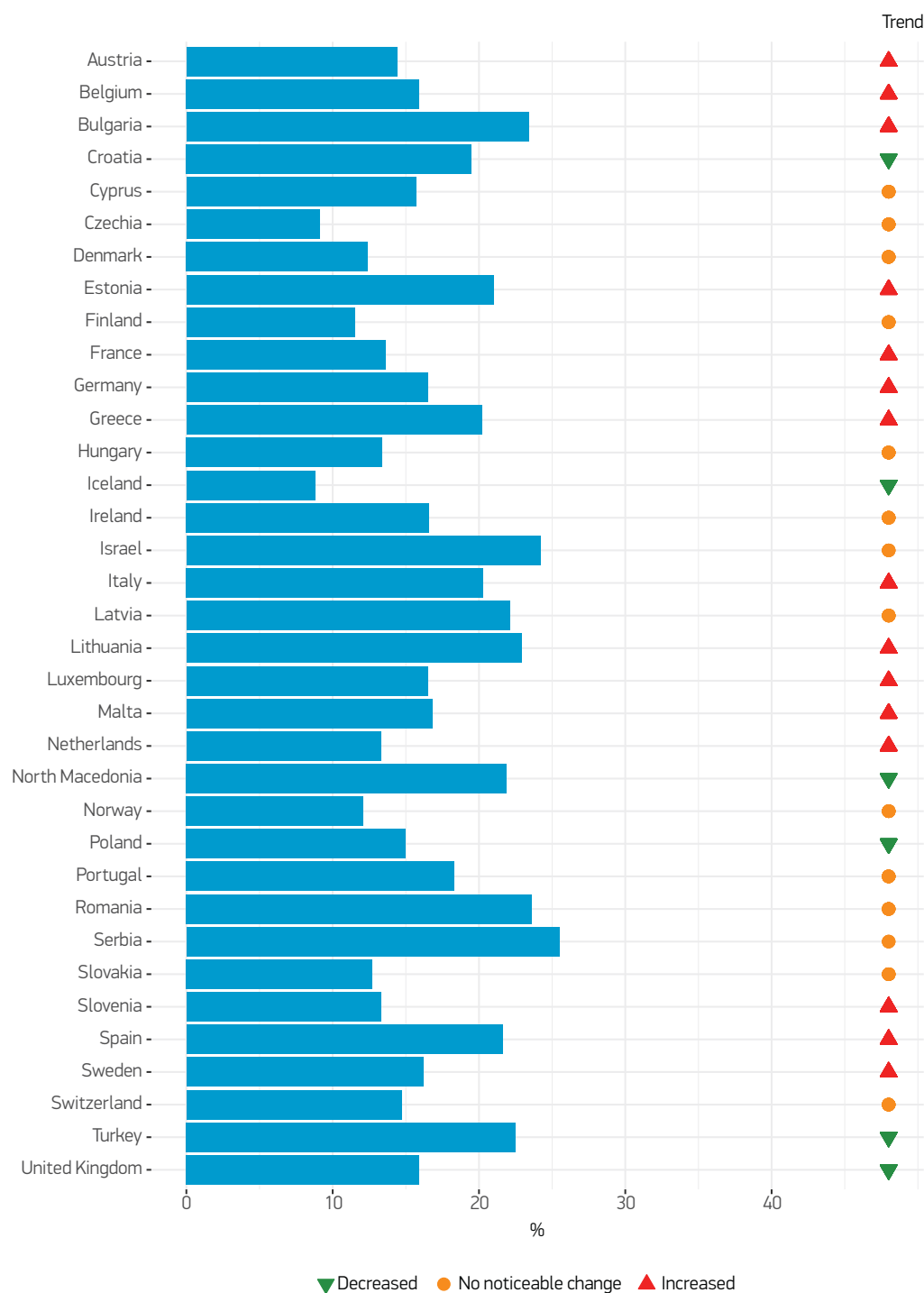
- Social protection impacts on health and health equity directly through income security and indirectly through other underlying conditions.
- Public expenditure on social protection impacts health equity as it improves financial security for those who are being left behind due to disability, unemployment, housing deprivation, and social exclusion (82).

- A key priority for reducing health inequities is having in place a system of social protection that reduces the economic vulnerability of those most at risk of income insecurity.
- Non-stigmatizing social protection policies have positive effects on reducing health inequities relating to income insecurity and poverty (83). Robust, inclusive income security systems, consisting of multiple levels and with an unconditional tier at the base, supplemented by state-supported contributory schemes are effective at reducing health inequities. Unconditional provision does not necessarily imply greater costs (83).
- Parental leave policies and statutory pensions provide protection against income insecurity at particular stages of the life-course, at which differences in income can have particularly adverse health effects. Investment in social protection for the early years and for families serves to support parents with low resources in giving their children a healthy start in life, as well as weakening the link between socioeconomic disadvantage and poor child health outcomes, including infant mortality (84, 85).
- Unemployment benefit coverage has a health equity impact when it provides a minimum income for those seeking work.
- The housing deprivation factor takes into account whether individuals live in a dwelling with a leaking roof, insufficient light, no bath or shower and no indoor toilet.
- Housing-related social protection policies can narrow these differences in housing deprivation by reducing differences in income insecurity. This is one way through which social protection can reduce health inequities.

Relative poverty rates increased or stayed the same in over 80% of European countries since 2005

- Fig. 2.11 shows the percentage of people living on or below 60% of median household disposable income (after taxes and transfers). This reflects widening income differences between people at the middle and at the bottom of the income distribution scale.
- This represents a measure of the proportion of the population exposed to income insecurity, and subsequently at risk of poor health.
- In the 35 European countries in Fig. 2.11, between nine and 26 people out of every 100 live in relative poverty, as measured by the percentage of the population living below 60% of median equalized disposable income.
- On average 17 in every 100 people live in relative poverty across the Region, an increase from 15 in every 100 in the year 2005.
- In 15 countries relative poverty increased and in 14 it stayed the same from 2005 to 2017, while it decreased in only six countries. Countries in which the relative poverty rate has increased are distributed across the WHO European Region, irrespective of geographic location and economic development.

Fig. 2.11. Percentage of population with income below 60% of median equivalized disposable income, 2017 (and trends since 2005)



Sources: authors' own compilation based on data extracted for the years 2005–2017 from the Eurostat and OECD databases.

Child poverty is still a problem across the Region

- Across the WHO European Region, children are more likely to live in poverty than adults (3). In 34 out of 35 countries from Fig. 2.11 (not the full 36 countries in Fig. 2.11, as data for Israel were not available), on average 20 children in every 100 live in relative poverty. This is in comparison to an average of 17 in every 100 adults.
- For over a decade, child poverty has been increasing in a number of European countries (86). Exposure to poverty during the early years of life can have a detrimental effect on health over the life-course (24).

Poverty affects morbidity and mortality

- The risk of poverty is directly correlated with early-onset morbidity and premature mortality. Young people, those in temporary or part-time employment, those with caring responsibilities, and older people are at higher risk of poor health associated with poverty risk (1).
- The relationship between poverty and NCDs is well-established: poverty drives and is driven by NCDs (87).
- The risk of poverty also influences mental health and psychosocial pathways. Research repeatedly links income inequality with worse health and social capital outcomes (2).

Poverty in countries without data on relative poverty rates

- Fig. 2.12 examines poverty rates in 14 central Asian countries, the Caucasus, and the western Balkans according to country-specific poverty lines. In these countries only data on poverty using national poverty lines were available.
- Between three and 31 out of every 100 people in the aforementioned country clusters live below the national poverty line. In eight of the 14 countries these poverty rates declined from 2005 to 2016.
- Fig. 2.12 provides useful information about rates of income insecurity in these countries.

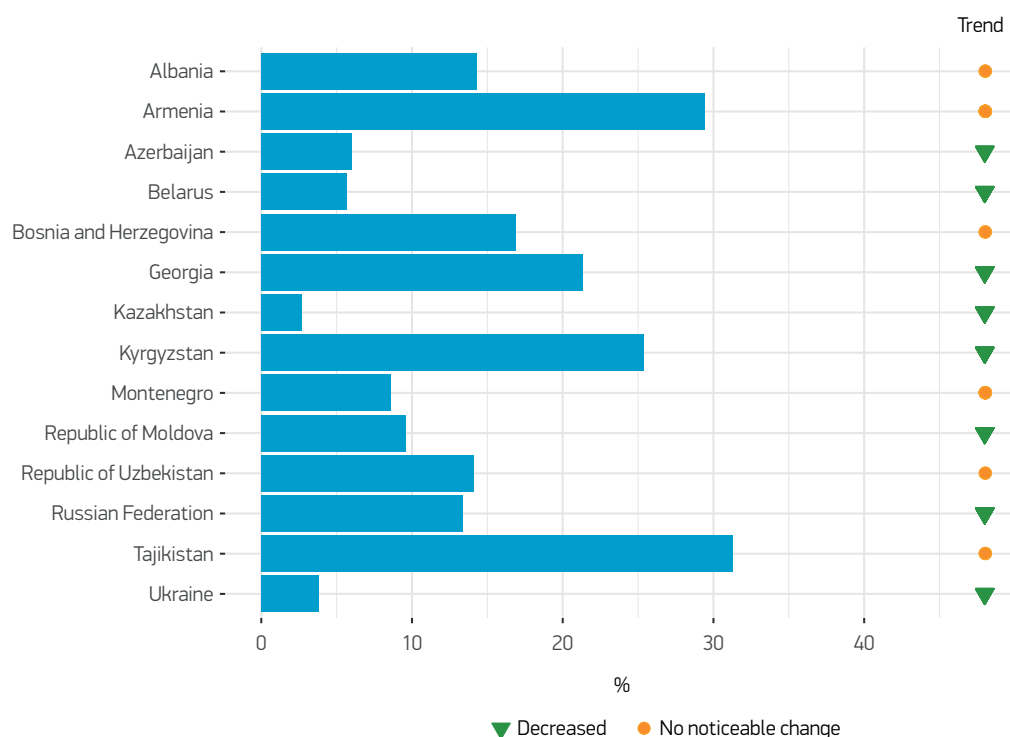
Relative and national poverty rates should not be compared

- In contrast to many countries of the EU, where poverty has been rising, across the central Asian countries, the Caucasus, the western Balkans and the Russian Federation poverty has largely been falling since 2005.
- It should be noted that poverty thresholds in Fig. 2.11 and Fig. 2.12 are not comparable. Poverty rates in Fig. 2.12 are based on national country-specific poverty lines, most of which differ. Their levels and trends are also not directly comparable with the poverty rates of the countries using the 60% of median income poverty line in Fig. 2.11, so they are presented in a separate figure.
- Relative poverty rates, as shown in Fig. 2.11, show the percentage of the population who have been left behind relative to those in the middle on the respective poverty scale.

On the whole, poverty is declining in later life but increasing among people of working age

- While relative poverty, including among the working-age population, stayed the same or increased in most countries from 2005 to 2017 (Fig. 2.11), this was not the case among older people in the WHO European Region.
- Fig. 2.13 shows that in half of countries (18/36) poverty rates fell for adults aged 65 years and over between 2005 and 2017. In 14 countries relative poverty among adults aged 65 years and over stayed the same, and worsened in only four countries.
- Among every 100 adults aged 65 years and over, between six and 41 live in relative poverty. On average, this represents 18 in every 100 adults in that age group, similar to the average rate of relative poverty in the general population across the Region (17 in every 100).

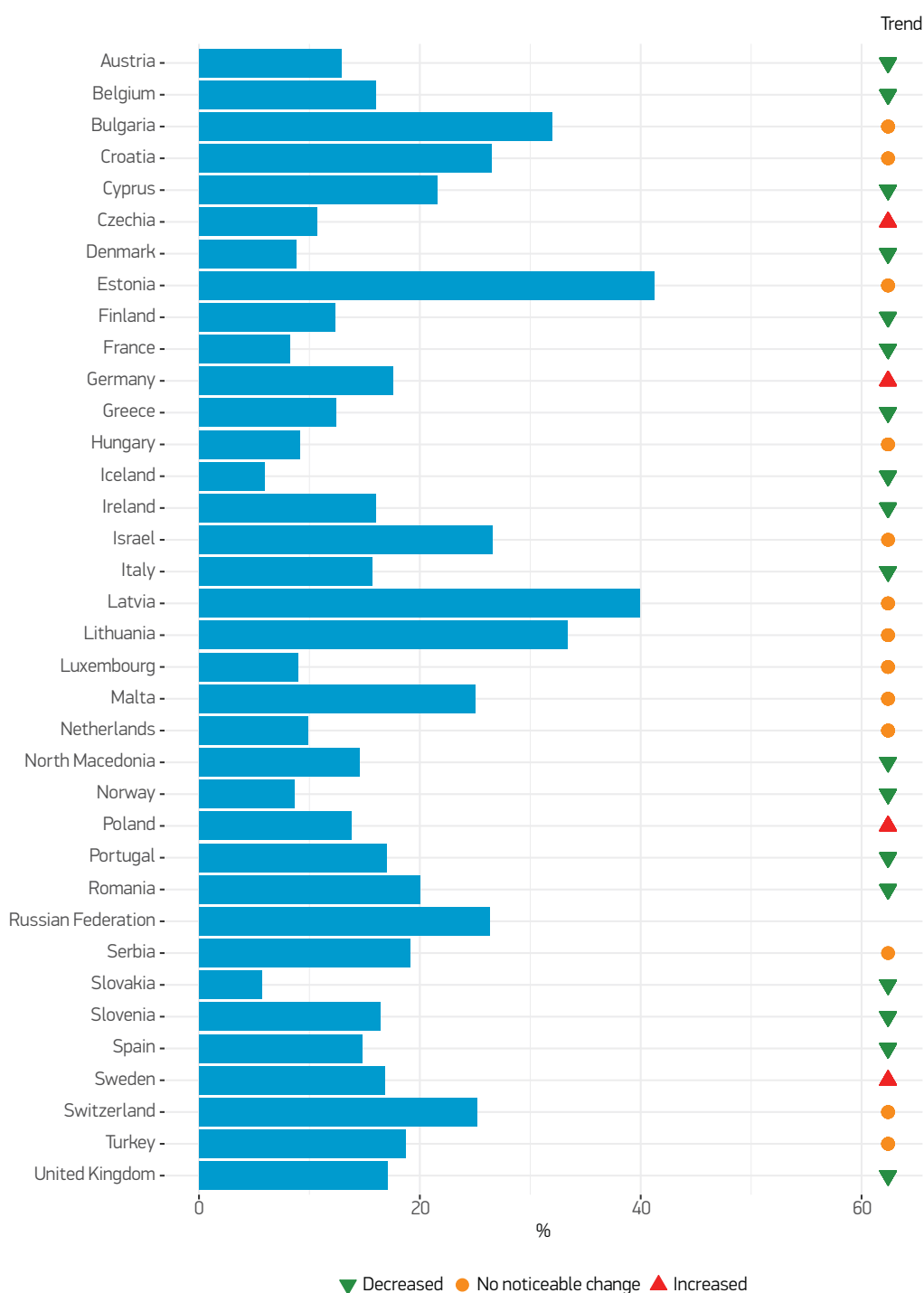
Fig. 2.12. Percentage of population with income below national poverty lines in central Asia and eastern Europe, 2016 (and trends since 2005)



Source: authors' own compilation based on data for the years 2005–2016 from the World Bank.

Financial and social protection in later life

- Social protection programmes that support older people have an impact on health equity by maintaining capacity to: avoid health risks; access health services; and perform daily tasks, especially for those with financial and health vulnerabilities (88). Income and health tend to be more vulnerable to shocks in later life.
- Statutory pensions are vital to narrowing differences in income insecurity at this stage of life. Pension benefits offer a degree of financial security in later life when employment income is not available, and the generosity of pensions affects the ability of individuals to lead healthy lives (88, 89).
- Gender and income inequity combine to increase the poverty risk of older women. Women are more likely to work part-time, in less-valued jobs and sectors (e.g. in care roles) and on average are paid less than men. All of this leads to women typically living longer lives but not in good health (46). The gender pay gap leads to a gender pension gap later in life. Coherent policies could improve the situation for women, as various laws and practices still exist in many countries – including earlier mandatory retirement ages for women, separate pension annuity tables based on average life expectancy (which generally is higher for women), and policies making women's pensions dependent on their husband's income and entitlements (14).

Fig. 2.13. Percentage of population aged 65 years and over with income below 60% of median equivalized disposable income, 2017 (and trends since 2005)

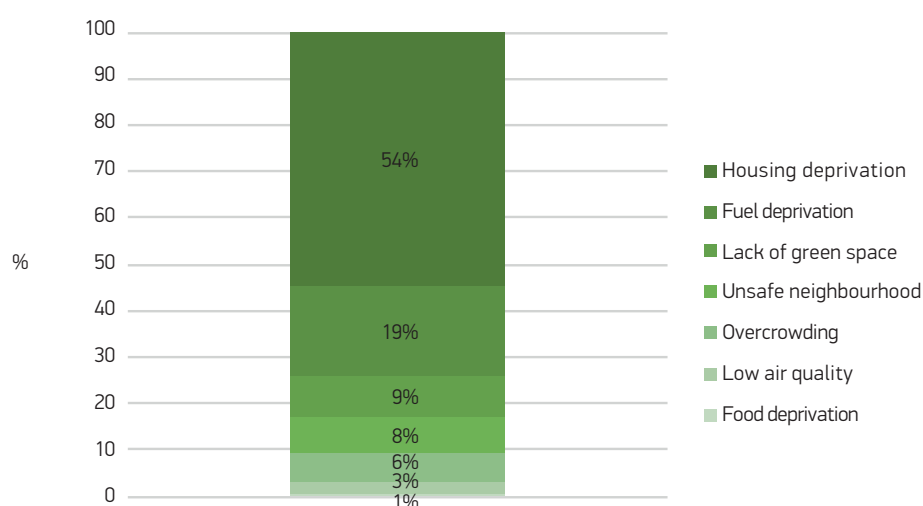
Sources: authors' own compilation based on data extracted for the years 2005–2017 from the Eurostat and OECD databases.

2.4 Underlying conditions and policy actions: *Living Conditions*

Housing and fuel deprivation are key factors driving health inequities related to Living Conditions

- Between 22% and 30% of health inequities in self-reported health, mental health and life satisfaction are associated with living conditions (Fig. 2.2).
- Fig. 2.14 identifies the contribution of individual indicators to the 30% gap in self-reported health explained by living conditions.
- Over 70% of the gap in health inequities in self-reported health status linked to living conditions can be explained by differences in housing and fuel deprivation.²⁰
- Fig. 2.14 shows that lack of green space and unsafe neighbourhoods contribute to health inequities in living conditions.

Fig. 2.14. Factors contributing to health inequities in Living Conditions (based on self-reported health)



Notes. Due to data requirements for the decomposition analysis, some factors influencing health equity are not captured in the decompositions (see Annex 2).

Source: decomposition analysis using data from the EQLS (see Annex 2).

²⁰ Housing deprivation is characterized by living in a home with either rot, damp and leaks, or lack of an indoor flushing toilet. Fuel deprivation is characterized by inability to keep the home warm. A person living in an overcrowded home does not have a minimum number of rooms equal to: one room for the household; one room per couple in the household; one room for each single person aged 18 or more; one room per pair of single people of the same gender between 12 and 17 years of age; one room for each single person between 12 and 17 years of age and not included in the previous category; one room per pair of children under 12 years of age (according to Eurostat definitions).

Key findings

- Inequities in Living Conditions – such as quality and availability of housing and community amenities, fuel deprivation and availability of green spaces – reflect inequities in safety, sense of belonging and security.
- In almost every country in the WHO European Region, those in the lowest income quintiles are at higher risk of poor housing conditions than those in wealthier quintiles.
- Inequities in housing and fuel deprivation are key contributors to health inequities in living conditions. Housing is more than where people live; it provides a sense of belonging, and feelings of safety, security and privacy.
- Housing is associated with inequities in health and well-being across the entire Region.
- Lack of green space and unsafe neighbourhoods also contribute to health inequities in living conditions.
- In 81% of countries for which data were available (25/31), expenditure on housing and community amenities either stayed the same or declined between 2006 and 2017.

Housing and well-being and health

- Housing is more than where people live; it provides a sense of belonging, and feelings of safety, security and privacy (5).
- Insecure housing generates stress. Housing can be insecure for many reasons, for example due to costs, weak security of tenure, fuel deprivation and/or overcrowding (4, 5).
- Every year, more than 100 000 deaths occur in the WHO European Region as a result of inadequate housing conditions (90).
- People in low-income households are more likely to face multiple housing problems; that is, they are not only cold in the winter, but are also more likely to have mould growing and poor indoor air quality (91).
- In 28 EU countries over 15% of the population live in deprived housing circumstances. Improvements have been slow to materialize, reflected in the fact that housing deprivation has only fallen by 4% since 2006 (92).
- Housing affects inequities in health and well-being across the entire WHO European Region. People living in unaffordable, poor-quality or insecure housing are more likely to report poor health and to suffer from a variety of health problems (93).

Air pollution and health inequities

- Air pollution – the largest single environmental risk to health – accounts for a low percentage of the factors contributing to health inequities in living conditions. It is a substantial problem in the Region but air pollution does not discriminate: it affects everyone, regardless of income, and so is not a large contributor to health inequity.
- For example, the majority (50–92%) of the urban population in European countries in which air pollution is monitored was exposed to poor air quality (according to WHO guidelines).
- That said, inequities in air quality do exist: deaths from household air pollution are over 10 times higher in countries with lower and middle income levels compared to higher-income countries (94). In poorly ventilated homes, indoor smoke can be 100 times higher than the agreed acceptable levels for fine particles (95).
- Those living in poor socioeconomic areas are more likely to be affected by air pollution (indoor and outdoor), flooding, sanitation issues, water scarcity, noise pollution and road traffic (2).

SDGs and living conditions

SDG 11. Make cities and human settlements inclusive, safe, resilient and sustainable.

Target 3.6. By 2020, halve the number of global deaths and injuries from road traffic accidents.

Poor housing conditions affect health and well-being

- The socioeconomic gradients in housing deprivation (Fig. 2.15), fuel deprivation (Fig. 2.16) and overcrowding (Fig. 2.17) are particularly strong. In virtually all countries, people in the lowest income quintiles are at higher risk of poor housing conditions than those in wealthier quintiles.
- In 4/33 countries there is more than 20% difference in housing deprivation between those living on the lowest and highest incomes (Fig. 2.15).
- In a quarter of countries (8/32) there is more than 20% difference in fuel deprivation between those living on the lowest and highest incomes (Fig. 2.16).
- In a third of countries (12/34) there is more than 20% difference in the percentage of people living in overcrowded dwellings between those living on the lowest and highest incomes (Fig. 2.17).

Inequities in severe housing deprivation are a problem across the WHO European Region

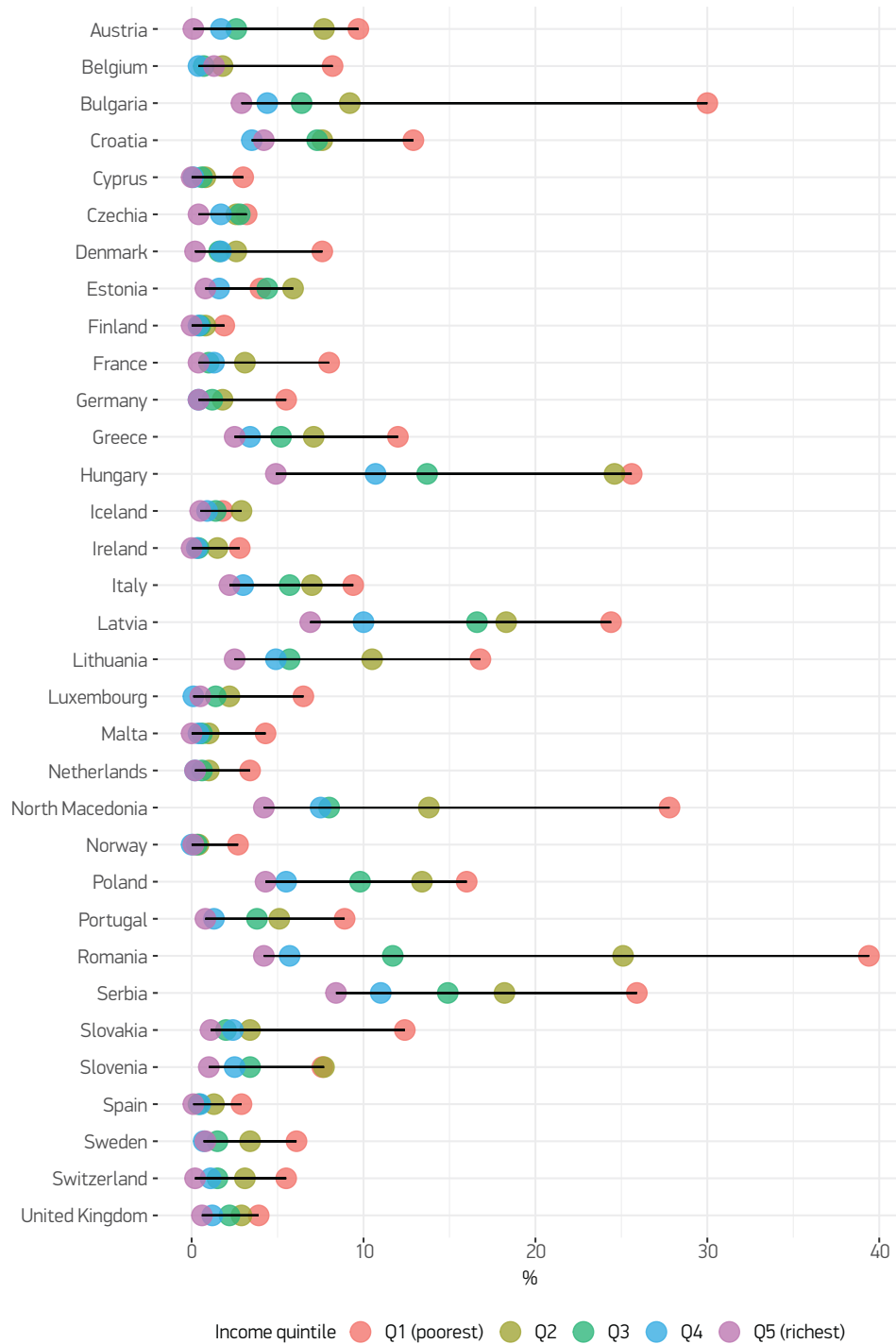
- Severe housing deprivation is a measure of health equity, used because low-income households are more likely to suffer from housing deprivation and poor-quality housing, which in turn negatively impacts on physical and mental health.
- In all 33 countries in Fig. 2.15, those in the lowest or second-lowest income quintiles are more likely to report severe housing deprivation than those with higher incomes.
- In every 100 households in these countries, between two and 43 more in the lowest income quintile report severe housing deprivation compared to households in the highest income quintile.
- These large inequities make reducing housing and fuel deprivation, and ending overcrowding key priorities for policy-makers if they are to improve living conditions and thus reduce health inequity (88).

Improving housing conditions and availability

- Dry, sanitary homes with adequate light reduce the risks of infections, respiratory illnesses, development problems in children, and poor mental health among both children and adults (2, 96).
- Another factor influencing housing is the increasing price of the average house in the WHO European Region. In 2017 house prices rose by 4.5% in 30 European countries (97).

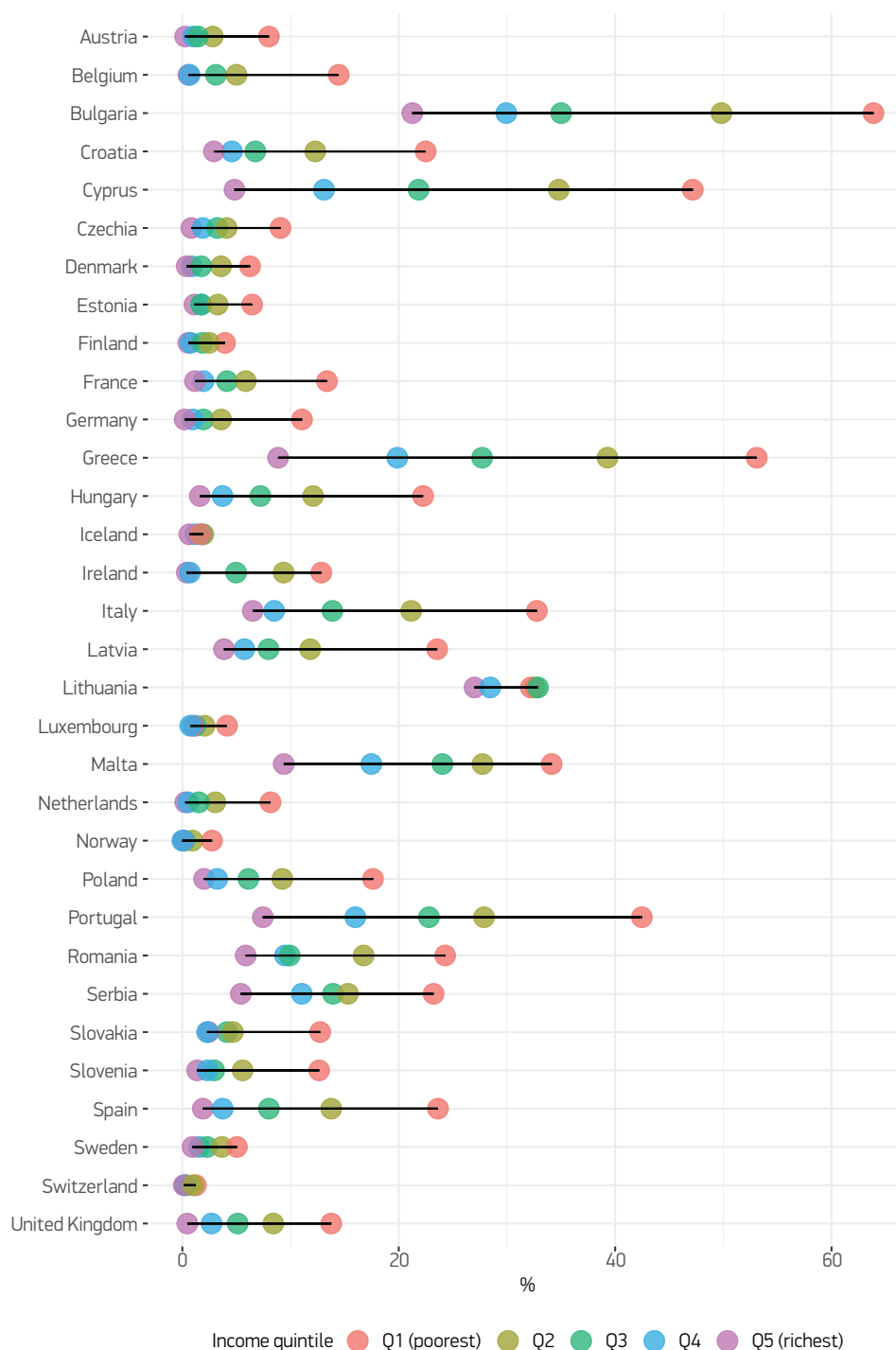
Keeping a home adequately warm is a problem for many on lower incomes

- In 30 out of 32 countries, people living on the lowest incomes tend to be the most unable to keep their homes adequately warm, compared to those on higher incomes (Fig. 2.16).
- The gap in a quarter of countries (8/32) is large; in these countries there is more than a 20% gap in those unable to warm their home between people in the lowest and highest income quintiles.
- Out of every 100 households, between one and 44 more in the lowest income quintile report that they are unable to keep their home adequately warm, compared to the highest income quintile.

Fig. 2.15. Percentage of respondents reporting severe housing deprivation, by income quintile, 2016/2017

Source: authors' own compilation based on the 2016 or 2017 EU-SILC surveys (latest available data for the countries concerned).

Fig. 2.16. Percentage of respondents unable to keep their home adequately warm, by income quintile, 2016 (or latest available year)



Source: authors' own compilation based on data from the 2016 EU-SILC survey for most countries, with the exception of Iceland (2015) and Malta (2014).

Overcrowded housing is a problem for those on lower incomes

- In all 34 countries in Fig. 2.17, people in the lowest or second-lowest income quintiles are more likely to live in overcrowded dwellings compared to those living on higher incomes.
- Out of every 100 households in these countries, between four and 55 more in the lowest income quintile live in overcrowded housing, compared to the highest income quintile.

Improving housing and reducing inequities

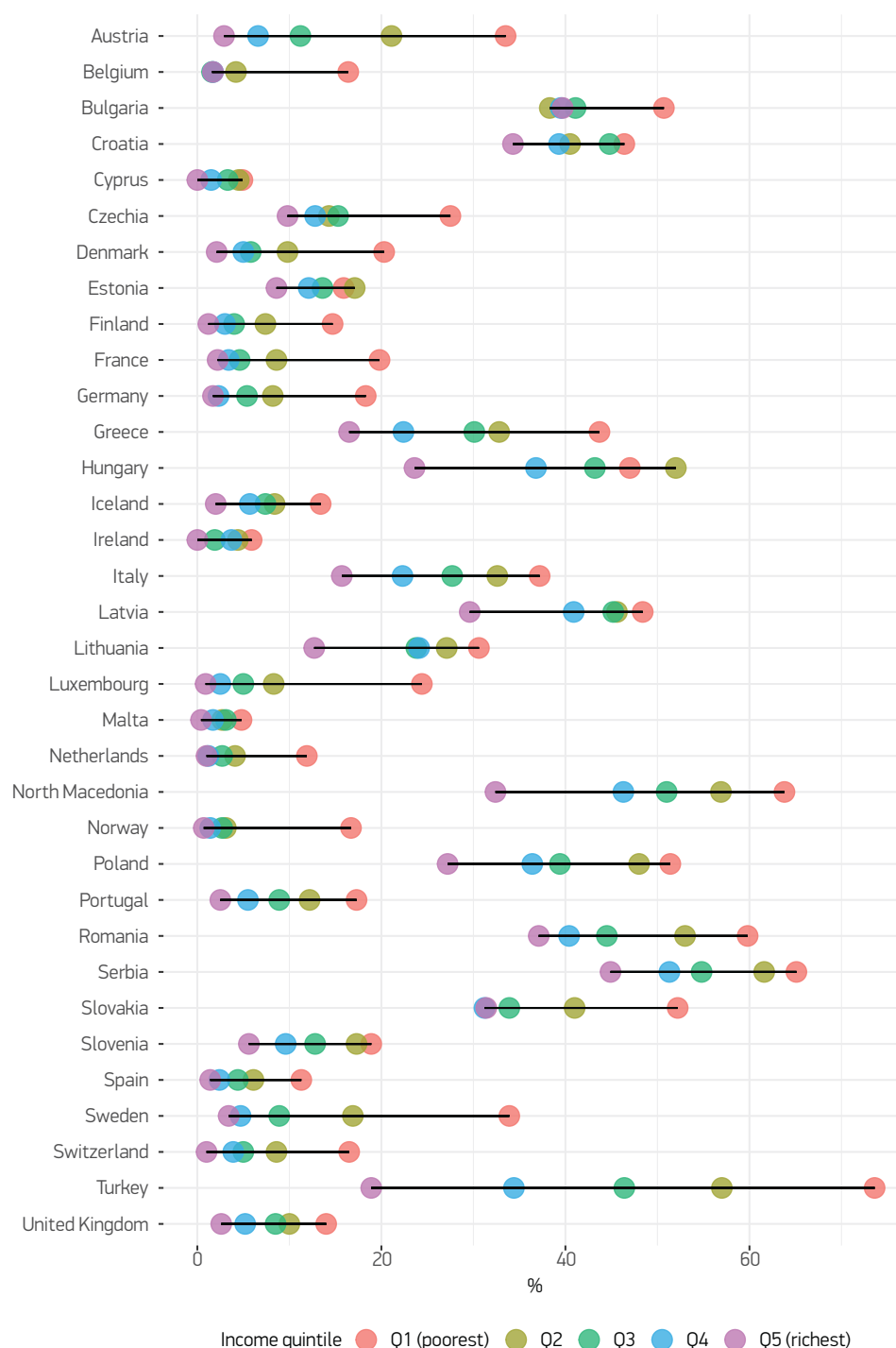
- Improved housing conditions for all, as well as accelerating action where it is needed most will save lives, prevent disease, increase quality of life, reduce poverty, help mitigate climate change and contribute to the achievement of the SDGs (5).
- Member States can reduce health differences resulting from inequities in living conditions by: increasing the availability of good-quality, affordable new housing in all areas and accelerating provision of this new housing in areas where people are most likely to be left behind; providing incentives to improve the condition of existing housing, especially stocks of old or social housing; increasing the proportion of social housing stock; investing in community amenities and regeneration schemes in less-advantaged neighbourhoods; and identifying a minimum set of standards for amenities, fuel efficiency and maintenance. Relevant policies could include: subsidies and other incentives to homeowners and landlords to improve fuel-efficient heating systems, energy efficiency of buildings, indoor sanitation facilities, and to ensure housing is kept in a decent state of repair (88).

Surrounding community environments are also driving health inequities

- In addition to the socioeconomic gradient in quality of housing, the quality of the surrounding environment, including aspects such as neighbourhood safety and the availability of green space, also affects inequities in health and well-being.
- The evidence shows that lack of green space and unsafe neighbourhoods contribute to health inequities in living conditions.

Feeling unsafe in your own home is more likely if you have fewer years of education

- In 36 out of 42 countries for women and in 30 countries for men, those with fewest years of education are more likely to feel unsafe in their own homes compared to those with most years of education (Fig. 2.18).
- Among these countries, out of every 100 women, as many as 23 more women with fewest years of education feel unsafe from crime in their own homes compared to women with most years of education.
- For men, as many as 15 more men in every 100 report feeling unsafe among those with fewest years of education compared to those with most years of education.
- Women state that they feel unsafe more often than men, whether alone at home (9% compared with 4%) or outside (20% compared with 9%) (98).

Fig. 2.17. Percentage of respondents living in overcrowded housing, by income quintile (latest available year)


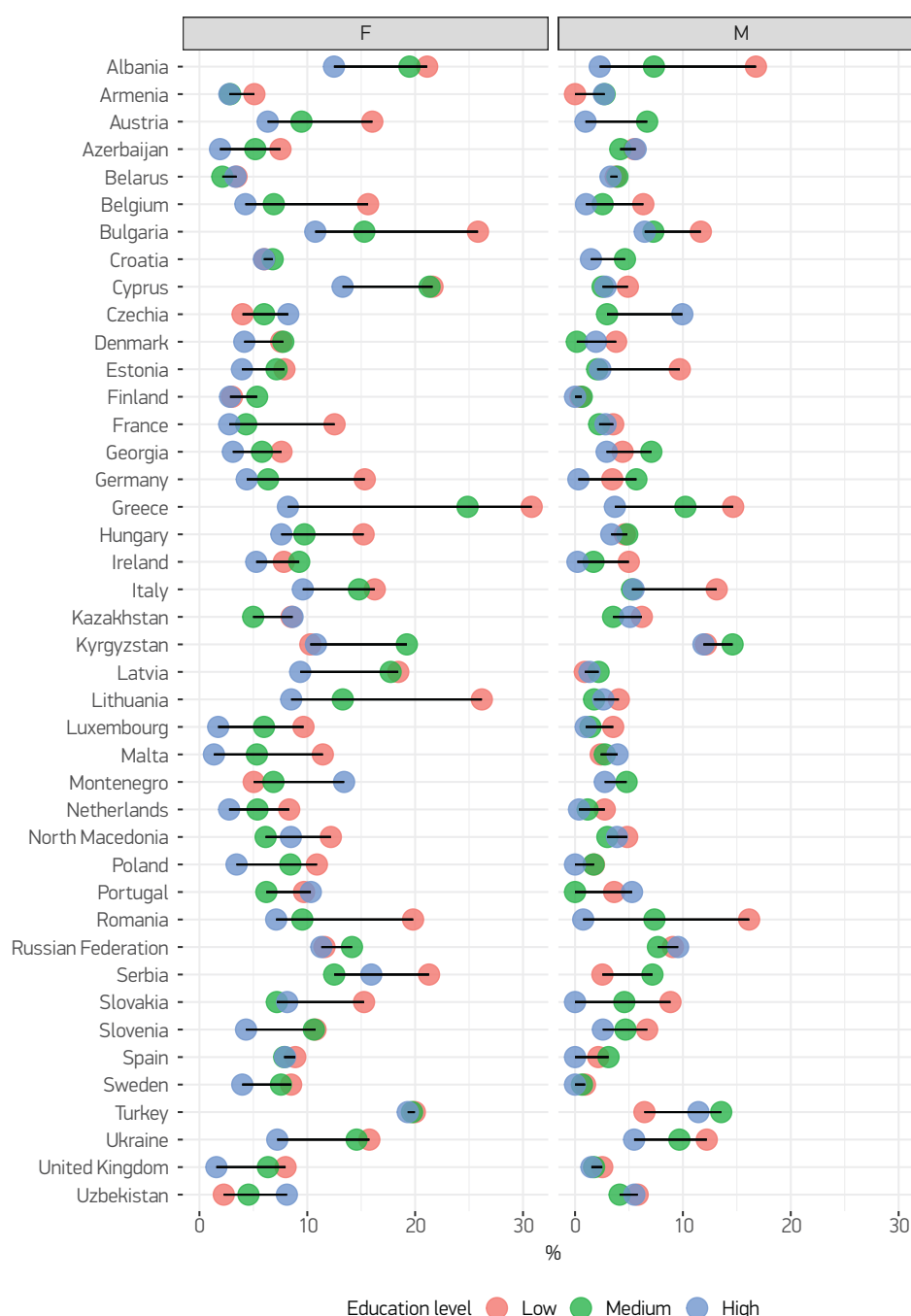
Source: authors' own compilation based on the latest available data for each country from the EU-SILC survey; for most, this was 2016 or 2017, with the exception of Turkey (2015).

The effects of feeling unsafe on well-being and mental health

- Exposure to actual or perceived personal and property crime and violence is associated with higher rates of poor mental health, social isolation and depression (99).
- In some cases this may have an impact on participation in social, economic and health-promoting activities and services (100).

- Interventions aiming to strengthen resilience are more effective when supported by environments that promote and protect population health and well-being (101). Giving people a sense of control helps to create supportive environments (88).
- Collaboration of health services with other sectors, along with adopting a whole-of-government and whole-of-society approach are crucial for the development of supportive environments and strengthening resilience (102).

Fig. 2.18. Percentage of respondents feeling unsafe from crime in their own home, by education level, 2016 (or latest available year)



Notes. F = females. M = males. Due to small sample sizes, data are missing on: low education for men in Austria, Croatia, Czechia and North Macedonia; and on high education for men in Serbia.

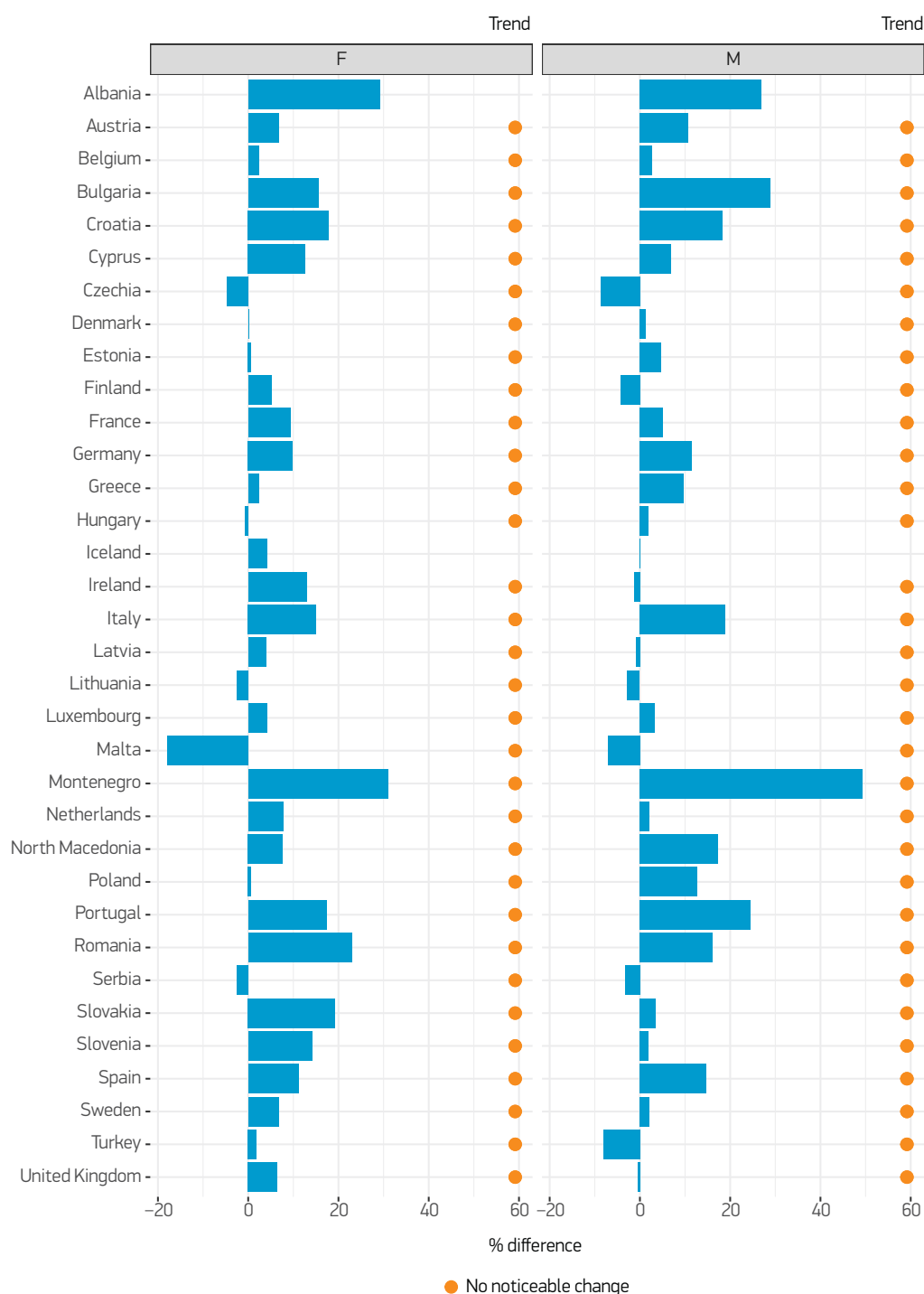
Sources: authors' own compilation based on data extracted from the 2016 EQS for most countries, with the exception of the following countries (for which data are from the 2011 WVS): Armenia, Azerbaijan, Belarus, Georgia (2014 WVS) Kazakhstan, Kyrgyzstan, Russian Federation, Ukraine and Uzbekistan.

Inequities in green space exist and are not changing

- Examining differences in access to green space by income quintile shows that people in the lowest income quintile are more likely to have difficulty accessing recreational or green areas compared to

those in the highest income quintile in around 29 out of 34 countries for women and 24 out of the 34 for men (Fig. 2.19).

Fig. 2.19. The percentage difference in adults who have difficulty accessing recreational or green space in the lowest income quintile compared to the highest income quintile, 2016 (and trends since 2011)



Notes. F = females. M = males. The negative percentages mean that there are fewer people reporting difficulty accessing green space among those in the lowest income quintile than among those in the highest.

Source: authors' own compilation based on data extracted for the years 2011–2016 from the EQLS.

- In these 34 countries, out of every 100 women there are on average 12 more in the lowest income quintile who find it difficult to access green space compared to women in the highest income quintile. Among men, on average 10 more in every 100 find it difficult to access green space in the lowest income quintile compared to the highest quintile.
- Fig. 2.19 shows that between 2011 and 2016, inequities in accessing green space remained the same. No country managed to reduce the differences between people in the lowest and highest income quintiles.
- In a small number of countries, more people in the highest income quintile have difficulty accessing recreational or green space than those in the lowest income quintile. In these countries, it may be that high-income households tend to be concentrated in more densely developed urban areas, whereas lower-income households tend to be located in more rural areas, with easier access to green space.

Improving green space availability and quality for all

- It is not only the provision of green space that is important; to reduce health inequities related to green space, it is important that high-quality green spaces are available to all residents. Interventions that can remove barriers to all using green spaces include: improving availability of and access to green areas in neighbourhoods with lower socioeconomic status; enhancing access to and use of urban green space (such as attractive and welcoming entrances or well-drained and paved footpaths, and benches); ensuring equitable provision of attractive, nature-based play grounds; and improving safety in urban parks (103).

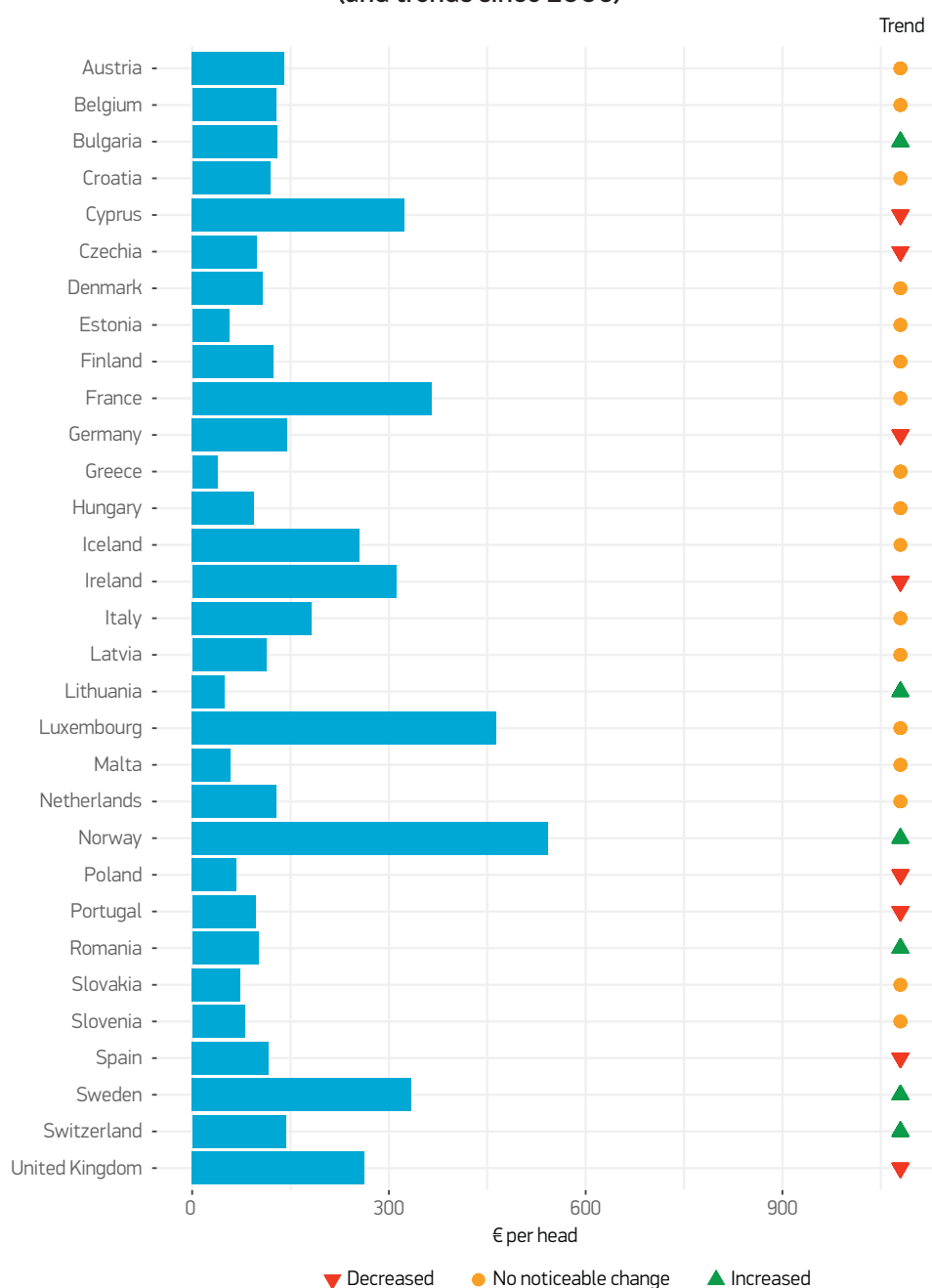
Green spaces and health and well-being

- People living in walkable urban neighbourhoods have higher levels of physical activity and social capital, are more likely to know their neighbours, be socially engaged and trust others (104).
- Green spaces in residential developments in urban settings are also effective in addressing inequities in overweight and obesity (105).
- The burden of disease resulting from obesity requires a wider focus on regulation, food systems and the extent to which these are shaped by CDoH (13).

Housing and community expenditure has stalled in many countries

- The lack of improvement or no significant change in green space (see Fig. 2.19) may be partly explained by the trend in spending on housing and community initiatives.
- Expenditure on housing and community amenities in the WHO European Region (including street lighting, safety, green spaces, and public facilities) ranged from €39 per head to €543 per head in 2017.
- Fig. 2.20 shows that in 81% of countries (25/31), expenditure on housing and community amenities either stayed the same or declined between 2006 and 2017.

**Fig. 2.20. Government expenditure per person on housing and community amenities, 2017
(and trends since 2006)**



Source: authors' own compilation based on data extracted for the years 2006–2017 from Eurostat.

SDGs and sanitation

SDG 6. Ensure availability and sustainable management of water and sanitation for all.

Inequities in basic sanitation services

- Fig. 2.21 shows that among 11 transition economies for which wealth-disaggregated data were available, there is a social gradient in almost every country in access to basic sanitation services.
- In 9 of the 11 countries, families in the lowest wealth quintile are least likely to have access to basic sanitation services.
- Among the same 11 countries in Fig. 2.21, in every 100 households on average 14 more in the lowest wealth quintile lack access to basic sanitation services compared to those in the highest wealth quintile.
- The only Millennium Development Goal not met in the Region was the sanitation goal (SDG 6).
- Adequate sanitation facilities include functioning toilets and safe means to dispose of human faeces.

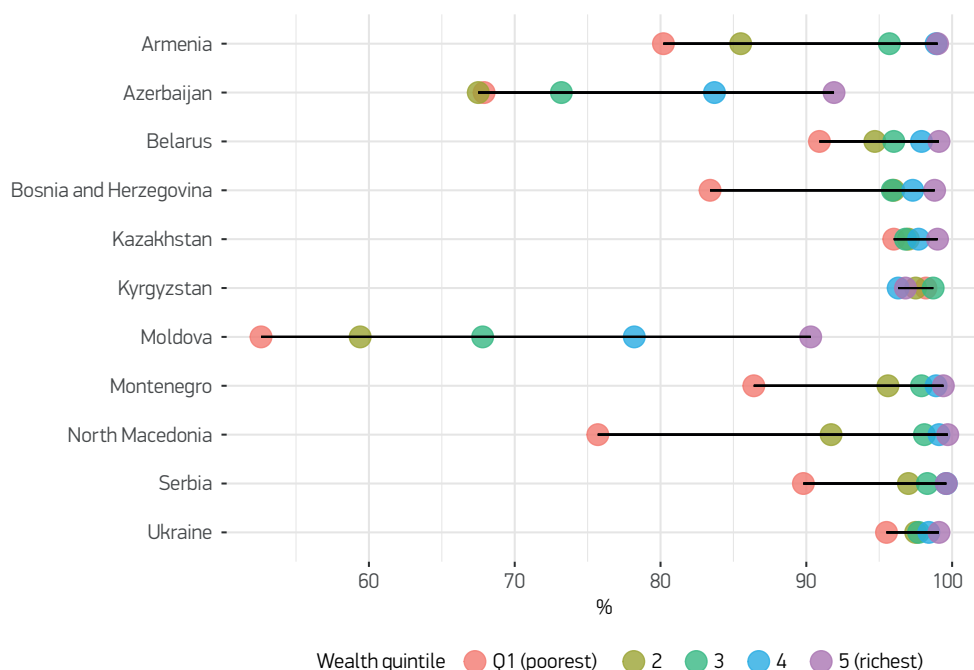
Inequities persist in basic drinking-water provision in some countries in the WHO European Region

- Fig. 2.22 shows inequities in the availability of basic drinking-water in the same 11 transition economies.
- The inequities are small in seven out of 11 countries; however, in four countries substantial inequities exist.
- In all 11 countries, those in the lowest wealth quintile are least likely to have access to basic drinking-water services.
- Among these countries, in every 100 households on average nine more in the lowest wealth quintile lack access to basic drinking-water services, compared to the highest wealth quintile.
- Inequities in access to drinking-water are often in particular a problem for those on low incomes in rural areas.

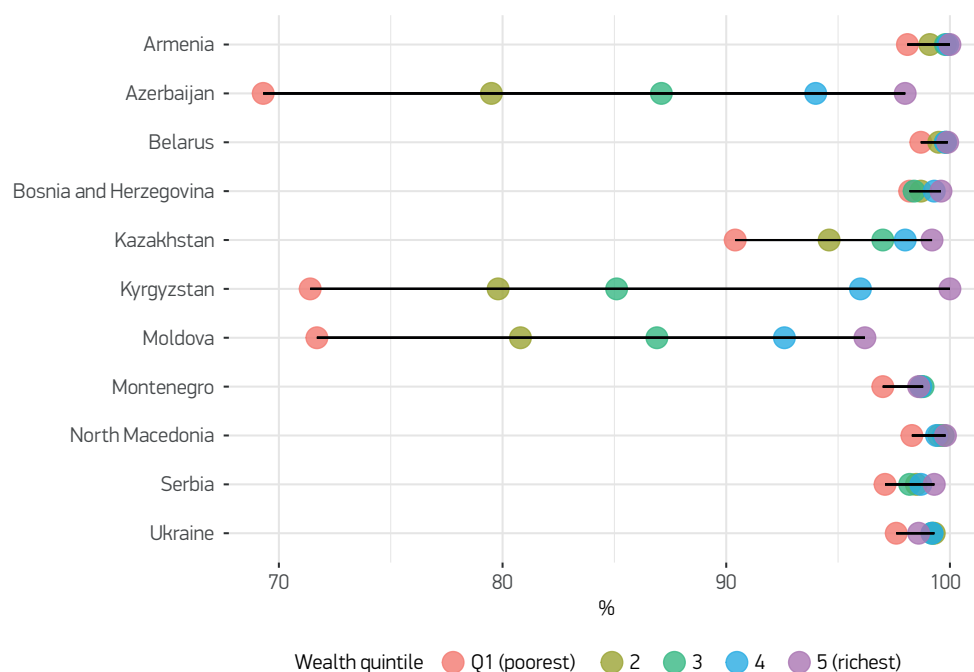
SDGs

Target 3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

SDG 6. Ensure availability and sustainable management of water and sanitation for all.

Fig. 2.21. Percentage of population with at least basic sanitation services, by wealth quintile, various years


Source: authors' own compilation based on data extracted for the years 2006–2014 from the WHO/United Nations Children's Fund (UNICEF) Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene.

Fig. 2.22. Percentage of population with at least basic drinking-water services, by wealth quintile, various years


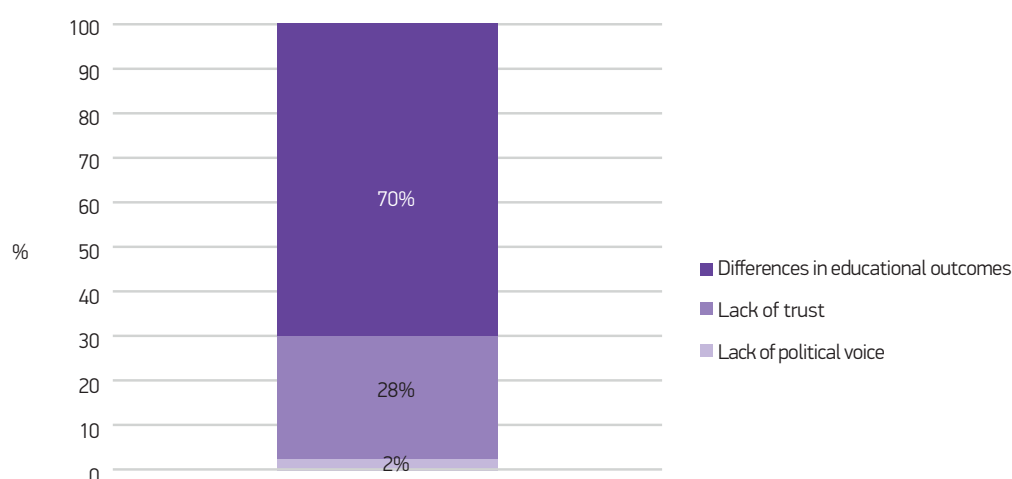
Source: authors' own compilation based on data extracted for the years 2006–2014 from the WHO/UNICEF JMP for Water Supply, Sanitation and Hygiene.

2.5 Underlying conditions and policy actions: Social and Human Capital

Differences in Social and Human Capital drive health inequities

- Fig. 2.2 shows that between 7% and 19% of the health inequities in self-reported health, mental health and life satisfaction are associated with social and human capital.
- Fig. 2.23 identifies the contribution of individual indicators to the 19% gap in self-reported health explained by social and human capital.
- Over two thirds of the gap in health inequities in self-reported health status linked to social and human capital is explained by educational differences. This confirms the findings in Section 1, which showed inequities related to number of years in education in a range of indicators.

Fig. 2.23. Factors contributing to health inequities in Social and Human Capital (based on self-reported health)



Notes. Due to data requirements for the decomposition analysis, some factors influencing health equity are not captured (see Annex 2). In the EQLS and the ESS, the lack of trust question is phrased: "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Please tell me on a scale of 1 to 10, where 1 means that you can't be too careful and 10 means that most people can be trusted." In the WVS, the question is phrased: "... or that you need to be very careful in dealing with people?"

Source: decomposition analysis using data from the EQLS (see Annex 2).

Key findings

- Inequities in Social and Human Capital reflect inequities in empowerment and control over life and health. As much as 98% of the gap in health inequities in self-reported health status associated with poor social and human capital is explained by differences in and lack of trust in others.
- Inequities relating to sense of security, belonging, and control over life are pronounced for people across the WHO European Region. These are also some of the largest contributors to differences in mental and physical health and well-being. Inequities in social and human capital reflect inequities in a sense of power and control over life and health.
- Building social and human capital through education, social cohesion and trust empowers individuals and communities to increase control over life and health.
- In health services, contributing to improving people's sense freedom of choice and control may seem difficult. Multisectoral policies and interventions are most effective at helping to achieve this.

Inequities in social and human capital reflect inequities in a sense of power and control over life and health

- The inequities in economic and power resources in a nation have an impact on health equity through the differences they generate in health and social literacy (13).
- Gender equality is a prerequisite for equity and is an aspect of social and human capital. There are fundamental differences in the assets and resilience that women and men possess (2). The Strategy on Women's Health and Well-being advises Member States to adopt a multisectoral approach to eliminate discriminatory values, norms and practices that affect the health and well-being of girls and women and to tackle the impact of gender and social, economic, cultural and environmental determinants on women's health and well-being (14).
- Gender-based violence against women is one of the most common human rights violations in the WHO European Region. It is estimated that one in four women in the Region will experience violence on the basis of gender at some point in their lives (at least once). Gender-based violence affects society as well as individuals; it has substantial effects on public health and is an obstacle to women's active participation in society. Empowering women impacts positively on social and human capital and has a positive effect on economic growth and development (14).

Investing in human capital from the early years improves health and well-being in the long term

- Childhood experiences have a strong correlation with future life chances and health outcomes. The poorer the circumstances in which a child grows, the worse their outcomes will be (2).
- Policy actions to break the intergenerational transmission of education differences can also help to combat differences in well-being, such as targeted investment in early childhood education and care reaching those from more disadvantaged backgrounds (106).

SDGs and violence against women and girls

Target 5.2. Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.

There are positive signs of investment in this area

- Government expenditure in purchasing power standards (PPS) on pre-primary education rose in two thirds of countries (where data were available) between 2012 and 2015 (21 out of 32 countries; see Fig. 2.24).
- The measure PPS is an artificial currency unit that eliminates the effect of price-level differences across countries created by fluctuations in currency exchange rates relative to the euro, so that in theory one PPS can buy the same amount of goods and services in each country.

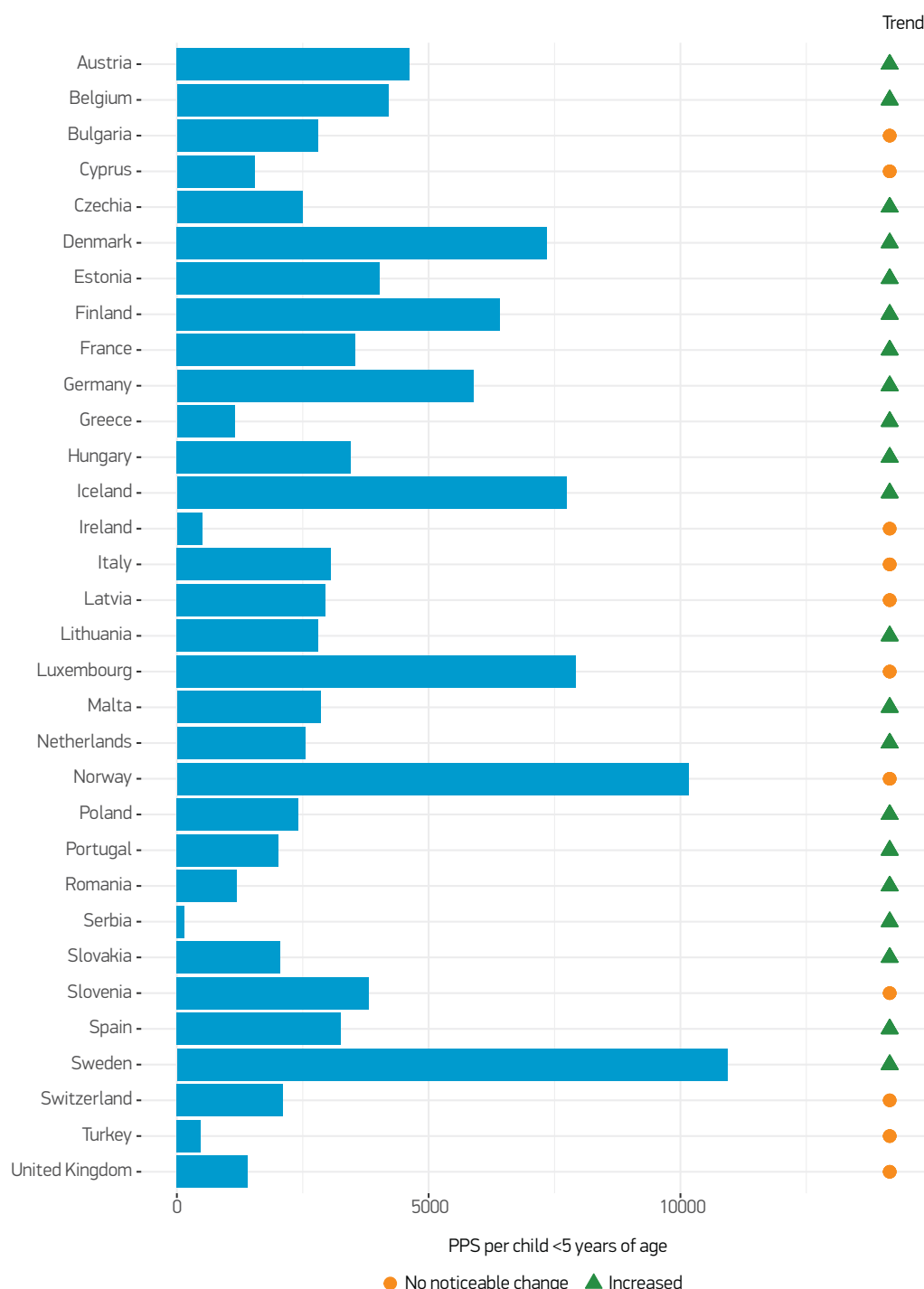
The power of pre-primary education to reduce inequities

- Similar to the situation with expenditure on public health (see Fig. 1.20 in Section 1.3), aggregate figures mask decisions about where the funding goes. Even in countries where spending is increasing, there are geographical inequities.
- For example, subnational regional geographical income inequities exist, with wealthier subnational regions receiving more expenditure on early childhood education (107).
- Equitable access to high-quality education from an early age has a strong impact on reducing differential opportunities and risks, with both direct and indirect impacts on health.

- In a number of countries in eastern Europe and central Asia, day care is lacking and there are large differences in terms of children's attendance of early education programmes, with the children of

parents living on the lowest incomes less likely to attend, compared to the children of parents with the highest incomes (2, 107).

Fig. 2.24. Government expenditure on pre-primary education per child aged under 5 years, 2015 (and trends since 2012)



Source: authors' own compilation based on data for the years 2012–2015 extracted from Eurostat.

SDGs and pre-primary education

Target 4.2. By 2030, ensure 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.

The education gradient in health also has an intergenerational element

- Differences in parental education influence differences in child education and well-being.
- Across the WHO European Region, children of parents with the fewest years of education are less likely to meet minimum proficiency levels in maths and reading at age 15 years, compared to children of parents with the most years of education (Fig. 2.25).

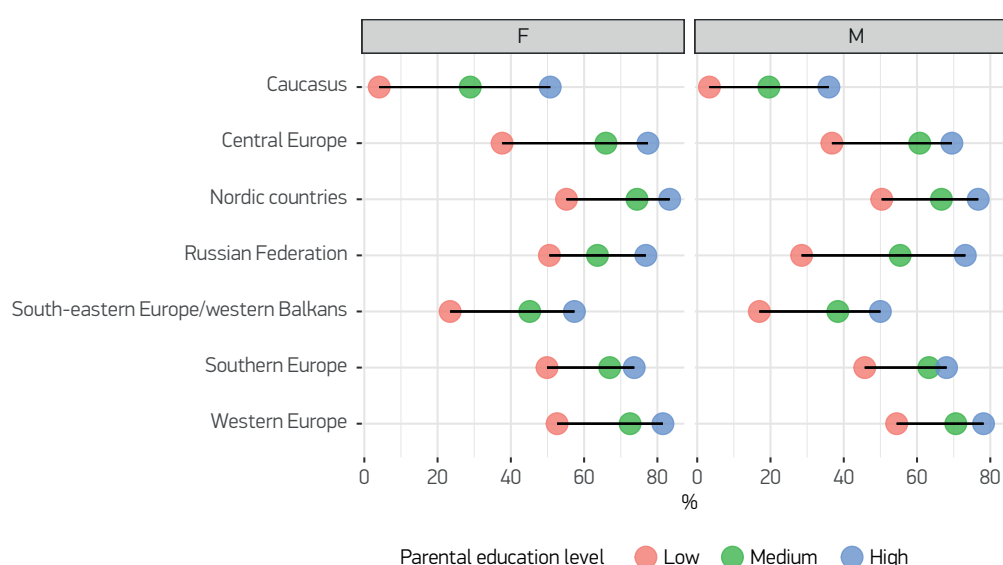
A clear social gradient exists in every country cluster for girls and boys

- In every country cluster in Fig. 2.25, more than 20% fewer children of parents with lower-secondary education meet the minimum proficiency levels in mathematics and reading at age 15 years than children of parents with university-level education.
- There are gender differences in these gaps in mathematics and reading proficiency between girls and boys. Girls with high and medium parental education levels (corresponding to university and upper-secondary education) outperform boys with the same parental education levels. However, the gap in proficiency between high and low parental education levels (corresponding to university and lower-secondary education) is larger for girls in all country clusters than for boys, except in the Russian Federation (108).

Disadvantage persists over generations; parents' education plays a significant role

- As many as 63% of children whose parents have a high level of education (tertiary degree) attain the same educational level as their parents. In contrast, only 41% of children with parents with primary-level education obtain a high level of education.
- Among parents with a high level of education, only 7% of their children end up having just primary-level education. That share jumps to 42% for parents with lower-secondary education (109).
- Schools with poor performance tend to have larger class sizes, less-experienced teachers, and are more likely to have shortages of and/or lower-quality educational materials and physical infrastructure than more advantaged schools (109). Coherent policy-making would see ministries of health and education working together to improve outcomes for all children by accelerating improvements in areas in which children who are being left behind are most likely to live.

Fig. 2.25. Percentage of 15-year-olds achieving minimum proficiency in mathematics and reading, by years of parental education, and by country cluster, 2015



Notes. F = females. M = males.

Source: authors' own compilation based on data from the 2015 PISA index.

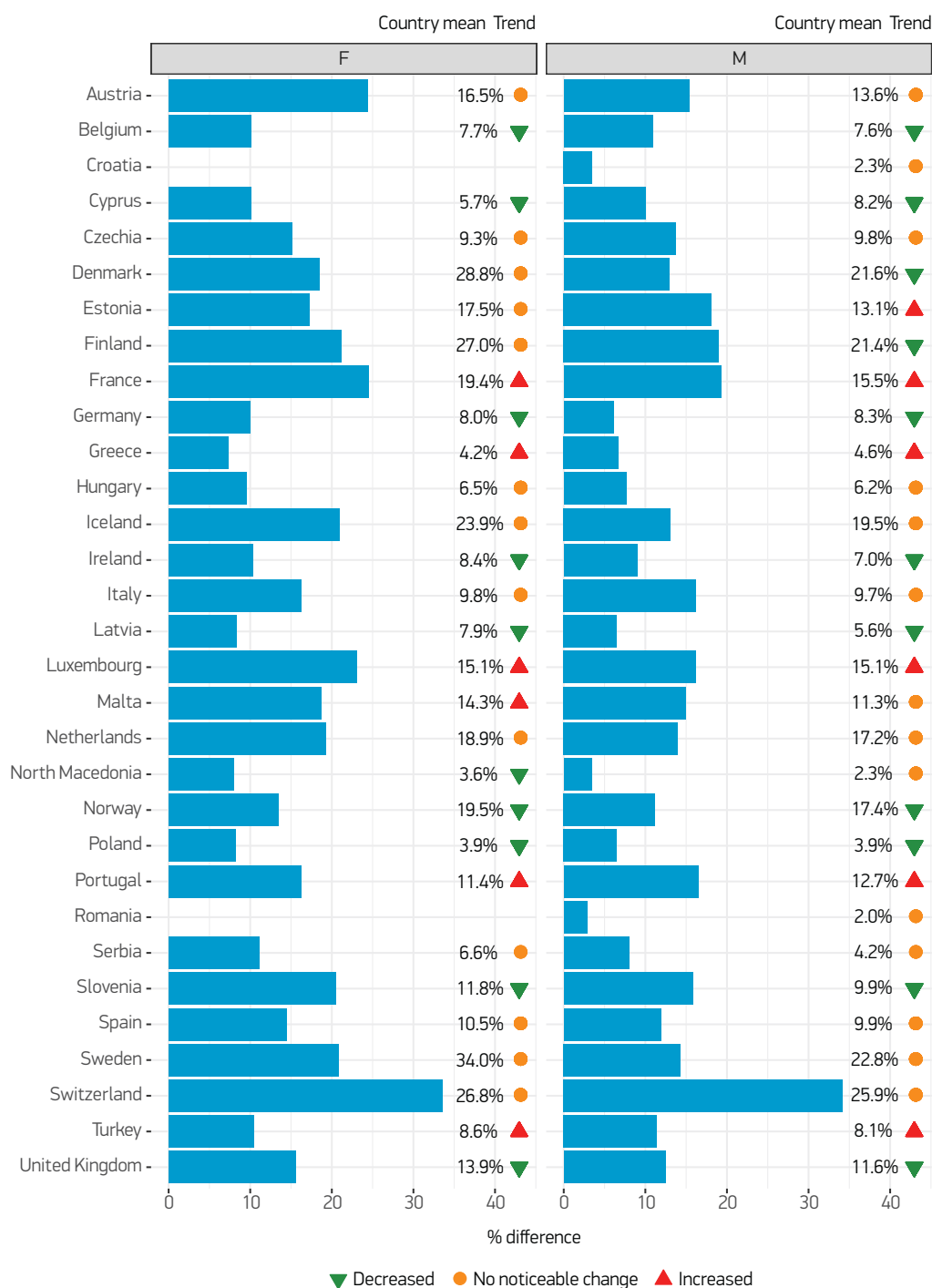
Education has long-term effects on health and well-being

- Improving levels of numeracy and literacy and reducing differences in proficiency improves ability to take control of life, including social participation, ability to reason, and skills related to communication, decision-making and accessing resources, which are all key factors underlying health inequities.
- These factors have long-term effects on future opportunities in the labour market and subsequently affect *Income Security and Social Inclusion* as well as *Social and Human Capital*.

Large differences exist in adult participation in formal and informal education and training

- Differences in lifelong learning further exacerbate differences in education, which in turn contribute to health inequities.
- People who already have the most years of formal education are also most likely to participate in further lifelong learning (Fig. 2.26).
- Between 2004 and 2017 the gap in adult participation in formal and informal education and training narrowed for women in 10 countries and for men in 11 countries.
- In 19 out of 29 countries for women and 20 out of 31 countries for men, the gap in adult participation in formal and informal education and training stayed the same or widened from 2004 to 2017.
- Among the 29 countries with data available for women in Fig. 2.26, out of every 100 women between seven and 34 fewer women with the least years of formal education participate in informal education and training, compared to women with the most years of formal education.
- Among men, between three and 34 fewer men in every 100 with the fewest years of formal education participate in informal education and training compared to those with the most years of formal education.

Fig. 2.26. The percentage difference in adults in formal and informal education and training per 100 adults with the most years in education compared to those with the fewest years in education, 2017 (and trends)



Notes. F = females. M = males. For most countries, trends data were available since 2004, with the following exceptions: North Macedonia (2006), Serbia (2010), and Turkey (2006). Data missing for women in Croatia and Romania.

Source: authors' own compilation based on data for the years 2004–2017 extracted from Eurostat.

Lifelong learning, well-being, mental health and inequities

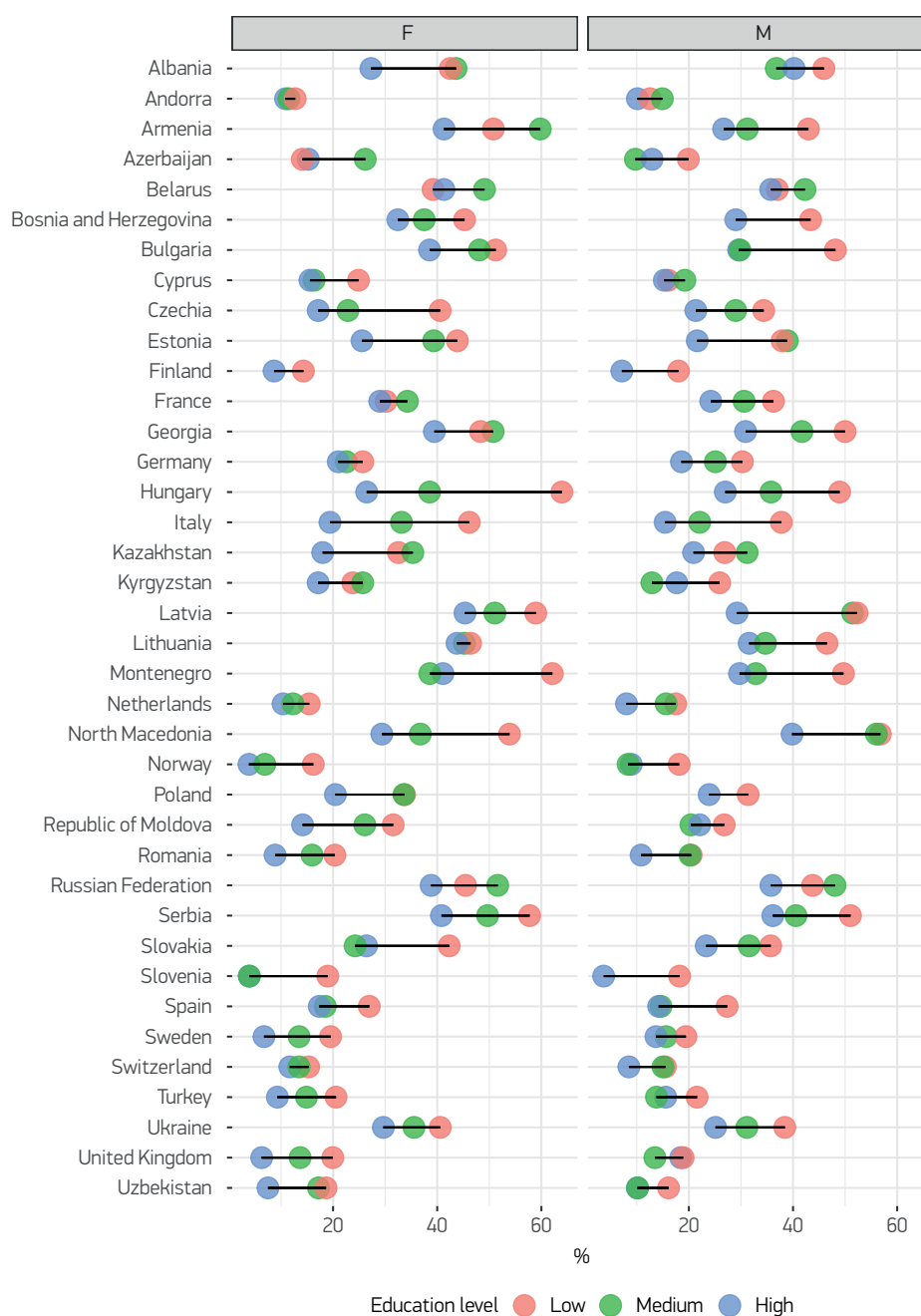
- Making education and lifelong learning opportunities available to all and accelerating efforts to include people who are left behind have a direct impact on improving social and economic inclusion and mental well-being (110).
- Formal and informal education and training aimed at adults can break the link between limited education in earlier life and poorer health outcomes (111).
- Lifelong learning builds skills, balances chances of participation in meaningful and satisfying employment, so that those with fewer years of education have the same possibilities of having good-quality work as those with more years of education.

Across the WHO European Region there is a social gradient in levels of choice and control over life

- In most countries for which data were available (29 out of 38 for women, and 31 out of 38 for men), people with the fewest years of education are most likely to report lack of choice and control over life (Fig. 2.27).
- In 17/38 countries, more than 40% of women with the lowest number of years of education state that they have a lack of freedom and control over their life. In four countries, more than 40% of women with highest number of years in education state that they lack such freedom and control.
- In 12/38 countries, more than 40% of men with the lowest number of years of education state that they have a lack of freedom and control over their life. In two countries, more than 40% of men with the highest number of years in education state that they lack such freedom and control.
- In the 38 countries in Fig. 2.27, out of every 100 women on average 12 more women with the fewest years of education report a lack of control over life compared to women with the most years of education.
- For men, on average 11 more men in every 100 with the fewest years of education report a lack of control over life compared to those with the most years.

For health services, improving a sense freedom of choice and control may seem difficult

- Multisectoral policies and interventions are most effective in improving social and human capital. For example, working with other organizations can improve community development and resilience, contributing to ensuring all people feel they have equal access to high-quality, universal services.
- Interventions that improve social capital – such as civic participation, reducing crime, and generating social connections – have positive impacts on health and well-being (112, 113).
- If these interventions are to positively affect health and well-being, it is important that health services work together to identify approaches that are most effective and also to monitor impacts on health and well-being.
- For public health actors and policy-makers, there are three key areas through which empowerment can further improve health equity: valuing the knowledge of individual and community experiences; maximizing the potential of empowering spaces, such as youth groups or citizens' assemblies; and explicitly moving away from stigmatizing narratives of disadvantage (13).

Fig. 2.27. Percentage of respondents reporting lack of freedom of choice and control over life, by years of education, various years

Notes. F = females. M = males. Due to small sample size, medium education level data are missing for women in Finland and for men in Finland, Poland and Slovenia.

Sources: authors' own compilation based on data extracted for the years 1998–2014 from the WVS: Andorra 2005; Albania 2002; Armenia 2011; Azerbaijan 2011; Belarus 2011; Bosnia and Herzegovina 2001; Bulgaria 2005; Cyprus 2011; Czechia 1998; Estonia 2011; Finland 2005; France 2006; Georgia 2014; Germany 2013; Hungary 2009; Italy 2005; Kazakhstan 2011; Kyrgyzstan 2011; Latvia 1996; Lithuania 1997; Montenegro 2001; Netherlands 2012; North Macedonia 2001; Norway 2007; Poland 2012; Republic of Moldova 2006; Romania 2012; Russian Federation 2011; Serbia 2001; Slovakia 1998; Slovenia 2011; Spain 2011; Sweden 2011; Switzerland 2007; Turkey 2011; Ukraine 2011; United Kingdom 2005; Uzbekistan 2011.

Lack of trust drives health inequities in Social and Human Capital

- Differences in levels of trust in others are also a large contributor to the differences in self-reported health in social and human capital. Lack of trust in others accounts for 28% of health inequities in social and human capital (Fig. 2.23).
- Trust is one of the most widely used measures of social capital and is a powerful indicator of well-being at both individual and society levels, as well as a fundamental condition for collective action and cooperation (114, 22).
- Higher levels of trust are found in societies where physical and mental health are better for all and where incomes are more equally distributed (115).

The impact of trust on health and well-being

- Meaningful participation in society, trust in others, and ability to influence decisions contribute to stronger individual and social resilience and lower levels of morbidity and poor mental health.
- This reflects a study of nine countries of the Commonwealth of Independent States that found policies promoting social capital contributed to improved health and well-being, strengthened communities and reduced corruption and social isolation (22).

Improving trust and reducing inequities

- Many factors influence sense of control over life, including underlying conditions in each of the other four policy areas and other underlying causes of health inequities.
- When health services and other key drivers of health, such as education, fail to meet the needs of marginalized people or groups, political and legal systems can be held to account. Political groups, civil society actors and public health bodies have an important role to play in ensuring that commitments are monitored and that evidence of what works (and what does not work) leads to changes in laws and policies (64).
- Improving participation and developing partnerships at local, subnational and national levels is fundamental to ensuring the public are able to hold decision-makers accountable for their actions, thus improving their sense of choice and control over their lives (2). Engaging with the public helps to create and sustain more responsive policies and services, improve accountability and transparency, build trust and improve sense of control (116).
- Improving accountability through political, social and judiciary systems can help to reduce inequities in sense of control and trust (113).
- Social participation refers to a population's involvement in the decisions that affect their health status; namely, their involvement in and influence over defining problems and making decisions (including implementation, evaluation and monitoring of policies) affecting health status and health care services (117).

Transparency in employment and purchasing

- Improved transparency, oversight and accountability in public procurement is one way of ensuring that public funds are not eroded by corruption and, within the framework of the appropriate policies, can contribute to reducing health inequities.
- Health services are important commissioners of services and products, providing substantial business to local companies. In the EU, public procurement accounts for 14% of GDP and 29% of government spending (118).
- Shifting a small percentage of purchasing budgets to local suppliers could have a substantial effect on local communities (119).

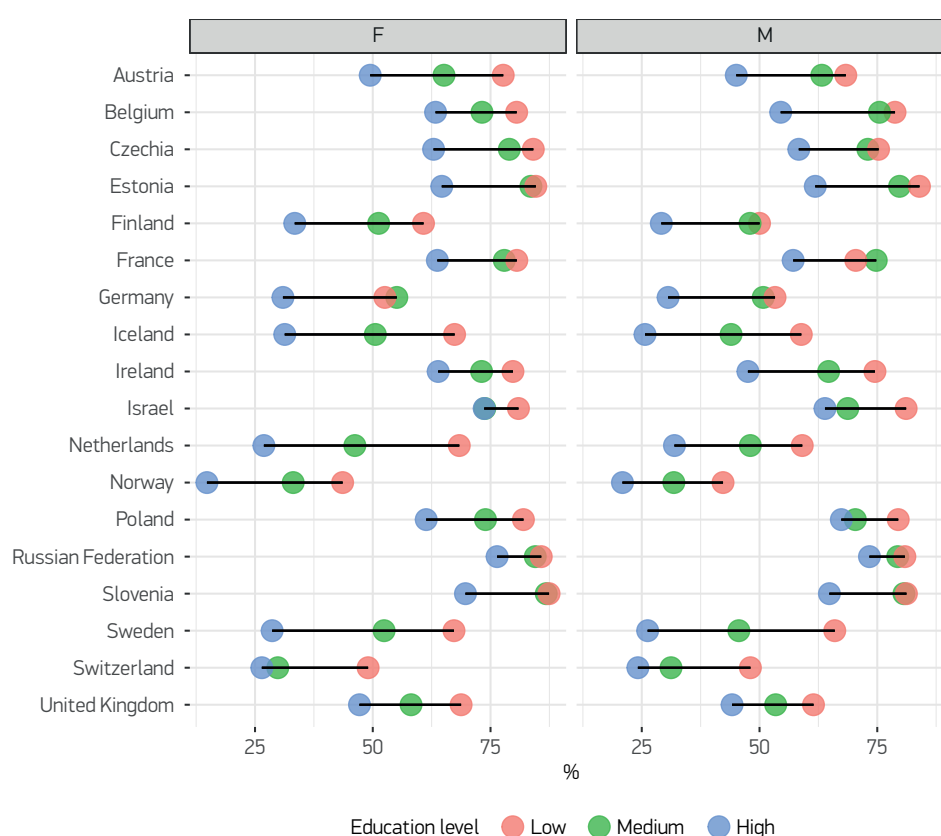
Feeling empowered in politics has an impact on health and well-being

- Lack of political voice; that is, the sense of ability to influence politics, contributes to health inequities between those in the highest and lowest income quintiles (Fig. 2.23).
- Lack of political voice follows a clear socioeconomic education gradient (Fig. 2.28).
- In all 18 countries analysed in Fig. 2.28, people with fewer years of education state that they feel less able to influence politics than those with more years of education.
- In those 18 countries, out of every 100 women, between seven and 41 more women with the fewest years of education feel unable to influence politics compared to women with the most years of education.
- Among men, there are between eight and 40 more men in every 100 with the fewest years of education who feel unable to influence politics compared to men with the most years.

The ability to influence policy decisions through political voice and sense of control over life

- Effective political participation is important for promoting the conditions needed for health equity (117).

Fig. 2.28. Percentage of respondents reporting inability to influence politics, by level of education, 2016



Notes. F = females. M = males.

Source: authors' own compilation based on 2016 data from the ESS.

- The sense of control over politics and decision-making is a crucial but often overlooked aspect of health inequities.
- For people at risk of being left behind, having a degree of influence over local, subnational and national development decisions offers the potential to improve their health and well-being, as well to gain a sense of agency over their own circumstances (12, 112).

Governance, politics and health inequities

- Policy actions to reduce inequities in political voice and political empowerment include public campaigns to encourage political engagement among marginalized members of society.
- Improving people's sense of trust in politics and their feeling of control can be achieved by creating legally binding policies that prevent inequitable welfare state provisions, as well as inequities in labour markets and systems of health care provision (120).
- Improving resilience, trust, and sense of control, and accelerating actions in these areas requires policy coherence, as well as health services working in partnership with other sectors.
- Building resilience can appear a difficult task, one outside of health services' control. However, there are practical strategies that health services can adopt to meet the needs of all those they serve, such as improving health literacy by building awareness and resilience among individuals and communities (102, 121).

Participation, politics and health

- Change happens at local level when communities are able to identify options to improve people's sense of control over the factors that influence health, such as how services are designed.
- Co-production is a tool used to build capabilities and resilience. It shifts the balance of power from professionals to local people and communities, placing service users on the same level as the service provider and drawing on the knowledge and resources of both parties to develop solutions and improve services (122).
- Table 2.1 explores other methods health services can use to improve social participation and sense of control.

Table 2.1. Health services interventions to improve social participation and sense of control

Level	Ways to take action
Health workers and health facilities	Promote collaboration and communication with local communities. Coordinate programmes with organizations that work directly with those who are being left behind.
	Build community capacities to take action on health and reduce health inequities. Work with local communities to identify local issues, devise solutions and build sustainable social action. Tools: community development, using asset-based methods.
	Empower local people to provide advice and information, and to support or organize activities. Accelerate action for those who are being left behind. Tools: peer support, health trainers, befriending and volunteer schemes.
	Involve communities and local services at the planning and implementation stages, leading to more appropriate, equitable and effective services. Accelerate action for those who are being left behind. Tool: co-production.
	Connect people to local community resources, offering practical help, group activities and volunteering opportunities. Accelerate action for those who are being left behind. Tool: social prescribing.
	Create participatory opportunities and roles in the governance structures of health services for representatives of local populations and civil society.
Health services and health policy	Adopt a participatory institutional culture and establish and sustain partnerships with sectors outside of health, as well as evaluating participatory processes.

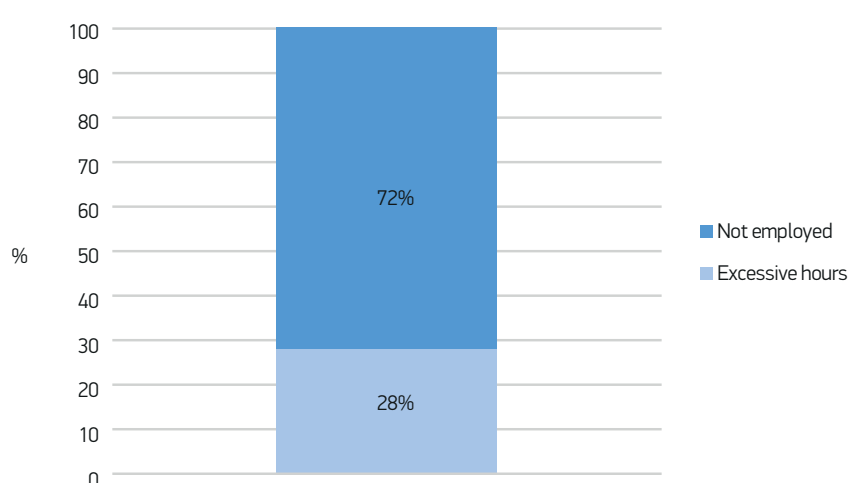
Sources: Boyce & Brown, 2017 (113); Francés & La Parra-Casado, 2019 (117).

2.6 Underlying conditions and policy actions: Employment and Working Conditions

Employment, working conditions and health inequities

- Fig. 2.2 in Section 2.1 shows that between 6% and 10% of the health inequities in self-reported health, mental health and life satisfaction are associated with employment and working conditions.
- Fig. 2.29 further analyses the factors contributing to the 7% gap in self-reported health explained by employment and working conditions, the most significant of which is differences in rates of employment.
- Working excessive hours also substantially influences health inequities.

Fig. 2.29. Factors contributing to health inequities in Employment and Working Conditions (based on self-reported health)



Note. Due to data requirements for the decomposition analysis, some factors influencing health equity are not captured (see Annex 2).

Source: decomposition analysis using data from the EQLS (see Annex 2).

Key findings

- Between 6% and 10% of the health inequities in self-reported health, mental health and life satisfaction are associated with Employment and Working Conditions.
- Equity in opportunities for secure, decently paid employment with decent working conditions are important factors for promoting health inequity.
- Work and employment and health, well-being and health inequities are interrelated in many ways.
- The largest contributor to the gap in self-reported health status linked to Employment and Working Conditions is explained by differences in rates of employment.
- Excessive hours, a way of indicating quality of work, also substantially influences health inequities.
- Differences in well-being highlight the need to reduce in-work poverty in order to reduce health inequities.

Exclusion from good-quality work can significantly affect health and well-being

- Being in work, the quality of this work and the health risks associated with it are influenced by a person's socioeconomic status (123).
- People with fewer years of education and those in chronic ill health have lower employment rates than their counterparts who spent more years in education (123, 124).
- Ensuring equitable participation in secure and decent employment has the potential to address health inequities by providing equal opportunities to earn a secure income (12).
- Unemployment and poor working conditions have a negative impact on well-being and increase the risk of mental disorders (125).
- In men, long-term unemployment is a predictor of more frequent heavy drinking, risk of CVD, and behaviours that contribute to health risks, such as accidents, crime, and violence (126).
- The effects of unemployment and work-related diseases on women are less well understood. Musculoskeletal and lower-limb disorders, along with stress-related problems affect women more than men (14). Spells of ill health increase the risk of job loss and lead to lower wages when people return to work (127).
- Long-term employment rates have not recovered among young people aged 15–24 years, and unemployment at this stage of life has enduring negative mental health effects (128).
- Young people who have experienced long-term unemployment are more likely to report behaviours that put health at risk than those who have not experienced unemployment, including young people from more advantaged backgrounds (124).

Good health, good jobs and economic gains

- The relationship between health, employment and national economies is becoming better understood. It has been estimated that increasing the proportion of people in good health in northern England, for example, by 3.5% would reduce the employment gap between that region and the rest of England by 10% (127).
- Decent work for all means attaining full and productive employment for all, which includes giving workers access to decent working and living conditions.

Quality of employment is important to ensure health and well-being

- Being in employment is not necessarily sufficient to reduce health-harming conditions.
- Differences in rates of overworking (working in excess of 40 hours a week) contribute to health inequity (Fig. 2.29).

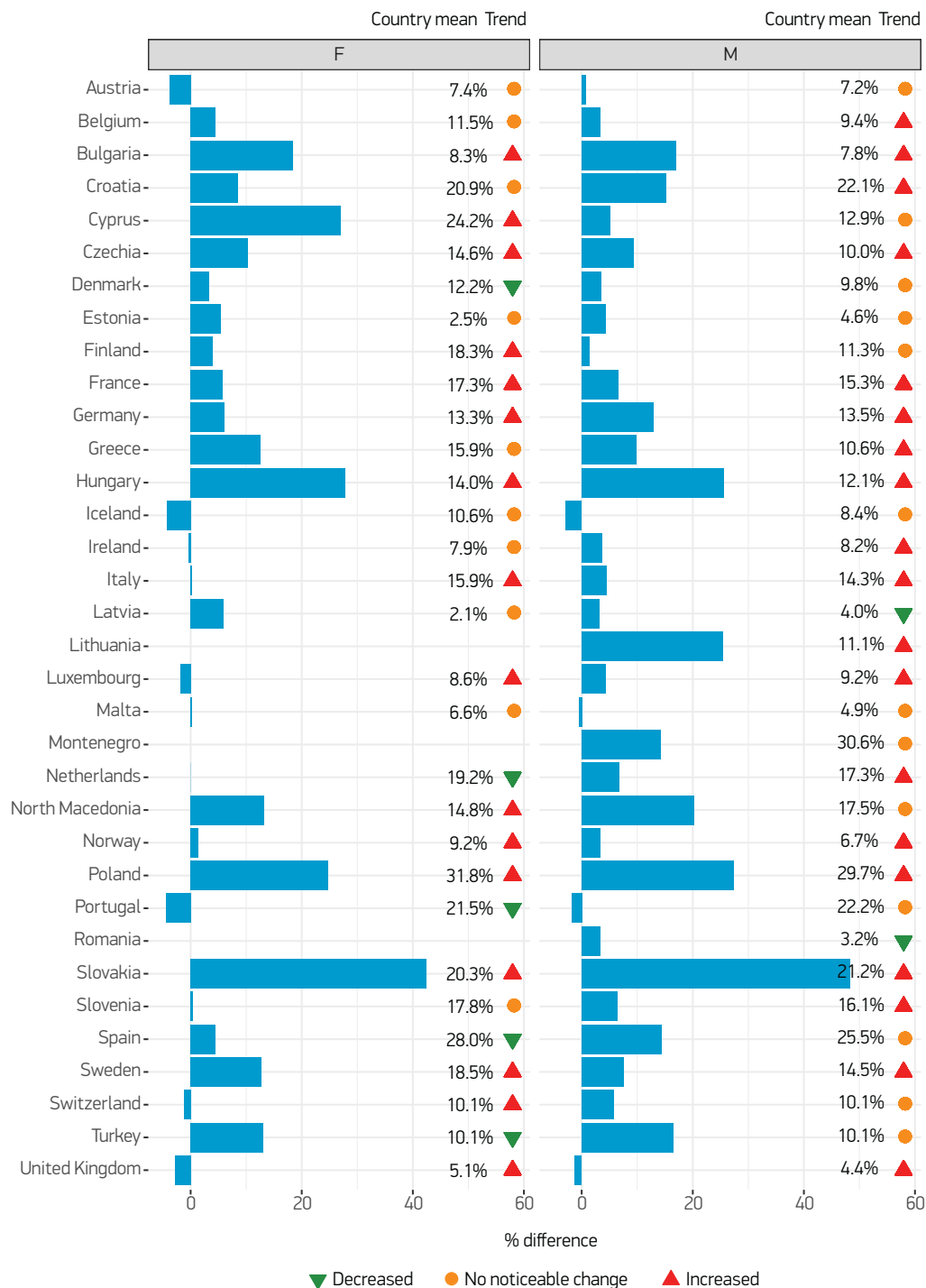
The rise of temporary work in the WHO European Region

- Temporary employment, which is often insecure in terms of pay and working conditions, includes fixed-term, seasonal, and casual work. More than half of new jobs created since 1995 in the EU have been part-time, non-contracted, insecure jobs (129).
- In almost every country for which data were available, the difference in rates of temporary employment between men with the fewest and most years of education stayed the same or widened between 2000 and 2017 (Fig. 2.30).
- Temporary employment is more common among vulnerable groups, such as young people, migrants, women, people from lower-income backgrounds and those with fewer years of education.
- In 26/31 countries, the difference in rates of temporary employment between women with the fewest and most years of education stayed the same or widened between 2000 and 2017.

- For the countries in Fig. 2.30, out of every 100 adults there are on average eight more women and 10 more men with the fewest years of education that are in

temporary employment, compared to women and men with the most years of education, respectively.

Fig. 2.30. The percentage difference in adults (aged 20–64 years) in temporary employment with the fewest years of education compared to those with the most years of education, 2017 (and trends since 2000)



Notes. F = females. M = males. Data missing for women in Lithuania, Montenegro and Romania.

Source: authors' own compilation based on data extracted for the years 2000–2017 from Eurostat.

Health, temporary work and policy coherence

- Poor mental and physical health (psychological stress, depression and CVD) are more prevalent among workers in precarious or temporary employment than among workers in permanent employment (124).
- Reducing the amount of temporary employment would help reduce numbers of vulnerable people at risk of economic, psychological and physical stress and anxiety due to precarious employment (124, 130, 131).
- As employment trends change in the WHO European Region, it is important that legislation and policies (labour, education, taxation, collective bargaining) seek to protect people most at risk of being left behind (132).
- Coherent policy-making means ministries of health and employment exchanging information on the advantages and disadvantages of these forms of work, looking at the impact of temporary employment outside of national employment rates.

The rise of in-work poverty

- Throughout the WHO European Region many people with the fewest years of education are working but still living in poverty, often because the jobs they occupy are temporary or insecure (Fig. 2.31).
- Across the 34 countries in Fig. 2.31, out of every 100 employed adults, between two and 50 more adults with the fewest years of education live in poverty compared to those with the most years of education.
- In five out of 34 countries, the gap between employed people with fewest and most years of education living in poverty narrowed between 2005 and 2017.
- In the remaining 29 countries, for women and men, the gap in employed people living in poverty stayed the same or increased.
- In-work poverty often results from frequent movement in and out of unemployment, due to employees being in insecure or temporary work.

SDGs and work

SDG 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

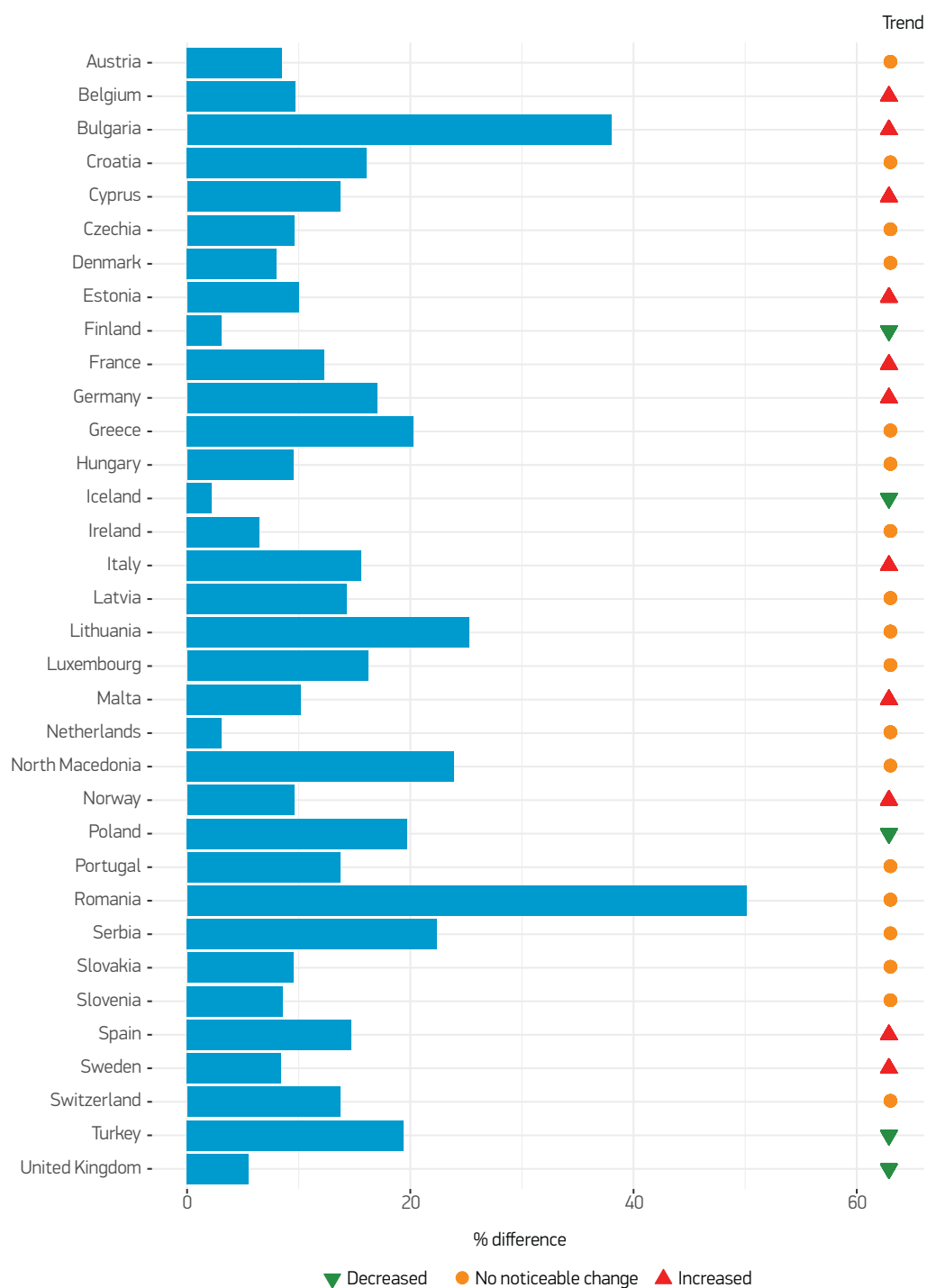
Wage levels have a direct effect on health inequity

- Low-wage jobs are associated with poorer self-reported health, life satisfaction and risk of poverty and social exclusion.
- These types of jobs are also disproportionately occupied by younger people, those with fewer years of education, migrants, and women (due to gender norms in terms of responsibility for families and caring). The amount of control workers have over the demands made of them also profoundly affects health inequities (2).

Improving wages, improving health and reducing inequities

- Income support and financial protection mechanisms, such as social transfers, enable low wage-earners to not be at risk of poverty and social exclusion (see also Section 2.3).
- European and international standards for minimum wages have a positive impact on guaranteeing people in employment a basic level of resources for meeting health needs as well as other basic needs (12).

Fig. 2.31. The difference in poverty rates between employed people with the fewest years of education compared to those with the most years of education, 2017 (and trends)



Notes. For most countries, trends data were available since 2005, with the exception of: Croatia (2010), North Macedonia (2012), and Serbia (2013).

Source: authors' own compilation based on data extracted for the years 2005–2017 from the EU-SILC survey.

Policies to reduce the unemployment gap are a key priority to reduce health inequities

- Expenditure on LMPs is an indicator of a country's commitment to improving the employment prospects of people who are out of work or in low-wage work, bringing about the associated health and well-being benefits (2).
- Expenditure on LMPs across the WHO European Region ranges from 0.5% to 3.2% of GDP (Fig. 2.32).
- In 19 of the 25 countries for which data were available, expenditure on LMPs either stayed the same or decreased between 2005 and 2016.
- Men tend to benefit more from LMPs than women, across the Region. In 28 countries with sex-disaggregated data, out of every 100 men wanting work, on average 35 are LMP programme participants, whereas only 30 in every 100 women are participants in LMP programmes.

Good-quality active LMPs will contribute to reducing health inequities

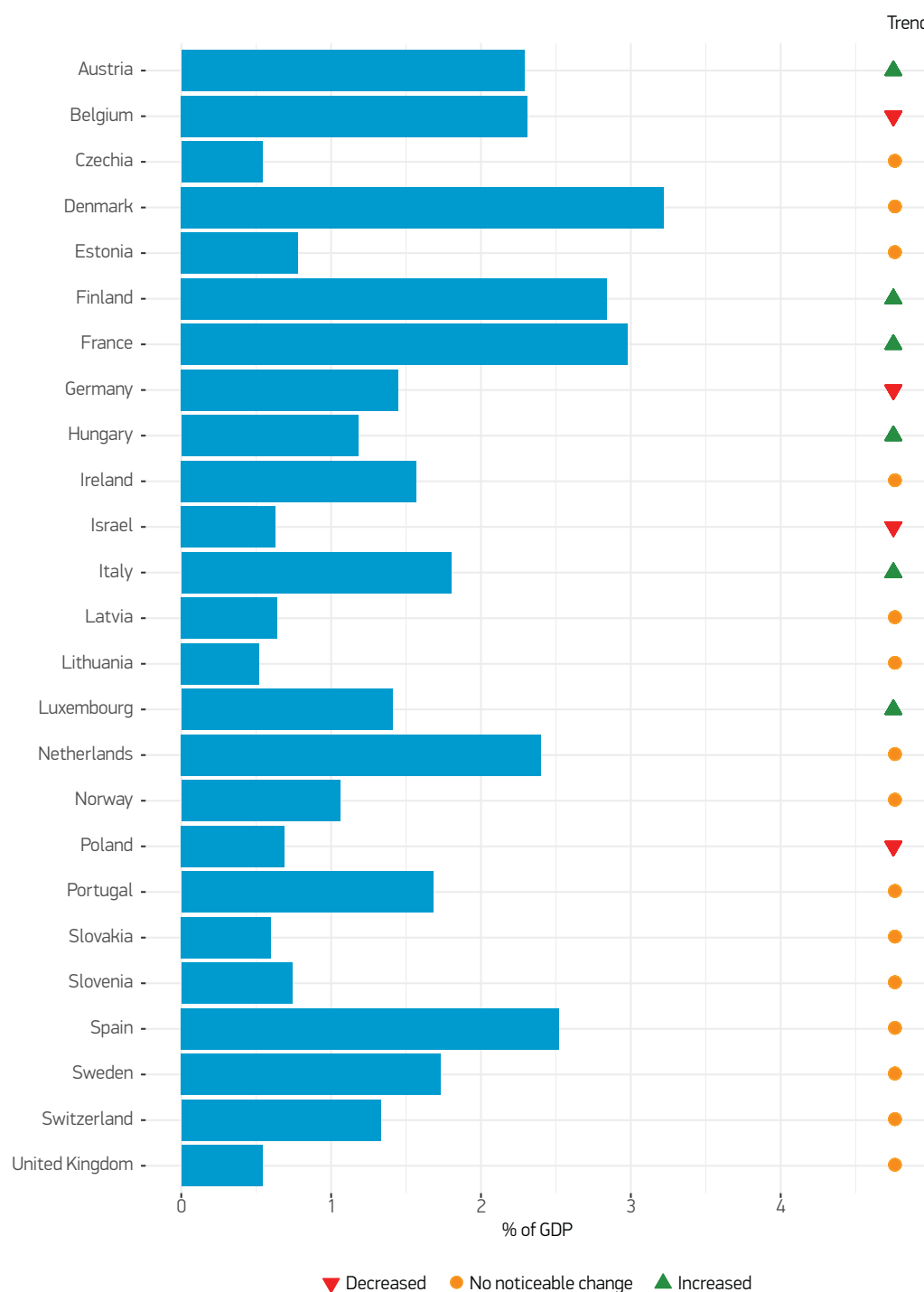
- Good-quality active LMPs and effective lifelong learning and vocational training, equitable employment legislation and adequate social security systems can improve health equity, as well as increase employment and contribute to economic growth (2, 133).
- Good-quality active LMPs improve mental health, increase sense of control and reduce sickness absence across the income spectrum and particularly for people with fewer years of education and fewer skills, and those who are in insecure work (124). Such policies include peer mentoring, apprenticeship schemes, on-the-job-training and job-seeking training.
- A coherent policy approach is needed to implement and monitor LMPs as they are less effective if their target populations are mentally or physically unhealthy (70).

Collective bargaining is a method to reduce inequities in working conditions

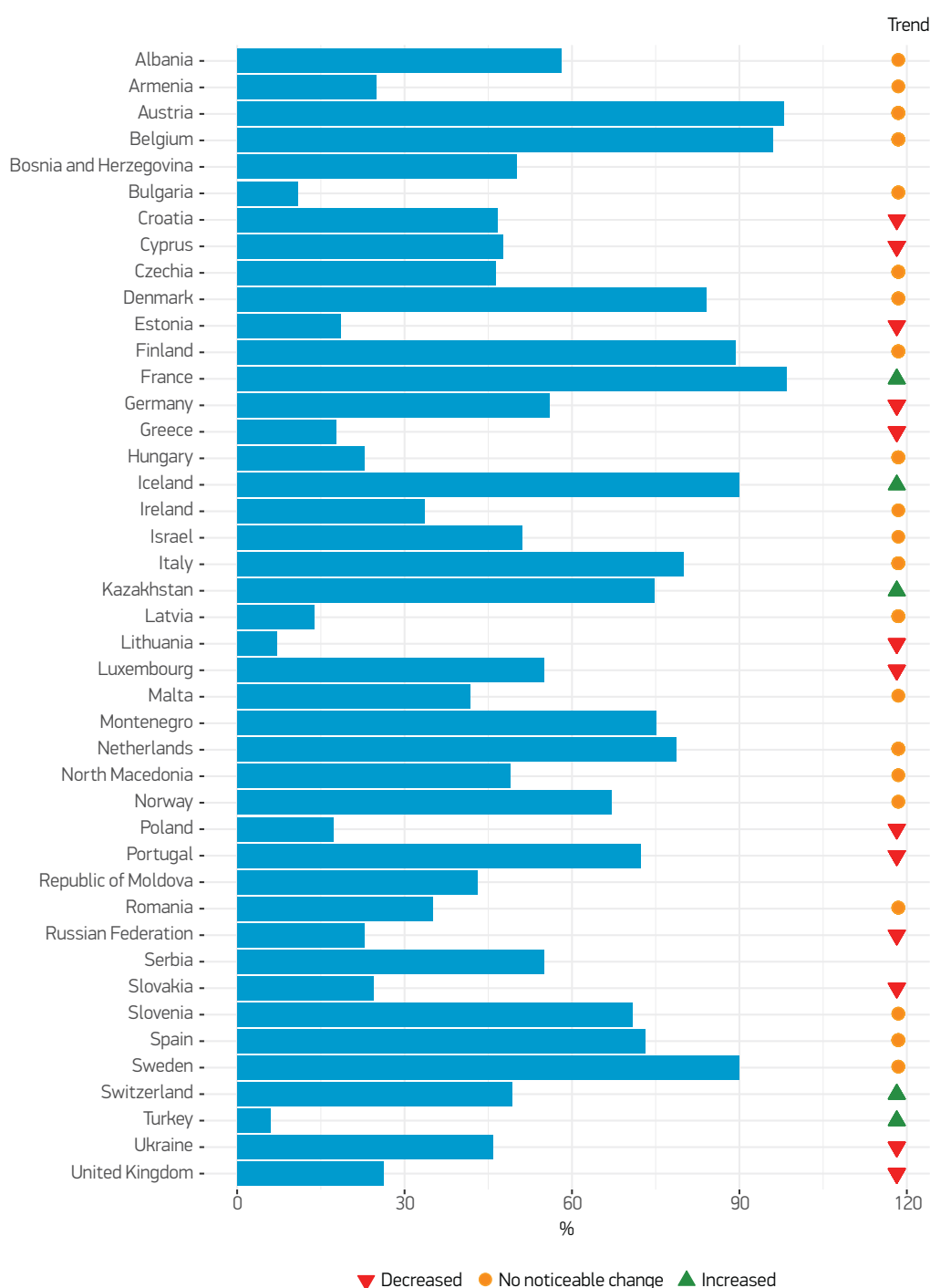
- In 15 of the 43 countries analysed in Fig. 2.33, more than 60% of the population are covered by collective bargaining.
- Workers' rights are being eroded. In 79% of countries (34/43) the collective bargaining rate stayed the same or reduced between 2004 and 2015.
- Temporary contract work is on the increase and is rarely unionized, potentially constituting one reason why union membership is in decline.
- Among these 43 countries, rates of collective bargaining coverage range between six and 99 adults out of every 100.

Collective bargaining, health and inequities

- Where collective bargaining arrangements are in place, as well as having the effect of reducing poverty, working conditions tend to be healthier and sickness absence rates lower.
- Collective bargaining empowers and supports workers in having better and more equitable opportunities to have decent financial and physical working conditions. In turn, reducing differences in wages levels, job security and working conditions promotes more equitable health and economic outcomes (95). Collective bargaining agreements contribute to reducing health inequities when they include the most vulnerable in the labour market and empower and support them to attain equal opportunities and benefits, securing fair and decent financial and physical working conditions.
- Countries with high levels of collective bargaining tend to have less inequality in wages, lower and less persistent unemployment, and fewer and shorter strikes than countries in which collective bargaining is not so well established (134).

Fig. 2.32. Expenditure on active (and passive) LMPs as a percentage of GDP, 2016 (and trends since 2005)


Source: authors' own compilation based on data extracted for the years 2005–2017 from the OECD database.

Fig. 2.33. Collective bargaining coverage rates, various years (and trends)

Notes. The figure depicts the extent to which wages and terms and conditions of work are negotiated collectively and the coverage of workers by these collective contracts. Most recent data year for most countries was 2015, with the following exceptions: Montenegro (2008), and Serbia (2010). For most countries, trends data were available since 2004, with the following exceptions: Bulgaria (2011), Croatia (2013), Israel (2012), North Macedonia (2011), Slovenia (2013), and Turkey (2012).

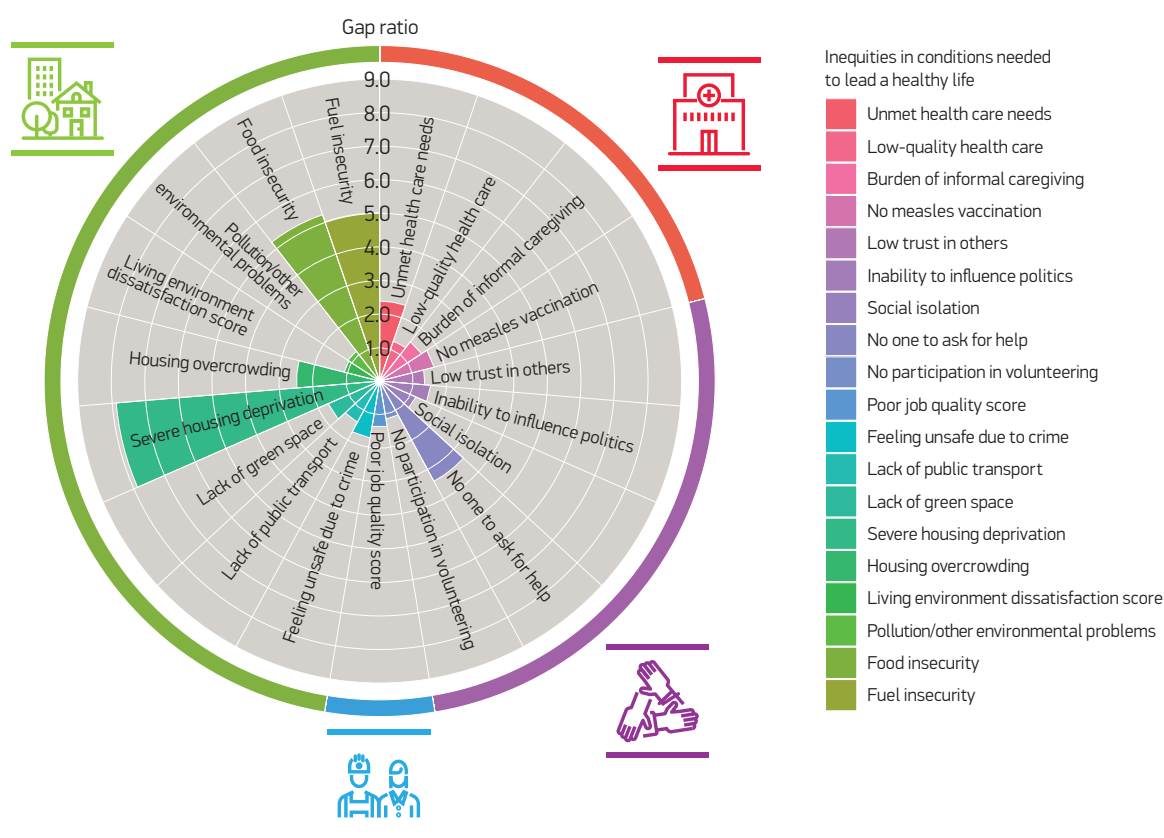
Source: authors' own compilation based on data extracted for the years 2004–2015 from the ILO database (ILOSTAT).

2.7 Summary wheel profiles of inequities in underlying conditions

Inequities in income drive inequities in the conditions needed for a healthy life

- Similar to the summary wheels in Section 1.3, Fig. 2.34 and Fig. 2.35 compare the differences in underlying conditions of health inequities for adults across the WHO European Region.²¹
- These summary assessments of inequities in indicators of *Health Services*, *Living Conditions*, *Social and Human Capital*, and *Employment and Working Conditions* across the Region show that there are socioeconomic gradients in every indicator in each of the conditions.
- Fig. 2.34 examines average differences between the highest and lowest income quintiles within all countries across the Region for which data were available. Some extremely pronounced inequities are observed, particularly in indicators of *Living Conditions*.

Fig. 2.34. Average within-country inequities in conditions needed to live a healthy life (gap ratio between the lowest and highest incomes quintiles)



Note. These figures are not disaggregated for men and women as they include indicators for which data are collected only at the household (not individual) level.

Source: authors' own compilation based on the Health Equity Dataset.

²¹ The wheels shown in these two illustrations only analyse indicators from the Health Equity Dataset. As such, some factors may be omitted; this is not a deliberate decision but one influenced by data availability. For example, Income Security and Social Protection is not included, as inequities in income are captured in the Health Equity Dataset not by disaggregated indicators but by summary indicators of income inequality and insecurity, such as Gini income inequality and relative poverty rate.

Key findings

- Across the Region, there are pronounced inequities in the four conditions measured in the wheels.
- Compared to those in the highest income quintile, people in the lowest income quintile are:
 - almost eight times more likely to suffer from severe housing deprivation;
 - five times more likely to suffer from food and fuel insecurity;
 - more than twice as likely to live in overcrowded housing;
 - more than twice as likely to have no one to turn to for help;
 - more than twice as likely to be more at risk of unmet health care needs.

Substantial inequities in *Living Conditions* and *Social and Human Capital*

- People in the lowest income quintile are almost eight times more likely to suffer from severe housing deprivation compared to those in the highest income quintile.
- People in the lowest income quintile are five times more likely to suffer from food and fuel insecurity compared to those in the highest quintile.
- Those in the lowest income quintile are more than twice as likely to live in overcrowded housing and to have no-one to turn to for help.
- These gaps in *Living Conditions* and *Social and Human Capital* reflect inequities in safety, sense of belonging, peace and security associated with having decent housing and someone to turn to for help.

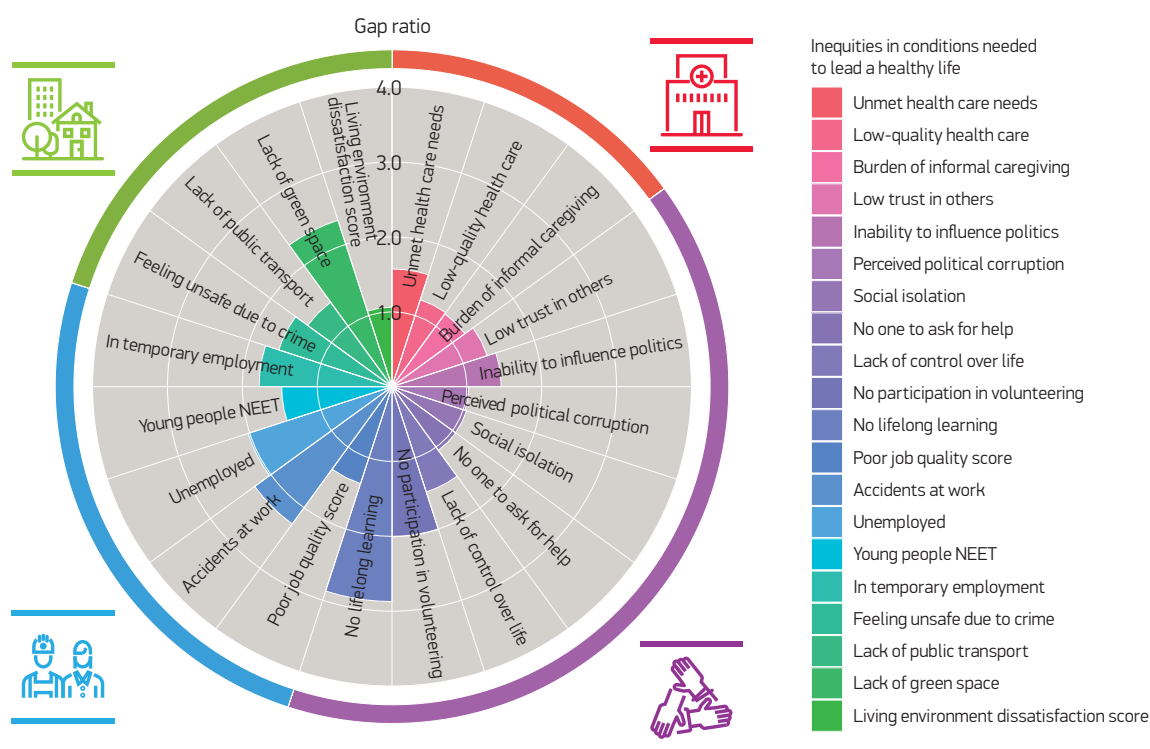
Inequities in *Health Services* and other conditions

- There are also strong inequities in unmet need for health care. People in the lowest income quintile are 2.5 times more at risk of unmet health care needs than those in the highest income quintile.
- There are clear inequities in all other indicators, showing that people in disadvantaged groups fare worse than those in advantaged groups, across the board and in all indicators.

Key findings

- Compared to people with higher education levels, those with lower education levels are:
 - more than twice as likely to have suffered from an accident at work;
 - three times less likely to have participated in lifelong learning;
 - 1.5 times more likely to have unmet health care needs, low levels of trust in others, inability to influence politics, lack of control over life, poor job quality, temporary insecure employment, lack of safety and lack of access to public transport.

Fig. 2.35. Average within-country inequities in conditions needed to live a healthy life
(gap ratio between the lowest and highest education levels)



Notes. The figures are not disaggregated for men and women as they include indicators for which data are collected only at the household (not individual) level. The large gap in participation in lifelong learning is partly an artefact of stratifying by years of education. NEET: not in education, employment or training.

Source: authors' own compilation based on the Health Equity Dataset.

Inequities in education drive inequities in the conditions needed to live a healthy life

- Fig. 2.35 shows the differences between people who have the lowest and highest number of years in education in the four conditions needed to lead a healthy life.
- For each condition measured, people with fewer years of education fare worse than those with more years of education.
- Those with most years of education are almost three times as likely to have participated in formal and informal education and training after the age of 25 years, compared to those with the fewest years of education.

Substantial inequities in Health Services, Employment and Working Conditions, and Social and Human Capital

- Across the WHO European Region people with the fewest years of education are more than twice as likely to have suffered from an accident at work compared to those with the most years of education.
- Unmet health care needs, low trust in others, inability to influence politics, lack of control over life, poor job quality, temporary insecure employment, lack of safety and lack of public transport are all around 1.5 times more likely among people with the fewest years of education compared to those with the most years of education.
- These factors contribute in particular to divisions across society in terms of the sense of security, belonging, and control over life for people across the Region, in ways that affect equity in mental and physical health.

Methods behind the wheels

- The gap ratios in the summary wheel figures are interpreted in the same way as described in Section 1.3. Each circular gridline indicates how many times more at risk those in the least advantaged group are in comparison to those in the most advantaged group for each indicator.²² These figures show the average size of the within-country gap for each indicator, considering all countries across the WHO European Region for which data were available.
- The figures draw on a wider set of disaggregated indicators in the Health Equity Dataset, some of which do not appear elsewhere in this report. For example, the Health Equity Dataset includes indicators on social isolation, public transport, and volunteering.
- The two summary wheels of inequities presented in Fig. 2.34 and Fig. 2.35 provide an understanding of the size of inequities in the underlying conditions across the Region. These summary wheels **do not reveal how much each indicator contributes to health inequity**.
- For indicators that are not disaggregated, gap ratios cannot be displayed in the figures. For example, policy actions on *Income Security and Social Protection* are key to reducing health inequities but they are not included.

²² The exceptions are the indicators of poor job quality and living environment dissatisfaction which form the basis of Fig. 2.35, whereby average scores are compared for the job quality score (as measured by Eurofound's Skills and Discretion Index) and living environment satisfaction scores are compared between groups.

3. Now is the time to achieve, accelerate and influence

The HESR provides the evidence to remove barriers and create the conditions for all to prosper and flourish

- Too often the common narrative on the lack of progress to reduce health inequity is that it is too complex and difficult to address, and it is not clear which policies and approaches would be most effective.
- The evidence in sections 1 and 2 identify the key issues and outline the approaches needed to reduce health inequities in the WHO European Region.
- For multiple indicators, the HESR demonstrates a clear socioeconomic gradient exists in terms of their impact on health and well-being.

A socioeconomic gradient is found in many indicators across all five conditions needed to live a healthy, prosperous life

- Section 1 shows a clear socioeconomic gradient in health and life chances, whether indicators of mortality, morbidity, or well-being are examined.
- The socioeconomic gradient is consistent, whether years of education, income or affluence level, or level of human development are used as markers of socioeconomic position.
- Section 2 shows health inequities are driven by the differences in the five underlying conditions associated with health inequities: *Health Services, Income Security and Social Protection, Living Conditions, Social and Human Capital* and *Employment and Working Conditions*.
- In each of the five conditions, systematic differences between people with either lower and higher incomes or lower and higher education levels have strong statistical significance in explaining health inequities.
- Using the evidence in sections 1 and 2, WHO European Region Member States can **achieve** progress towards reducing health inequity by creating the conditions necessary for health equity.

Key findings

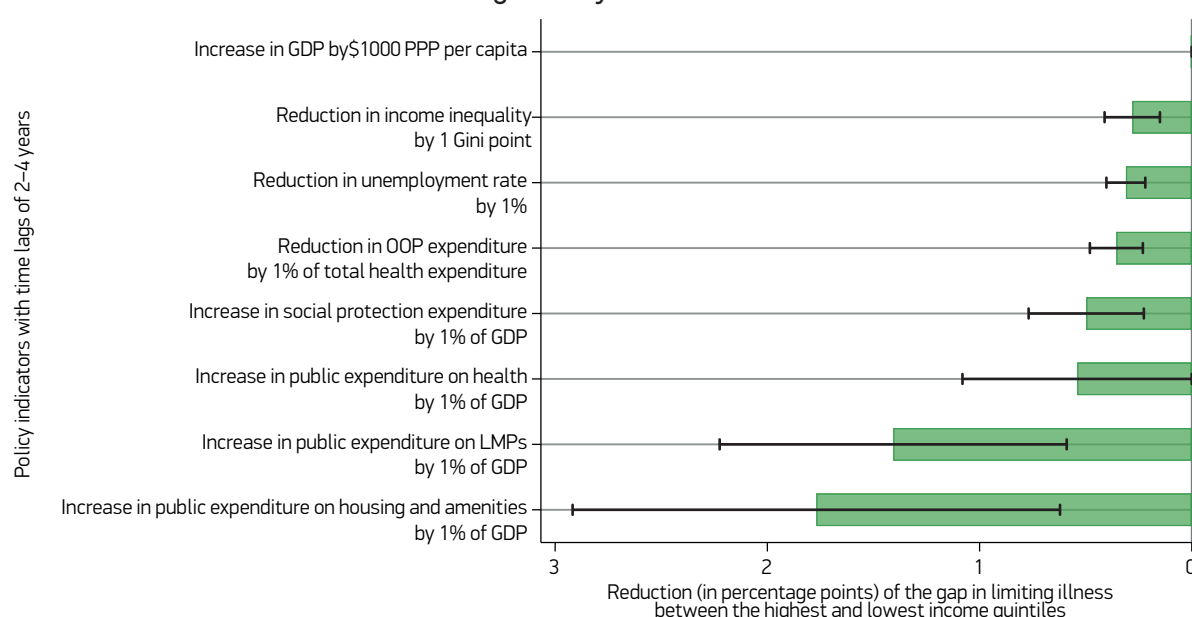
- The HESR provides the evidence needed to remove barriers and create the conditions for all to prosper and flourish.
- **Modelling the impact of improving policies** and the association with reducing differences in limiting illness between the highest and lowest income quintiles within countries, over a period of 2–4 years, establishes the fact that there are **many options to reduce health inequities** in the short term. These include:
 - increasing public expenditure on housing and amenities;
 - increasing expenditure on LMPs;
 - reducing relative poverty rates;
 - increasing social protection expenditure;
 - reducing unemployment;
 - reducing OOP payments for health.
- It is necessary to **address inequities in all of the underlying conditions**; selecting one intervention or one area is not sufficient and is the reason for the lack of progress in the Region thus far.
- Action for health equity is accelerated where:
 - **accountability mechanisms** are strong;
 - **policies are coherent** across sectors and different levels of government;
 - there is **inclusive participation** of sufficient quality;
 - people and communities are **empowered**.
- **Equitable health and well-being is vital to inclusive and sustainable economies and socially just societies.** Reforming employment structures and labour markets, and economic and trade policies, as well as ensuring fair income security measures, are important steps in sustainably reducing inequities and preventing differences from worsening. These are methods that health and finance and employment ministries can use to work together for inclusive and healthy economies and societies.
- **Multisectoral action is crucial** to removing barriers and creating the necessary conditions across all dimensions of life for equal opportunities to good health and prosperity for all. Health policies can have a greater impact and tackle unintended negative effects on health equity by other sectors if they are combined and coordinated across actors, institutions and levels of governance.

3.1 Policy actions to achieve progress towards health equity

Identifying what works to reduce inequities

- The HESR models the solutions needed to reduce health inequities by assessing the relationship between health equity and the implementation, coverage and uptake of key policies. Fig. 3.1 examines the relationship between health equity and several of the policy options discussed in Section 2.2 to Section 2.6.
- The figure shows the potential effects of eight macroeconomic policies in reducing health inequities. This improvement is measured by the percentage reduction in limiting illness reported between adults in the highest and lowest income quintiles within countries.
- The green bars represent the average reductions in health inequities that have been achieved 2–4 years after countries have taken action to implement each of the eight policies listed on the left of the chart, controlling for each of the other policy indicators and for country characteristics.
- The aim is to enable policy-makers to feel confident that, with the right interventions, the gaps in health between socioeconomic groups can be reduced, even within political mandates.
- Increasing per-capita income shows no association with reducing health inequities, while all of the other seven policies show a positive association. However, the magnitude of the association of each of these policies is different. Fig. 3.1 shows that, of the policy indicators available in the Health Equity Dataset, the indicator associated with the largest reduction in health inequity is an increase in public expenditure on housing and community amenities (as a percentage of GDP).
- Increases in expenditure on LMPs, reductions in relative poverty rates, increases in social protection expenditure, reductions in unemployment and OOP payments for health are all associated with reductions in health inequities.
- As increasing average income per capita is not associated with any significant reductions in the health gap; it is vital that income inequality is reduced.

Fig. 3.1. The potential for 8 macroeconomic policies to reduce inequities in limiting illness among adults with a time lag of 2–4 years in 24 countries



Notes. Country fixed effects are used in the model. The converse widening of health inequity is true for countries taking the equal but opposite policy actions – the analysis does not account for asymmetry in changes in different directions.

Source: authors' own compilation, based on data for 2008–2014 from the Health Equity Dataset.

- The association between increases in expenditure on public health and reducing inequities in limiting illness is positive, though not statistically significant (as can be seen by the 95% confidence interval (CI) that touches the zero line in Fig. 3.1). This suggests increasing expenditure on public health may not by itself be enough to reduce health inequity.
- As the analysis in Section 1 suggests, these measures need to be accompanied by reductions in the burden of OOP payments, as well as ensuring equally high-quality health care provision.

Methods behind the analysis

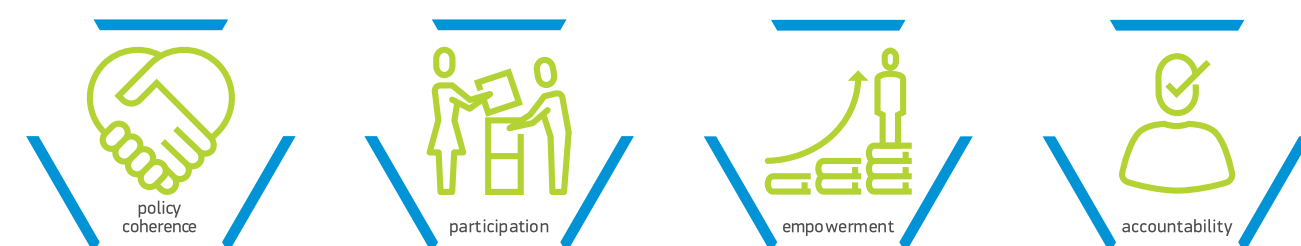
- It is important to note that this is not a causal analysis or predictive model. It should not be claimed, for example, that increasing social protection expenditure by 1% of GDP will lead to a 0.5% decrease in the difference in limiting illness, for example from 5% to 4.5% in the average western Balkan country, or in any specific country.
- The analysis shows what statistical associations have been observed in the past, and can therefore be interpreted going forward as guidance for what is within realistic bounds of policy impact. The analysis of relationships between each policy indicator and the gap in health allows for a time lag of 2–4 years. This is because the link between change in policies and change in health equity is not instantaneous.
- The 95% CI in Fig. 3.1 shows which of the policy indicators have a statistically significant association with health inequity. CIs that do not touch or intersect the zero axis indicate statistically significant associations.
- A 1% reduction in the difference in limiting illness can be better understood in the context of the differences in limiting illness identified in Fig. 1.17 (Section 1.2).
- There is an average 14% difference in limiting illness between people in the highest and lowest income quintiles in the western Europe country cluster.
- There is an average 5% difference in limiting illness between people in the highest and lowest income quintiles in the western Balkans country cluster.
- The analysis considers lags of 2–4 years; as such, these associations represent short-term changes. It is therefore difficult for this analysis to capture long-term changes, such as associations between early years' interventions. This is because policy interventions such as these require a longer time frame in order to see evidence of the well-established effects.
- A limitation of analysing multiple policy interventions in one model is that the time frame considered is constrained by the indicators for which the fewest years of data were available. As data sources underlying the Health Equity Dataset are updated, it may be possible to expand the model to include early years policy interventions in future iterations of the report.

3.2 Accelerating progress to reduce health inequities

Making policies more effective

- In addition to specific policies measuring and establishing the pathways through which health inequities arise, certain broader social and institutional factors are also crucial in accelerating the reduction of health inequities. Policy coherence, accountability, participation and empowerment all drive health equity (Fig. 3.2).
- Each of these four drivers can empower or disempower people and communities to actively engage with decisions affecting their health and well-being and the five required underlying conditions (13).

Fig. 3.2. The four drivers for reducing health inequities



- Action for health equity is accelerated where: accountability mechanisms are strong; policies are coherent across sectors and different levels of government; there is inclusive and high-quality participation; and where people and communities are empowered (13).
- Advancing health equity requires State engagement with accountability processes both within and beyond health services. Accountability mechanisms and processes need to adapt to continually evolving political, environmental, economic and social challenges. Accountability is fundamental to good governance and the rule of law; it underpins the legal commitment that all people and institutions, including the State, are subject to the laws and commitments made by states (64).
- Taking action on the SDH, economic and environmental determinants and the CDoH is central to Health 2020, which emphasizes an integrated and multisectoral approach in achieving better health and well-being (102).

Adopting proportionate universal approaches

- The task of levelling up the gradient in health cannot be achieved by providing a common universal offer to everyone equally. At best, this would improve health equally for everyone, but the gradient would persist unchanged. At worst, demand for what is on offer would be greatest among people who already have most access to resources and health inequalities would be widened as a result.
- Similarly, the whole of the gradient in health cannot be reduced by only targeting those who are most deprived – since this would not improve the health of those who are moderately disadvantaged, but outside the target group. This is often referred to as a cliff-edge scenario in policy-making terms.
- To address these two contrasting forms of implementation failure, the proportionate universal approach aims to provide a universal offer to all, supplemented by additional resources that are distributed on the basis of level of need. The approach relies, of course, on having a sufficiently sensitive indicator of risk of subsequent ill health that both identifies need and enables any intervention to be delivered sufficiently early in the causal pathway to disease to make a difference.
- A proportionate universal approach can be implemented in a number of ways; namely, through service delivery, service commissioning, allocation of financial resources or through the design and rules for making payments from an insurance fund or welfare budget.

- **In terms of service delivery**, universal provision ensures wide public support and demonstrates that such an approach is not seen as providing “poor services for poor people”. The geographical distribution should be according to the level of population deprivation, and the intensity of staffing and range of facilities should be greatest in areas of higher deprivation, with the recognition that these factors are progressively less important to achieving equality in areas of greater affluence.
- **As far as service commissioning is concerned**, many services are publicly commissioned that either contribute to the SDH or are able to mitigate their effects (such as housing, libraries, provision of clean water and effective sewerage, maintenance of safe public spaces). Often these services are maintained at the highest level in the most affluent neighbourhoods. A proportionate approach involves spending more to bring deprived areas up to a good standard and maintaining those standards across the board. The resources to do this would essentially be proportionate to the need to improve environmental quality. To avoid any deterioration of the best areas, a basic offer should be in place to service those areas.
- **In terms of resource allocation**, many public services are supported by annual grant funding allocations from higher levels of government to lower levels that are closer to the communities they serve. Mechanisms for deciding on the level of support, such as funding formulae, should be needs based; that is, taking into account not only the demographic needs of the population served but also variation in social and health needs. Very often the metrics used to apportion funding are not based on need but on historic demand (e.g. historic use of health services rather than either the variation in social need, or health outcomes).
- **Insurance-based services** are used in many countries to provide health services and welfare payments. Ensuring a proportionate universal approach in population-centred schemes requires: reducing the size of the population not covered, when the scheme is based on premiums or other forms of contribution by individuals, employers or the State; and ensuring that the gateways to eligible services are driven by need and not either by demand from the most vociferous or by a requirement to navigate or “play” the system.

Improving disaggregated data

- Collecting disaggregated national data is fundamental to accountability for health equity. It is essential that all countries, particularly those without many data, improve their disaggregated data collection to enable better assessment and evaluation of the impacts and benefits of policies and interventions to reduce health inequities.
- The equity impact of policy should be measured in terms of its coverage, uptake, or effectiveness. Coverage indicates the availability of a policy to certain population groups, especially those most left behind. Uptake indicates to what extent the policy actually reaches its intended coverage group(s). Effectiveness indicates the ability of the policy to meet the intended goal of increasing equity in health and the conditions needed to live a healthy life.

3.3 Achieve, accelerate and influence

This report calls for improvements in all five conditions needed for health equity

- Implementing the policies and interventions needed to reduce health inequities for all requires Member States to build on universal policies and shift from single policy interventions to adopt a basket of solutions. It is necessary to address inequities in all of the underlying conditions (Fig. 3.3); selecting one intervention or one area is not sufficient and is the reason for the lack of progress thus far on this matter in the WHO European Region.
- Many actors, including health systems, various ministries across governments, professionals in health, social care and education, and civil society organizations have a role to play in the actions needed to provide the conditions for all to lead a healthy and prosperous life. It is important to engage the public as partners in helping to help create the conditions and reduce the barriers, so they understand why actions are needed to reduce health inequities.

Fig. 3.3. HESR health equity conditions



Health Services

- UHC is essential to improving health and well-being for all and to reducing health inequity.
- Member States should accelerate improvements in the quality of health services for people who are being

left behind by pursuing proportionate universalism to reduce unmet need for health care. This includes reducing OOP payments for health and accelerating actions to reduce the impacts of OOP payments for health on those who are being left behind.

Income Security and Social Protection

- Social protection policies should be implemented that reduce inequities in ability to cope with income insecurity when it occurs, irrespective of means and circumstances.

- This includes implementing employment conditions for all workers (no matter their type of contract) that protect against income insecurity, such as parental leave policies and statutory pensions.

Living Conditions

- Policies targeting the improvement of housing and community amenities should be implemented and actions accelerated in areas where people are most likely to be left behind, in order to reduce inequities.

- Policies and interventions should be implemented to improve the conditions in which people live, focusing on existing housing and neighbourhoods, as well as creating new accessible green spaces and good-quality housing in the areas in which people live who are most likely to be left behind.

Social and Human Capital

- Education policies should be implemented that reduce inequities, improve teaching and educational outcomes and accelerate education spending (early years, primary, secondary and lifelong learning) in areas in which those who are being left behind are most likely to live.

- It is also important to implement policies to encourage political engagement, so that all people are able to participate in political decision-making that influences their lives and health at local, national and international levels.

Employment and Working Conditions

- Policies and interventions should be implemented and actions accelerated to reduce differences

in unemployment rates, increase equitable availability of good-quality active LMPs, and improve

employment conditions for all workers, including those in precarious forms of employment (e.g. temporary and fixed-term contracts).

Multisectoral action is crucial

- All sectors of government, not only the health sector, are responsible for promoting positive health environments and reducing exposure to health risks.
- Health services can strengthen and maximize the contributions of other sectors towards reducing health inequities. The range of stakeholders working on issues of relevance to health equity is increasingly diverse. They operate at international, regional, national and subnational levels, as well as across the public–private, profit and non–profit-making, and formal to informal spectrums.
- Health policies can have a greater impact and tackle unintended negative effects on health equity by other sectors if they are combined and coordinated across actors, institutions and levels of governance.
- SDG 17 is to revitalize the global partnership for sustainable development; as such, one of its aims is to encourage and promote effective public, public–private and civil society partnerships, building on the experience and resourcing strategies of partnerships.
- Ministries (including health) need strong accountability mechanisms and processes to ensure that legislation and regulations that advance health equity are enacted and implemented (64).
- Working with non-State actors, including corporations, is essential to working towards health equity in the WHO European Region and addressing the CDoH.
- The HESR provides the evidence needed for health services to shift to multisectoral approaches, from seeing health and well-being as lifestyle issues to regarding equitable health and well-being as a vital to inclusive and sustainable economies and socially just societies (13).
- The equity in Health in All Policies (eHiAP) approach provides capacity-building and tools to implement joint actions to improve health equity and well-being across sectors.
 - This framework emphasizes a multisectoral approach to national or subnational public policy development to ensure that health equity is given full consideration outside of health services. The aim is to make health equity a priority for the whole of government(s).

Sustainable economies and health inequities

- Health equity is central to achieving sustainable development and inclusive economies. To achieve the SDGs requires working with health and development partners, and adopting a multisectoral approach is vital to this work to encourage collaboration between people working in different sectors.
- The conditions imposed on countries by international organizations and financial institutions are often at odds with the aim of improving health for all. Instead of prioritizing sustainable and inclusive growth, the conditionalities prioritize economic growth that is not sustainable, which can lead to low wages, tax increases and cuts to key services, such as health and social care (135).
- Improving trust in public institutions, such as health services, is part of improving how societies function, contributing to reducing stress and improving well-being.
- Reforming employment structures and labour markets to make them more equitable and ensuring economic and trade policies are equitable for all are important to sustainably reduce inequities and prevent differences from worsening.
- Regarding income security measures as part of preventative health and well-being is a way that health, finance and employment ministries can work together for inclusive and healthy economies and societies.
- Improving health and well-being and ensuring no one is left behind contributes to economic growth and, in turn, sustainable and inclusive growth stimulates economies and reduces income-related inequalities in health (136, 137).
- Sustainable and inclusive growth aims to benefit everyone fairly across society. Incorporating social values – such as fostering fairness, equality, respect for human dignity and human rights, trust, belonging, well-being and resilience – in financial and economic policy will help to achieve sustainable development and inclusive societies and remove the barriers so everyone can prosper and flourish.

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Annex 1. Methods to derive indicators

A1.1 Selection of indicators

Indicators were selected for inclusion in the Health Equity Status Report (HESR) Dataset to provide a pragmatic set of measures that were based on accessible data and cover health equity status and policy progress across the five underlying conditions of health equity: *Health Services, Income Security and Social Protection, Living Conditions, Social and Human Capital and Employment and Working Conditions*. Certain key criteria were considered in selecting indicators, in consultation with the Scientific Expert Advisory Group.

The HESR aimed to include indicators that:

- clearly related to priority areas for action on health equity for which there is a clear evidence base;
- related to areas of action in which Member States have already made commitments;
- were relevant to the full range of country contexts across the WHO European Region;
- provided a balance of measures across the five underlying conditions for health equity;
- provided sufficient coverage of countries across the Region – aiming to cover at least 30 countries with each indicator, with preference given to indicators that covered countries outside the European Union (EU);
- used data that had been collected through consistent processes across countries in order to support more reliable comparisons;
- used data that could be disaggregated by socioeconomic status, or that were related to policies known to have an impact on health inequities;
- used openly accessible data from international datasets, which could be feasibly collected and analysed given the available timescale and resources;
- used data that were reasonably current and that could be updated to track trends.

An initial, long list of over 200 indicators was reviewed by the Scientific Expert Advisory Group and through wide consultation against the criteria listed above; the final 108 indicators included in the Health Equity Dataset were selected.

A1.2 Data sources

Data from several sources were used to derive the indicators featured in the Health Equity Dataset. Data were obtained from sources such as household and other population-based surveys, administrative data systems and surveillance systems. Where obtainable, publicly available data were used. For example, a number of indicators were derived from datasets containing national-level data published by the Organisation for Economic Co-operation and Development (OECD), World Bank, International Labour Organization (ILO) and the Eurostat database from the Statistical Office of the EU. Eurostat data were obtained through a data-sharing agreement (RPP 85/2018-LFS-EU-SILC-EHIS). The responsibility for all conclusions drawn from the data lies entirely with the authors.

Where data were not publicly available, survey microdata, which contained information available at the individual level, were used to derive indicators. Official requests were made to access survey microdata, using (for example) the European Union Statistics on Income and Living Conditions instrument (EU-SILC), the WHO STEPwise approach to Surveillance (STEPS) tool, and the European Health Interview Survey (EHIS; included in the list below). Empirical data collected from these nationally representative surveys, among others, were compiled and processed to create indicators.

Details of each of the data sources are listed here.

- Eurostat [online database]. Luxembourg: Statistical Office of the European Union (<http://ec.europa.eu/eurostat/data/database>).
- World Bank Data Catalogue [online database]. Washington (DC): The World Bank Group (<https://data.worldbank.org/data-catalog>).
- WHO Global Health Observatory (GHO) data repository [online database]. Geneva: World Health Organization (<http://www.who.int/gho/en/>).
- WHO Global Health Expenditure Database (GHED) [online database]. Geneva: World Health Organization (<https://apps.who.int/nha/database>).
- European Health Information Gateway [online database]. Copenhagen: WHO Regional Office for Europe (<https://gateway.euro.who.int/en/>).
- OECD.Stat data warehouse [online database]. Paris: Organisation for Economic Co-operation and Development (<https://stats.oecd.org/>).
- ILOSTAT [online database]. Statistics of the International Labour Organization. Geneva: International Labour Organization (<http://www.ilo.org/ilostat/>).
- UNICEF data [online database]. New York (NY): United Nations Children's Fund (<https://data.unicef.org>).
- UIS.Stat [online database]. UNESCO Institute for Statistics. Paris: United Nations Educational, Scientific and Cultural Organization (<http://data.uis.unesco.org/>).
- Global Data Lab (GDL) [online database]. Nijmegen: Raboud University Institute for Management Research (<https://globaldatalab.org/>).
- European Union Statistics on Income and Living Conditions (EU-SILC) [online database]. Luxembourg: Statistical Office of the European Union (Eurostat) (<http://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions>).
- European Quality of Life Surveys (EQLS) (<https://www.eurofound.europa.eu/surveys/european-quality-of-life-surveys>). European Foundation for the Improvement of Living and Working Conditions (Eurofound). European Quality of Life Survey integrated data file, 2003–2016 (data collection). 3rd Edition. Colchester: UK Data Service; 2018 (SN: 7348) (<http://doi.org/10.5255/UKDA-SN-7348-3>).
- European Social Survey (ESS) (<http://www.europeansocialsurvey.org/>).
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- European Working Conditions Survey (EWCS) (<https://www.eurofound.europa.eu/surveys/european-working-conditions-surveys>). Eurofound. European Working Conditions Survey integrated data file, 1991–2015 (data collection). 7th Edition. Colchester: UK Data Service; 2018 (SN: 7363) (<http://doi.org/10.5255/UKDA-SN-7363-7>).
- World Values Survey (WVS) (<http://www.worldvaluessurvey.org>).
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- Health Behaviour in School-aged Children (HBSC) [online database]. Bergen: HSBC Data Management Centre (<https://www.uib.no/en/hbscdata>).

- Global Burden of Disease (GBD) Collaborative Network [online database]. Seattle (WA): Institute for Health Metrics and Evaluation (IHME) (<http://ghdx.healthdata.org/organizations/global-burden-disease-collaborative-network>).
- WHO STEPwise approach to Surveillance (STEPS) [website]. Geneva: World Health Organization (<https://www.who.int/ncds/surveillance/steps/en/>).
- European Health Interview Survey (EHIS) [online database]. Luxembourg: Statistical Office of the European Union (Eurostat) (<https://ec.europa.eu/eurostat/web/microdata/european-health-interview-survey>).
- OECD PISA [online database]. Programme for International Student Assessment. Paris: Organisation for Economic Co-operation and Development (<http://www.oecd.org/pisa/data/>).
- WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene [online database]. Geneva: World Health Organization and United Nations Children's Fund (<https://washdata.org/data>).
- European Social Progress Index [online database]. Brussels: European Commission (https://ec.europa.eu/regional_policy/en/information/maps/social-progress).
- Multiple Indicator Cluster Surveys (MICS) [online database]. New York (NY): United Nations Children's Fund (<http://mics.unicef.org/surveys>).
- World Justice Project (WJP) Rule of Law Index [online database]. Washington (DC): World Justice Project (<https://worldjusticeproject.org/our-work/wjp-rule-law-index>).
- European Union Labour Force Survey (EU-LFS) [website]. Data and publication. Luxembourg: Statistical Office of the European Union (Eurostat) (https://ec.europa.eu/eurostat/statistics-explained/index.php/EU_labour_force_survey_%E2%80%93_data_and_publication).

A1.3 Data processing

Following data collection, individual datasets containing primary data were stored in a secure data warehouse for processing. In order to maximize country coverage, indicators were created by combining datasets from different sources, if comparable data were available. Data processing involved, where necessary, data cleaning and suppression of implausible values and cells based on small samples (counts of <50 respondents). Data were aggregated by country and year, as well as characteristics such as sex, age group, education level and income, using survey weights where available to adjust for sampling errors and biases. To facilitate comparison between countries with different age profiles, health outcome indicators were directly age standardized with the WHO World Standard Population. For some analyses, countries were aggregated by geographical region, as follows: Caucasus, central Asia, central Europe, Nordic countries, Russia(n) (Federation), South-eastern Europe/western Balkans, southern Europe and western Europe (see Annex 3).

For the majority of indicators, income quintiles were calculated based on equivalized disposable household income. Where possible, levels of education were based on the International Standard Classification of Education (ISCED) 2011, or the earlier classification, ISCED 1997. The ISCED educational levels are often aggregated to form a three-category education variable, with: (1) low-level education, which is pre-primary to lower-secondary education only; (2) mid-level education, which represents upper-secondary to post-secondary non-tertiary education; and (3) high-level education, which is tertiary education. Indicators within the HESR were disaggregated by this three-category variable for educational level, where available; otherwise, an equivalent measure was used, such as years of education.

Data processing was conducted using R statistical software (version 3.4.3). A panel of regional experts, scientific advisors and members of international organizations approved the methods used and the interpretation of the indicators, prior to publication.

The primary equity measure derived was the absolute difference between the most and least disadvantaged groups (e.g. based on education or income). Trends were assessed as increasing if the linear trend across all the data points available was significantly greater than 0 ($p < 0.1$), or decreasing if the linear trend across all the data points available was significantly lower than 0 ($p < 0.1$); otherwise, the trend was labelled as having no noticeable change.

A1.4 Limitations

Certain limitations need to be taken into account when interpreting the indicators and users should refer to the original source documentation to assess the quality of the data collection and measurement methods.

Differences in methodologies – such as the extent to which samples are representative of populations – and differences in survey instruments and definitions may limit the comparisons that can be made between countries and within countries over time. Individuals from lower socioeconomic groups are often underrepresented in population-based surveys, which may limit generalizability. Additionally, self-reported outcomes may be influenced by response biases, and, when comparing countries with diverse health services, differences in self-reported health outcomes may reflect access to care, rather than real differences in morbidity.

Whilst effort has been made to maximize country coverage, only a very small number of indicators cover all countries in the WHO European Region. This highlights the need for a coordinated approach to monitoring health equity within the Region going forward.

Annex 2. Decomposition analysis

Demanding microdata requirements for the decomposition analysis means that this analysis is only possible for inequities in a select number of health indicators. A variant of the Oaxaca decomposition method is used, technical details of which are given in the subsection that follows.

Decompositions of contributors to self-reported health, mental health and life satisfaction are possible using microdata from the EQLS for 34 countries in the WHO European Region, consisting of the 28 EU countries, Iceland, North Macedonia, Norway, Serbia, Switzerland and Turkey. There are sufficient data for underlying conditions in all five areas to be analysed, showing that differences in conditions in all five areas are statistically significant in explaining inequities in these health indicators (Fig. 2.2).

In addition, for the 18 non-EU countries not available in the EQLS – mainly in central Asia, the Caucasus, and the western Balkans – decomposition of contributors to self-reported health is possible using data from the WVS. There are only sufficient data for underlying conditions in the three areas of (1) *Social and Human Capital*, (2) *Employment and Working Conditions*, and (3) *Income Security and Social Protection* to be analysed for these countries. Differences in conditions in all three of these areas are statistically significant in explaining the gap in self-reported health (see Fig. 2.3 in Section 2.1 of the HESR).

- EQLS (2003–2016) analysis for self-reported health, mental health and life satisfaction covers: the 28 countries of the EU, Iceland, North Macedonia, Norway, Serbia, Switzerland and Turkey.
- WVS (2001–2014) analysis for self-reported health covers: Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Israel, Kazakhstan, Kyrgyzstan, Montenegro, Republic of Moldova, Russian Federation, Switzerland, Ukraine, and Uzbekistan.
- Combining EQLS and WVS data, almost all 52 countries of the WHO European Region are represented in these decomposition analyses.

A2.1 Technical details of the decomposition method

The idea behind the decomposition analysis is to explain the differences in health indicators that were observed between socioeconomic groups in Section 1 by a set of contributing factors that differ systematically between these groups.

This helps to understand the multisectoral conditions behind why health inequities exist between groups of people within countries, even when effective health services are in place that aim to narrow or eliminate inequities in health and health care. For example, differences in health may be explained by differences in housing conditions and working conditions, as well as by differences in quality of health care. Even if countries are able to narrow inequities in one factor, inequities may still remain in others, emphasizing the importance of taking a multisectoral approach to tackling health inequity.

The decomposition analysis reveals the extent to which each factor contributes to health inequities compared to each of the other factors. The method used in the Health Equity Status Report (HESR) is a variant of the Oaxaca decomposition method proposed by Neumark (1) and Oaxaca & Ransom (2). The decomposition is based on regression analysis of the relationships between self-reported health and the indicators of underlying conditions. It should be noted that while this analysis provides an explanation of health inequity in terms of statistical associations, the regression model used does not constitute a causal analysis and therefore the results should not be interpreted as a stand-alone guide to policy – the decomposition results should be interpreted with care and only in context with other evidence.

The technical details of the decomposition are explained here (adapted from O'Donnell et al. (3)).

Suppose variable \mathcal{Y} is our health variable of interest – self-reported health. We have two groups: in the case of decomposing health inequity between income quintiles, these are the highest quintile and the lowest quintile. In our model \mathcal{Y} is explained by a vector of underlying conditions, \mathbf{x} , according to a regression model:

$$y_i \begin{cases} \beta^{bottomq} x_i + \varepsilon_i^{bottomq} & \text{if in bottom quintile} \\ \beta^{topq} x_i + \varepsilon_i^{topq} & \text{if in top quintile} \end{cases}$$

The gap between the average level of health variable y , $y^{bottomq}$ and y^{topq} is:

$$y^{bottomq} - y^{topq} = \beta^{bottomq} x^{bottomq} - \beta^{topq} x^{topq}$$

where $x^{bottomq}$ and x^{topq} are vectors of averages of the underlying conditions for those in the lowest quintile and the highest quintile, respectively.

This can be further decomposed to show how much of the overall gap is attributable to differences in the \mathbf{x} s:

$$\begin{aligned} y^{bottomq} - y^{topq} &= \Delta x [D \beta^{bottomq} + (I - D) \beta^{topq}] \\ &\quad + \Delta \beta [x^{bottomq} (I - D) + x^{topq} D] \end{aligned}$$

where I is the identity matrix and D is a matrix of weights. In the original Oaxaca decomposition, either $D = 0$ or $D = 1$. In the first case, the differences in the \mathbf{x} s are weighted by β^{topq} and in the second case, the differences are weighted by $\beta^{bottomq}$.

In a special case where the coefficients are instead obtained from a pooled regression combining the two groups (Neumark (1) and Oaxaca & Ransom (2)):

$$\begin{aligned} y^{bottomq} - y^{topq} &= \Delta x \beta^P + [x^{bottomq} (\beta^{bottomq} - \beta^P) + x^{topq} (\beta^P - \beta^{topq})] \end{aligned}$$

where β^P are the pooled coefficients. This is the decomposition estimated in the HESR analysis.

Annex 3. Country clusters

Member States have been grouped according to policy and political commonalities. The clusters also aim to reflect the countries that Member States compare themselves to. This grouping does not coincide with pre-existing WHO country groupings.

Country	Cluster
Armenia	Caucasus
Belarus	Caucasus
Georgia	Caucasus
Ukraine	Caucasus
Azerbaijan	Central Asia
Kazakhstan	Central Asia
Kyrgyzstan	Central Asia
Tajikistan	Central Asia
Turkmenistan	Central Asia
Uzbekistan	Central Asia
Bulgaria	Central Europe
Croatia	Central Europe
Czechia	Central Europe
Estonia	Central Europe
Hungary	Central Europe
Latvia	Central Europe
Lithuania	Central Europe
Poland	Central Europe
Romania	Central Europe
Slovakia	Central Europe
Slovenia	Central Europe
Denmark	Nordic countries
Finland	Nordic countries
Iceland	Nordic countries
Norway	Nordic countries
Sweden	Nordic countries
Russian Federation	Russian Federation
Andorra	Southern Europe
Cyprus	Southern Europe
Greece	Southern Europe
Italy	Southern Europe
Malta	Southern Europe
Portugal	Southern Europe
San Marino	Southern Europe
Spain	Southern Europe
Turkey	Southern Europe
Albania	Western Balkans/South-eastern Europe
Bosnia and Herzegovina	Western Balkans/South-eastern Europe

Country	Cluster
Israel	Western Balkans/South-eastern Europe
Montenegro	Western Balkans/South-eastern Europe
North Macedonia	Western Balkans/South-eastern Europe
Republic of Moldova	Western Balkans/South-eastern Europe
Serbia	Western Balkans/South-eastern Europe
Austria	Western Europe
Belgium	Western Europe
France	Western Europe
Germany	Western Europe
Ireland	Western Europe
Luxembourg	Western Europe
Monaco	Western Europe
Netherlands	Western Europe
Switzerland	Western Europe
United Kingdom	Western Europe

Annex 4. Definitions

A4.1 Self-reported health

The questions used in the EU-SILC survey to measure health and the prevalence of disability are: (1) "How is your health in general? Is it very good, good, fair, bad, very bad?"; and (2) "For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do? Would you say you have been severely limited, limited but not severely, or not limited at all?" People in institutions are not surveyed.

There has been some discussion about the robustness of self-reported health as an indicator. In high-income countries it is associated with life expectancy but in low-income countries this is not the case, and it was suggested that this may be driving some unexpected results in self-reported health in some countries.

Cross-country comparisons of self-reported health are subjective and can be affected by individuals' social and cultural backgrounds; therefore, this is not the only measure used but it is a useful measure nonetheless, as self-reported health has consistently predicted future health outcomes when used in national population health surveys (4, 5). In the WHO European Region, self-reported health is a useful indicator as it includes a large number of countries in the Region. Surveys of self-reported health consistently find adults (both men and women) with fewer years in education are more likely to self-report poor health than those with higher levels of education. Those with lower incomes do not appear to underreport poor health compared to those with higher incomes (6).

A4.2 Limiting illness/long-standing limitations in daily activities

The aim of this variable is to assess the limitations people have experienced – because of health problems – in carrying out usual activities for at least six months. The question, which appears in the EU-SILC survey, asks: "For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do? Would you say you have been ..." severely limited / limited but not severely or / not limited at all?" (7).

A4.3 Life satisfaction

Life satisfaction comprises the subjective dimension of well-being in Health 2020 (8). The percentage of surveyed adults reporting poor life satisfaction was calculated using combined data from three surveys: the EQLS, the ESS and the WVS. These surveys use similar questions to assess life satisfaction. The EQLS survey question is: "All things considered, how satisfied would you say you are with your life these days? Please tell me on a scale of 1 to 10, where 1 means very dissatisfied and 10 means very satisfied." For this analysis, a score of less than 6 was taken to represent poor life satisfaction. Cross-national comparisons of self-reported life satisfaction are seen as a valid measure for investigating differences in policy between countries (9).

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The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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Armenia
Austria
Azerbaijan
Belarus
Belgium
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Croatia
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Finland
France
Georgia
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Original: English



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