

Social determinants of health and health inequalities



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OUTLINE

- Definition of health
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Definition of Health

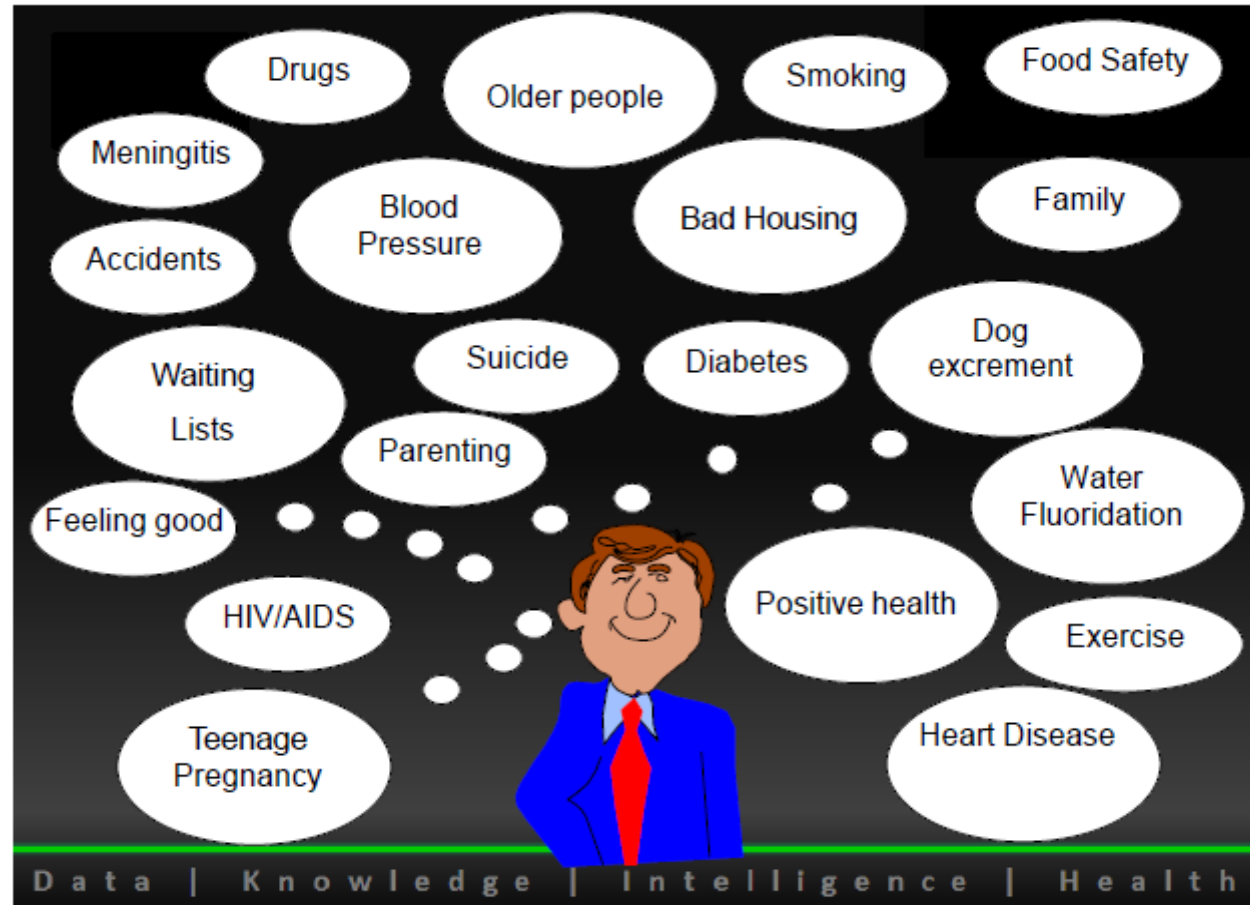
Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1948) and the extent to which an individual or group is able to realize aspirations and satisfy needs, and to change or cope with the environment.

Health is a resource for everyday life, not the objective of living; it is a positive concept, emphasizing social and personal resources as well as physical capabilities” (WHO, 1984).

Complexity define health

Everyone considers health differently.

Things which are important to your health will vary over time and is context dependent; if a member of your family is ill your view of what it means to be healthy will be different to the time when this person is not ill.



- We now understand that good health does not lie solely with medical interventions but also with living conditions and personal choices.
- Determinants of health are lifestyle-based properties affected by broader social, economic, and political forces that influence quality of personal health.
- These attributes partially include education level, employment, income level, and distribution, housing, childhood development, food security, and nutrition, race, gender, and stress.
- Such factors have been shown to have marked associations with risks for different illnesses, life expectancy, and life-time morbidity.

- In recent decades, increasing health disparities among developed countries and between developing and developed countries have been associated with these social factors.
- Public health workers and policymakers are seeking to reduce this divide. At the same time, they face challenges in designing and implementing programs to address complex, long-term problems and causal relationships with specific disease pathways.
- However, both the motivation and action to develop effective research and intervention methods continue to grow in this field of public health.

Determinants of Health

Factors that contribute to a person's current state of health.

Scientists generally recognize **five determinants of health** of a population:

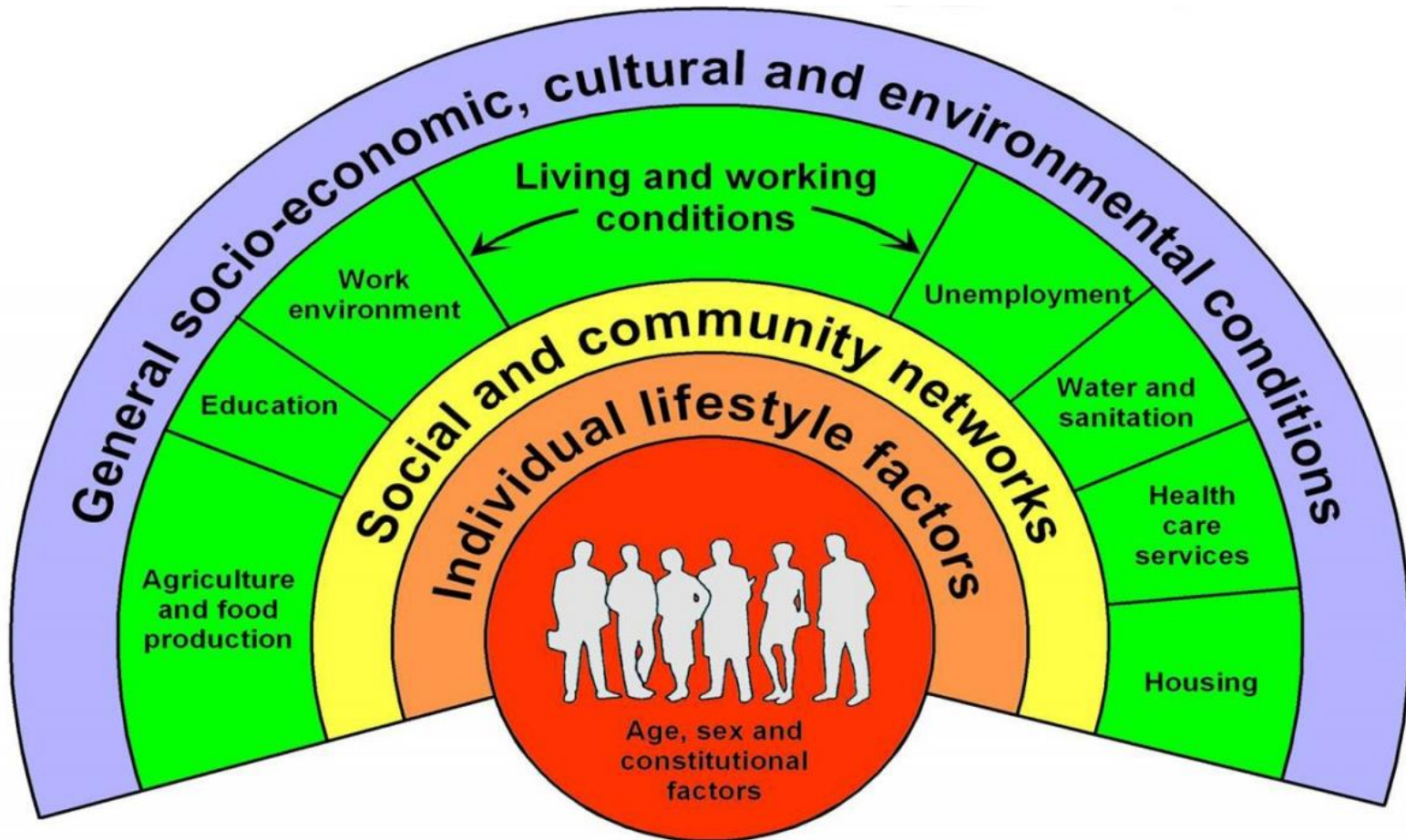
- **Biology and genetics**. Examples: sex and age
- **Individual behavior**. Examples: alcohol use, injection drug use, unprotected sex, and smoking
- **Social environment**. Examples: discrimination, income and gender
- **Physical environment**. Examples: where a person lives in crowding conditions
- **Health services**. Examples: Access to quality health care and having or not having health insurance



The Social Determinants of Health

- The **social determinants of health** can loosely be defined as how the circumstances in which people develop and live affect their mental and physical well-being and life expectancy, and have been characterised as the **causes of the causes of health** (or ill health).
- As well as age, sex and biological characteristics that are largely fixed, individuals are part of society and therefore the debates around health policy and healthcare provision must reflect the influence of societal, economic, environmental and cultural factors on a person's lifestyle, as well as their interactions with familial, social and community networks.
- These interactions and layers of influence affecting health are represented in the well-known diagram devised by Dahlgren and Whitehead in the early 1990s

Rainbow model of health



Source: Dahlgren and Whitehead, 1991

What causes health inequalities?

The core problem

Throughout the world, people who are vulnerable and socially disadvantaged have less access to health resources, get sicker, and die earlier than people in more privileged social positions...

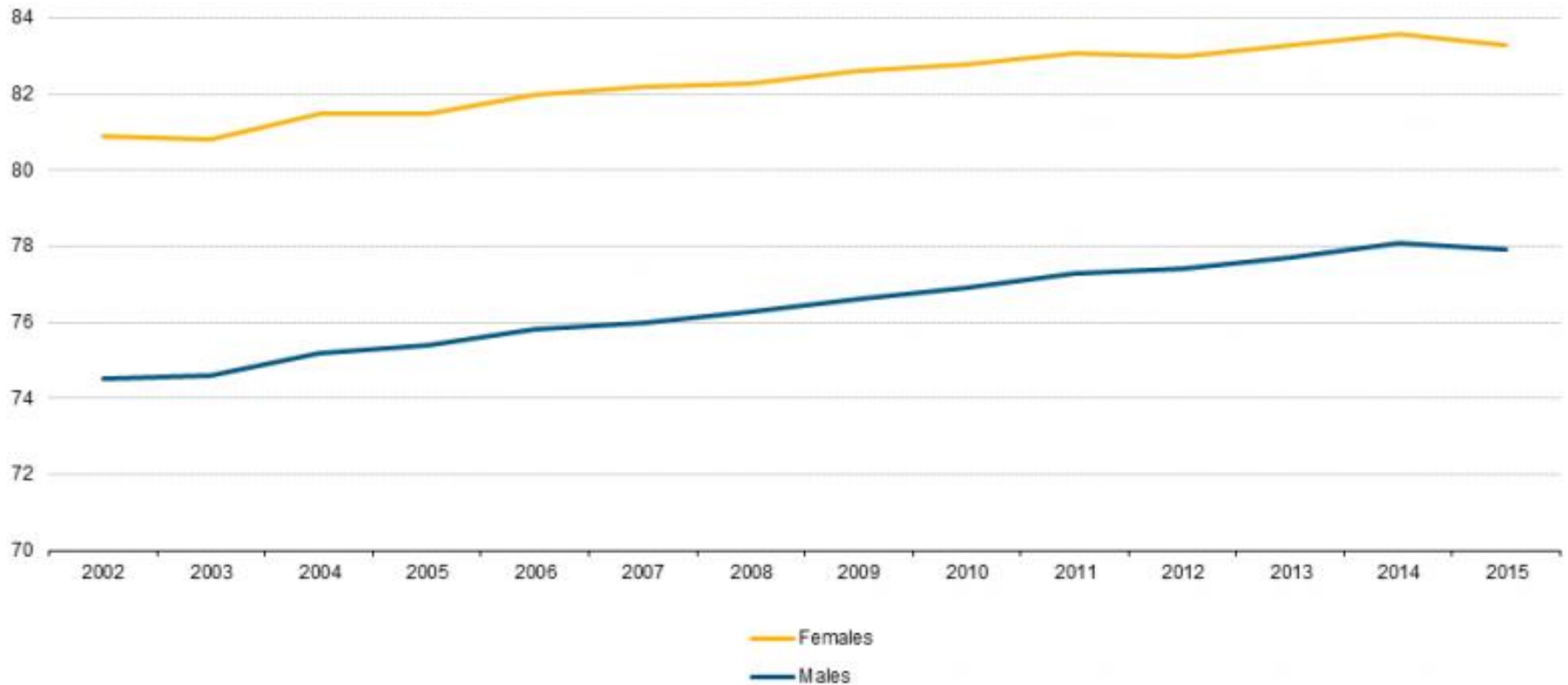
Health gaps are growing

Irwin A. et al. The Commission on Social Determinants of Health: Tackling the social roots of health inequities. *PLoS Medicine* 2006; 3(6), e 106.

- Life expectancy for men in Russia is 58.4 years, a full 20 years less than in Sweden and Iceland.
- In 2015 life expectancy for men in Lithuania is 69.2 yrs in Sweden is 80.4
- In the Scottish city of Glasgow, people living in the most deprived districts have life expectancy 12 years shorter than those living in the most affluent.

Life expectancy at birth is defined as how long, on average, a newborn can expect to live, if current death rates do not change

Figure 2: Life expectancy at birth, EU-28, 2002-15 (years)



Note: The y-axis is broken. 2010, 2011, 2012, 2014 and 2015: breaks in series. 2013, 2014 and 2015: estimate and provisional.
Source: Eurostat (online data code: demo_mlexpec)

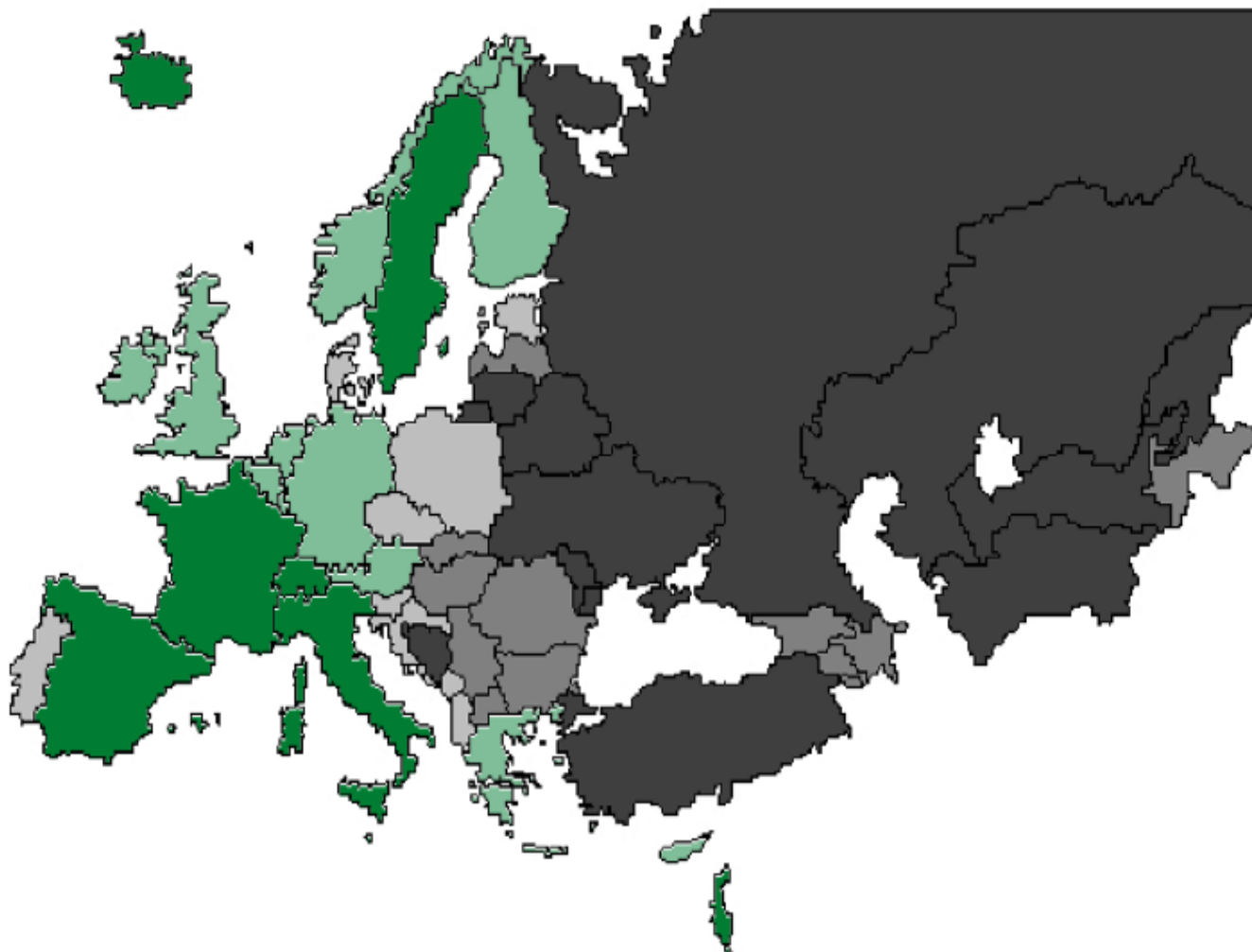
Fig. ES.1

**Life expectancy in countries
in the European Region,
2010 (or latest available)**

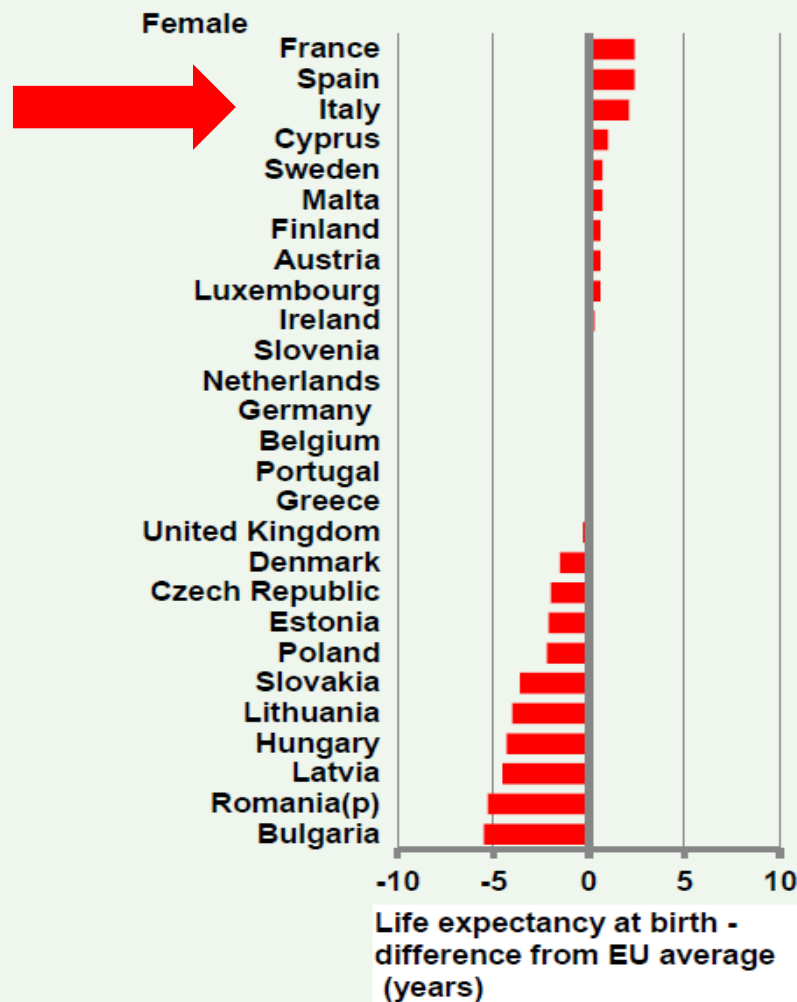
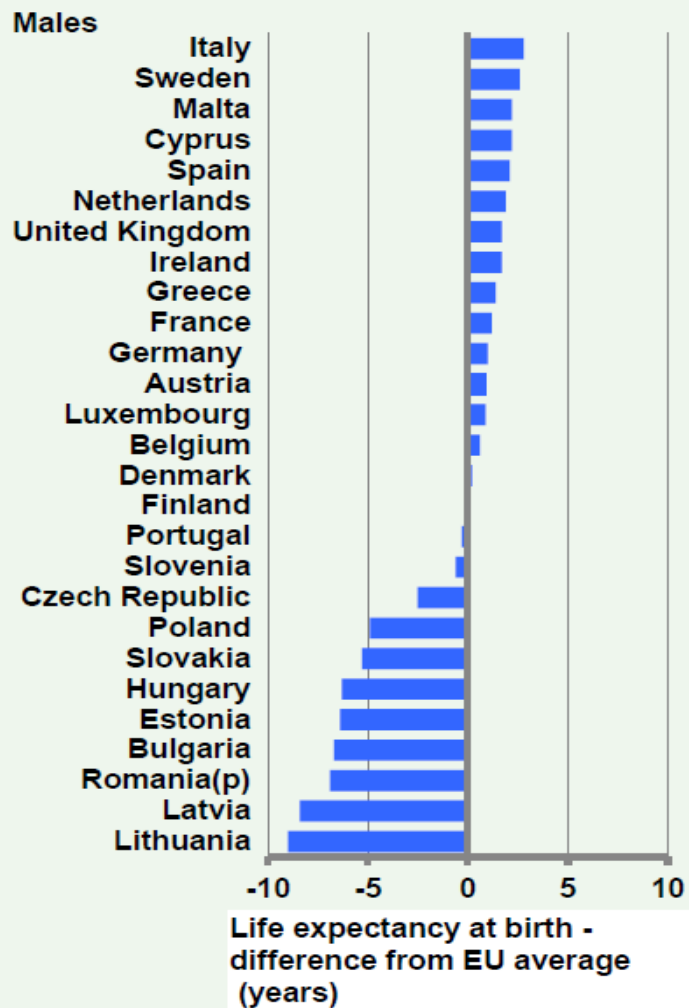
Life expectancy – quintiles:

- **Highest**
- **Second**
- **Third**
- **Fourth**
- **Lowest**

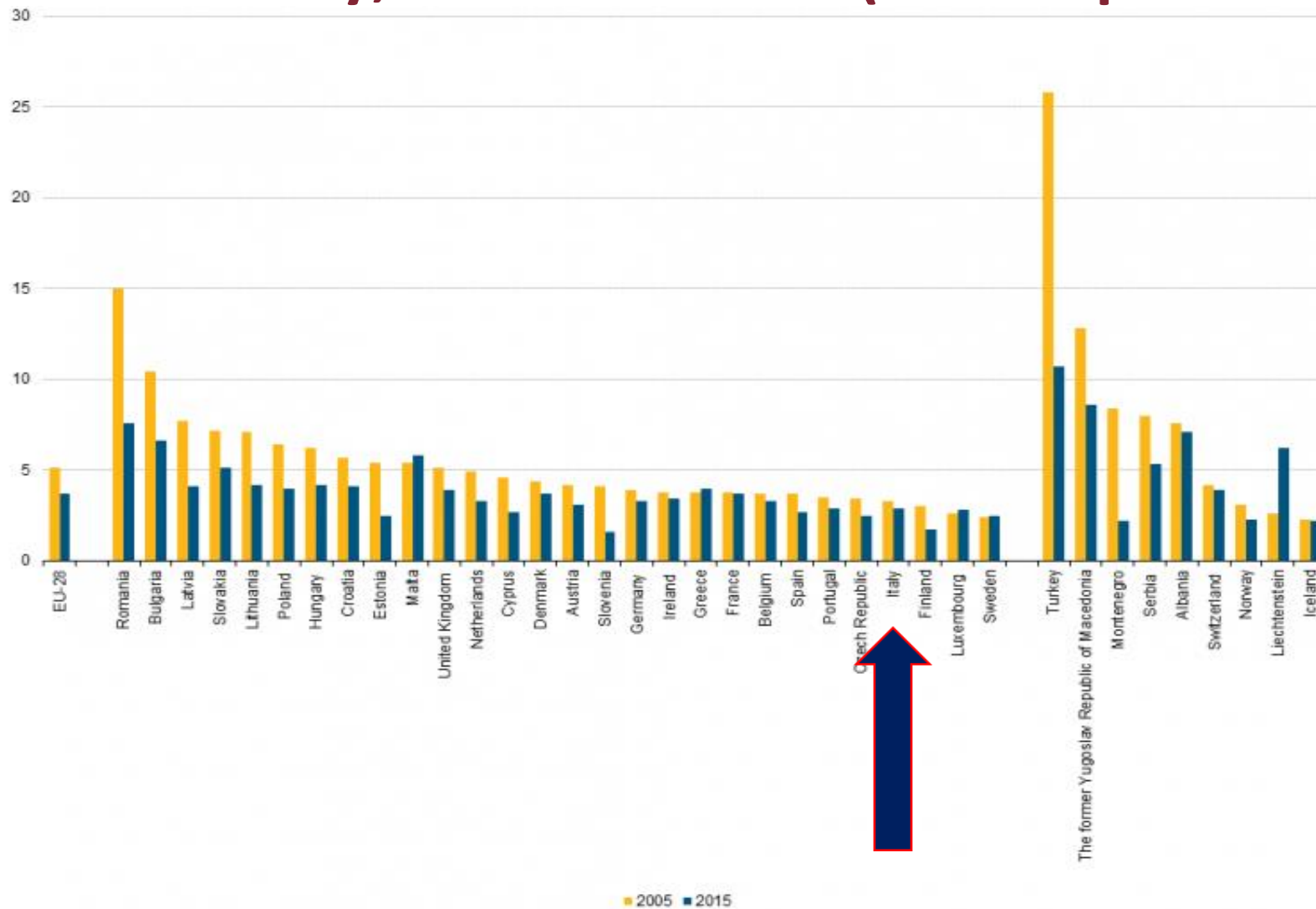
*Source: WHO Regional Office
for Europe (3).*



Difference in life expectancy at birth between EU Member States and the EU average, by sex, 2010



Infant mortality, 2005 and 2015 (deaths per 1 000)

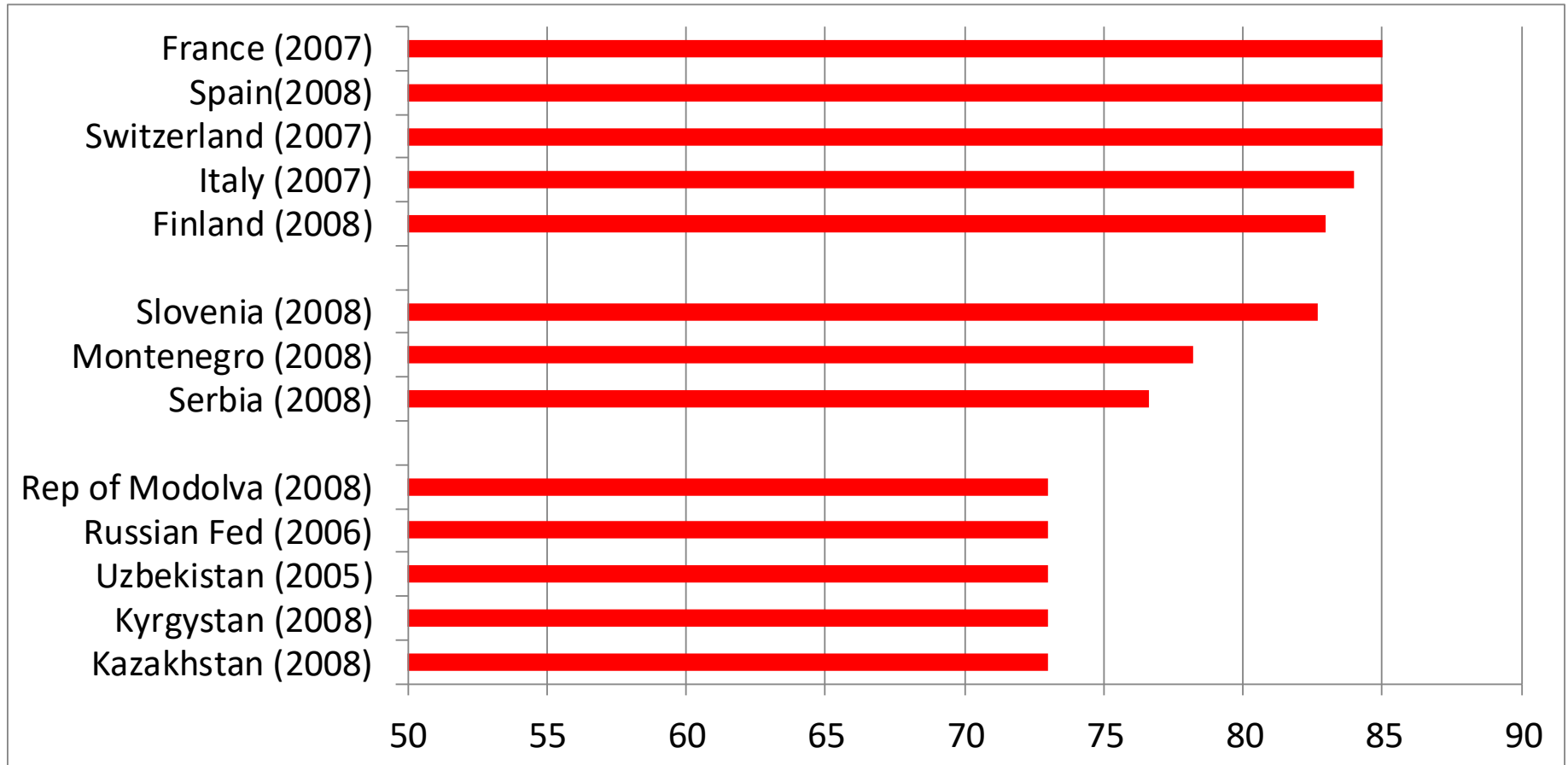


Source: Eurostat (online data code: demo_minfind)

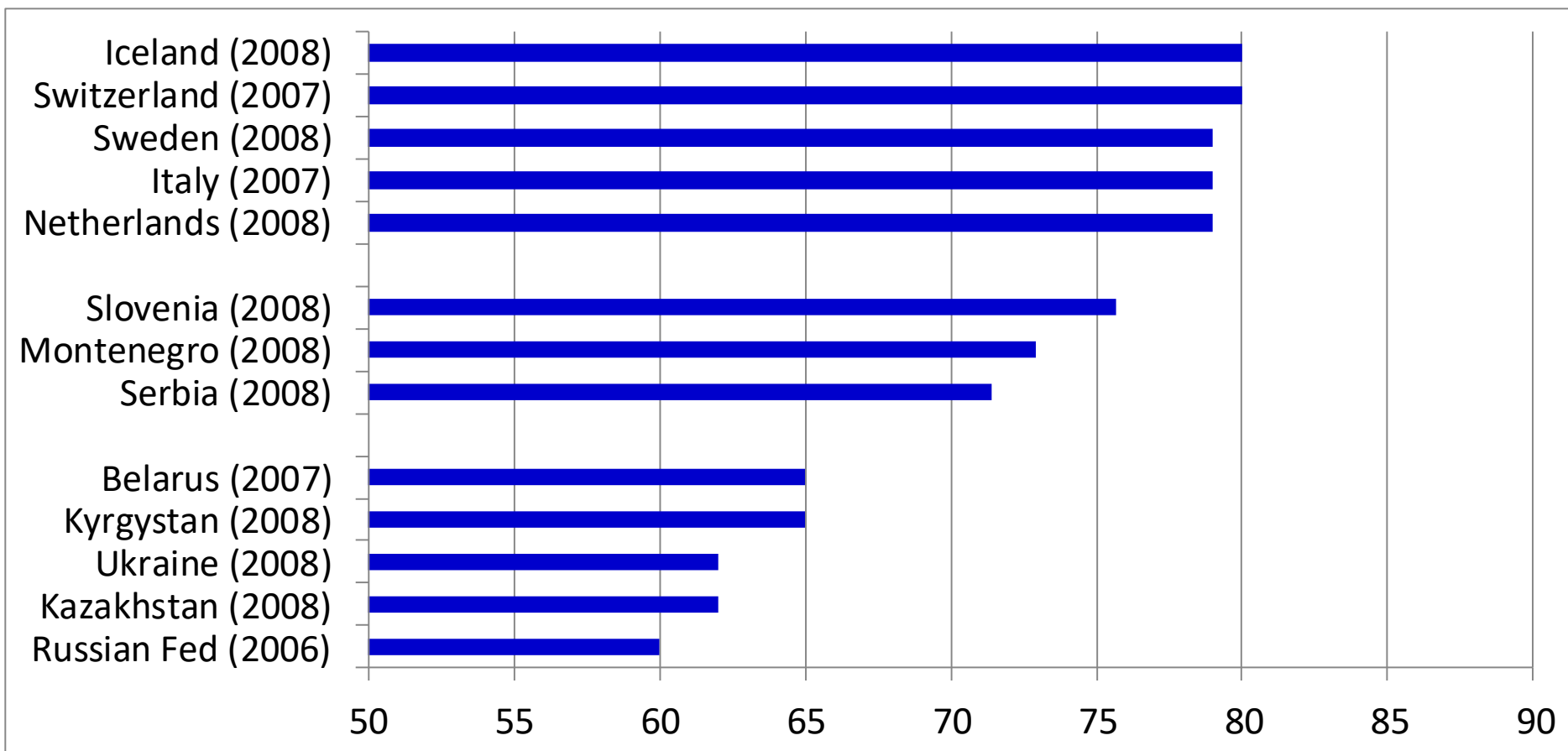
Gender

- Gender differences in health and mortality are complex and not yet fully understood.
- The social determinants of health have both similar and different effects on men and women.
- Women seem to have a biological advantage over men in terms of life expectancy.
- Men tend to die younger than women, and research suggests that the work they do and issues like job security and unemployment often affect men's health.

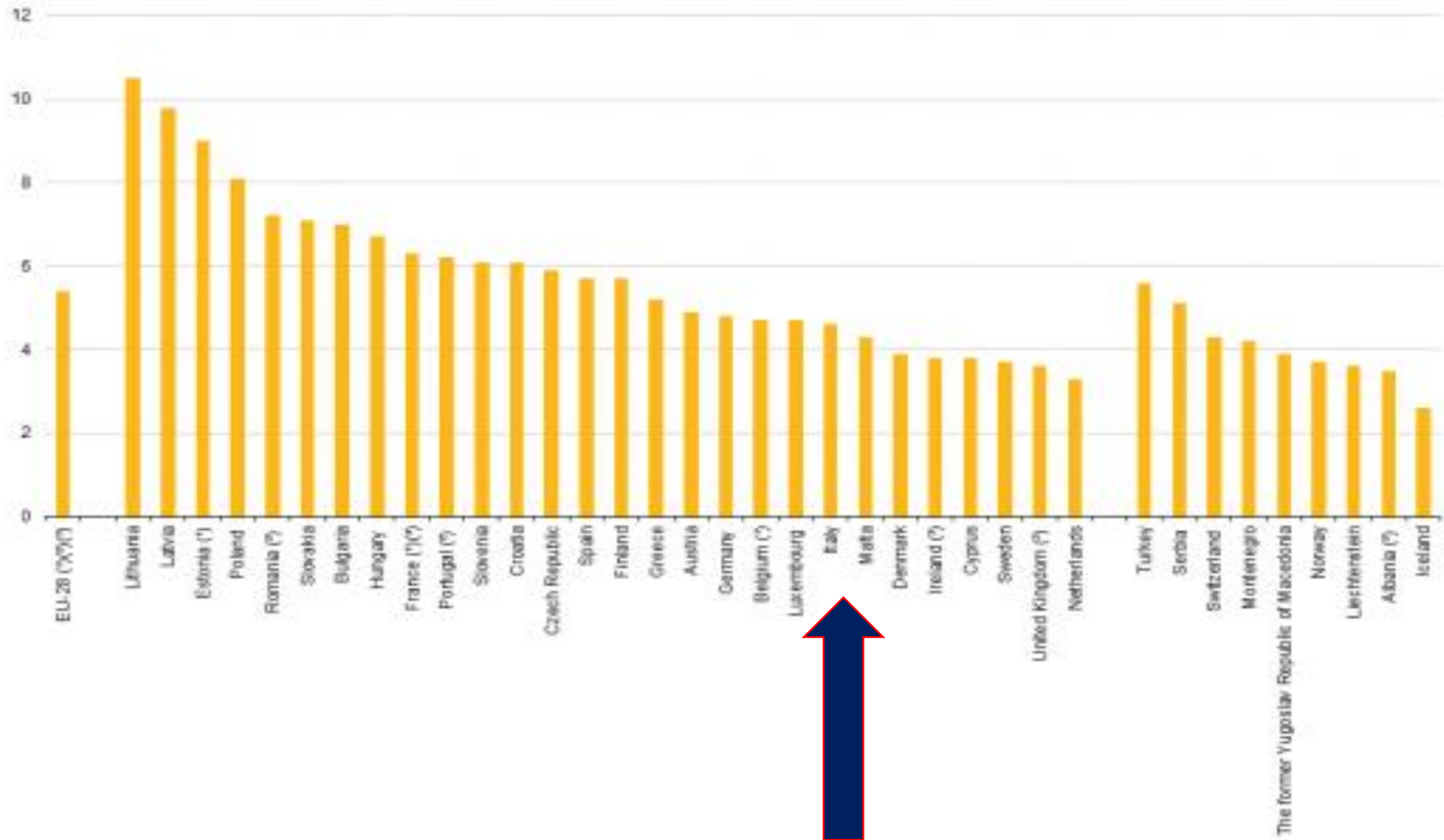
Life expectancy at birth – women, WHO EURO Health for All database



Life expectancy at birth – men, WHO EURO Health for All database



Life expectancy at birth, gender gap, 2015 (years, female life expectancy - male life expectancy)



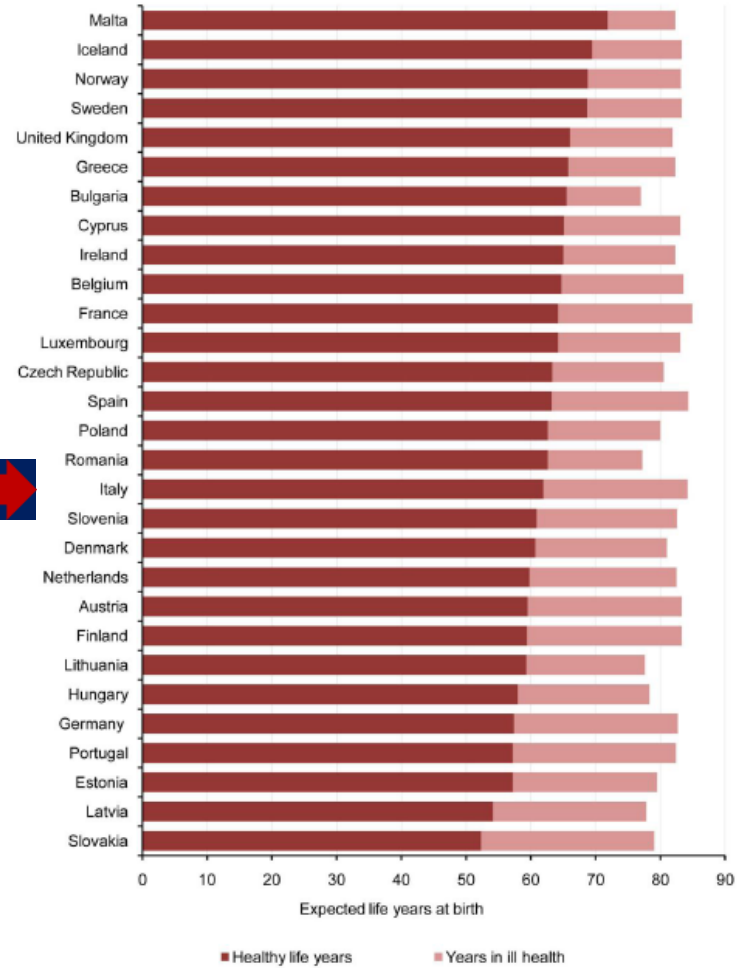
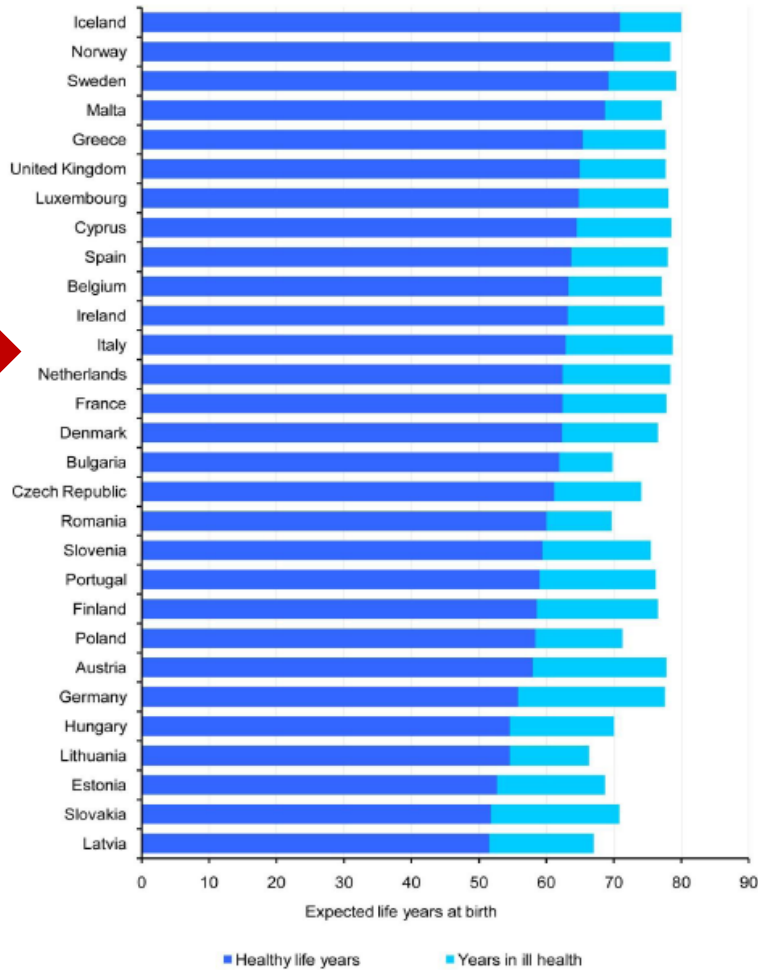
(*) Break in series.

(**) Estimate

(*) Provisional

Source: Eurostat (online data code: demo_mlespec)

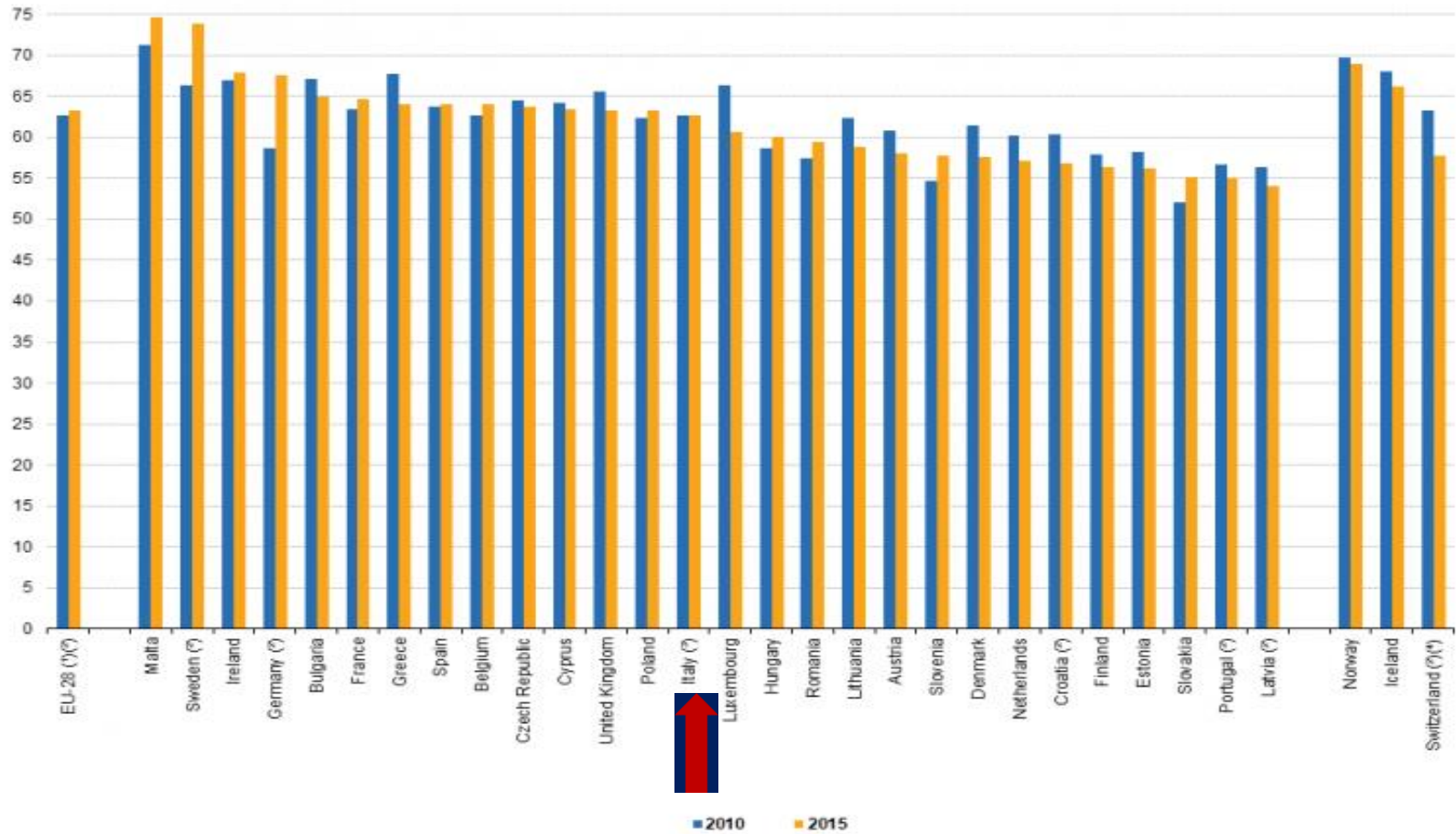
Healthy life years and life expectancy at birth, 2008 Source: Eurostat (2011)



HLE is defined as the number of years that a person is expected to continue to live in a healthy condition.

Figure 1: Healthy life years at birth, females, 2010 and 2015 (years)

Source: Eurostat ([hlth_hlye](#))



(*) 2010: estimate.

(*) Break in series.

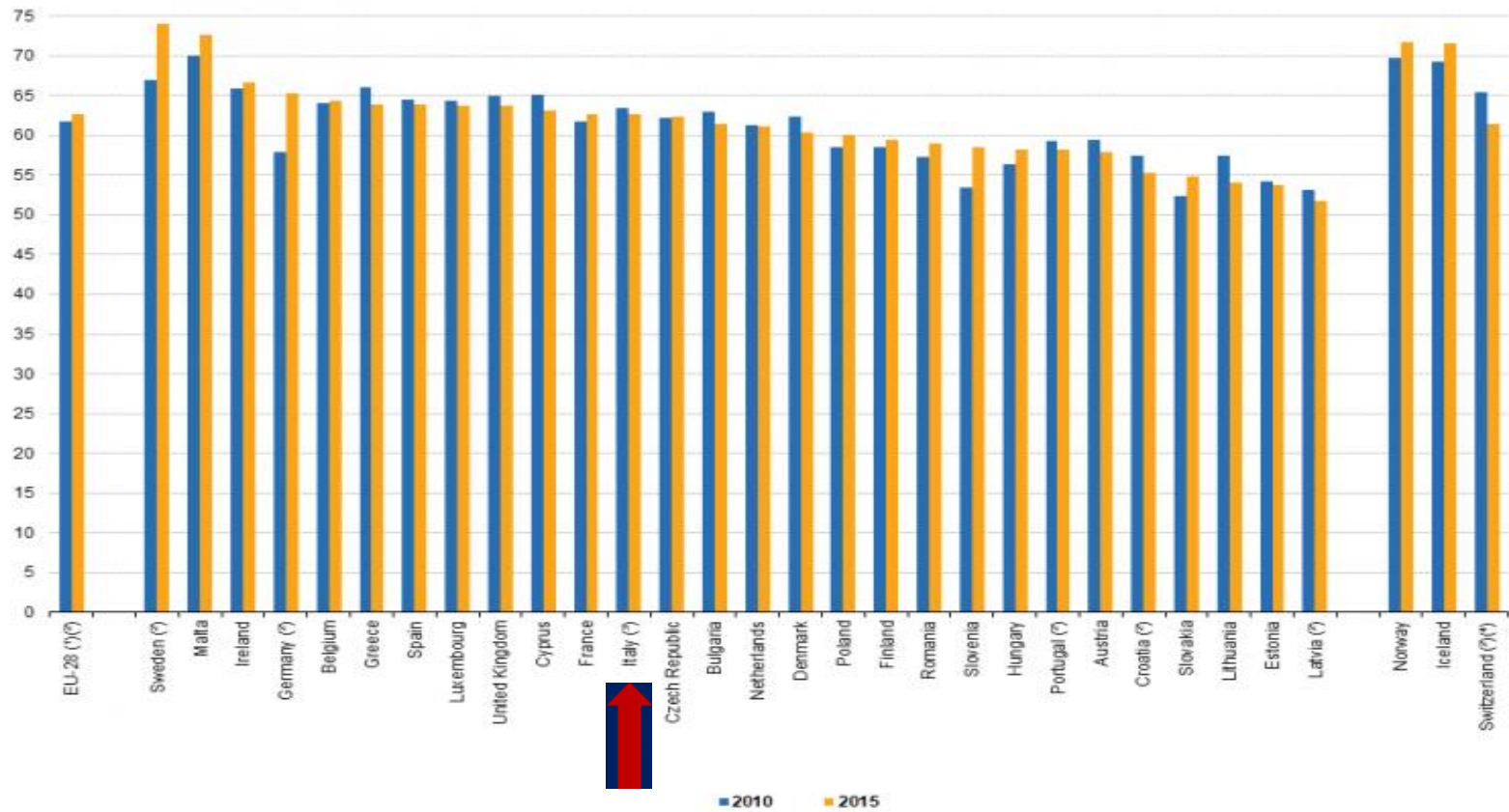
(*) 2011 instead of 2010.

(*) 2014 instead of 2015.

Source: Eurostat (online data code: hlth_hlye)

Figure 2: Healthy life years at birth, males, 2010 and 2015 (years)

Source: Eurostat ([hlth_hlye](#))



(*) 2010: estimate.

(*) Break in series.

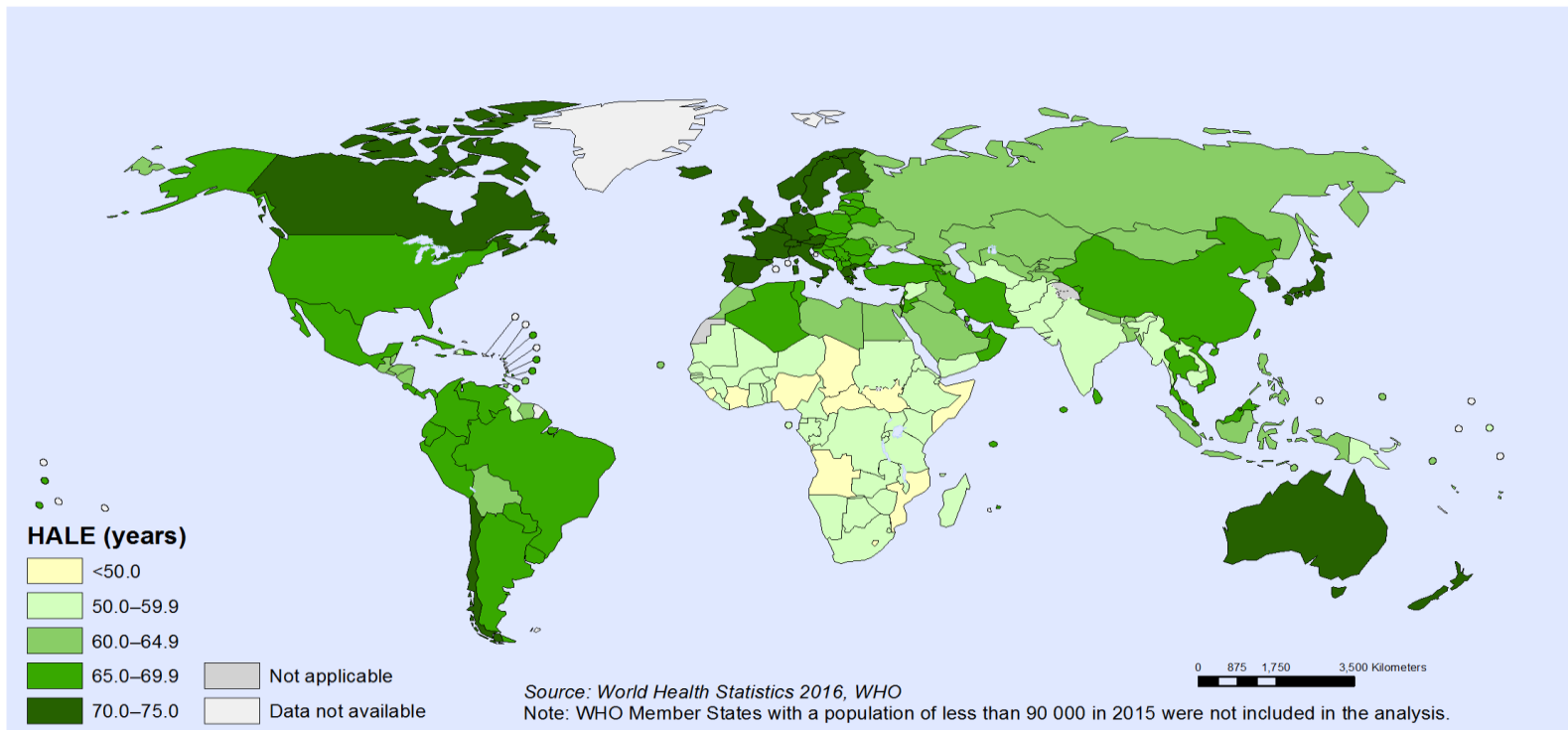
(*) 2011 instead of 2010.

(*) 2014 instead of 2015.

Source: Eurostat (online data code: hlth_hlye)

The gender gap was considerably smaller in terms of healthy life years than it was for overall life expectancy

Healthy life expectancy (HALE) at birth, both sexes, 2015



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
Map Production: Information Evidence and Research (IER)
World Health Organization



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There are relevant marked differences in health experience among continents and countries. Light green countries on the map have remarkably lower health life expectancy than dark green countries.

Focusing on the social determinants of health is crucial in order to understand the cause of such differences, as well as to contrast them.

Much of epidemiology seeks to ***identify individual risk factors for disease.***

- Smokers have higher risk of several diseases than people who never smoked
- Raise plasma cholesterol or blood pressure are associated to the increased risk of vascular disease.
- Newer risk factors such as C Reactive Protein have been identified. One of their use in screening is to identify individuals at high risk of subsequent disease who may be suitable for special interventions.

The approach we take is different

- Among risk factors we distinguish those that are **behaviours** from those that are **biological markers**, such as cholesterol or blood pressure.
- A low level of biological markers may be useful to reduce the risk of subsequent disease.

It is important to seek the determinants of these biological markers if we are to find effective ways of improving public health

- This leads, in the case of cholesterol and blood pressure, to considerate diet, obesity, and alcohol.
- In public health, it might be more useful to think of the behaviour (diet) as the cause of the disease rather than labelling plasma cholesterol (the biological effects of diet) as causal.

We go further to examine the causes of these causes.

- It is not an accident that people consume *diets high in saturated fat and salt*. It represents the nature of the food supply, culture, affordability and availability among other influences. (the causes of the cause).
- For example, given the *smoking* is an important cause of premature disease and death, we need to understand the social determinants of smoking.
- In particular, in many rich countries there is a social gradient in smoking: the lower the socio-economic position, the higher the rate of smoking.

Governments of developed nations are increasingly embracing the concept of the ***social determinants of health and wellbeing***.

Moreover, they play an important role to remove the social impediments contributing to social inequity.

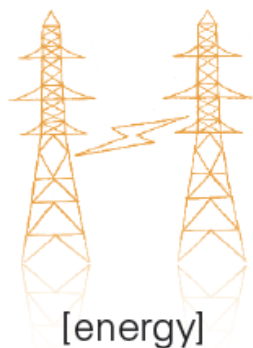
What are the social determinants of health?

- The social determinants of health are the conditions in which people are born, grow, live, work and age.
- Health is not just the outcome of genetic or biological processes, but is also influenced by the social and economic conditions in which we live.

- These circumstances are shaped by the distribution of money, power and resources at global, national and local levels.
- **The social determinants of health are mostly responsible for health inequalities within and among countries.**
- Inequalities in social conditions give rise to unequal and unjust health outcomes for different social groups.

SOCIAL DETERMINANTS OF HEALTH

ACCESS TO POWER, MONEY AND RESOURCES AND THE CONDITIONS OF DAILY LIFE —
THE CIRCUMSTANCES IN WHICH PEOPLE ARE BORN, GROW, LIVE, WORK, AND AGE



[energy]



[investment]



[community/gov.]
[providers of services, education, etc.]



[water]
[accessible & safe]



[justice]



[food]
[supply & safety]

Social Determinants

‘The social conditions in which people live powerfully influence their chances to be healthy.

Indeed factors such as poverty, food insecurity, social exclusion and discrimination, poor housing, unhealthy early childhood conditions and low occupational status are important determinants of most diseases, deaths and health inequalities between and within countries’

(WHO 2004)

KEY DEFINITIONS

➤ Social determinants of health

These refer to the social, economic, and political situations that affect the health of individuals, communities, and populations.

➤ Absolute and relative inequalities in health

Inequality in health is an empirical notion and refers to **differences in health status between different groups**. It is a multidimensional concept, consisting of technical and normative judgments in the choice of appropriate metrics.

KEY DEFINITIONS

➤ Health Equity

“The opportunity for everyone to 'attain their full health potential' and no one is 'disadvantaged from achieving this potential because of their social position or other socially determined circumstance’”

➤ Inequity in health

It is a normative concept and **refers to those inequalities that are judged to be unjust or unfair because they result from socially derived processes.** Equity in health care requires active engagement in planning, implementation, and regulation of health systems to make unbiased and accountable arrangements that address the needs of all members of society.

KEY DEFINITIONS

➤ Health system and health-systems performance

The health system as defined by WHO describes “all the activities whose primary purpose is to promote, restore, or maintain health”.

Inequity versus inequality

- Health **inequity** = Unjust differences in health between people of different social groups; a normative concept.
- Health **inequality** = Observable health differences between subgroups within a population; differences, variations, and disparities in the health achievements of individuals and groups of people. It can be measured and monitored. Health inequities can be linked to forms of disadvantage such as poverty, discrimination and lack of access to services or goods.

Monitoring health inequalities serves as an indirect means of evaluating health inequity.

Inequalities

- Inequalities exist in many areas and can be measured using various indicators (death, illness, health and health service use).
- Often, inequalities are quantified by comparing the national average value of an indicator across countries. Such national figures, however, do not account for inequalities that exist within countries, that is, between the different subgroups that comprise the national population.
- In addition to cross-country inequality, it is important to consider within-country inequality, which captures the different experiences of men and women, rural and urban residents, the rich and the poor, the young and the old, the educated and the non-educated, etc...

Inequalities

- Health inequalities are observable differences in health among subgroups of a population.
- Subgroups can be defined by demographic, geographic or socioeconomic factors such as age, economic status, education, place of residence and sex.
- Inequalities exist wherever there are differences in health indicators between subgroups.
- When health data are disaggregated – broken down by subgroups – they reveal differences between social groups that might have otherwise remained hidden behind the overall average.

Making comparisons on a global level

- **Within-country inequality** exists between subgroups within a country, based on disaggregated data and summary measures of inequality
 - For example, comparing the difference between infant mortality rates among urban and rural subgroups
- **Cross-country inequality** shows variability between countries based on national averages
 - For example, comparing countries on the basis of national infant mortality rates
- **Cross-country comparisons of within-country inequality** are possible
 - For example, countries may be compared based on the level of rural–urban inequality in infant mortality rate within each country

The health of the world's population is in a state of inequality.

That is to say, there are vastly different stories to tell about people's health depending on where they live, their level of education, and whether they are rich or poor, etc.

Describing the state of inequality in health compares the experiences of population subgroups of different social classes, ages and sex.

It sheds light on questions such as:

- How do mortality rates differ between rural and urban areas?
- Do the richest members of a population have better access to skilled health personnel than the poorest?
- Is there a difference, in terms of malnutrition levels, among children born to women with higher versus lower levels of education?

- Finding answers to these – and similar – questions helps to identify those differences in health that are unjust, and is an important first step towards promoting health equity and the right to health.
- Calling attention to the importance of health equity is neither a new, nor novel practice.
- **The right to health is a fundamental human right**, as affirmed in the **WHO 1946 constitution** and in numerous legally binding human rights conventions.
- Ensuring that all individuals of a population have the opportunity to realize the right to health sets nations on a course to develop and thrive.

- The **Declaration of Alma-Ata**, adopted in 1978, was one of the first major international proclamations that identified the need for urgent action **“to protect and promote the health of all people of the world”** and **recognize the inequalities in health that exist**, both between countries and within them.
- The **Global Strategy for Health for All** was subsequently adopted by the World Health Assembly in 1981, **prioritizing the achievement of equity in the way that health resources and health care are distributed and accessed.**

- More recently, this call to promote health among disadvantaged populations has been echoed through other important global initiatives, notably the **Commission on Social Determinants of Health (CSDH)**, and the **Rio Political Declaration on Social Determinants of Health**.
- Increasingly, global initiatives are orienting towards establishing health inequality monitoring practices and recommending tangible actions to reduce health inequalities, with a focus on accountability and results.

All documents share principles of nondiscrimination and equal opportunity, outline the right to health, link health outcomes with SDH and other social goals that enhance population well-being, and address responsibilities of duty-bearers, primarily member states (e.g., governments) and those who act on their behalf, such as intergovernmental organizations.

- The inclusion of universal health coverage as part of the health-related post-2015 sustainable development agenda puts equity at the forefront of a major global movement.
- The concept of **universal health coverage** encompasses two components: **all people should be able to obtain high-quality, essential health interventions, which they should be able to access** without experiencing undue financial hardship.
- Proposed **targets for universal health coverage** are that all populations achieve a **minimum of 80% coverage of essential health interventions and 100% financial protection.**

- The reduction of inequalities in both components – coverage of health interventions and financial protection – is key for the progressive realization of universal health coverage.
- From the initial implementation of universal health coverage through to its realization, ongoing monitoring of the state of inequality is vital to ensure that disadvantaged populations are identified and prioritized.

Social Determinants/Health

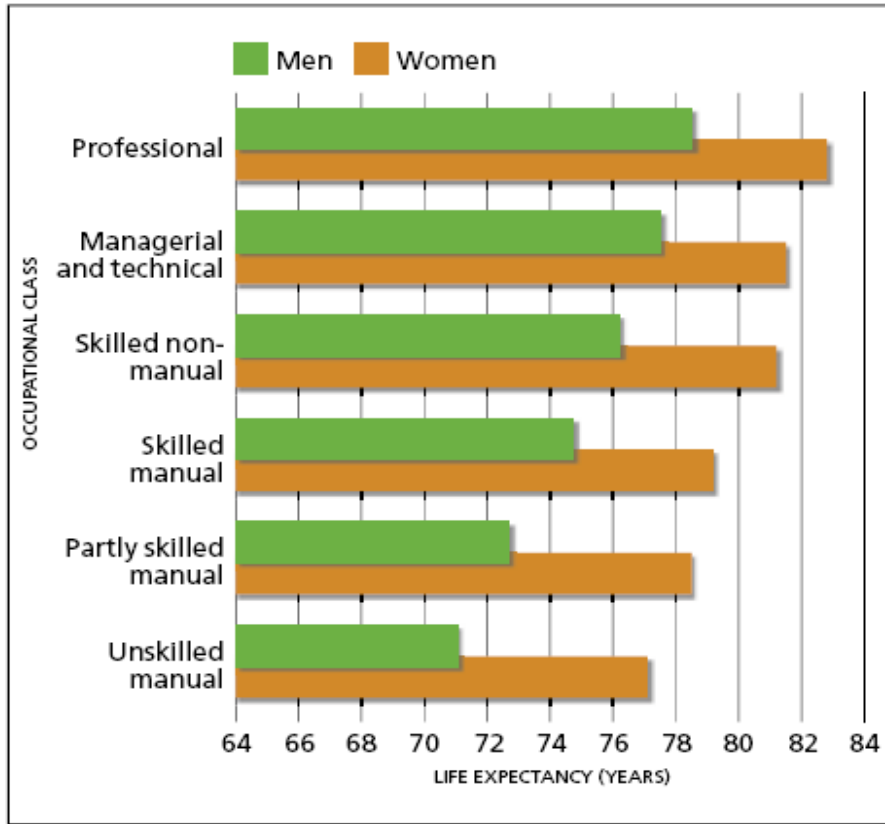
1. Social determinants contribute to health inequalities among social groups because they are not distributed equally or fairly across society
2. Social determinants can influence health both directly and indirectly. For example, educational disadvantage can limit access to employment, raising the risk of poverty and its adverse impact on health
3. Social determinants of health are interconnected e.g poverty is linked to poor housing, access to health services or diet, all of which are in turn linked to health
4. Social determinants operate at different levels

Because **the causes of the causes** are not obvious, the **WHO Regional Office for Europe** asked a group at University College London to summarise the evidence on the social determinants of health, published as **The Solid Facts**.

It has 10 messages on the social determinants of health based on:

- 1. Social gradient**
- 2. Stress**
- 3. Early life**
- 4. Social exclusion**
- 5. Work**
- 6. Unemployment**
- 7. Social support**
- 8. Addiction**
- 9. Food**
- 10. Transport**

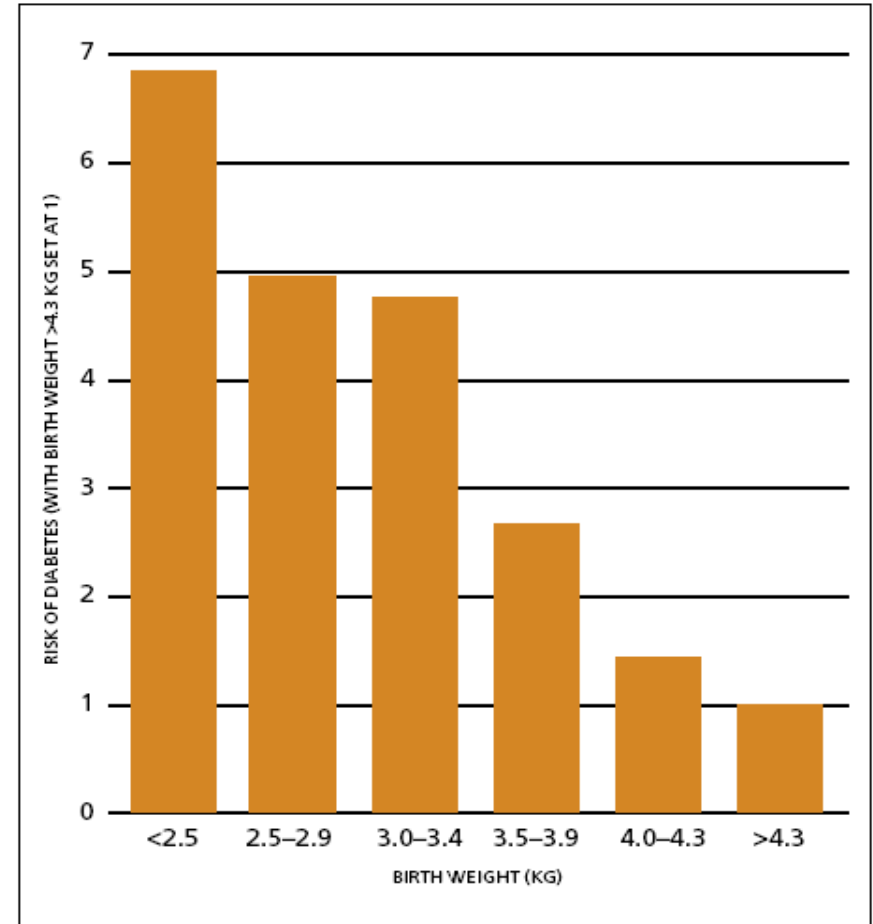
Fig. 1. Occupational class differences in life expectancy, England and Wales, 1997–1999



Life expectancy is shorter and most diseases are more common further down the social ladder in each society

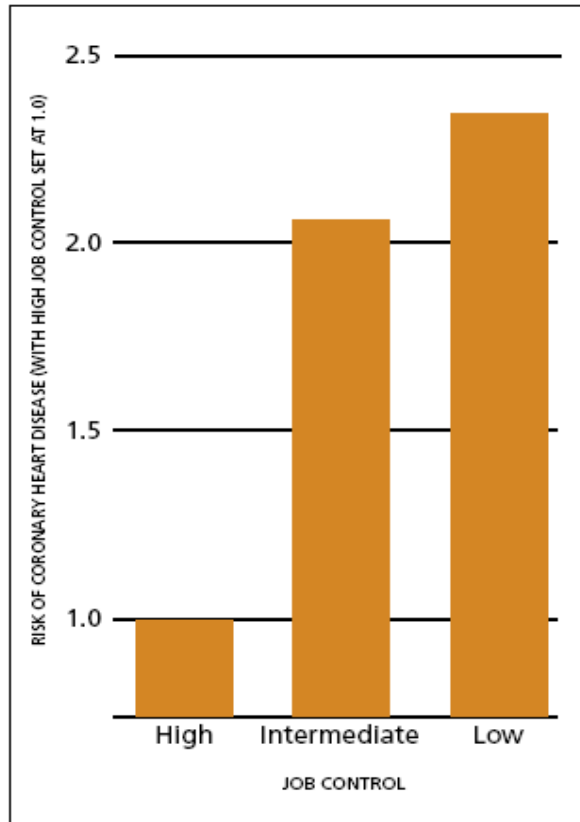
Fig. 2. Risk of diabetes in men aged 64 years by birth weight

Adjusted for body mass index



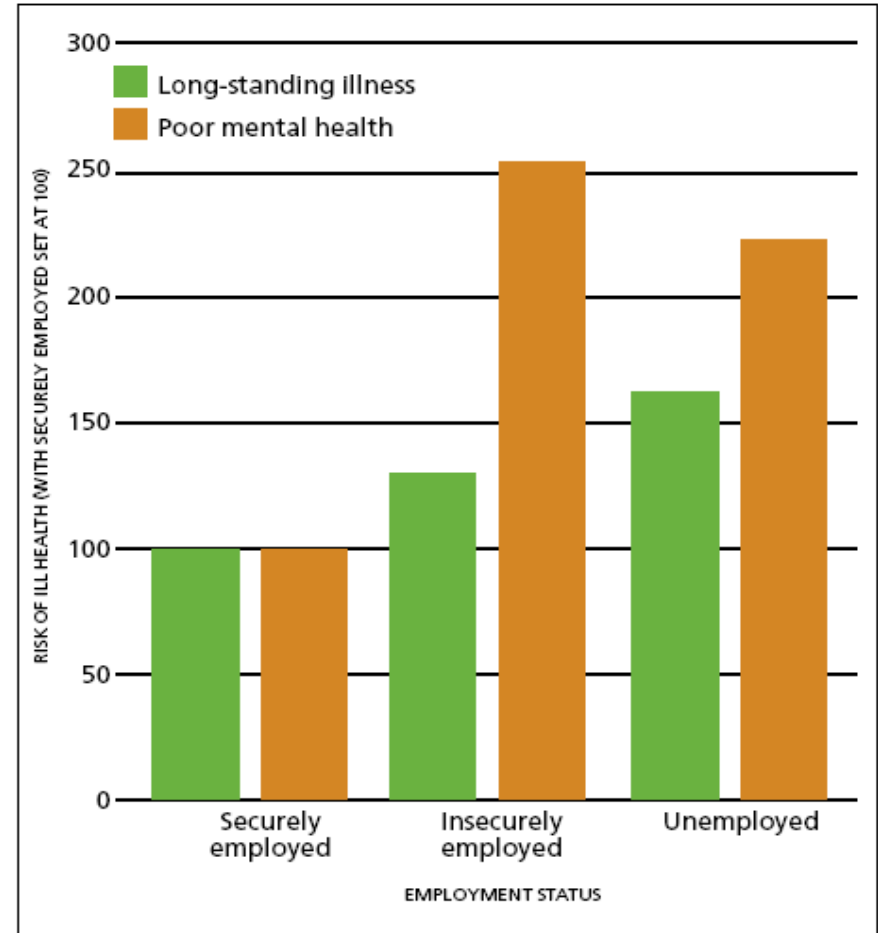
A good start in life means supporting mothers and young children: the health impact of early development and education lasts a lifetime

Fig. 4. Self-reported level of job control and incidence of coronary heart disease in men and women



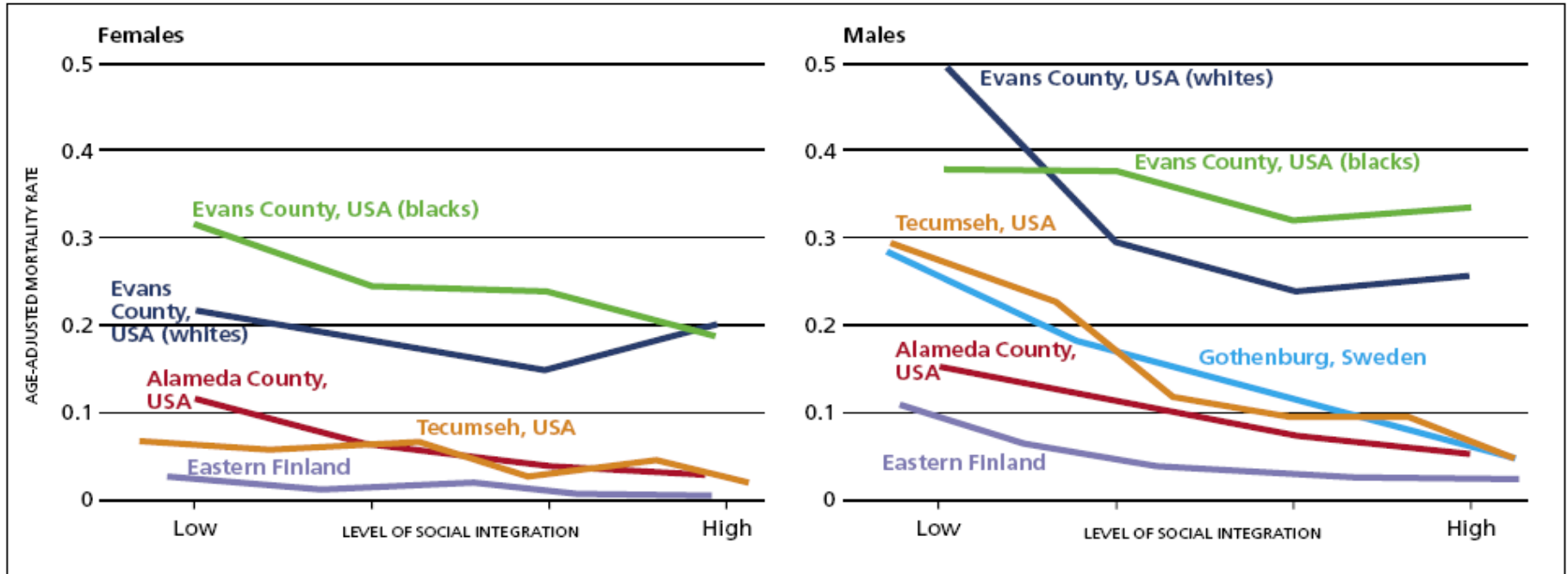
Adjusted for age, sex, length of follow-up, effort/reward imbalance, employment grade, coronary risk factors and negative psychological disposition

Fig. 5. Effect of job insecurity and unemployment on health



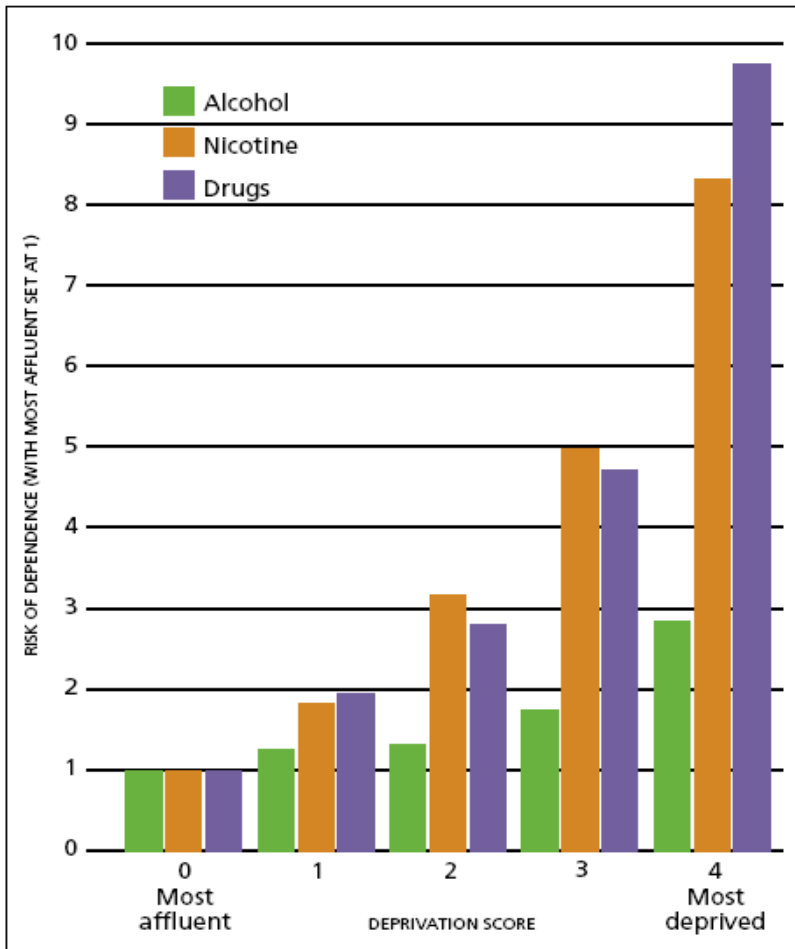
Stress in the workplace increases the risk of disease. People who have more control over their work have better health

Fig.6 Level of social integration and mortality in five prospective studies



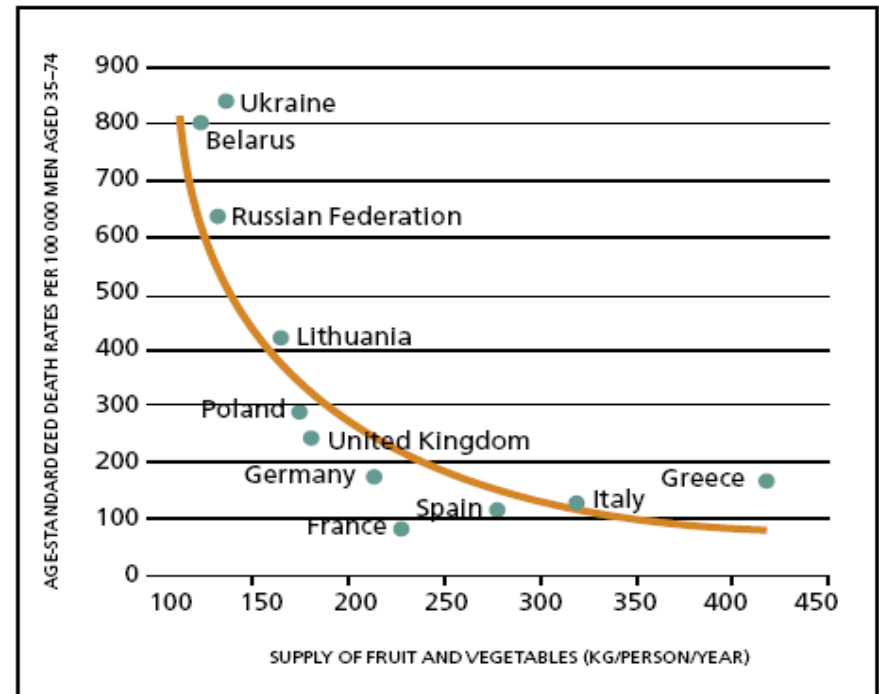
Friendship, good social relations, and strong supportive networks improve health at home, at work and in the community

Fig. 7. Socioeconomic deprivation and risk of dependence on alcohol, nicotine and drugs, Great Britain, 1993



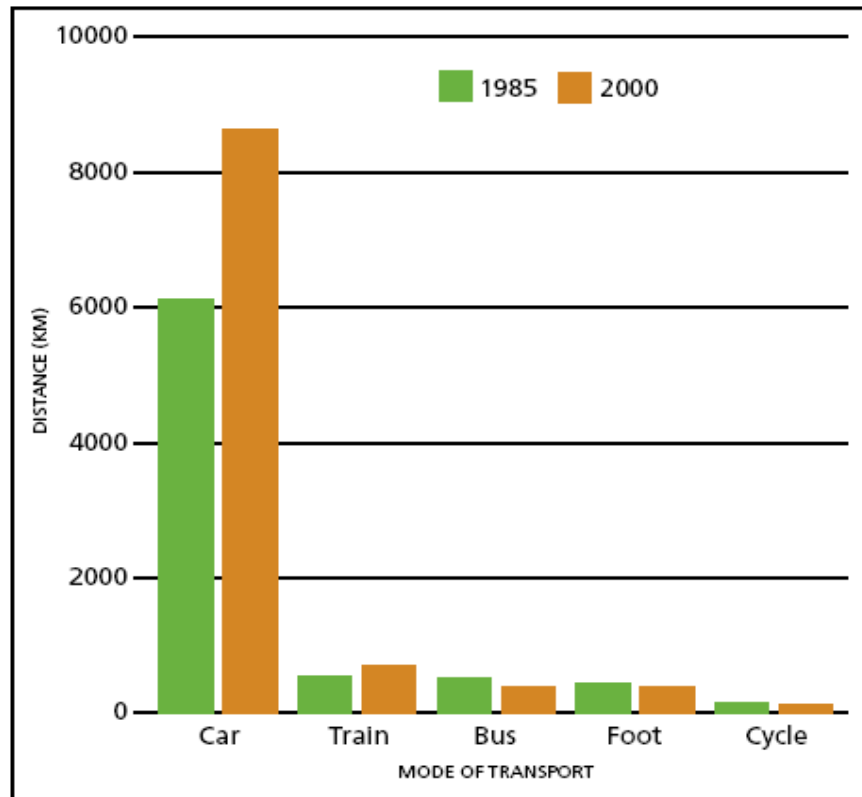
Individuals turn to alcohol, drugs and tobacco. They suffer for their use, but it is influenced by the wider social setting

Fig. 8. Mortality from coronary heart disease in relation to fruit and vegetable supply in selected European countries



A good diet and an adequate food supply are central for promoting health and well-being

Fig. 9. Distance travelled per person by mode of transport, Great Britain, 1985 and 2000

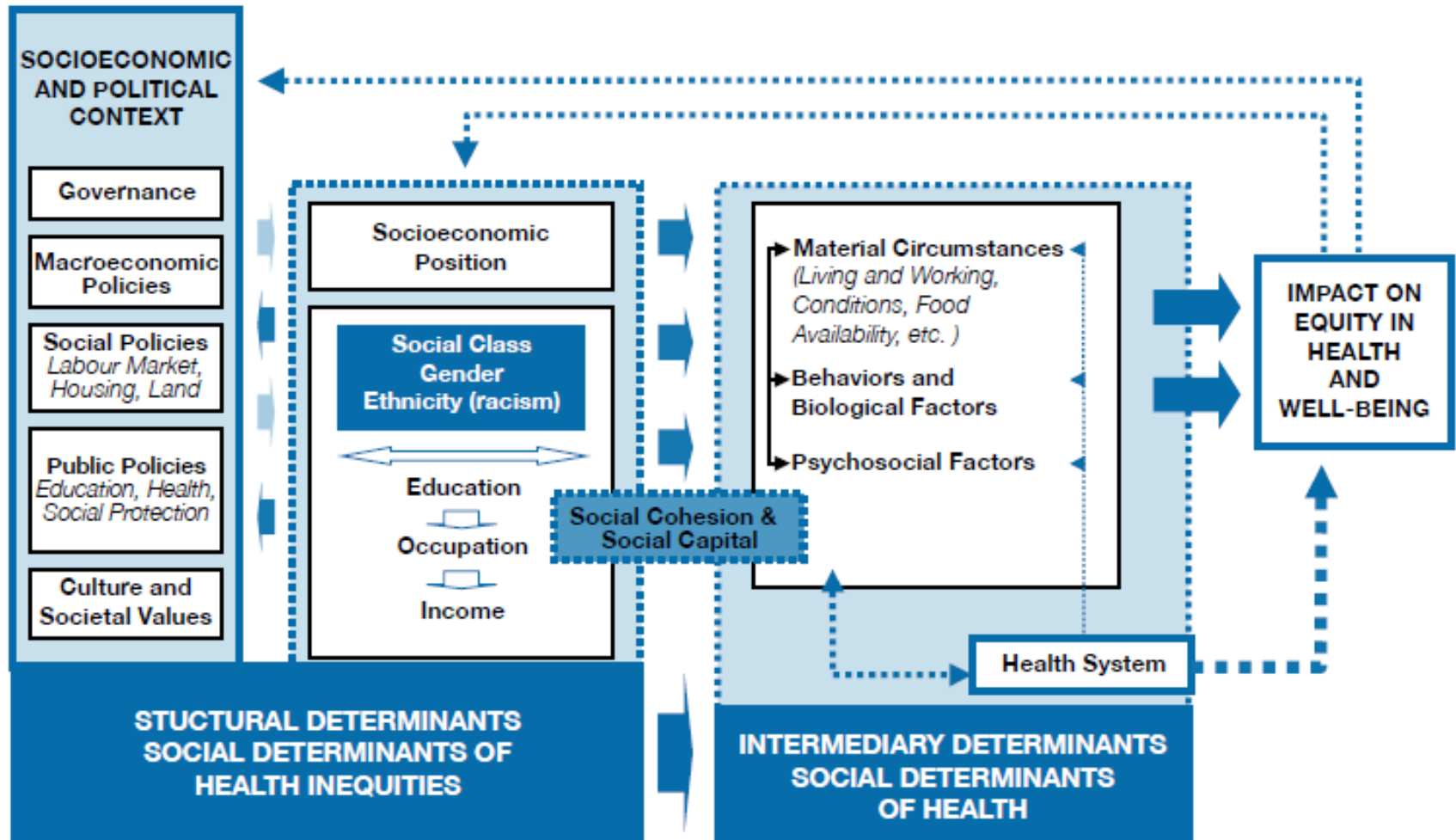


Roads should give precedence to cycling.

Healthy transport means less driving and more walking and cycling, backed up by better public transport

Cycling, walking and the use of public transport promote health in four way. They provide exercise, reduce fatal accidents, increase social contact and reduce air pollution

World Health Organization Commission on Social Determinants of Health conceptual framework linking social determinants of health and distribution of health



Commission on Social Determinants of Health conceptual framework

The framework shows how social, economic and political mechanisms give rise to a set of socio-economic positions, whereby populations are stratified according to income, education, occupation, gender, race/ethnicity and other factors.

These socioeconomic positions in turn shape specific determinants of health status (intermediary determinants) reflective of people's place within social hierarchies.

Based on their respective social status, individuals experience differences in exposure and vulnerability to health-compromising conditions.

Commission on Social Determinants of Health conceptual framework

Illness can “feed back” on a given individual’s social position, e.g. by compromising employment opportunities and reducing income; certain epidemic diseases can similarly “feed back” to affect the functioning of social, economic and political institutions.

The CSDH framework explain the concept of social determinants to policy-makers in ways that clarify the distinction between the social causes of health and the factors determining the distribution of these causes between more and less advantaged groups.

THE DISTINCTION BETWEEN HEALTH INEQUALITY AND HEALTH INEQUITY

Inequality and equality are dimensional concepts, simply referring to measurable quantities.

Inequity and equity, on the other hand, are political concepts, expressing a moral commitment to social justice.

Health inequality is the generic term used to designate differences, variations, and disparities in the health achievements of individuals and groups.

A straightforward example of health inequality is higher incidence of disease X in group A as compared with group B of population P.

If disease X is randomly or equally distributed among all groups of population P, then there is no presence of health inequality in that population.

In other words, health inequality is a descriptive term that need not imply moral judgment.

Further illustrating this point, imagine individual A who dies at age 40 during a sky diving accident.

His identical twin, B, who does not enjoy this hobby, lives to age 80.

In this case, the unequal life spans of A and B (and for that matter, the unequal life expectancies of recreational sky divers and non-divers) reflects a personal choice that would not necessarily evoke moral concern.

As well as voluntarily assumed risks, other examples of health inequality that we would not normally consider unjust include pure chance (a random genetic mutation—unlucky but not unjust) and life stage differences (a 20 year old having better health than a 60 year old, but expected to succumb to the same health problem 40 years on).

That said, many forms of health inequalities are also undoubtedly inequitable.

Health inequity refers to those inequalities in health that are deemed to be unfair or stemming from some form of injustice.

Whitehead and Dahlgren proposed additional considerations such as whether the inequalities are avoidable or unnecessary.

There are some difficulties in adopting preventability and necessity as criteria for the definition of health inequity.

In principle, even risk taking behaviour such as sky diving is avoidable or preventable.

However, this does not make its tragic outcome more or less inequitable.

The identification of health inequities entails normative judgment premised upon (a) one's theories of justice; (b) one's theories of society; and (c) one's reasoning underlying the genesis of health inequalities.

This is a crux of the distinction between equality and equity.

Science alone cannot determine which inequalities are also inequitable, nor what proportion of an observed inequality is unjust or unfair.

On one account, most of the health inequalities across social groups (such as class and race) are unjust because they reflect an unfair distribution of the underlying social determinants of health (for example, access to educational opportunities, safe jobs, health care, and the social bases of self respect).

On the other hand, some extreme views would deny any role of social injustice in the creation of health inequalities.

Much of this debate revolves around the issues of free will and individual responsibility for self care.

People who emphasise individual responsibility tend to view health inequalities as the outcome of differences in how people make choices.

- The decision to start smoking, or to adhere to a risk taking hobby

Social determinists view the same choices as arising out of constrained and unfair circumstances.

- Targeting of tobacco advertising to low income children

The existence of a social gradient in health behaviours demands an explanation.

The weight of the empirical evidence in the health inequalities literature supports the social determinist's position.

That is, the decision to invest in personal health is not freely chosen to the extent that (a) there are early life course influences on adult health (when, presumably, most individuals are not competent to make informed choices); and (b) to the extent that one's life chances depend upon contextual factors (that is, ambient risks that are imposed on individuals through their micro and macro environment or the behavior of others).

The conditions that need to be met for regarding health inequalities as fair are, in fact, extremely stringent.

Thus, many genetic differences, exposure to different childhood conditions, differences in most health behaviours, as well as most environmental exposures are unfair.

Well established inequalities

- Income
- Poverty
- Education
- Health

Poverty and Inequality

Both poverty and economic inequality are bad for health.

Poverty is an important risk factor for illness and premature death. It affects health directly and indirectly, in many ways, e.g. financial strain, poor housing, poorer living environments and poorer diet, and limited access to employment, other resources, services and opportunities.

Poor health can also cause poverty.

Poverty definition

When a person or group of people lack human needs because they cannot afford them. Human needs include clean water, nutrition, health care, education, clothing, and shelter.

Poverty, social exclusion, poor housing and poor health systems are among the main social causes of ill health



Differences in the quality of life within and among countries affect how long people live



A child born in Japan has a chance of living 43 years longer than a child born in Sierra Leone.

Probability of death between the age of 15 and 60 is:

- 8.2% in Sweden
- 48.5% in the Russian Federation
- 84.5% in Lesotho



In Australia, there is a 20-year gap in life expectancy between Australian Aboriginal peoples and the Australian average



Social Exclusion and Discrimination

Social exclusion is the process by which groups and individuals are prevented from participating fully in society as a result of a range of factors including poverty, unemployment, caring/responsibilities, poor education or lack of skills, women, older people, people with disabilities or homeless people, for example, may experience social exclusion.

Social exclusion therefore is about more than poverty.

It is about isolation from participation in social life, and from power and decision-making.

Social Exclusion and Discrimination

Social exclusion is often compounded by discrimination, which can arise on the basis of a person's gender, race or ethnicity, disability, marital, family or caring status, age, religion.

Equality legislation has an important role to play in tackling these forms of discrimination and promoting greater equality, inclusion, and diversity.

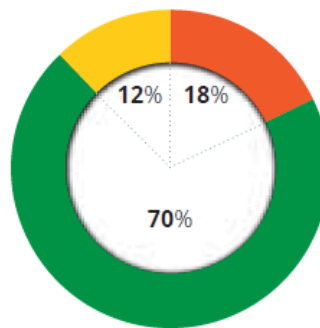
Road safety in the Sustainable Development Goals Ensure healthy lives and promote well-being for all at all ages. By 2020, halve the number of global deaths and injuries from road traffic accidents.

Ninety-percent of road traffic deaths occur in low- and middle-income countries, and while these countries also account for 82% of the world's population, they nevertheless bear a disproportionate number of deaths relative to their level of motorization, as they account for only 54% of the world's registered vehicles.

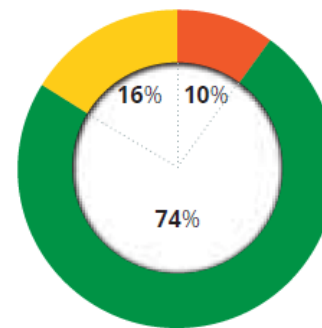


Population, road traffic deaths and registered motorized vehicles^a, by country income status

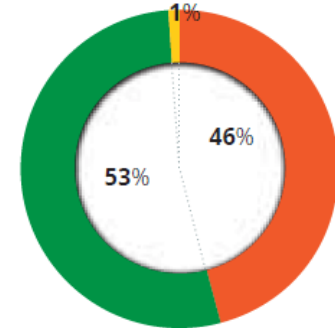
High-income Middle-income Low-income



Population



Road traffic deaths



Registered motorized vehicles

The world has made substantial progress in child survival since 1990, but 5.6 million children under the age of 5 years died in 2016.

This translates into 15 000 under-five deaths per day.

More than half of these early child deaths are due to conditions that could be prevented or treated with access to simple, affordable interventions.

Leading causes of death in children under-5 years are preterm birth complications, pneumonia, birth asphyxia, diarrhoea and malaria.

Children in sub-Saharan Africa are more than 15 times more likely to die before the age of 5 than children in high income countries.



A child's risk of dying is highest in the first 28 days of life (the neonatal period).

Improving the quality of antenatal care, care at the time of childbirth, and postnatal care for mothers and their newborns are all essential to prevent these deaths.

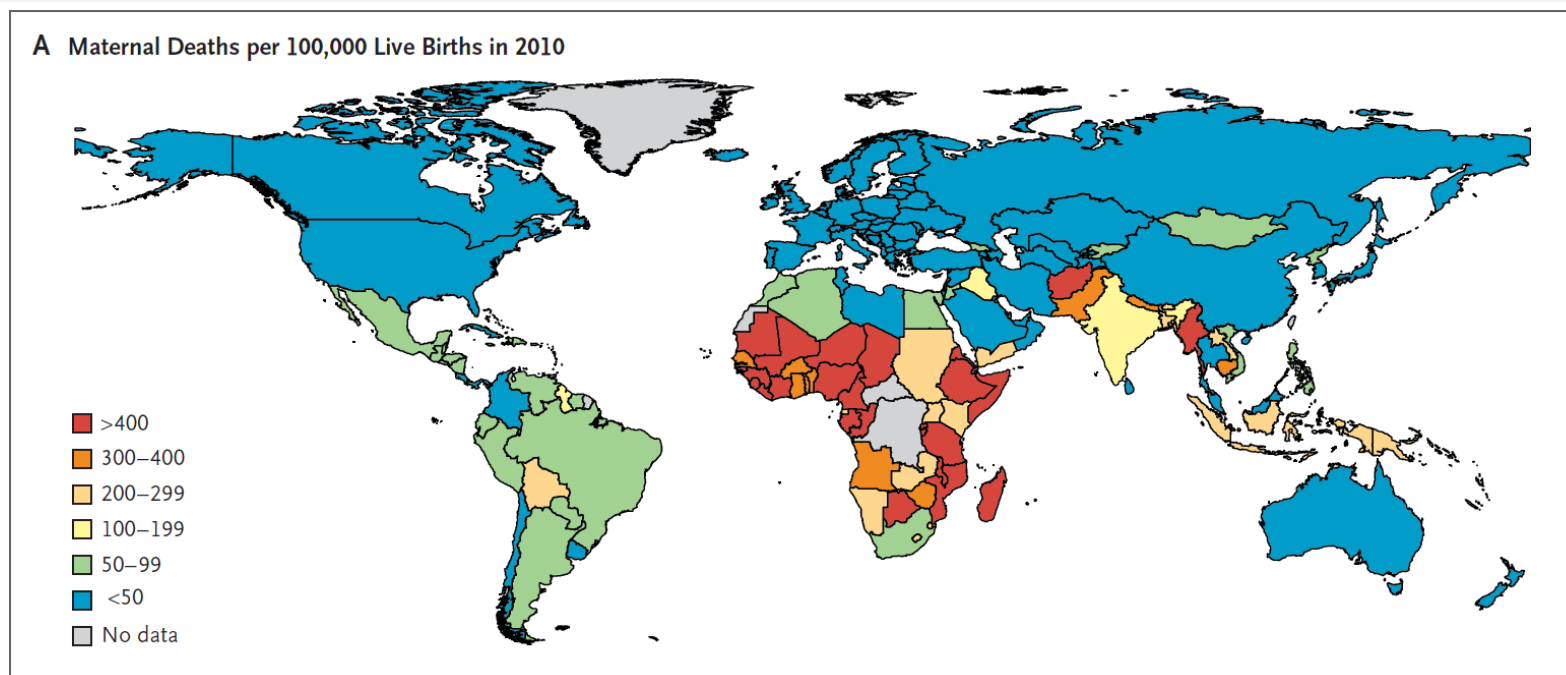
Globally 2.6 million children died in the first month of life in 2016.
There are approximately 7 000 newborn deaths every day, amounting to 46% of all child deaths under the age of 5-years.

The leading under-5 causes were preterm birth complications (1.055 million), pneumonia (0.921 million), and intrapartum-related events (0.691 million). In the two MDG regions with the most under-5 deaths, the leading cause was pneumonia in sub-Saharan Africa and preterm birth complications in southern Asia.

Focused efforts are still needed in Sub-Saharan Africa and South East Asia to prevent 80 per cent of these deaths.

Figure 1. Maternal, Neonatal, and Child Mortality Worldwide.

Maps were generated with data from Lozano et al.,³ the United Nations Children's Fund,⁴ and the United Nations Population Fund.

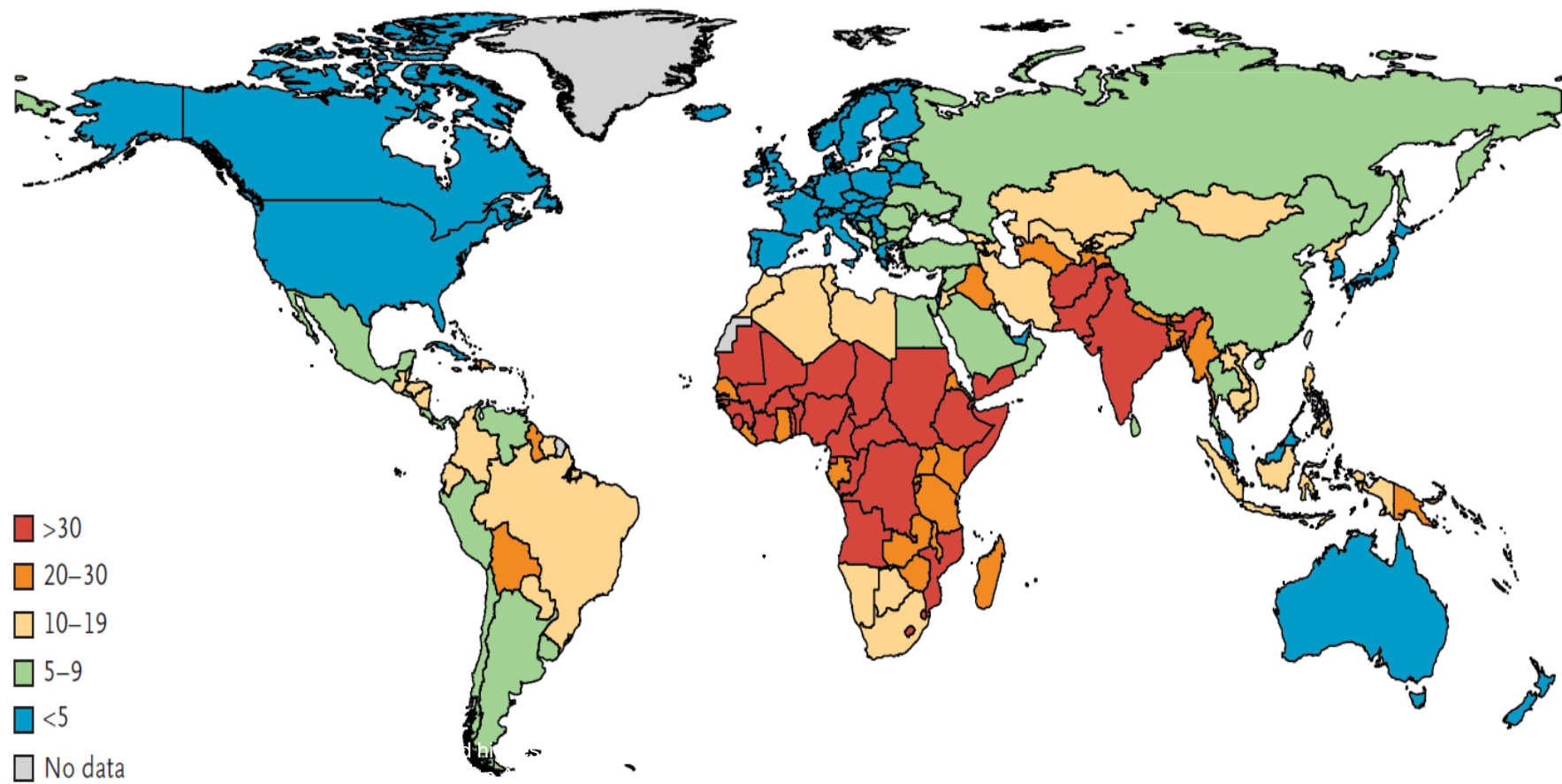


The largest numbers and highest rates of maternal, neonatal, and child deaths are in countries of sub-Saharan Africa and South Asia (Fig. 1).

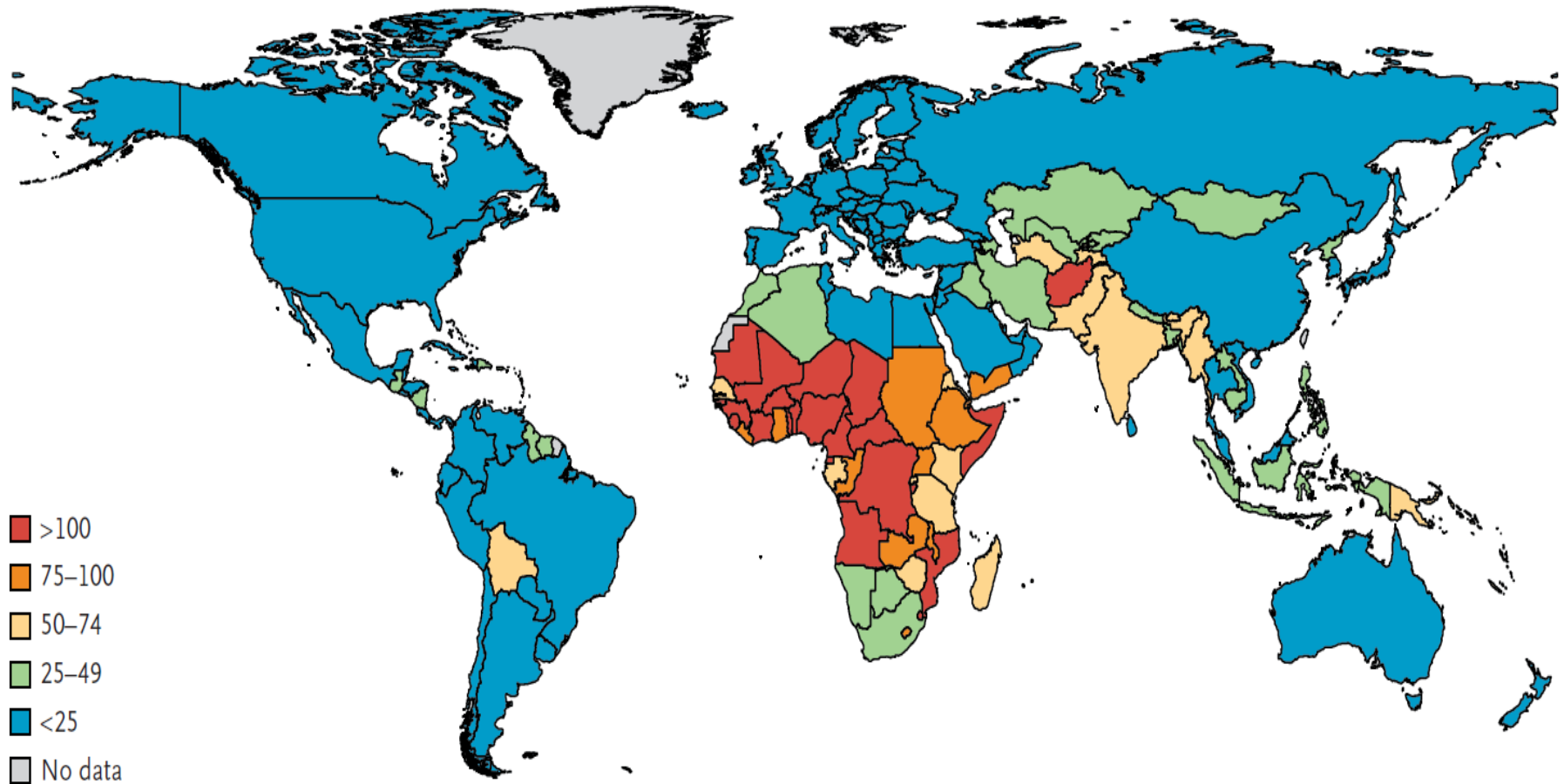
A total of 10 countries have almost two thirds of the global burden of maternal and newborn deaths, as well as stillbirths

Maternal deaths have dropped from 427 000 in the year 2000 to 289 000 in 2013, but are still unacceptably high: nearly 800 women die due to complications of pregnancy and childbirth every day.

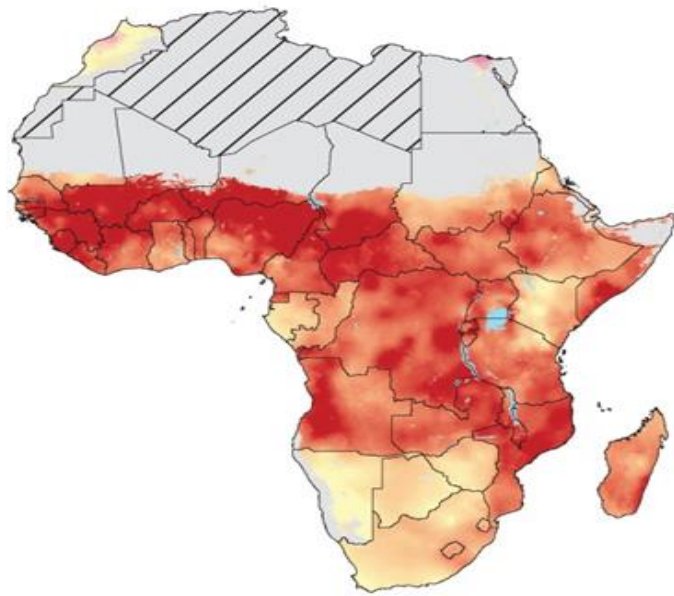
B Neonatal Deaths per 1000 Live Births in 2011



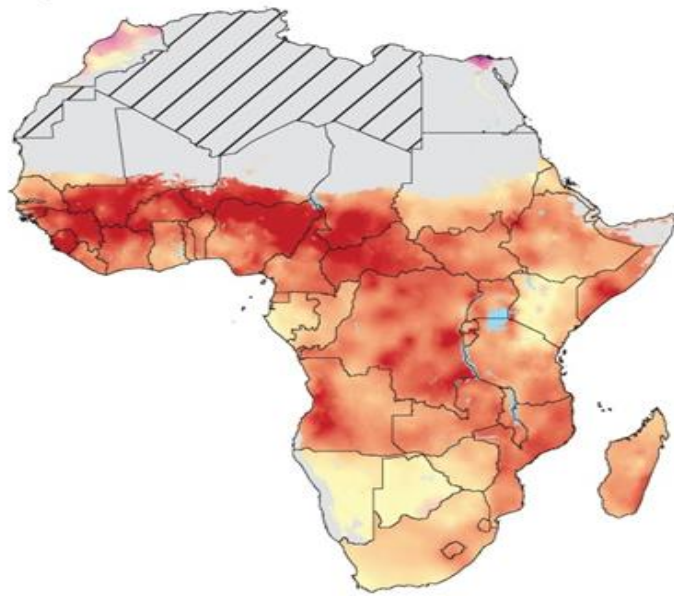
C Deaths in Children <5 Yr of Age per 1000 Live Births in 2011



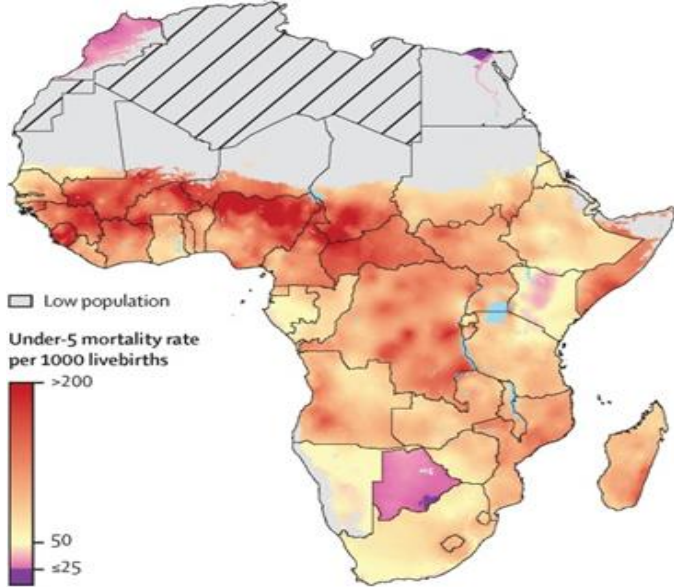
2000



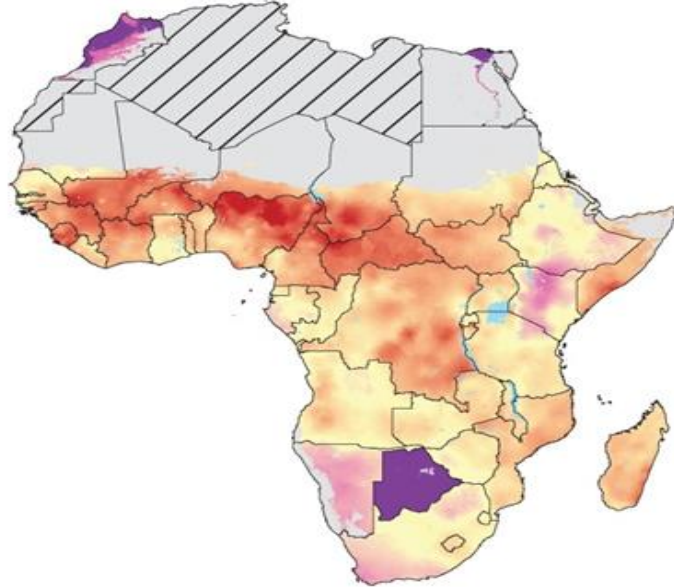
2005



2010



2015



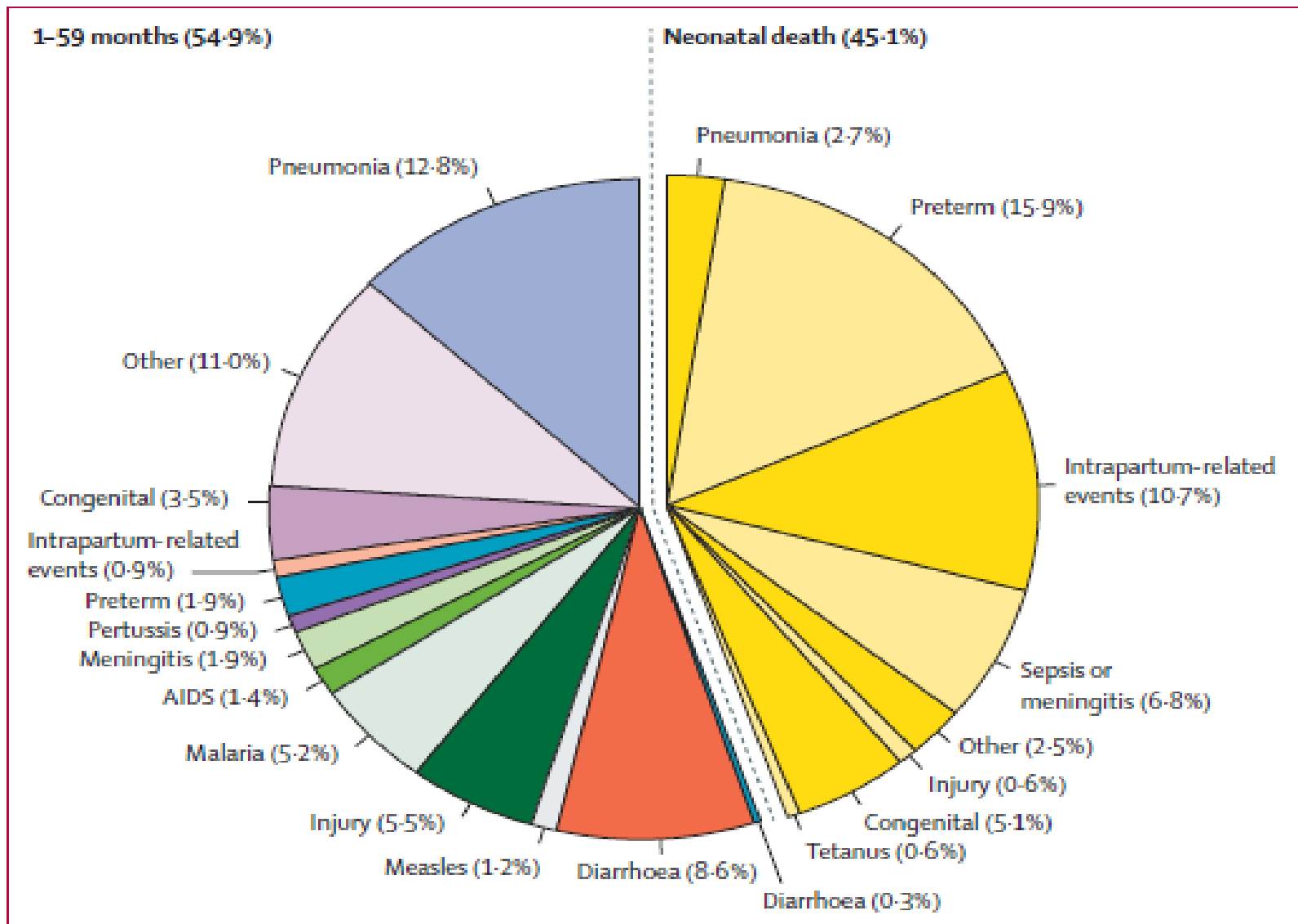


Figure 1: Global causes of under-5 deaths in 2015

B Causes of Maternal Death

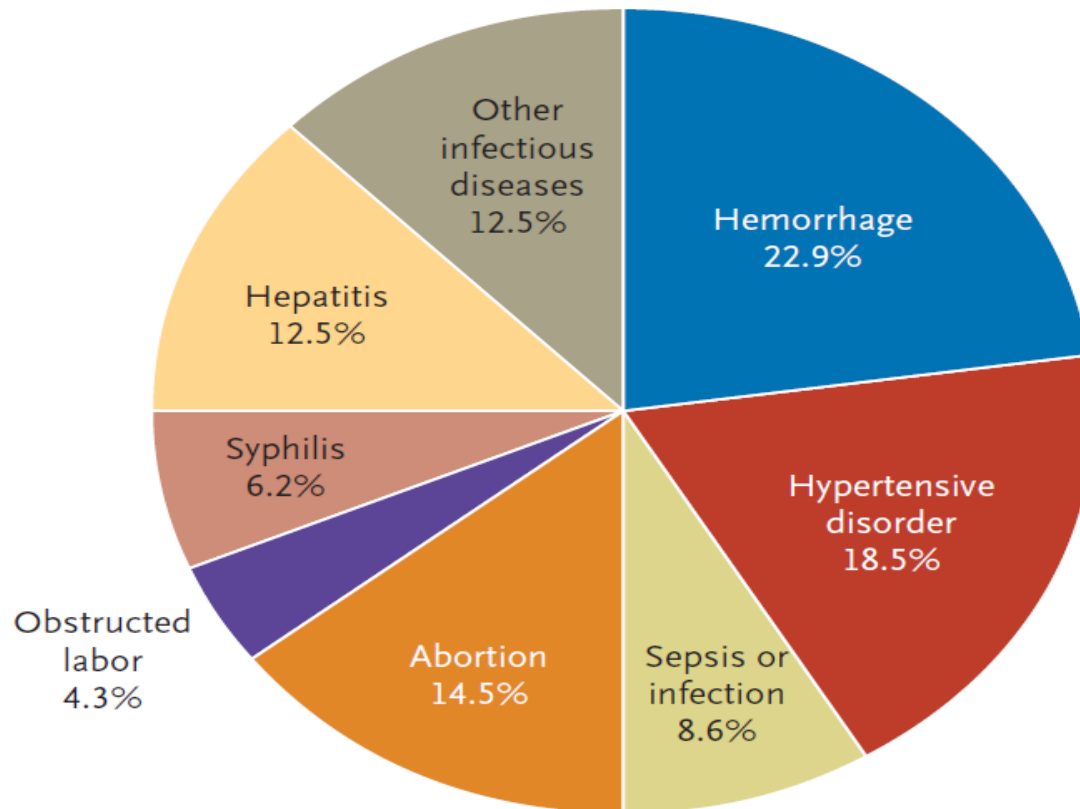


Figure 2. Causes of Death in Children Younger Than 5 Years of Age and Causes of Maternal Death.

The causes of death in children younger than 5 years of age are shown separately for neonates and for children 1 to 4 years of age. Data for causes of death in children younger than 5 years of age are from Liu et al.⁸ Data for causes of maternal death are from Lozano et al.⁹ Percentages do not sum to 100 owing to rounding.

The close link between poverty and under nutrition is also well recognized.

It has been estimated that 45% of all deaths among children younger than 5 years of age may be associated with undernutrition, as manifested by fetal growth restriction, stunting, wasting, deficiencies of vitamin A and zinc, and suboptimal breast-feeding (e.g., partial or no breast-feeding and early weaning)

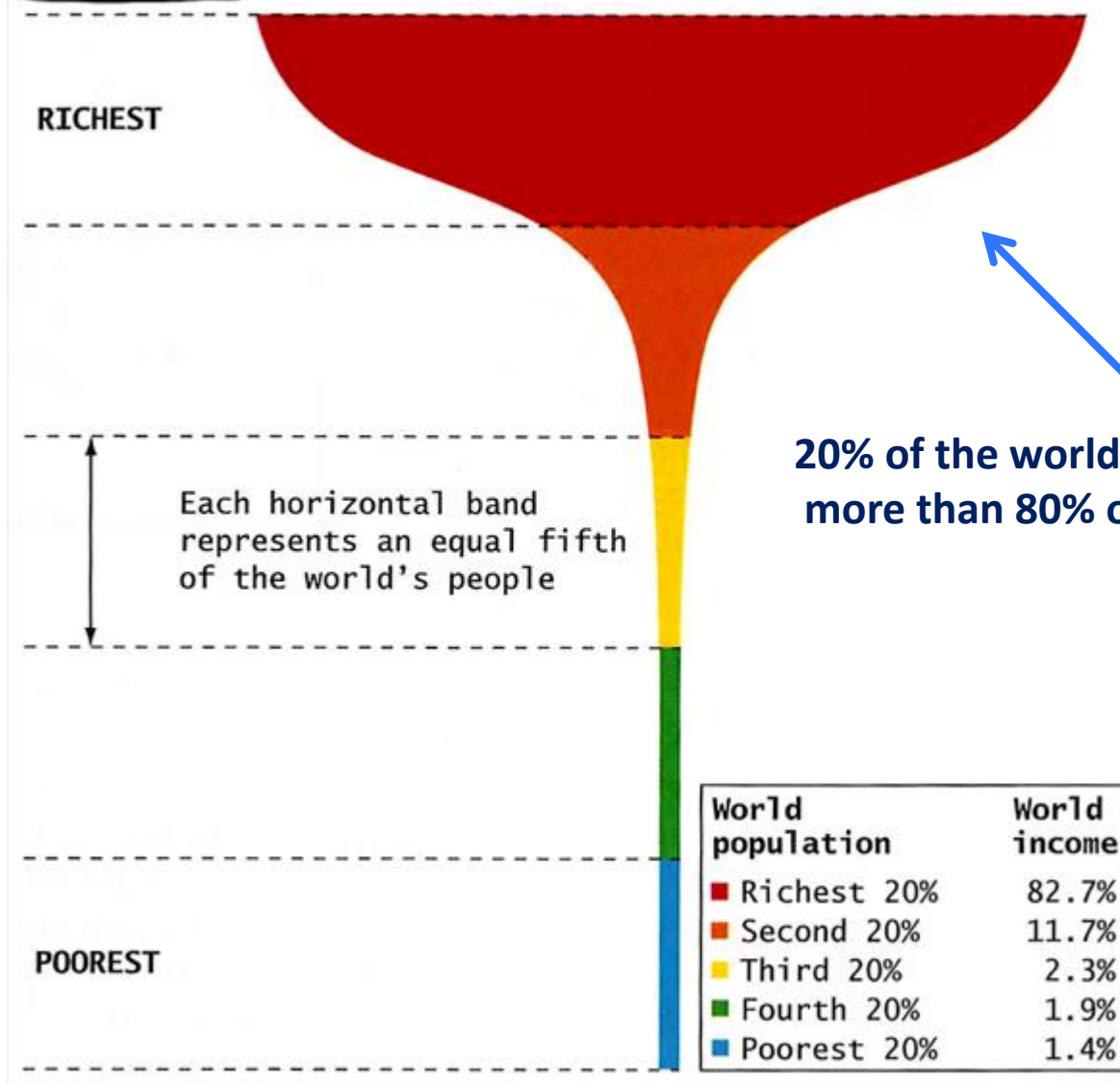
Leading causes of death in post-neonatal children: risk factors and response

Cause of death	Risk factors	Prevention	Treatment
Pneumonia, or other acute respiratory infections	Low birth weight	Vaccination	Appropriate care by a trained health provider
	Malnutrition	Adequate nutrition	
	Non-breastfed children	Exclusive breastfeeding	Antibiotics
	Overcrowded conditions	Reduction of household air pollution	Oxygen for severe illness
Childhood diarrhoea	Non-breastfed children	Exclusive breastfeeding	Low-osmolarity oral rehydration salts (ORS)
	Unsafe drinking water and food	Safe water and food	
	Poor hygiene practices	Adequate sanitation and hygiene	Zinc supplements
	Malnutrition	Adequate nutrition	
		Vaccination	

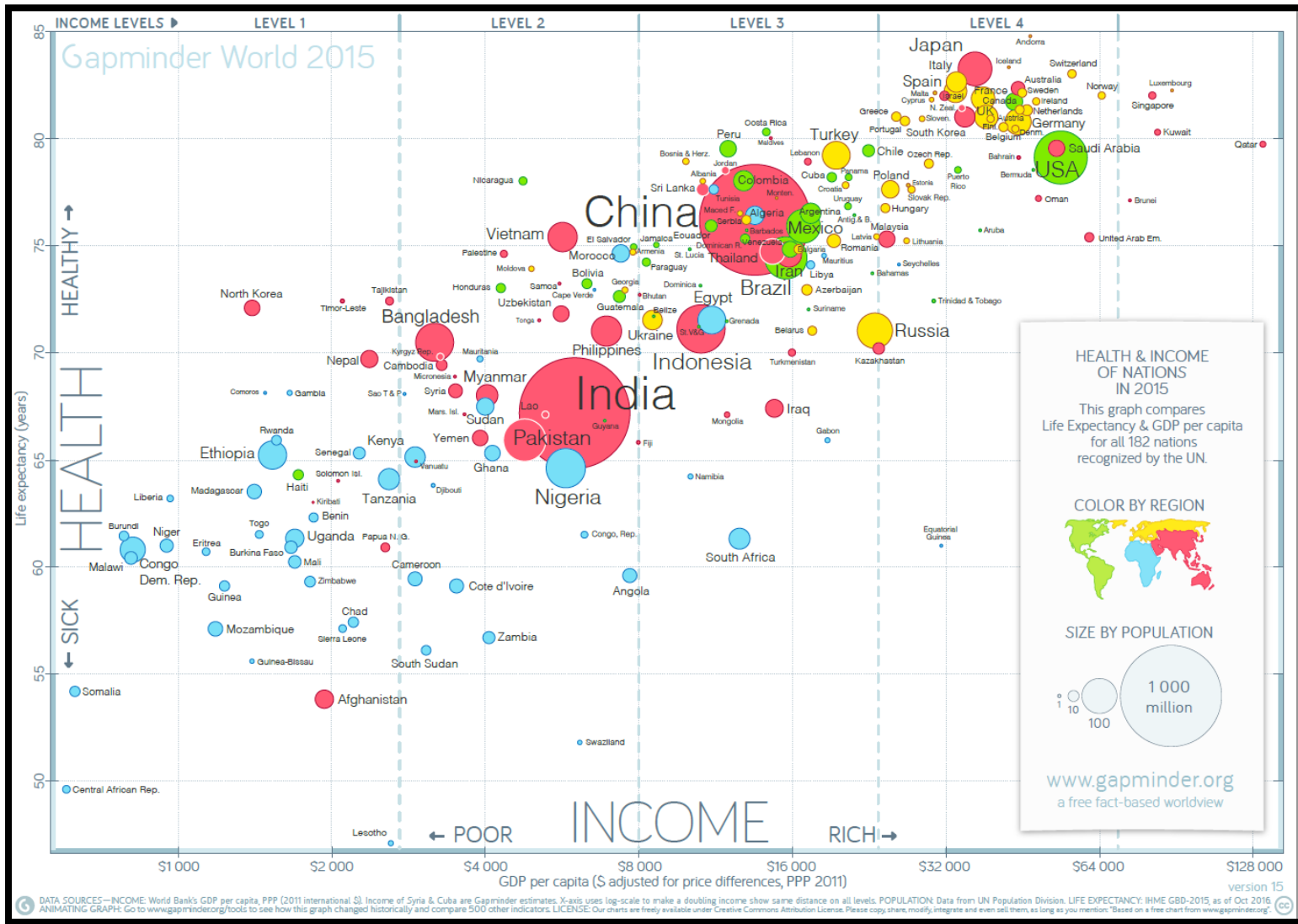
Inequality in income is increasing in countries that account for more than 80% of the world's population.



Champagne-Glass Distribution



20% of the world's population holds more than 80% of the world wealth



How Does Income Relate to Life Expectancy? Short answer — Rich people live longer

Few governments have explicit policies for tackling socially determined health inequalities



Gender inequalities in health and wellbeing across the first two decades of life: an analysis of 40 low-income and middle-income countries in the Asia-Pacific region

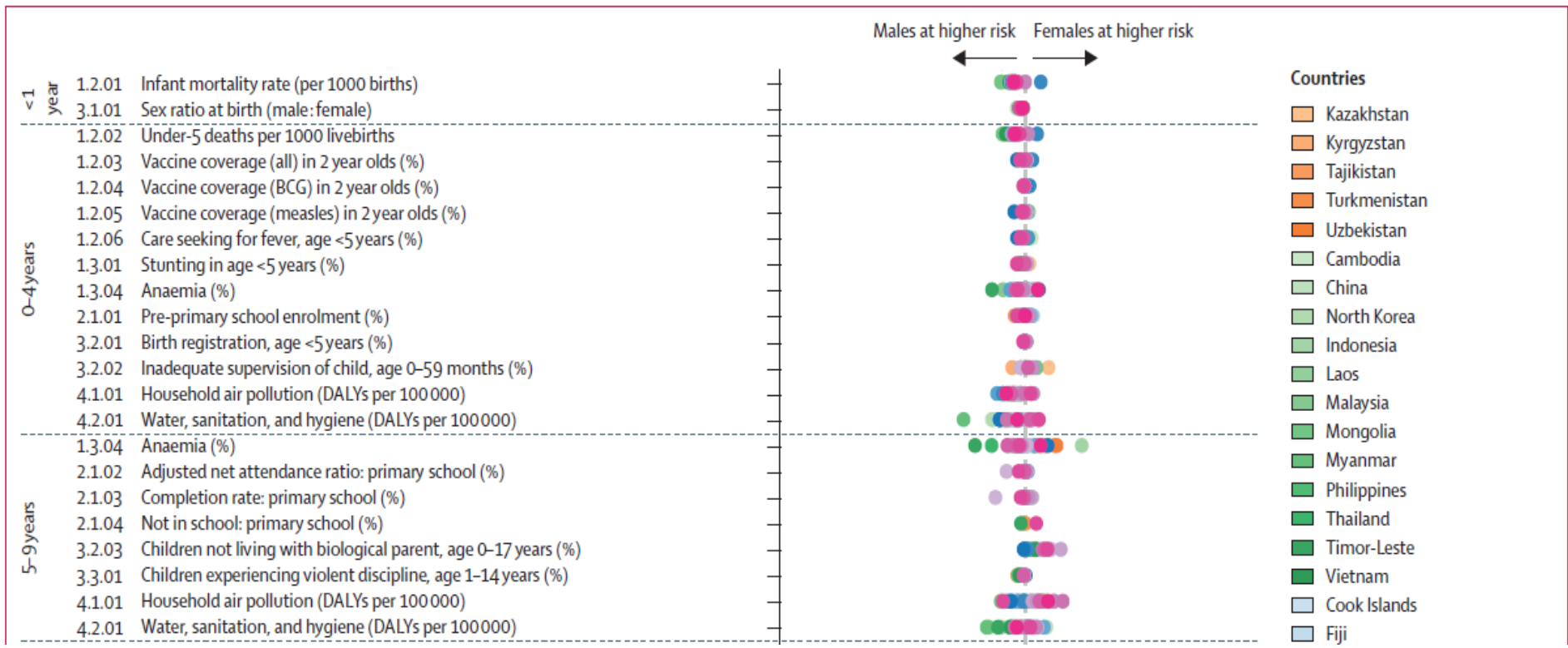
Lancet Glob Health 2020; 8: e1473–88

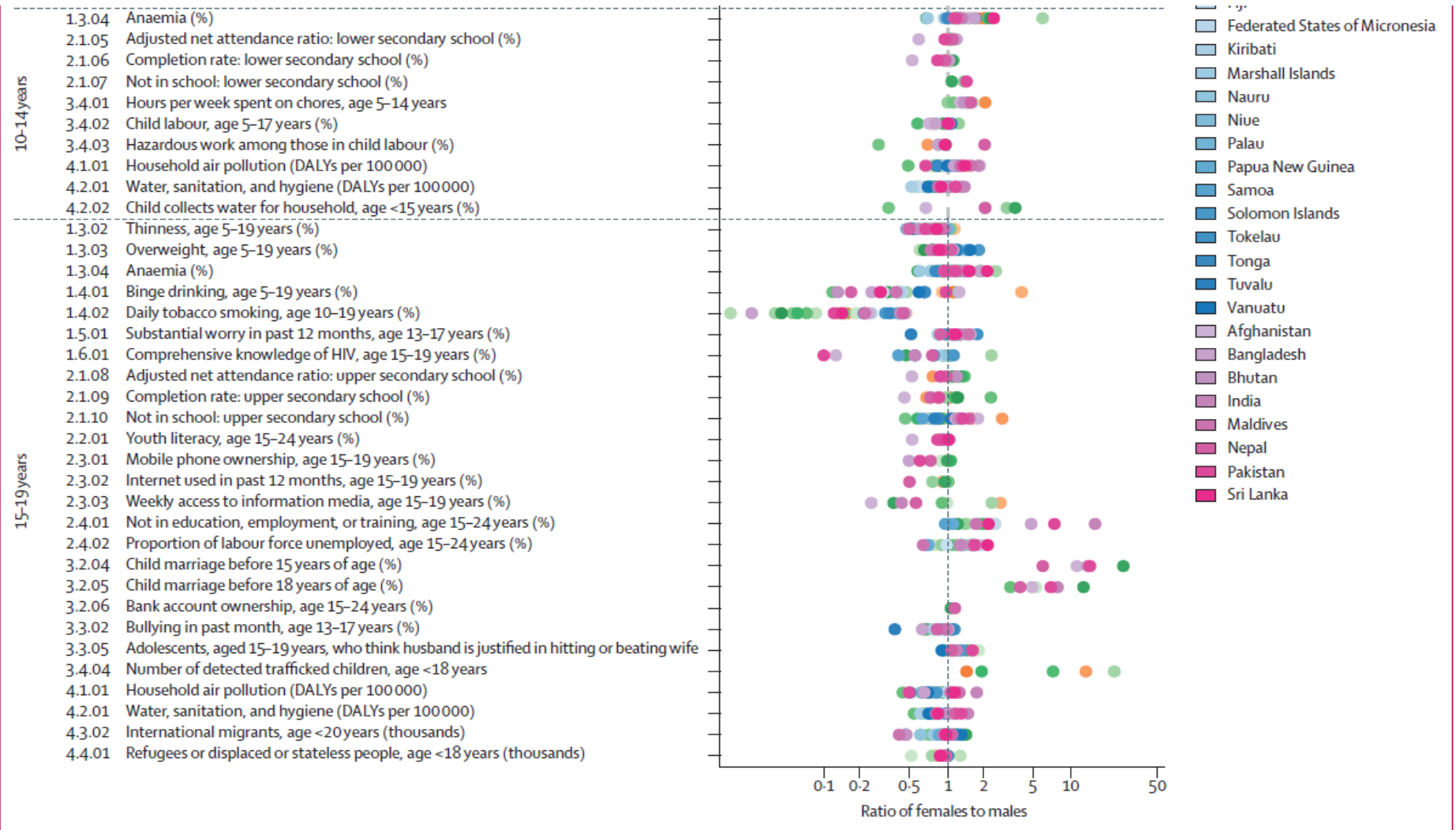
Background By adulthood, gender inequalities in health and wellbeing are apparent. Yet, the timing and nature of gender inequalities during childhood and adolescence are less clear. We describe the emergence of gender inequalities in health and wellbeing across the first two decades of life.

Methods We focused on the 40 low-income and middle-income countries in Asia and the Pacific. A measurement framework was developed around four key domains of wellbeing across the first two decades: health, education and transition to employment, protection, and a safe environment. Specific measurement constructs were then defined by considering gender indicator frameworks, the Sustainable Development Goals, indicator frameworks for child and adolescent health and wellbeing, and key stakeholder input. Available data were then mapped to define 87 indicators, subsequently populated using databases (UN agencies and the Global Burden of Diseases, Injuries, and Risk Factors Study) and nationally representative surveys. Where possible, estimates in girls were compared with boys to report relative risks.

Figure 3: Relative risks by gender for age-specific indicators across the first two decades of life

Relative risks for indicators of health and wellbeing are shown, organised by key life stages. Estimates are coloured by region and country and shown on a log scale, with points to the right signifying that females are at higher risk than males. Indicator definitions and data sources are detailed in the table; the first digit of the indicator number refers to the domain (1: health, 2: education, 3: protection, 4: environment).





Social inequality



The coronavirus is teaching us a global lesson about the cost of social inequality.

Resource-poor countries are unable to compete with resource-rich countries to purchase desperately needed personal protective equipment that can determine life or death for medical personnel and others exposed to people infected with the SARS-CoV2 virus.

Everywhere in camps for refugees and displaced persons, there is concern that the slightest exposure to SARS-CoV2 would produce an apocalypse, given the camps' rampant crowding, malnutrition, chronic stress, and chronic diseases.

In the United States, Blacks are dying from COVID-19 at rates far higher than Whites.

For example, in Illinois, Blacks account for just 15 % of the state's population but 43% of deaths attributed to COVID-19.

Blacks make up only 13% of Michigan's population but 40% of the deaths.

In Louisiana, Blacks are a third of the state's population but 70% of the deaths.

The ethnic inequality in COVID-19 deaths in the U.S. mirrors profound and pervasive differences in Blacks' experiences from cradle to grave as a result of racism.



COVID-19 is painfully exposing the existing and persisting health inequalities in our societies.

This pandemic will have the heaviest impact on the lives of people living in deprivation or facing difficult socio-economic circumstances.

EuroHealthNet partners – the public bodies responsible for health – are doing their utmost to protect citizens and contain the outbreak.

In the difficult days and months to come, the need to work together will be clear. Protecting health is the responsibility of all.

Good health starts in the community.

In the long term, we must consider how our health systems are structured, their sustainability, and their ability to protect all in times of crisis.



Addressing inequality in times of COVID-19

- The direct and indirect effects of the COVID-19 pandemic are strongly conditioned by inequality between countries and inequality within countries. COVID-19 will likely worsen these inequalities.
- Higher- and middle-income countries, that have greater financial resources and stronger public health systems, have staggered under the impact of COVID-19, yet are managing to address the pandemic. Lower-income countries, with dramatically fewer financial resources and weaker provision of public health, social protection, sanitation and other public services, particularly in rural areas, will face greater difficulties addressing the health, social and economic consequences of the pandemic.

- Within countries, pervasive existing inequalities in access to income, assets, health, education, formal employment, equal opportunity, social protection, internet and public services will magnify the direct and indirect impacts of COVID-19.
- The most vulnerable includes poorer households and those dependent on informal employment, including casual day labour, seasonal migration or mobile livelihoods; small-scale producers; those without savings and with little recourse to insurance or alternative sources of income.
- For those with employment, many are low paid workers in essential services and highly exposed to the virus. Inequality within countries and within households is strongly linked to gender.
- Women face specific inequalities, as well as other marginalized population groups including indigenous peoples. These vulnerable groups are least able to adhere to containment restrictions and often lack the means to cushion the social and economic shock.

- Increased inequality from COVID-19 will have long-term consequences.
- Greater inequality reduces the impact of economic growth on poverty reduction, meaning that eventual economic recovery may have less impact on the poor and other marginalized groups, potentially leaving them worse off and facing greater inequality than before.
- If inequalities are not addressed, eventual economic recovery will have less impact on reducing poverty brought on by COVID-19.
- Rising inequality is not inevitable.
- National institutions, politics and policy can play key roles in both addressing existing inequalities and in reaching a more equitable response to the immediate and long-term impact of the COVID-19 pandemic.
- Addressing inequalities needs to be an explicit priority and viewed through a medium and long-term lens.

10 FACTS ON HEALTH INEQUITIES AND THEIR CAUSES

1. Health inequities are systematic differences in health outcomes

Health inequities are differences in health status or in the distribution of health resources between different population groups, arising from the social conditions in which people are born, grow, live, work and age.

Health inequities are unfair and could be reduced by the right mix of government policies.



2. Every day 16 000 children die before their fifth birthday

They die of pneumonia, malaria, diarrhoea and other diseases. Children from rural and poorer households remain disproportionately affected.

Children from the poorest 20% of households are nearly twice as likely to die before their fifth birthday as children in the richest 20%.



3. Maternal mortality is a key indicator of health inequity

Maternal mortality is a health indicator that shows the wide gaps between rich and poor, both between and within countries. Developing countries account for 99% of annual maternal deaths in the world.

Women in Afghanistan have a lifetime risk of maternal death of 1 in 11, while a woman in Ireland has a risk of 1 in 17 800.



4. Tuberculosis is a disease of poverty

Around 95% of TB deaths are in the developing world.

These deaths affect mainly young adults in their most productive years.

Contracting the disease makes it even harder for these adults to improve their personal economic condition and that of their families.



5. About 87% of non-communicable diseases (chronic diseases) are in low- and middle-income countries.

NCDs already disproportionately affect low- and middle-income countries where nearly three quarters of NCD deaths – 28 million – occur.

The 4 main types of non-communicable diseases are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.

In low-resource settings, health-care costs for non-communicable diseases (NCDs) can quickly drain household resources, driving families into poverty. The exorbitant costs of NCDs are forcing 100 million people into poverty annually, stifling development.



6. Life expectancy varies by 36 years between countries

In **low-income countries**, the average life expectancy is **62**, while in **high-income countries**, it is **81**.

A child born in Malawi can expect to live for 47 years while a child born in Japan can expect to live 83 years.



7. There are alarming health inequities within countries

For example, in the United States of America, African Americans represent only 13% of the population but account for almost half of all new HIV infections.

There is no biological or genetic reason for these alarming differences in health.



8. Health disparities are huge in cities

In London, men's life expectancy ranges from 71 years in Tottenham Green ward (Haringey) to 88 years in Queen's Gate (Kensington and Chelsea) – a difference of 17 years.

According to the findings of the London Health Observatory, when travelling east from Westminster, each tube stop represents nearly one year of life expectancy lost.



9. Health inequities have a significant financial cost to societies

The European Parliament has estimated that losses linked to health inequities cost around 1.4% of gross domestic product (GDP) within the European Union – a figure almost as high as the EU's defense spending (1.6% of GDP).

This arises from losses in productivity and tax payments, and from higher welfare payments and health care costs.



10. Persistent inequities slow development

Close 1 billion people in the world live in slum conditions, representing about one quarter of the world's urban population. The likelihood of meeting the health-related Millennium Development Goals is lowered by poor health service delivery to hard-to-reach populations such as these.

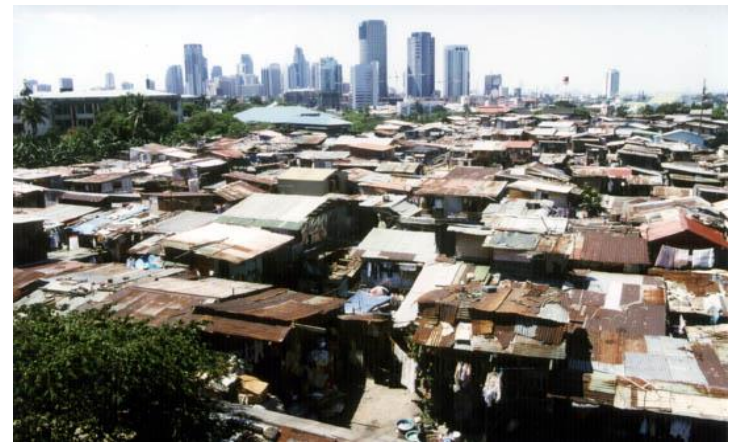


Health inequities are ***avoidable inequalities*** in health among groups of people within and between countries.

These inequities arise from inequalities within and between societies.

Social and economic conditions and their effects on people's lives determine their risk of illness and the actions taken to prevent them becoming ill or treat illness when it occurs.

What are inequities?



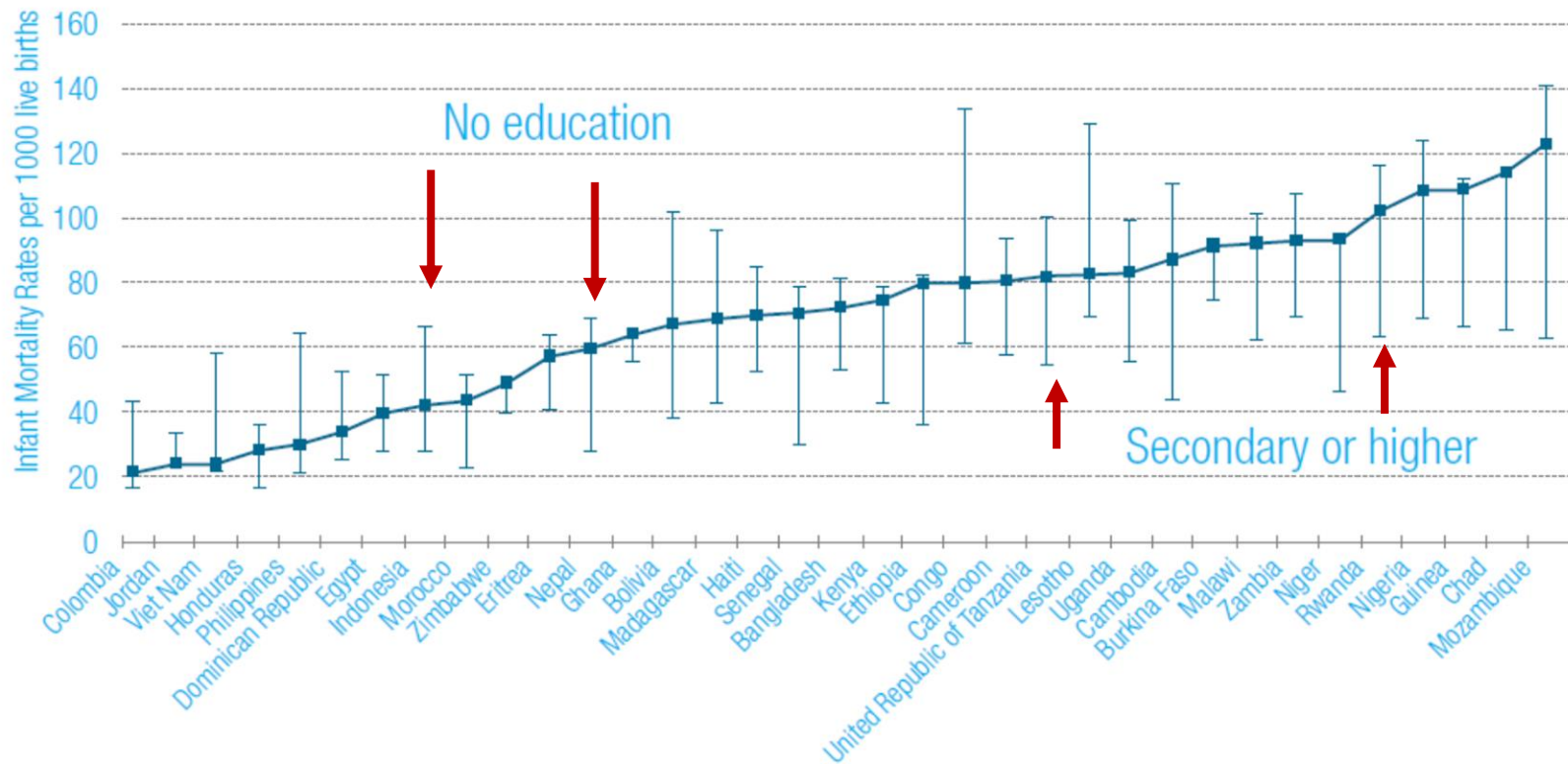
“... differences which are unnecessary and avoidable, but in addition are considered unfair and unjust. So, in order to describe a certain situation as inequitable the cause has to be examined and judged to be unfair in the context of what is going on in the rest of society.”

Whitehead (1992)

Examples of health inequities between countries

- the *infant mortality rate* (the risk of a baby dying between birth and one year of age) is **2 per 1000** live births in Iceland and over **120 per 1000** live births in Mozambique.
- in Afghanistan the *lifetime risk of a maternal death* is **1 in 11**; In Europe, the lowest one is **1 in 31.800**

Figure 2.1: Inequity in infant mortality rates between countries and within countries by mother's education.



Data from the Demographic and Health Surveys (DHS, nd) derived from STATcompiler. The continuous dark line represents average infant mortality rates for countries; the end-points of the bars indicate the infant mortality rates for mothers with no education and for mothers with secondary or higher education.

Examples of health inequities within countries

- in Bolivia, babies born to women with no education have *infant mortality* greater than **100 per 1000** live births, while the infant mortality rate of babies born to mothers with at least secondary education is **under 40 per 1000**;
- *life expectancy at birth* in Australian aboriginals is substantially lower (**59.4** for males and **64.8** for females) than Australian non aboriginal (**76.6** and **82.0**, respectively);
- *Male life expectancy at birth* in Calton neighbourhood of Glasgow is **28 years lower** than in Lenzie, a few kilometres away;
- the *prevalence of long-term disabilities in European men aged 80+ years* is **58.8%** for the lower educated versus **40.2%** for the higher educated.

Male life expectancy, between- and within-country inequities, selected countries

Place	Life expectancy at birth
United Kingdom, Scotland, Glasgow (Calton) ^b	54
India ^a	62
United States, Washington DC (black) ^c	63
Philippines ^a	64
Lithuania ^a	65
Poland ^a	71
Mexico ^a	72
United States ^a	75
Cuba ^a	75
United Kingdom ^a	77
Japan ^a	79
Iceland ^a	79
United States, Montgomery County (white) ^c	80
United Kingdom, Scotland, Glasgow (Lenzie N.) ^b	82

a) Country data: 2005 data from World Health Statistics (WHO, 2007c).


b) Pooled data 1998-2002 (Hanlon, Walsh & Whyte, 2006).

c) Pooled data from 1997-2001 (Murray et al., 2006).



INEQUITY IN HEALTH CONDITIONS

LEB among indigenous Australians is substantially lower (59.4 for males and 64.8 for females in the period 1996-2001) than that of all Australians (76.6 and 82.0, respectively, for the period 1998-2000) (Aboriginal and Torres Strait Islander Social Justice Commissioner, 2005).



In Europe, the excess risk of dying among middle-aged adults in the lowest socioeconomic groups ranges from 25% to 50% and even 150% (Mackenbach, 2005).

Health inequalities are observed among the oldest old. The prevalence of long-term disabilities among European men aged 80+ years is 58.8% among the lower educated versus 40.2% among the higher educated (Huisman, Kunst & Mackenbach, 2003).



Of people with diabetes, 80% live in low- and middle-income countries. Diabetes deaths are likely to increase by more than 50% in the next 10 years without urgent action (WHO, nd,c).

Mental health problems will become increasingly important. It is estimated that unipolar depressive disorders will be the leading cause of the burden of disease in high-income countries in 2030, and it will be number two and three in middle- and low-income countries, respectively (Mathers & Loncar, 2005).

The lifetime risk of maternal death is one in eight in Afghanistan; it is 1 in 17 400 in Sweden, (WHO et al., 2007).



Maternal mortality is three to four times higher among the poor compared to the rich in Indonesia (Graham et al., 2004).

Every day, over 13 500 people worldwide die due to tobacco. The total number of smoking deaths will increase from 5 to 8 million in the next 20 years. Soon, it will become the leading cause of death in developing countries (as it is in high-income countries) (Mathers & Loncar, 2005).

Health inequalities are often observed along a ***social gradient***.

This means that the more favorable your social circumstances such as income or education, the better your chance of enjoying good health and a longer life. While there is a significant gap between the wealthy and the poor, the relationship between social circumstances in health is in fact a graded one.

Socioeconomic Gradient in Health

A stepwise fashion health outcomes improve as socioeconomic position improves.

This gradient can be measured by people's income, occupation or level of education.

What is mean by social gradient?

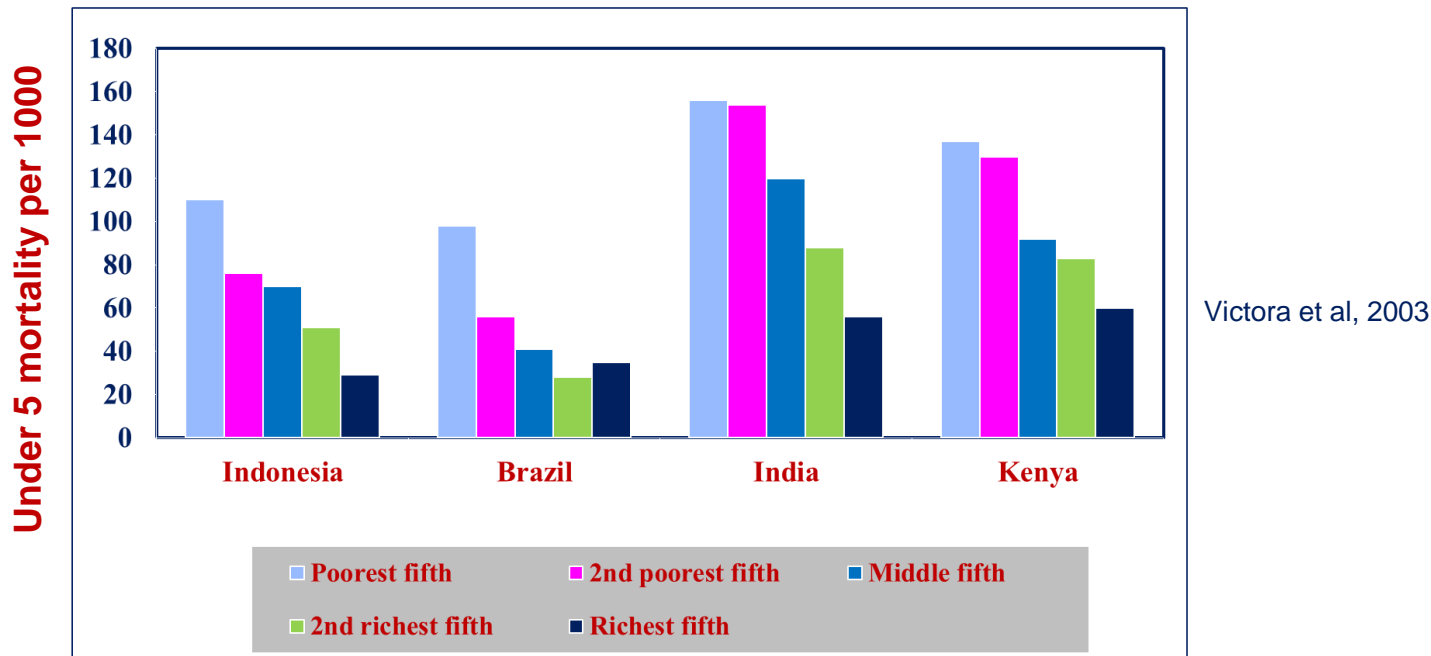
The poorest of the poor, around the world, have the worst health.

The evidence shows that, within countries, who has the lowest socio-economic position have the worse health.

There is a social gradient in health that runs from top to bottom of the socioeconomic spectrum. This is a global phenomenon, seen in low, middle and high income countries.

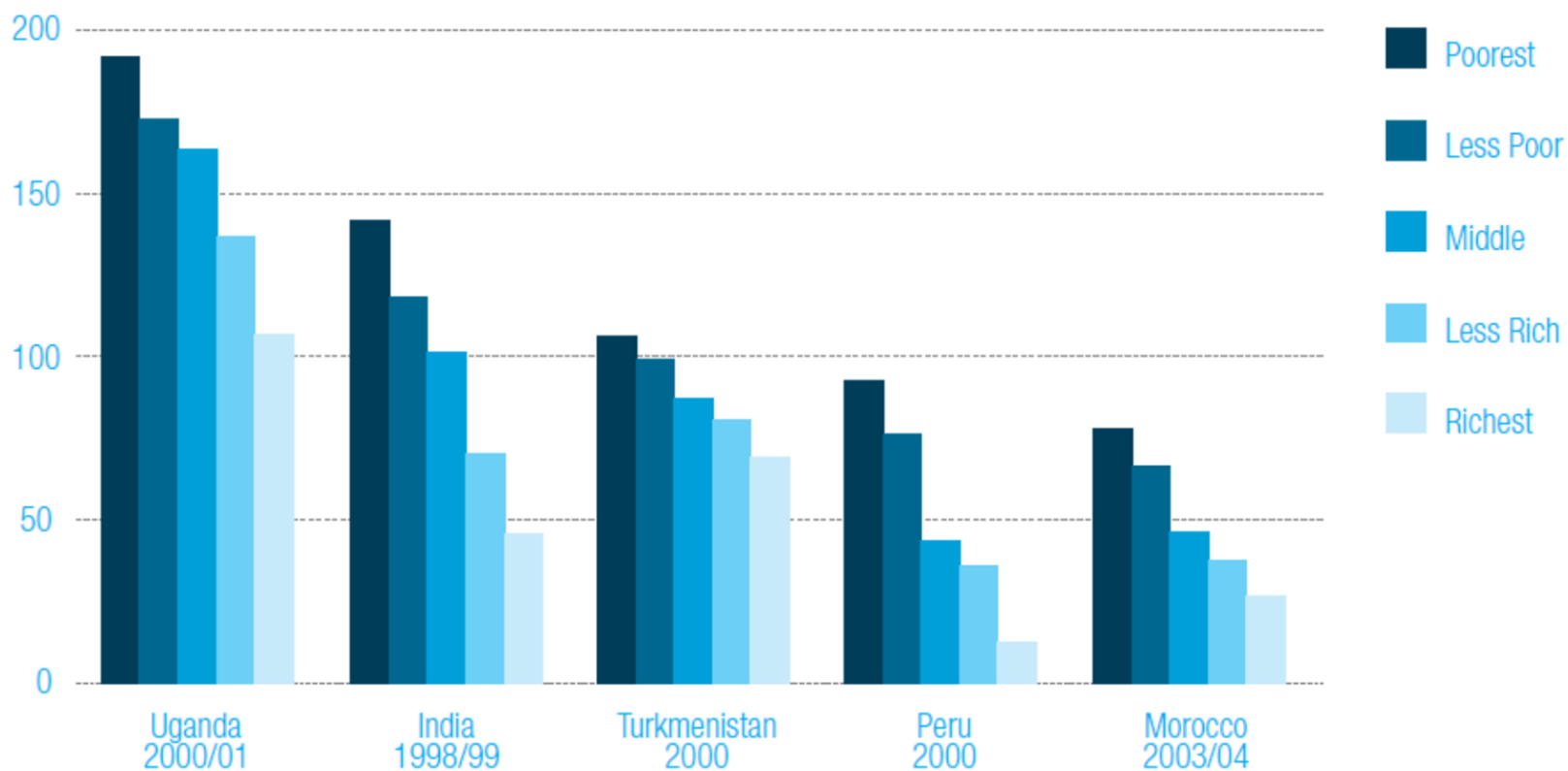
- The social gradient in health means that health inequities affect everyone

Under 5 mortality rates, select countries, by household wealth



For example, if you look at under-5 mortality rates by levels of household wealth you see that within countries the relation between socioeconomic level and health is graded. The poorest have the highest under-5 mortality rates, and people in the second highest quintile of household wealth have higher mortality in their offspring than those in the highest quintile. **This is the social gradient in health.**

Figure 2.2: Under-5 mortality rate per 1000 live births by level of household wealth.



Source: Gwatkin et al. (2007), using DHS data.

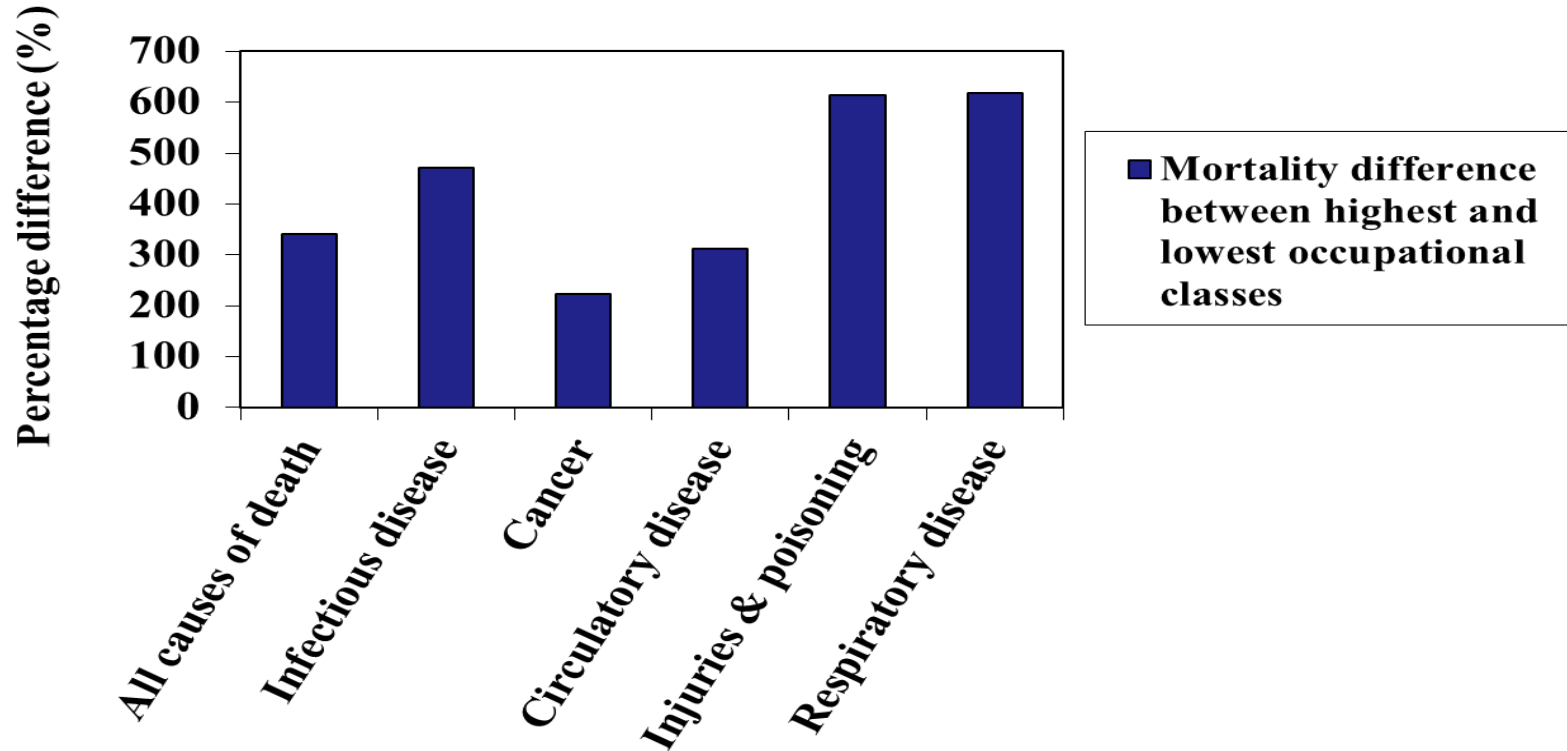
In Western society, the 'social gradient' is particularly significant in determining health and wellbeing.

Social and environmental influences impact notably on the disadvantaged and vulnerable

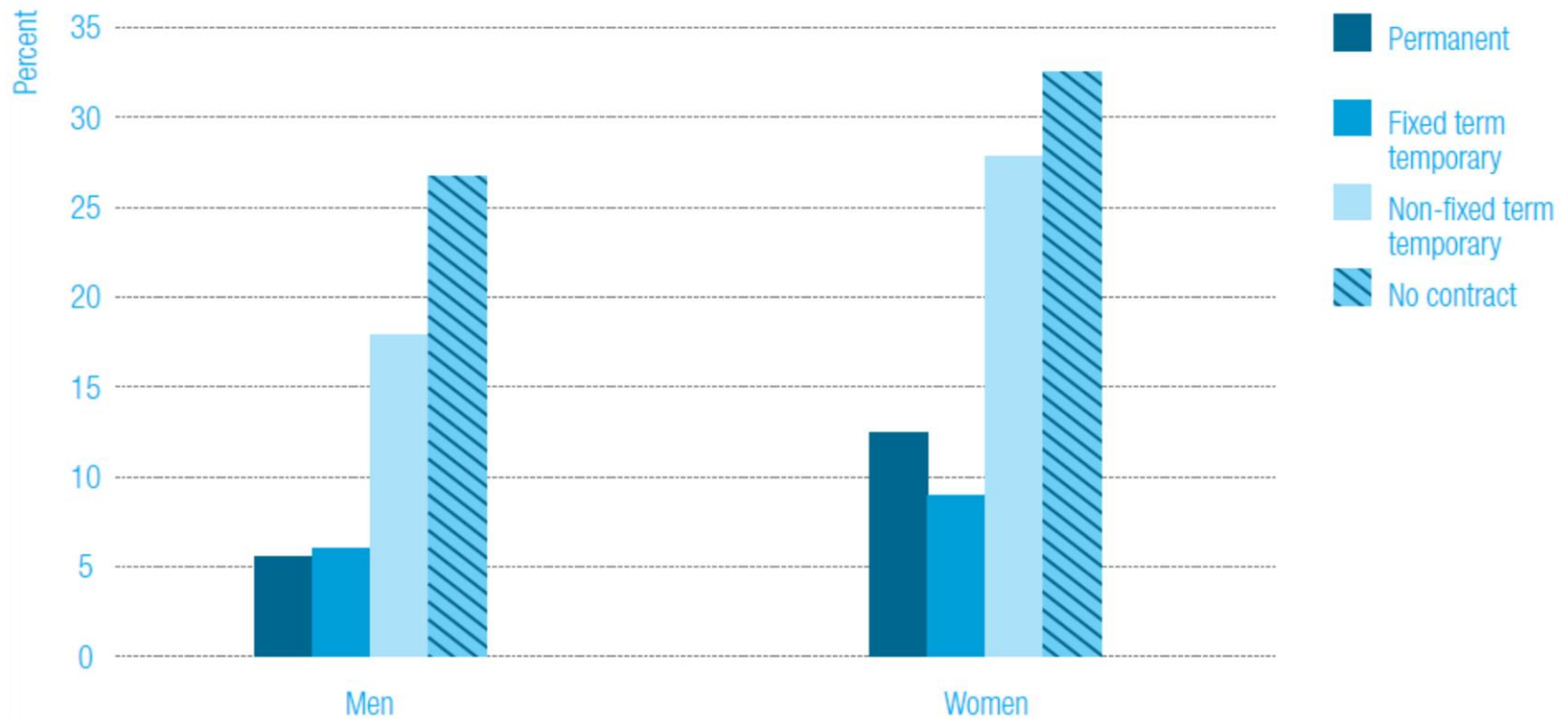
A social gradient in health exists within countries

All Ireland Health Inequalities

Occupational class gradients in health

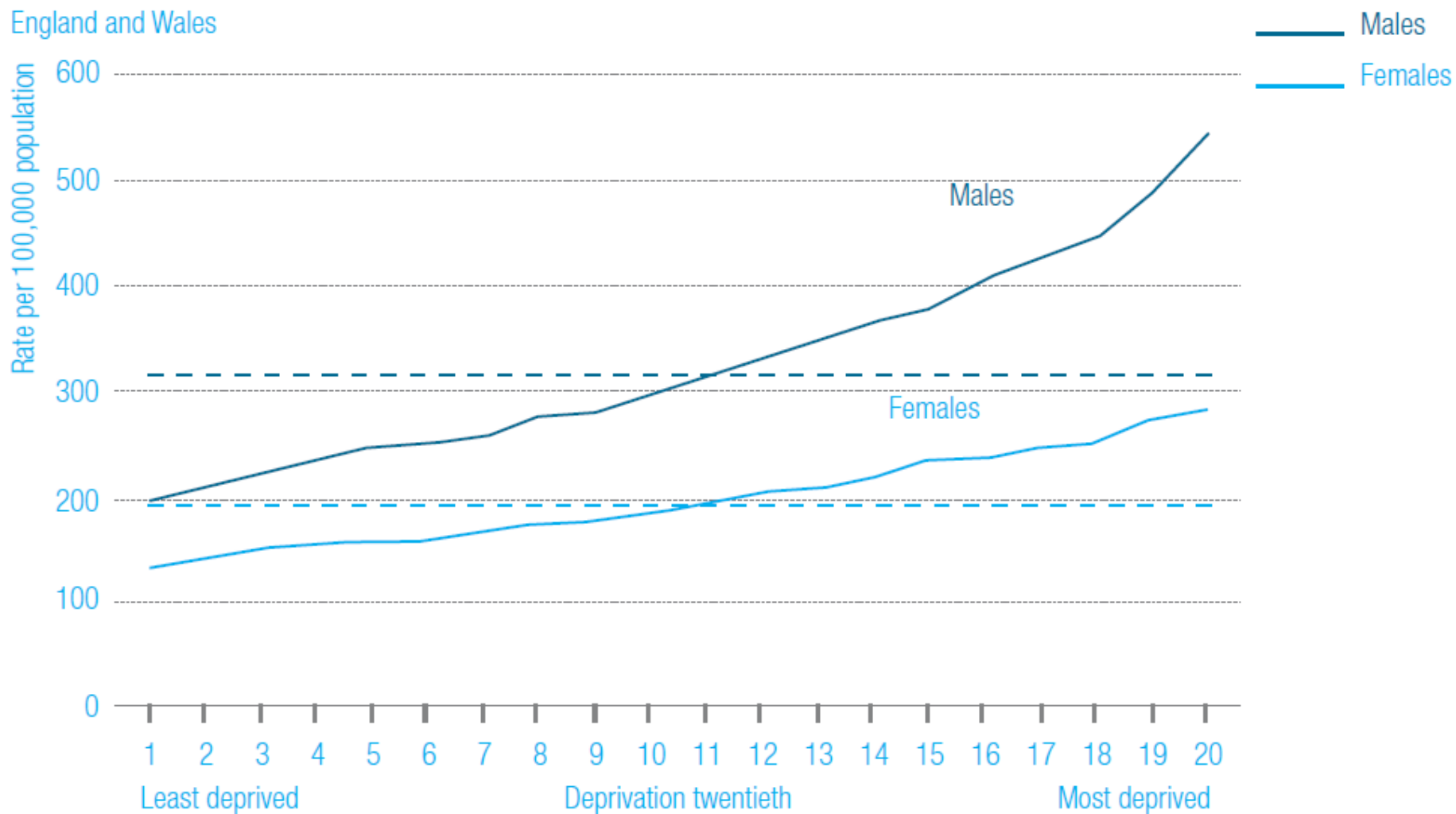


Prevalence of poor mental health among manual workers in Spain by type of contract.

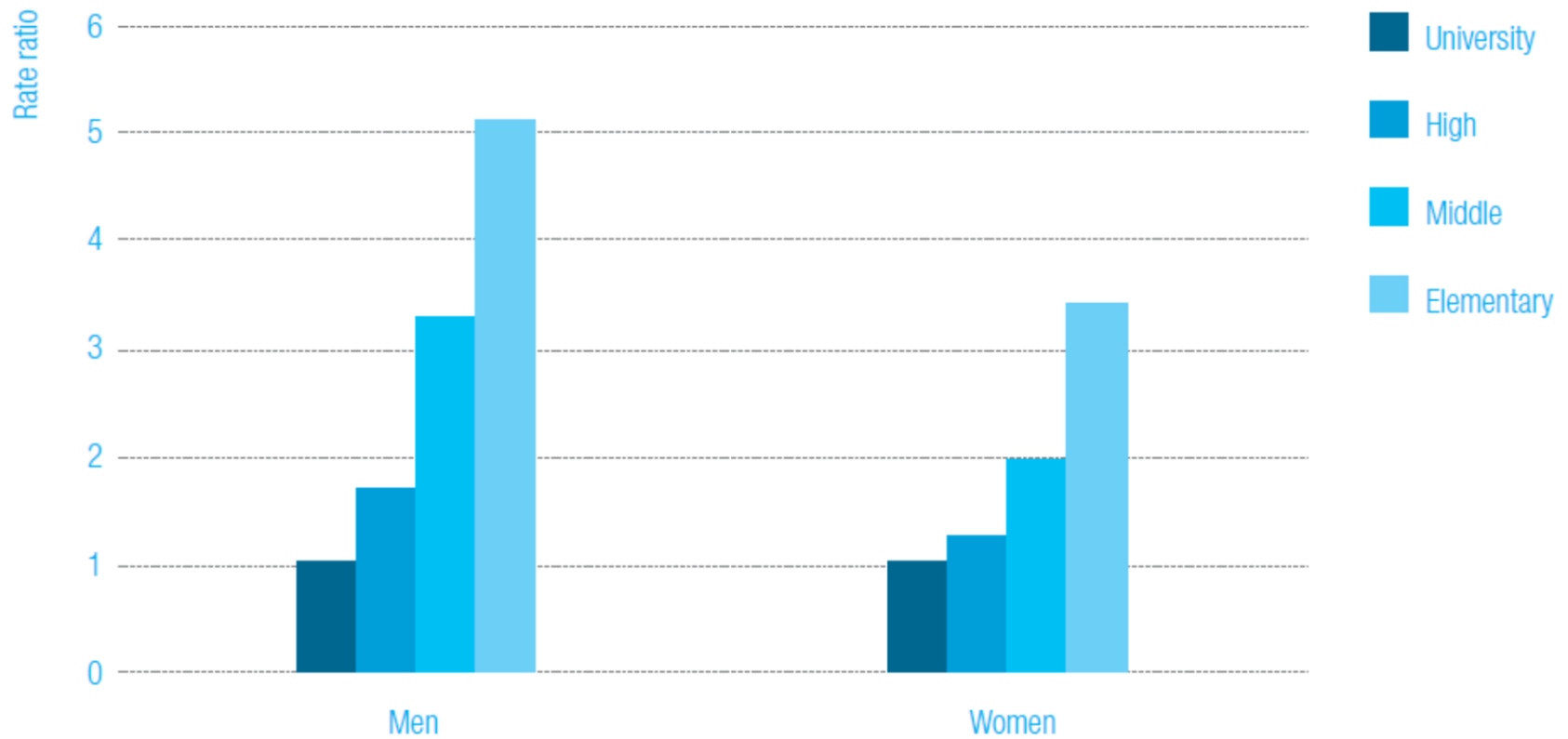


Source: Artazcoz et al., 2005

Age standardised all cause mortality, 15-64 years 1999-2003, England and Wales



Age-adjusted mortality among men and women of the Republic of Korea by educational attainment, 1993–1997.



Source: Son et al., 2002

Health inequalities in Italy

According to data from national and local studies, mortality increases linearly with social disadvantage for a wide range of indicators at both the individual (education, social class, income, quality of housing) and the geographical level (deprivation indexes computed at different levels of aggregation).

This positive correlation is evident for both genders, with the steepest gradient observed among adults of working age, although differences persist also among the elderly.

Health inequalities in Italy

The causes of death found to be most highly correlated with social inequality, and largely responsible for the increasing inequality over the last decade, are those associated with addiction and exclusion (drug, alcohol and violence related deaths), with smoking (lung cancer) and with safety in the workplace and on the roads (accidents).

Similar gradients and trends have been observed with different outcomes, such as self-reported morbidity, disability and cancer incidence.

Health inequalities in Italy

Reproductive outcomes confirm this picture: compared to women belonging to the upper classes, those women in low socioeconomic conditions experience more spontaneous abortions and their children suffer from higher infant mortality and low birth weight.

This is a critical issue since poor infant health, particularly for metabolic and respiratory pathologies, affects health in adult life.

Health inequalities in Italy

With respect to the health care system, various studies are in agreement in demonstrating that poor and less educated people have inadequate access both to primary prevention and early diagnosis, and to early and appropriate care.

They also experience higher rates of hospitalization, particularly in emergencies and with advanced levels of severity.

Mortality due to low-quality health systems in the universal health coverage era: a systematic analysis of amenable deaths in 137 countries *Kruk ME et al. Lancet 2018; 392: 2203–12*

Universal health coverage has been proposed as a strategy to improve health in low-income and middle income countries (LMICs). However, this is contingent on the provision of good-quality health care.

We estimate the excess mortality for conditions targeted in the Sustainable Development Goals (SDG) that are amenable to health care and the portion of this excess mortality due to poor-quality care in 137 LMICs, in which excess mortality refers to deaths that could have been averted in settings with strong health systems.

Methods Using data from the 2016 Global Burden of Disease study, we calculated mortality amenable to personal health care for 61 SDG conditions by comparing case fatality between each LMIC with corresponding numbers from 23 high-income reference countries with strong health systems.

We used data on health-care utilisation from population surveys to separately estimate the portion of amenable mortality attributable to non-utilisation of health care versus that attributable to receipt of poor-quality care.

Findings 15·6 million excess deaths from 61 conditions occurred in LMICs in 2016.

After excluding deaths that could be prevented through public health measures, 8·6 million excess deaths were amenable to health care of which 5·0 million were estimated to be due to receipt of poor-quality care and 3·6 million were due to non-utilisation of health care.

Poor quality of health care was a major driver of excess mortality across conditions, from cardiovascular disease and injuries to neonatal and communicable disorders.

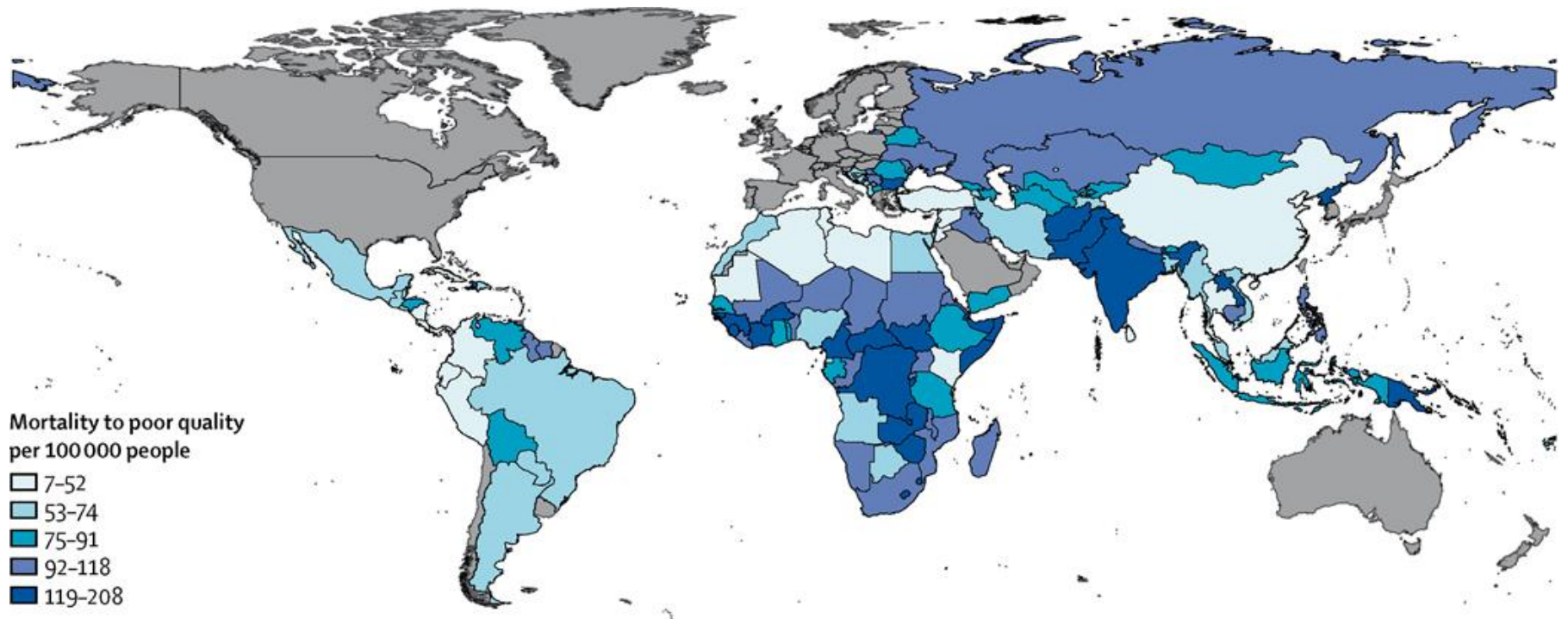


Figure 1 maps mortality due to poor quality per 100 000 population. Poor-quality health care contributed to the most deaths per unit population in South Asia and central and west Africa. The total LMIC poor-quality mortality was 82 deaths per 100 000 population.

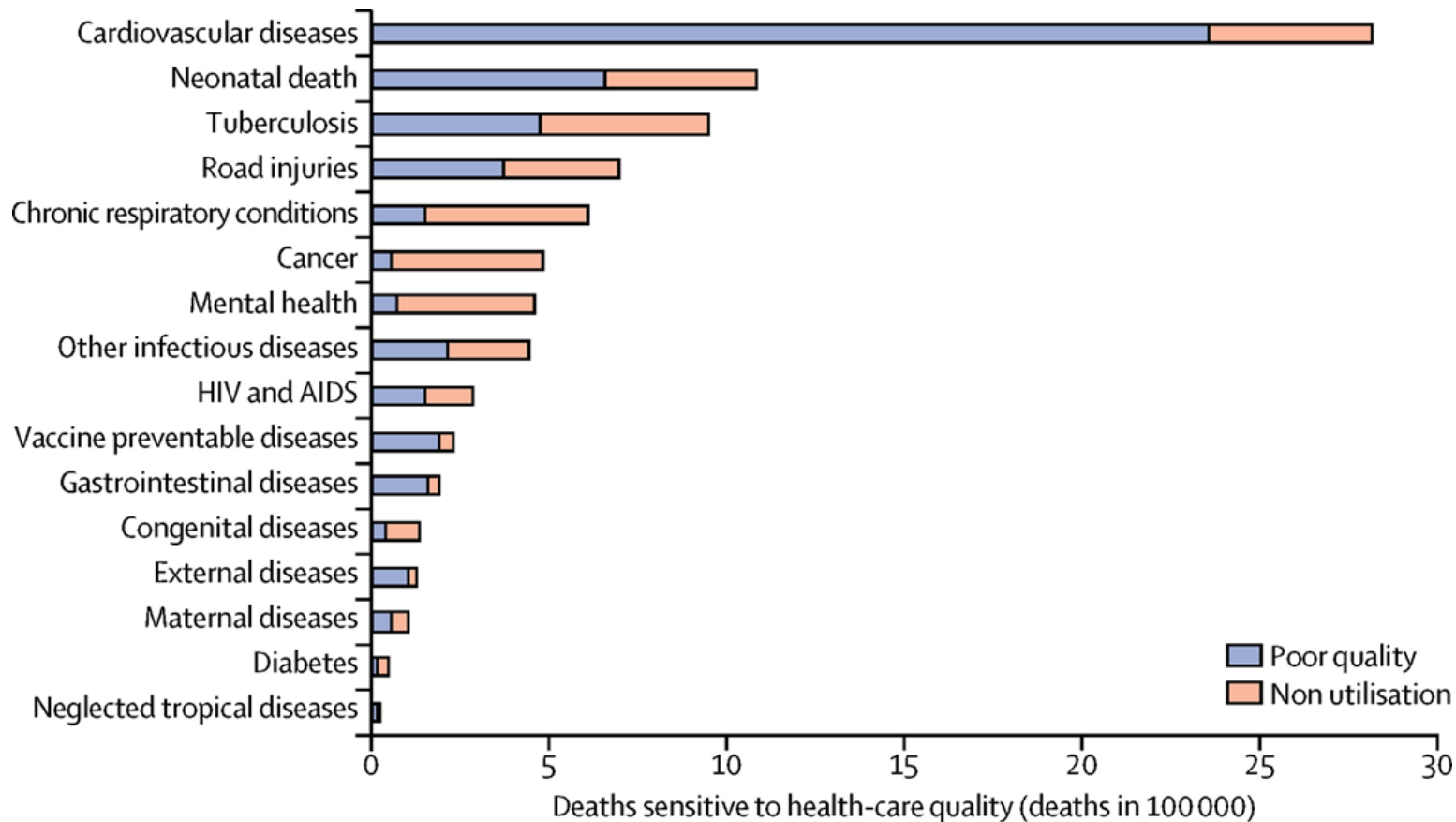


Figure 2 presents the mortality due to access to poor quality services and non-utilisation of health services by condition type. Cardiovascular disease deaths made up 33% (2 817 000) of the amenable deaths in the total health system, of which 84% (2 358 000) were caused by use of poor-quality health services.

What are the drivers of health inequities?

The Commission on Social Determinants of Health (CSDH) also implicates the structural determinants or structural drivers in health inequalities and inequities. It proposes that social, economic, and political mechanisms within a particular society give rise to a set of sociopolitical positions whereby populations are stratified according to income, gender, education, occupation, race, ethnicity, and other factors.

In turn, these socioeconomic positions shape specific determinants of health status reflective of people's place within social hierarchies.

According to the Commission, the unequal distribution of power, income, goods, and services in each society gives rise to fundamental inequalities in the distribution of the social determinants of health.

In turn, these differentials translate into inequitable social policies and programs and unfair economic arrangements that perpetuate inequalities.

Structural drivers of health inequities

Many countries spend more on the military than on health. Eritrea, an extreme example, spends 24% of GDP on the military and only 2% on health. Pakistan spends less on health and education combined than on the military (UNDP, 2007).

- Health equity depends vitally on the empowerment of individuals to challenge and change the unfair and steeply graded distribution of social resources to which everyone has equal claims and rights.
- Inequity in power interacts across four main dimensions – political, economic, social, and cultural – together constituting a continuum along which groups are, to varying degrees, excluded or included.

What is health equity in all policies?

- Every aspect of government and the economy has the potential to affect health and health equity – finance, education, housing, employment, transport, and health, to name just six. While health may not be the main aim of policies in these sectors, they have strong bearing on health and health equity.
- Policy coherence is crucial – different government departments' policies must complement rather than contradict each other in relation to health equity. For example, trade policy that actively encourages the production, trade, and consumption of foods high in fats and sugars to the detriment of fruit and vegetable production is contradictory to health policy.

- **Obesity** is becoming a real public health challenge in transitioning countries, as it already is in high-income nations.
- **Obesity prevention** requires approaches that ensure a sustainable, adequate, and nutritious food supply; a habitat that lends itself to easy uptake of healthier food; participation in physical activity; and a family, educational, and work environment that positively reinforces healthy living. Very little of this action sits within the capabilities or responsibilities of the health sector.

- Positive advances have been made – for example, bans on advertisements for foods high in fats, sugars, and salt during television programmes aimed at children.
- However, a significant challenge remains: to engage with the multiple sectors outside health in areas such as trade, agriculture, employment, and education, if we are to redress the global obesity epidemic.

Figure 17.1 Cracking the nut of health equity.



Cartoon by Simon Kneebone. Reprinted, with permission of the publisher, from Baum (2007).

Table 17.1: Milestones towards health equity

Date	Milestone
November 2008	Global conference: “Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health”.
2008–09	Creation of post-Commission global alliance to take forward the social determinants of health agenda in partnership with WHO.
2008–09	Economic and social costing of Commission recommendations and costs of not taking action.
2009	Meetings of Commissioners and social determinants of health champions to advance global plan for dissemination and implementation of Commission recommendations.
2009	World Health Assembly resolution on social determinants of health and health equity.
2008–13	Research funders progressively dedicate more resources to research on social determinants of health, especially in areas highlighted by the Commission.
2008–13	Increasing numbers of countries adopt a social determinants of health approach to health equity and develop and implement social determinants of health policies, so that by 2013 at least 50% of all low-, middle-, and high-income countries have a committed plan for action to reduce health inequity through action on the social determinants of health, with evidence that they are implementing the plan.
2009–10	The Economic and Social Council, supported by WHO, set up a UN interagency mechanism for social determinants of health with working groups dedicated to specific thematic areas, initially on ECD, gender equity, employment and working conditions, health-care systems, and participatory governance, including all relevant multilateral agencies and civil society stakeholders.
2010	The Economic and Social Council, supported by WHO, prepare for consideration by the UN the adoption of health equity as a core global development goal, with appropriate indicators to monitor progress both within and between countries.
2010	1st Report on Health Equity (report on global and national health equity surveillance framework indicators and targets) to 1st Global Forum of UN Member States on social determinants of health and health equity.
2013	Review of progress on WHO social determinants of health targets.
2015	MDG target date; review of progress from health equity perspective: second 5-yearly global health equity report and Global Forum.
2020–2040	5-yearly reviews of progress on reducing health inequities within and between countries.

Social justice is a matter of life and death. It affects the way people live, their consequent chance of illness, and their risk of premature death...

Closing the gap in a generation

Health equity through action on the social determinants of health



CONCLUSION

- The health status of a given population is the results of a complex interaction of a wide range of factors
- Addressing social determinants of health is a primary approach to achieving health equity
- Inequality matters for achieving goals of global public health, numerical targets can be mechanically met while many are left behind, the less privileged members of society can be often bypassed
- Inequality within a country get worse overall health

CONCLUSION

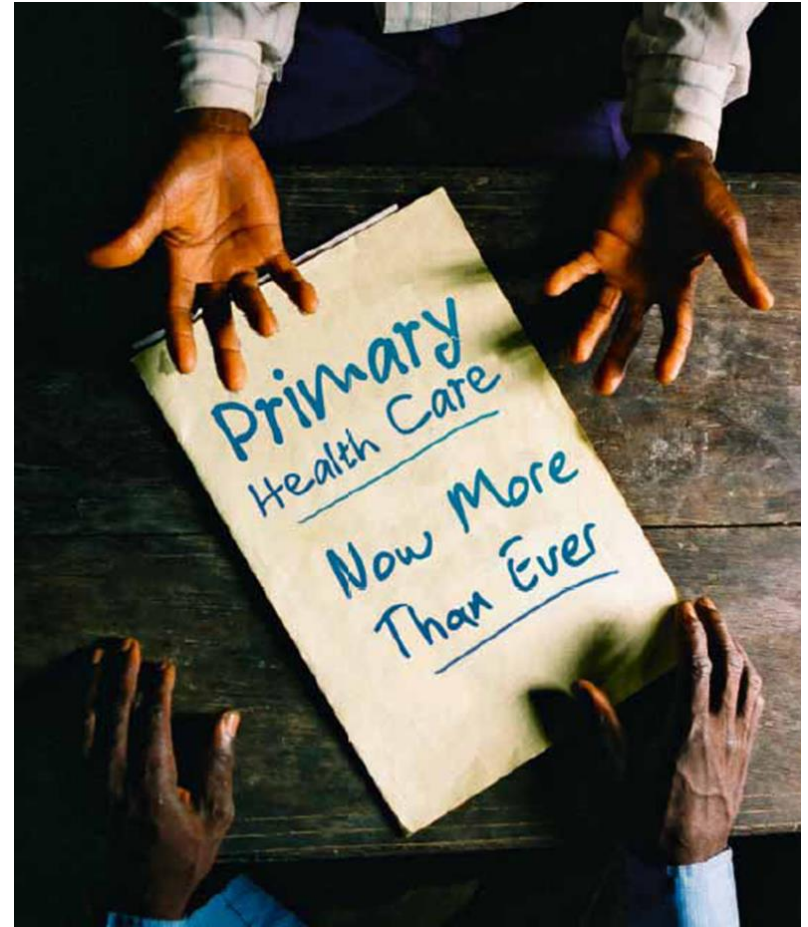
- Equality of access to health services, appropriately designed to meet the needs of the disadvantaged, is critical
- The majority of factors that contribute to ill health and health inequities lie outside the traditional mandate of the health sector
- The social determinants of health must be considered within health programmes and across government policies in order to reach broader societal

Health inequalities and policy strategies

- Health inequalities are not inevitable
- Not just a responsibility of the health care sector
- There is no 'magic bullet'
- Whole of society, whole of government

How doctors can close the gap?

Tackling the social determinants of health through culture change, advocacy and education



Over the past two decades, while significant advances in medical, diagnostic, and therapeutic innovations have been made in key areas, such as infectious disease, cardiovascular health, and oncology, significant inequities remain in health outcomes according to factors such as race and ethnicity, sexual and gender orientation, income, and education.

The social environment in which individuals live, as well as their lifestyles and behaviors, can influence the incidence of illness in populations .

Having an understanding of these inequities and being equipped to address modifiable determinants of health disparities provides the physician-in-training with the necessary foundation to effectively practice medicine in the 21st century and to address important public health needs.

Thus, the training of the modern physician must weave the development of traditional skills such as communication and physical examination with the cost-effective use of novel biomolecular information in complex systems to deliver culturally competent care.

The promise of this training is the development of individuals who are at the forefront of using translational medicine to address disparities in health.

“Whoever wishes to investigate medicine properly should ... consider ... the mode in which inhabitants live, and what are their pursuits, whether they are fond of drinking and eating to excess, and given to indolence, or are fond of exercise and labour.”

HIPPOCRATES (5TH CENTURY BC)



Health is a human right
Do something
Do more
Do better

Equity is a core value in public health. Mindful of human rights, doctors should aim to respect, protect, and fulfil the right of all groups to best possible health

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**Thank you for your
attention!**