

Treatment is: an expensive intervention, impossible to plan, with moderate effectiveness

Prevention is: an investment, cheap, plannable, highly effective



CURE

PREVENTION

Andrzej M. Fal
Prof. Dr. med.
Prof. h.c., MD, PhD, MBA, AAAAI

The Economic Benefit of Promoting Healthy Ageing and Community Care

Analizy statystyczne
Statistical analyses



Warszawa, Wroclaw 2023

Prognoza ludności na lata 2023–2060

Population projection 2023–2060

Pensions at a Glance 2025

OECD and G20 Indicators



Health at a Glance 2025

OECD Indicators



Healthcare - the intersection of
demography and economics

Leading “killers” – the most deadly
diseases

We do not like to spend on
preventive medicine

Risk factors we are trying to combat -
the case of cigarettes





WORLD POPULATION

8,211,404,883

8,273,353,817

Current World Population

GOVERNMENT & ECONOMICS

\$ 12,865,553,585

13,177,196,753 (\$571,239,621,957)

Public Healthcare expenditure today (this year)

\$ 8,502,755,566

8,643,420,634 Public Education expenditure today

\$ 3,513,073,626

3,507,961,476 Public Military expenditure today

<https://www.worldometers.info/> (accessed 15.03.2025, 17.00

02.02.2026, 17.00)

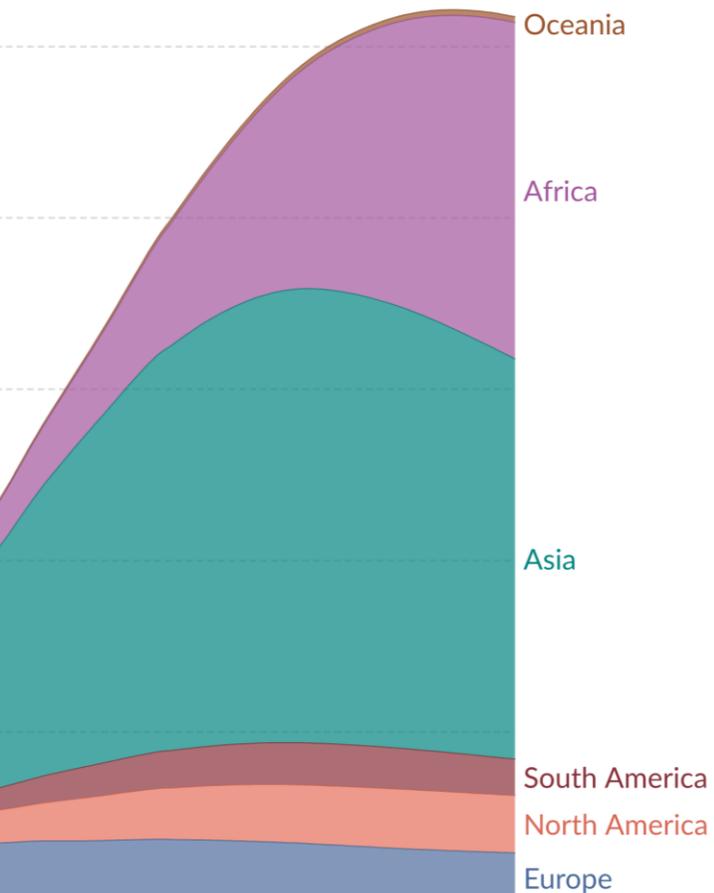
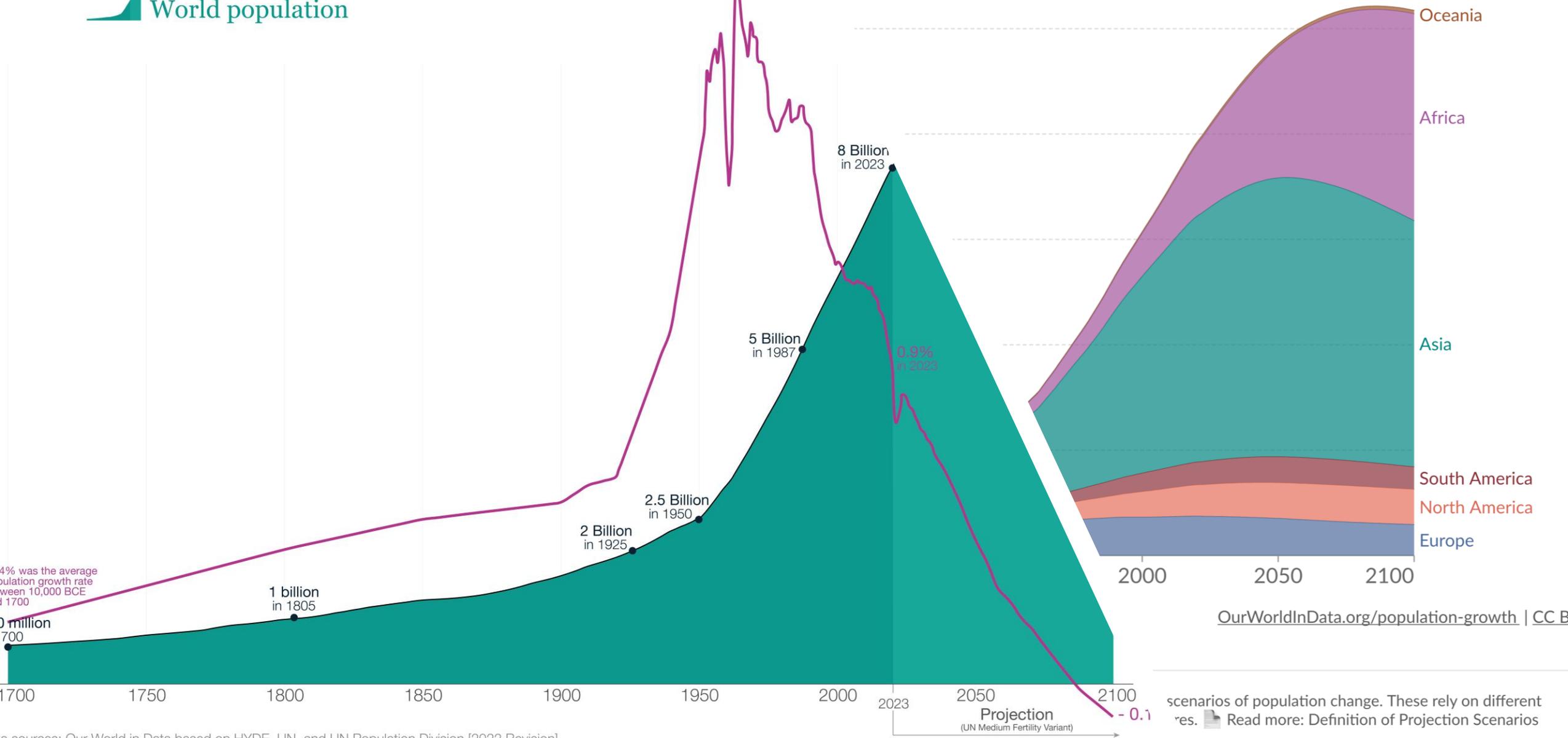
World population growth, 1700-2100

Region

Projections based on the UN medium-fertility scenario¹.

Annual growth rate of the world population

World population



OurWorldInData.org/population-growth | CC BY

Data sources: Our World in Data based on HYDE, UN, and UN Population Division [2022 Revision]. This is a visualization from OurWorldInData.org, where you find data and research on how the world is changing.

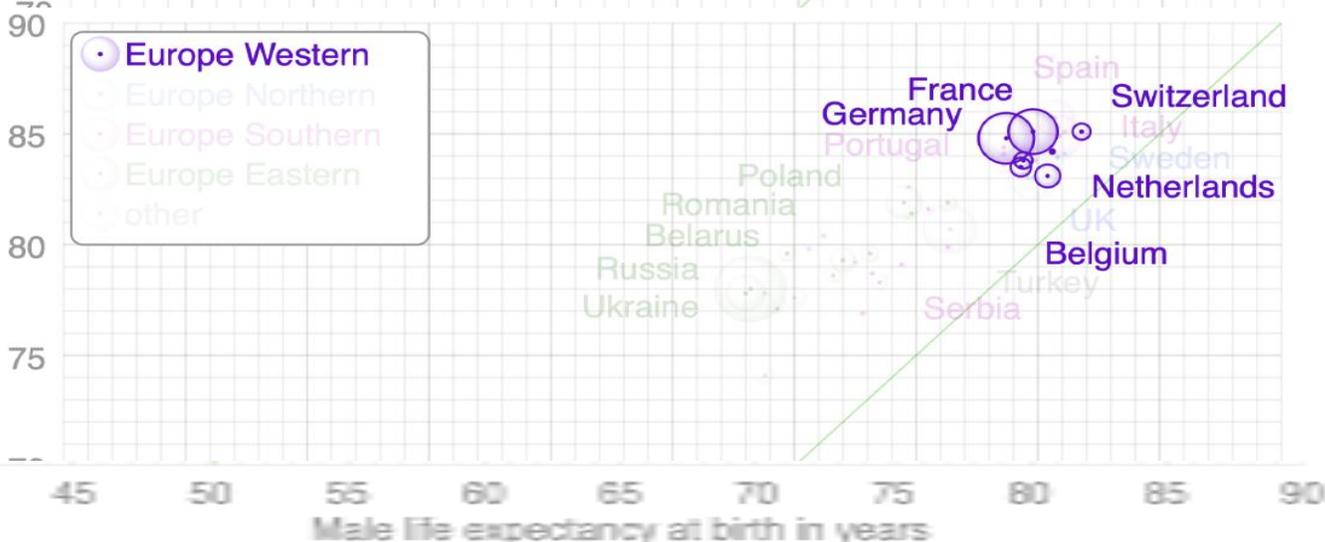
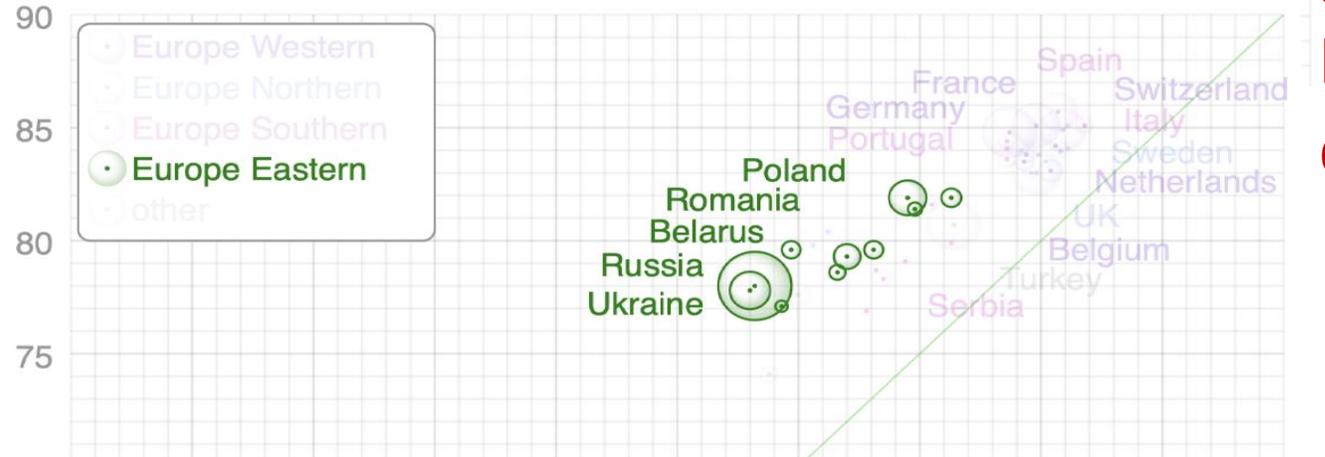
Licensed under CC-BY by the authors Max Roser and Hannah Ritchie.

scenarios of population change. These rely on different res. [Read more: Definition of Projection Scenarios](#)

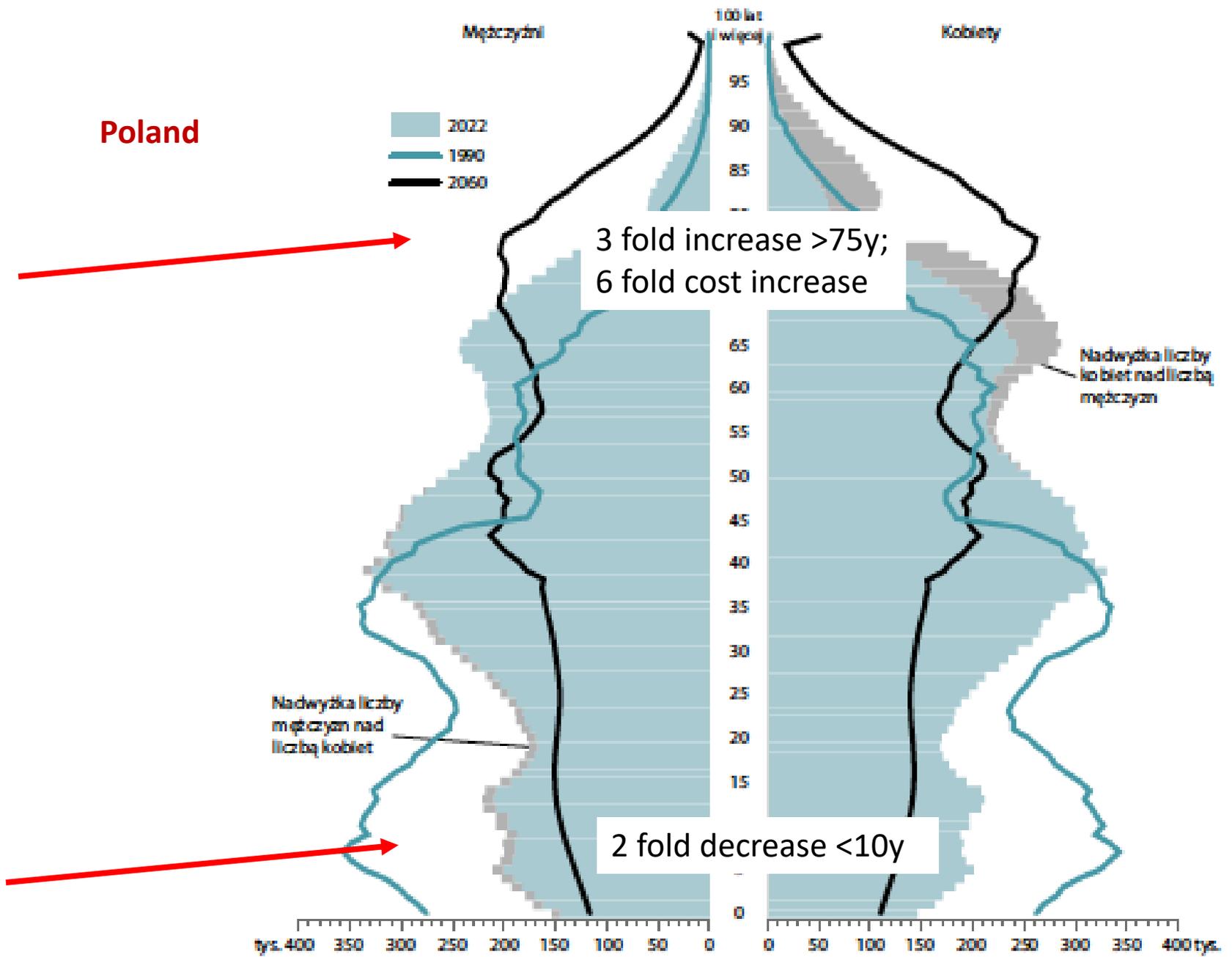


Różnice wieku dożycia kobiet i mężczyzn w różnych częściach Europy

Differences in life expectancy in different parts of Europe



Piramidy wieku ludności w latach 1990, 2022 i prognoza na 2060 rok



Poland

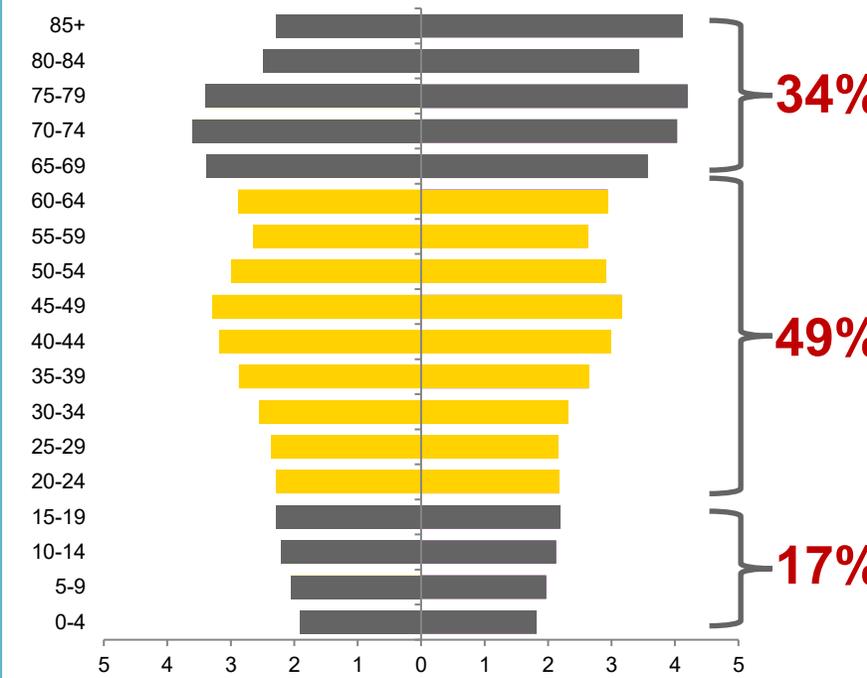


Projected old-age dependency ratio, 2100

(%)



2060





Healthcare - the intersection of demography and economics

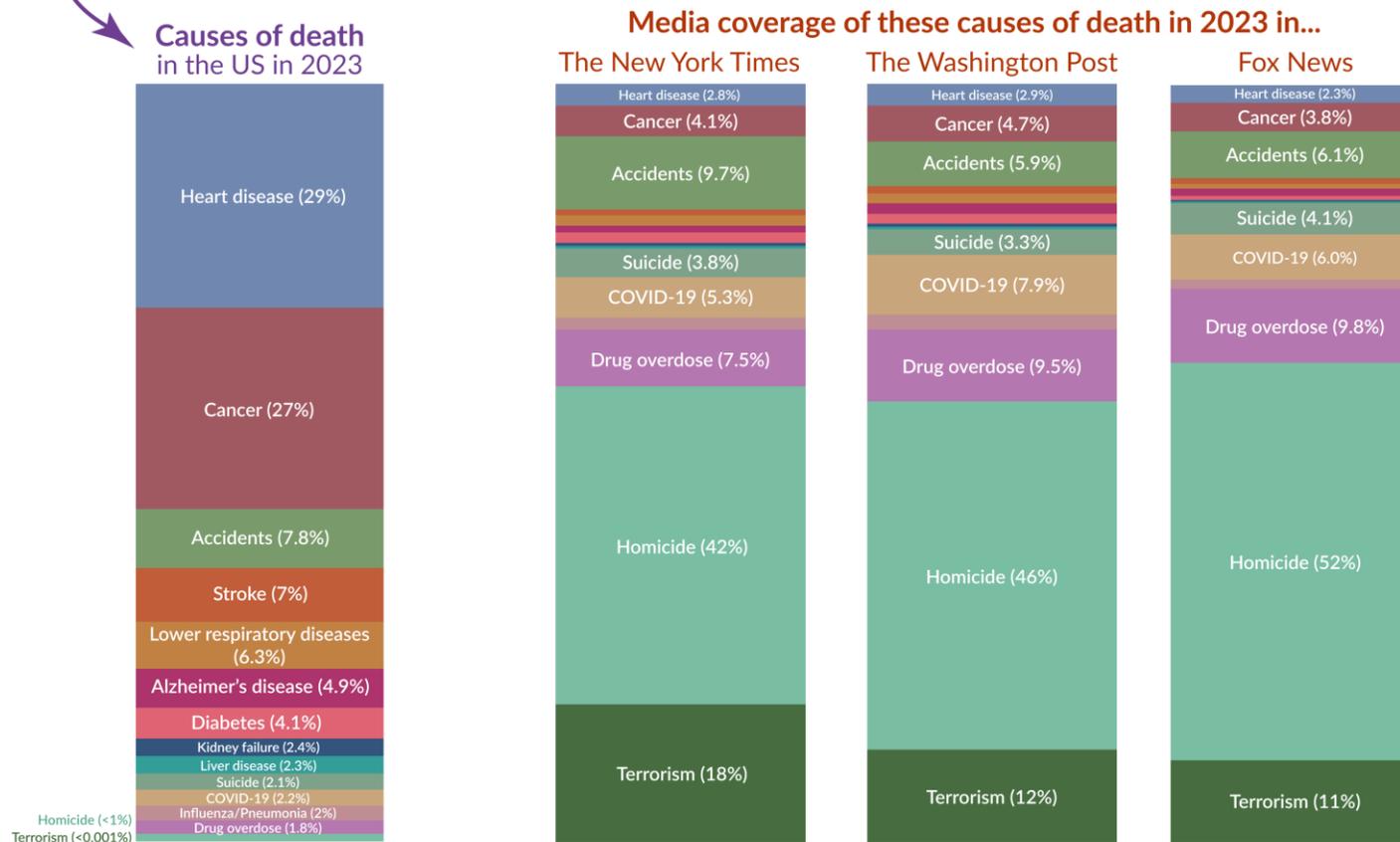
Leading “killers” – the most deadly diseases

We do not like to spend on preventive medicine

Risk factors we are trying to combat - the case of cigarettes

What Americans die from and the causes of death the US media reports on

Our World
in Data



Note: Based on the share of causes of death in the US and the share of mentions for each of the causes in the New York Times, the Washington Post, and Fox News. All values are normalized to 100%, so the shares are relative to all deaths caused by the 12 most common causes + drug overdoses, homicides, and terrorism. These causes account for more than 75% of deaths in the US. A "media mention" is a published article in one of the outlets which mentions the cause (e.g., "influenza") or related keywords (e.g., "flu") at least twice.

Data sources: Media mentions from Media Cloud (2025); deaths data from the US CDC (2025) and Global Terrorism Index.

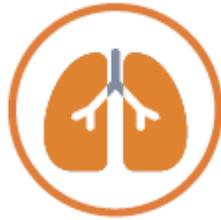
CC BY

NCD Category		Approx. Annual Deaths
Cardiovascular diseases	Heart attack, stroke	≥19 million
Cancers	Lung, breast, colorectal, etc.	~10 million
Chronic respiratory diseases	COPD, asthma	~4 million
Diabetes	Type 1 & 2, diabetic kidney disease	>2 million

DISEASES



**Cardiovascular
Disease**



**Chronic Respiratory
Diseases**



Cancer

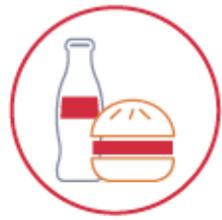


Diabetes



**Mental and
Neurological Conditions**

RISK FACTORS



Unhealthy Diet



Tobacco Use



**Harmful Use of
Alcohol**

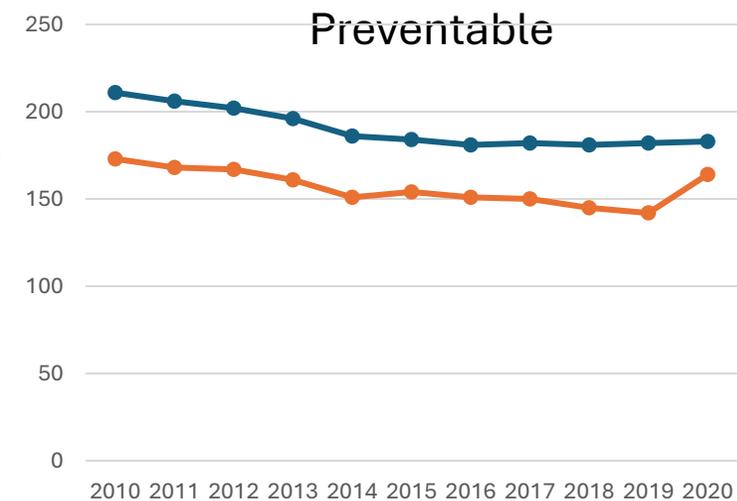
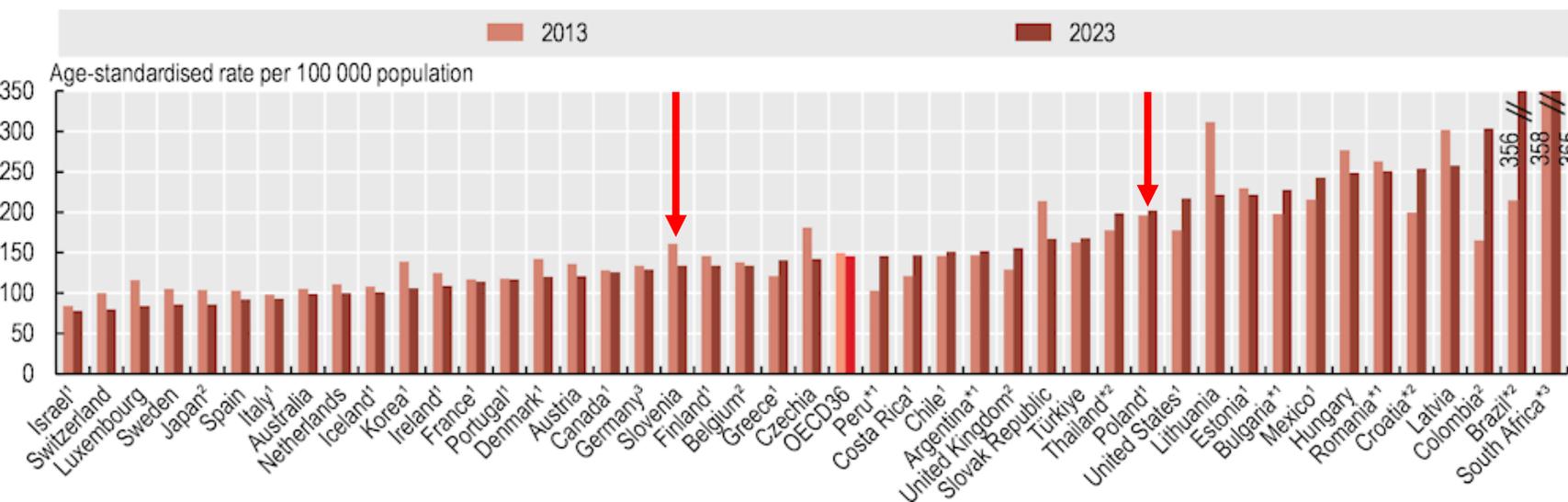
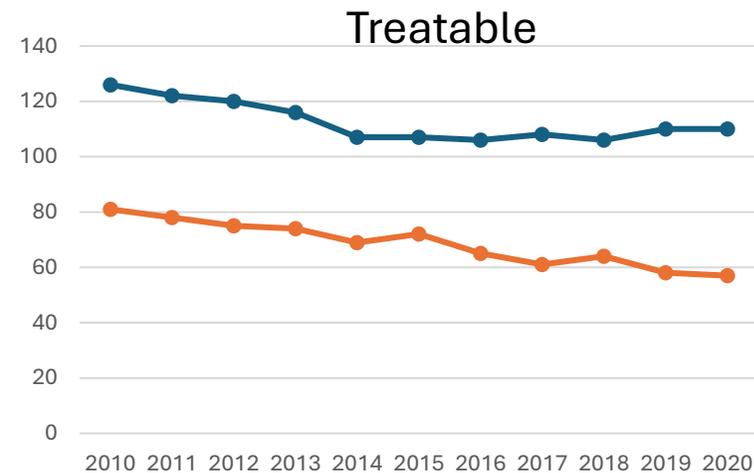
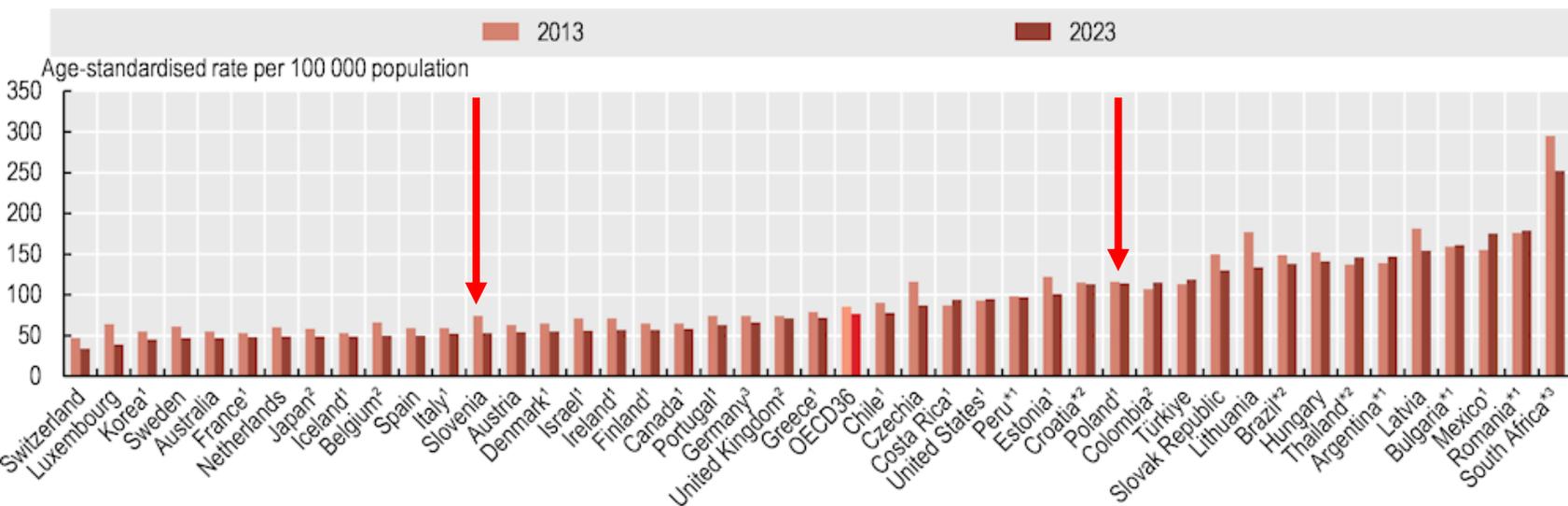


Physical Inactivity

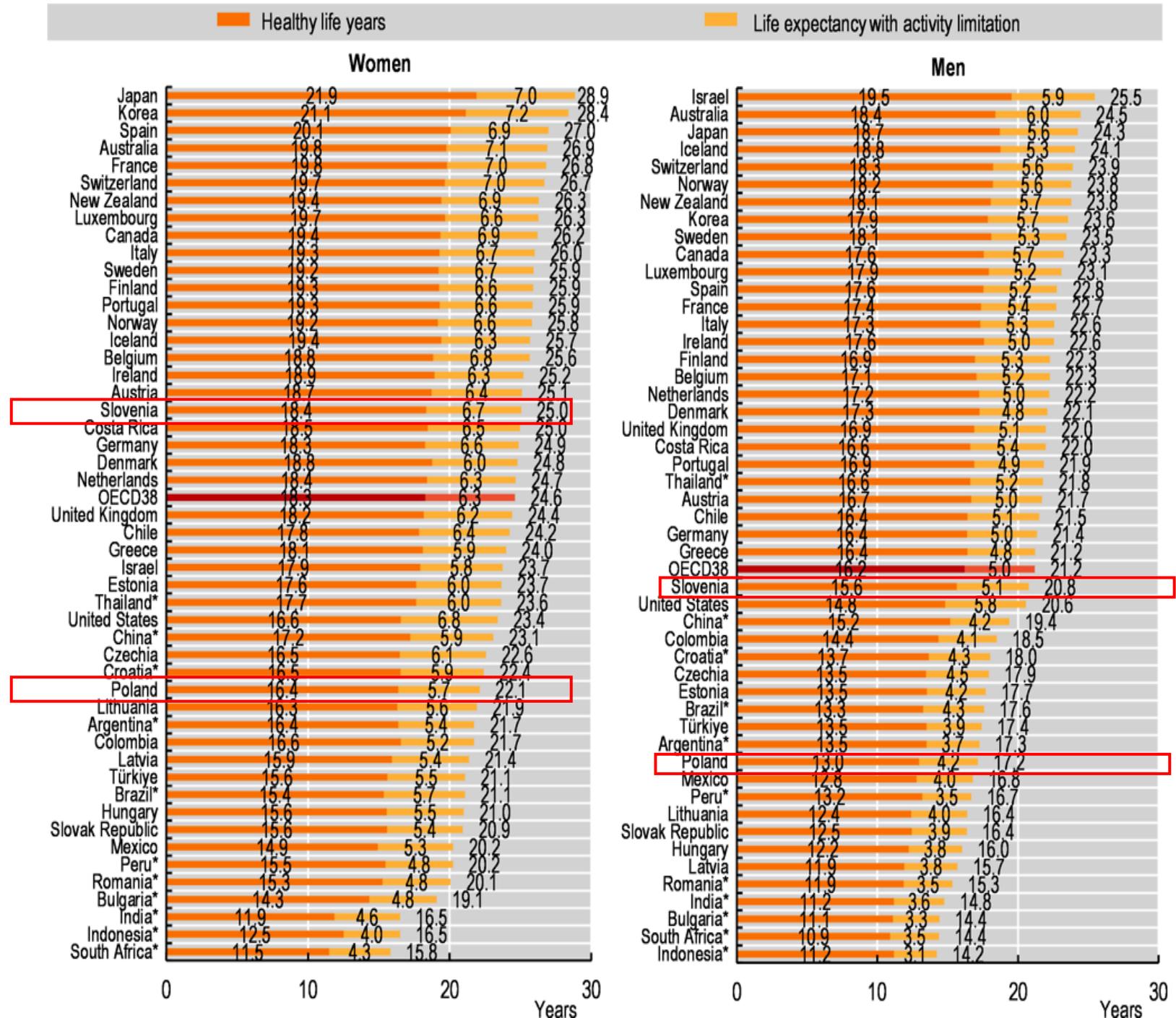


Air Pollution

Change in avoidable (preventable+treatable) mortality



At the age of 60...



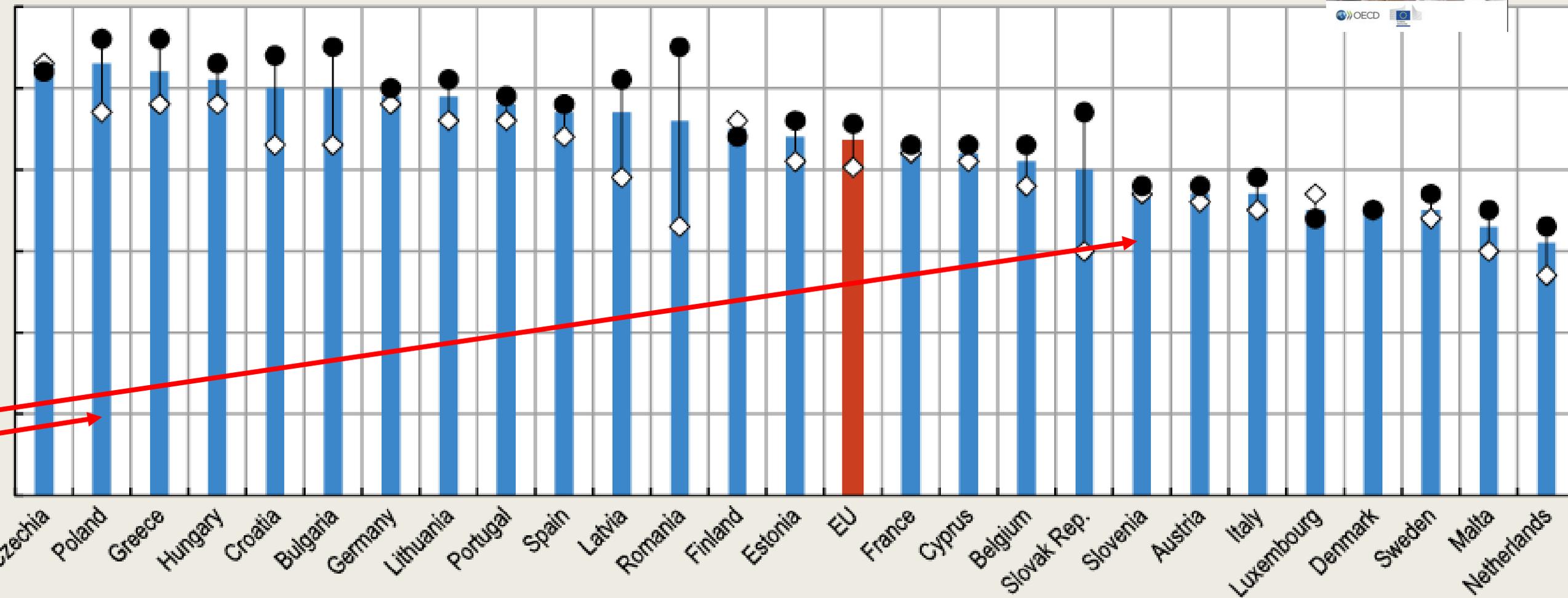


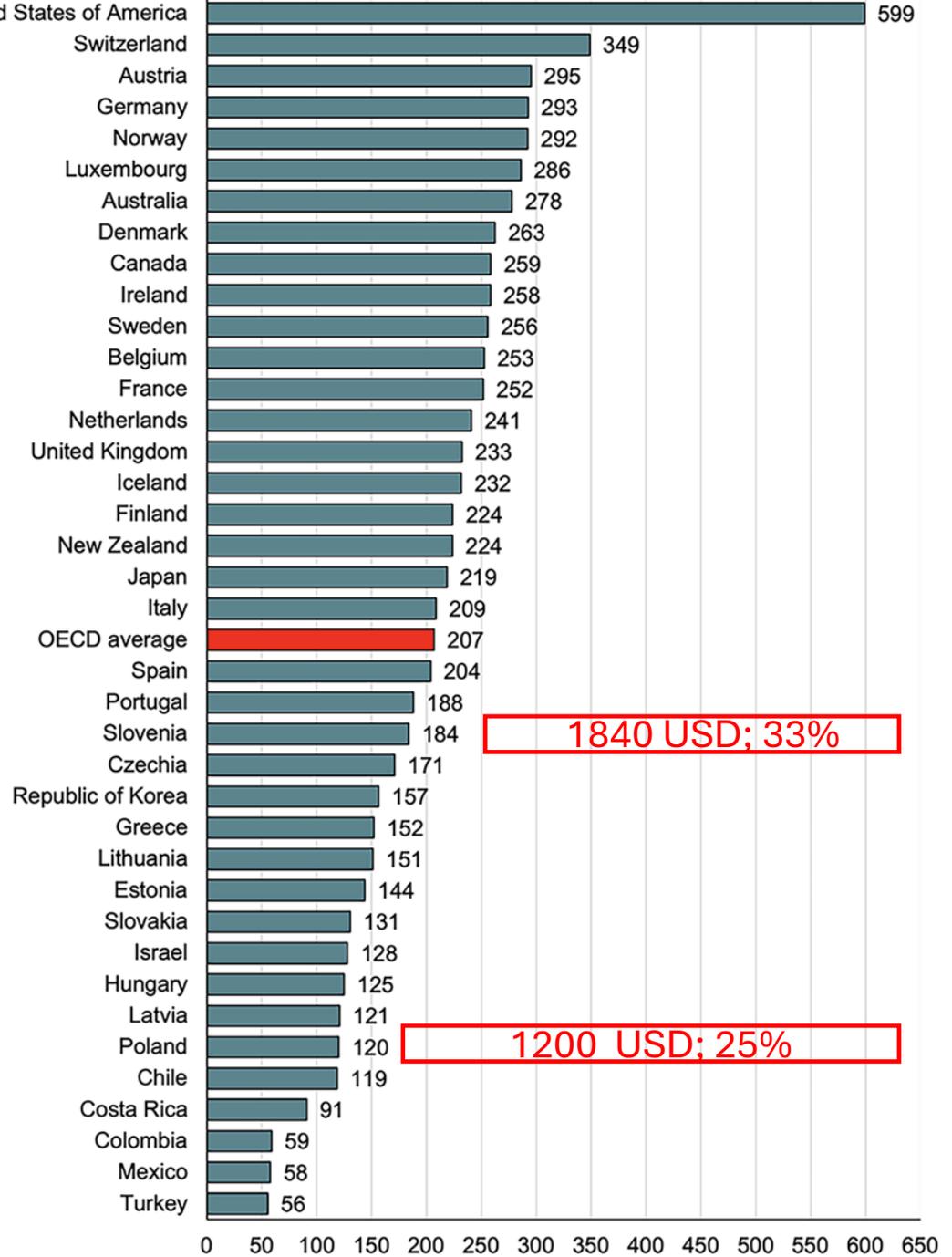
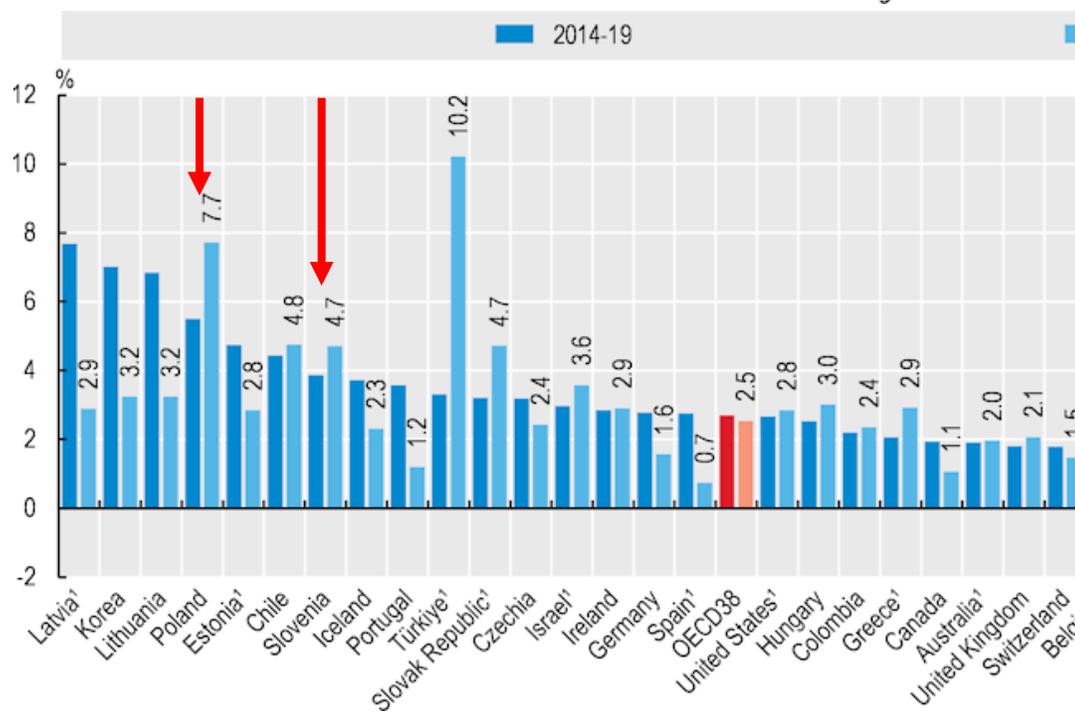
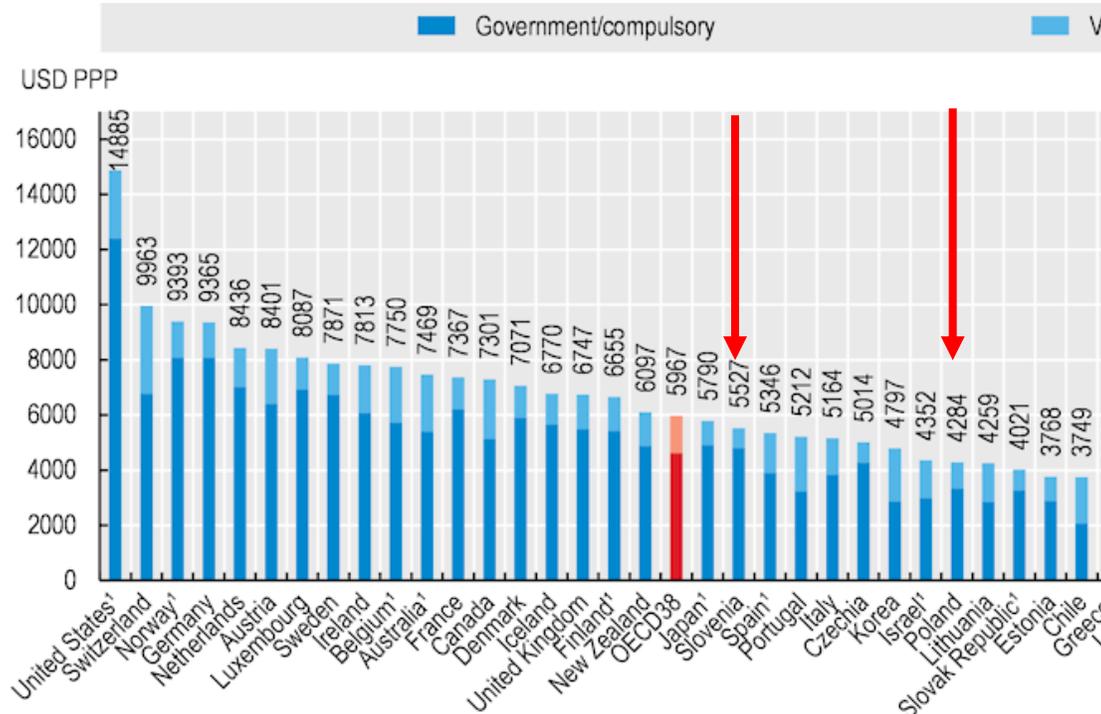
■ Total

◇ Men

● Women

of people aged 65 or over reporting at least two chronic diseases





NCD expenditure per 100,000 population (US\$ millions, PPP adjusted)

Air Pollution

Healthcare - the intersection of demography and economics

Tobacco Use

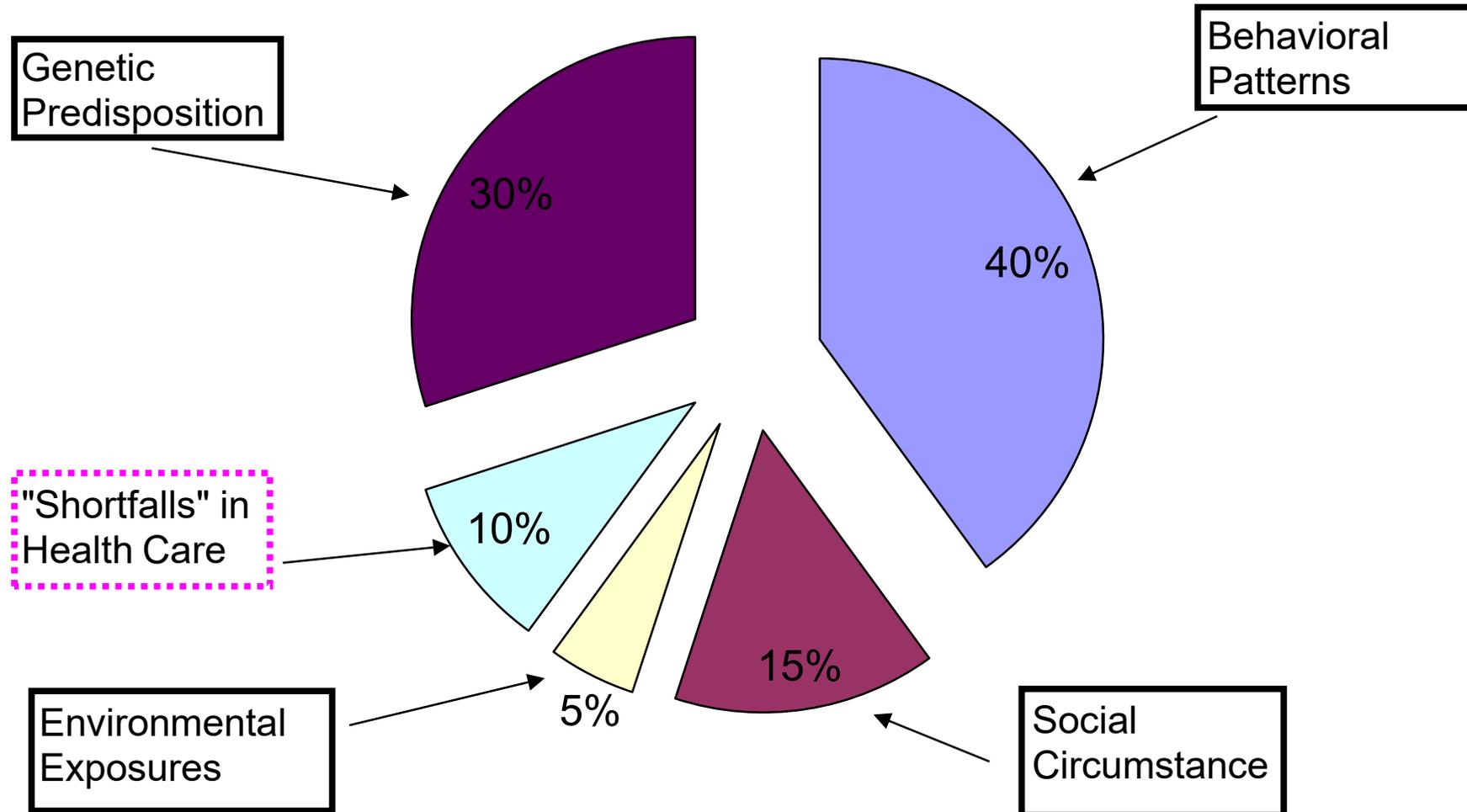
Leading “killers” – the most deadly diseases

We do not like to spend on preventive medicine

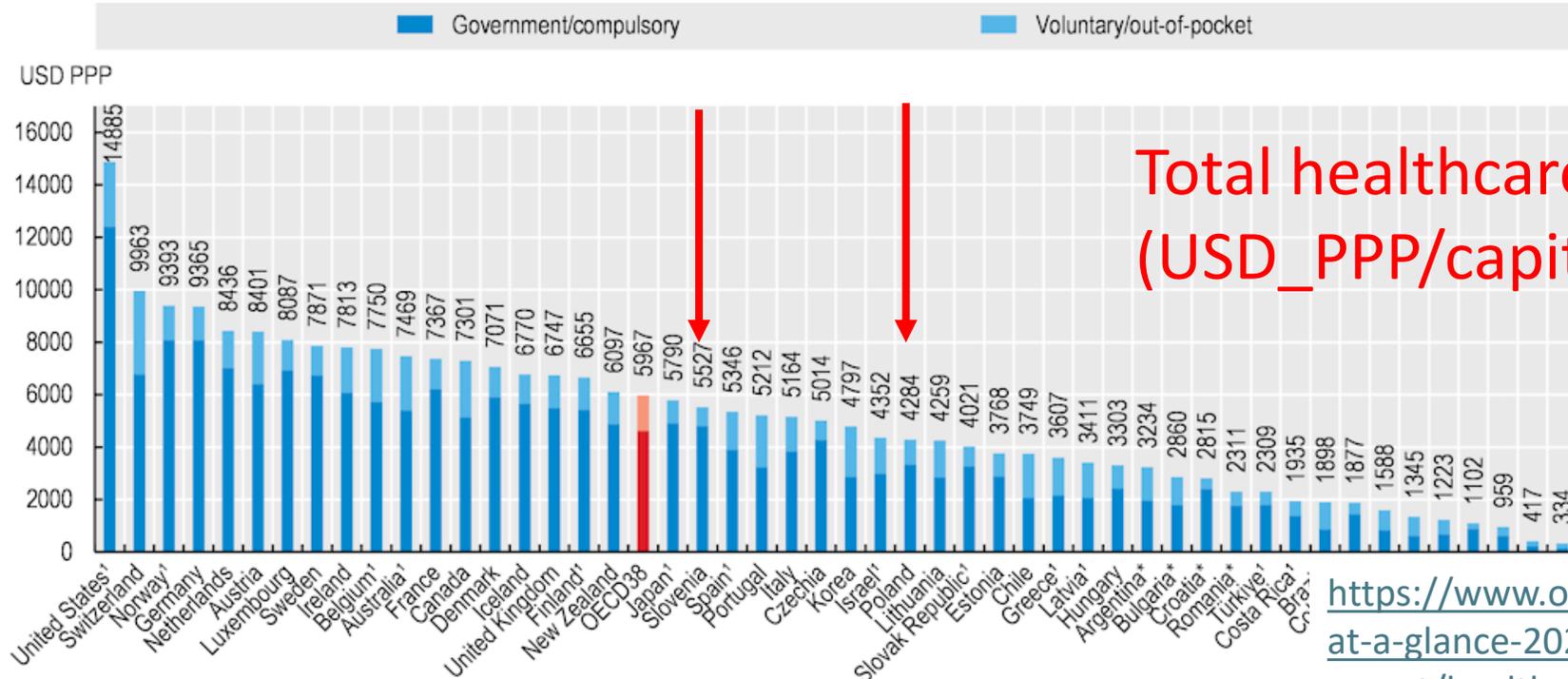
Unhealthy Diets and Nutrition

Risk factors we are trying to combat - the case of cigarettes

Lalonde after 20 years

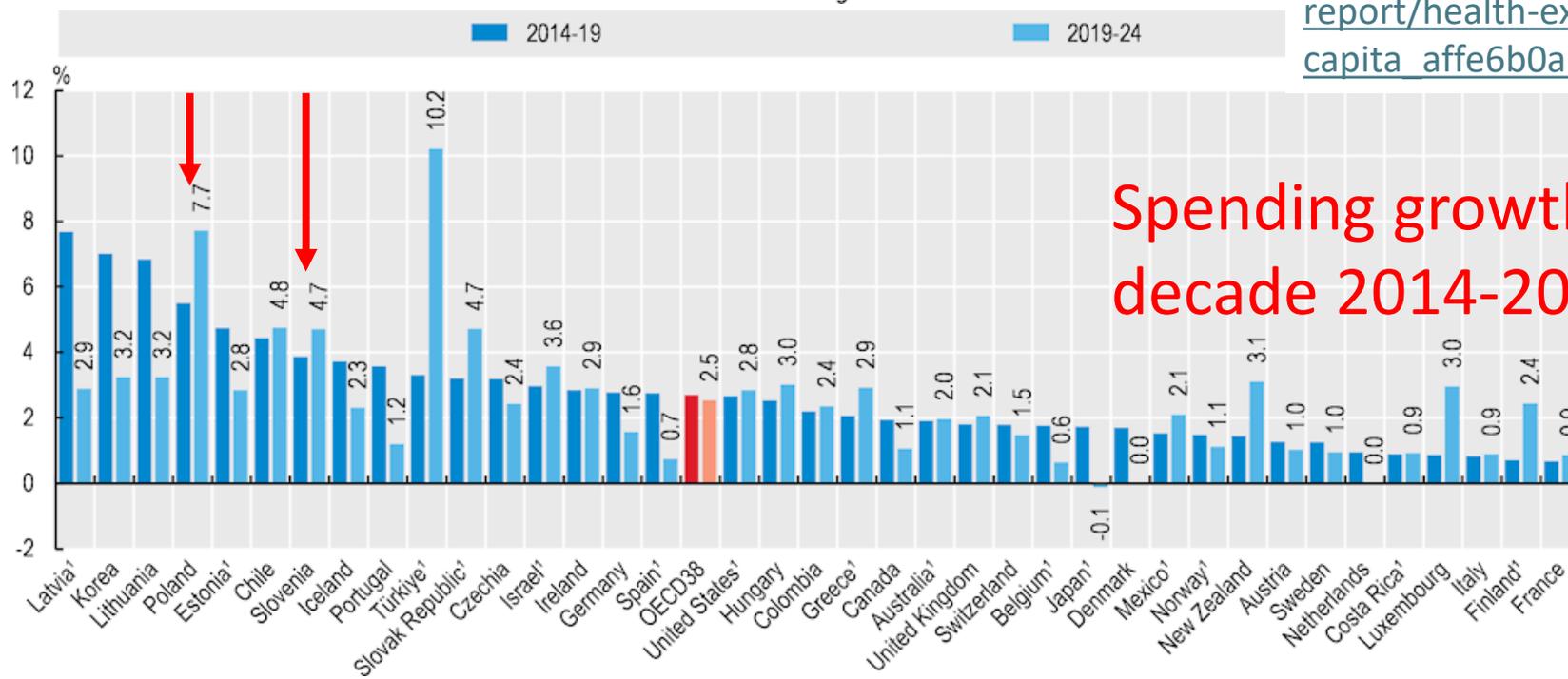


McGinnis JM et al. The case for more active policy attention to health promotion. *Health Affairs* 2002;21(2):78-93. Project Hope



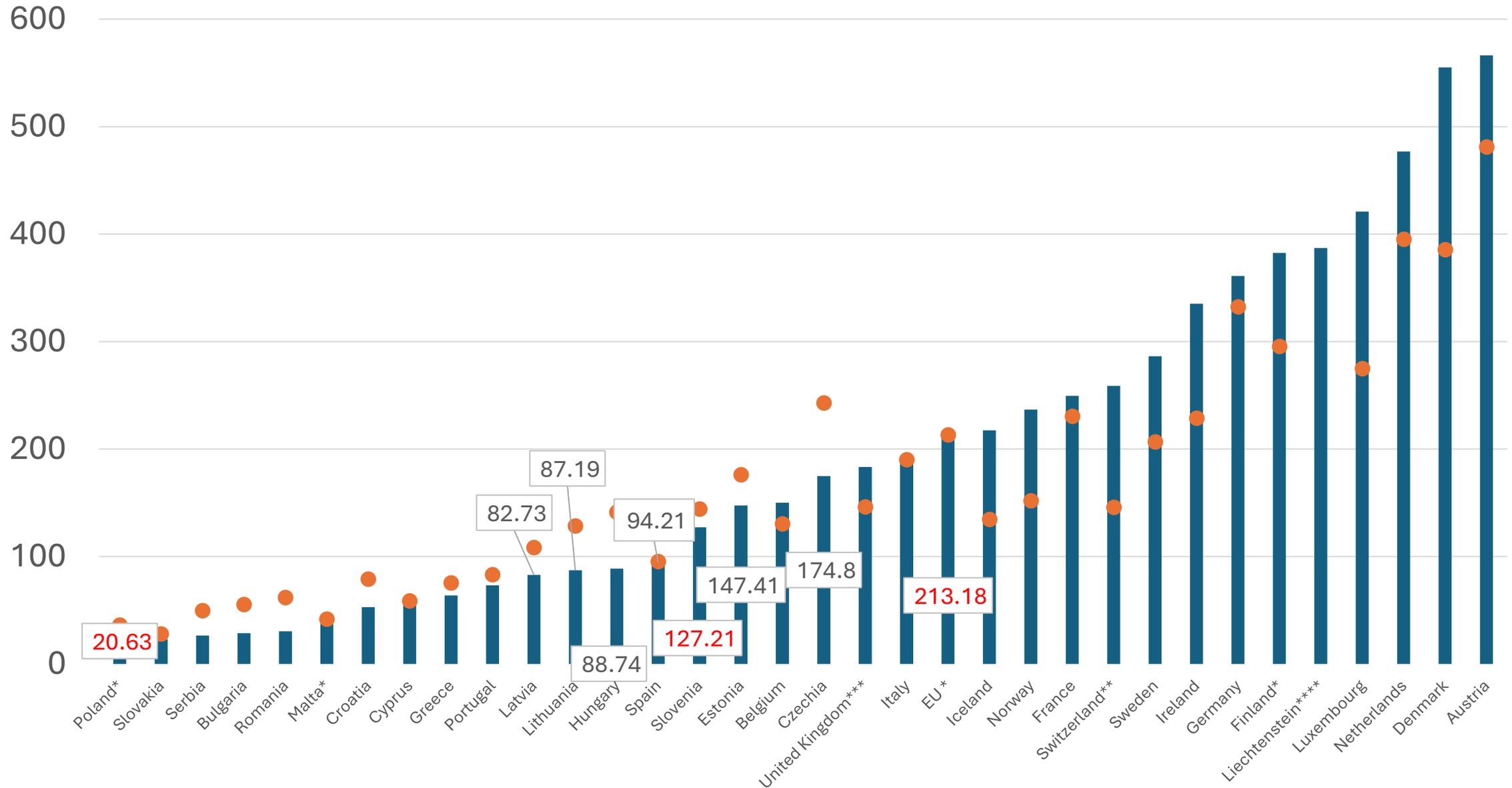
Total healthcare expenditure (USD_PPP/capita), 2024

https://www.oecd.org/en/publications/health-at-a-glance-2025_8f9e3f98-en/full-report/health-expenditure-per-capita_afe6b0a.html; (Accessed 02.02.2026)



Spending growth during the decade 2014-2024

Expenditures on preventive healthcare, Euro/per capita, 2023

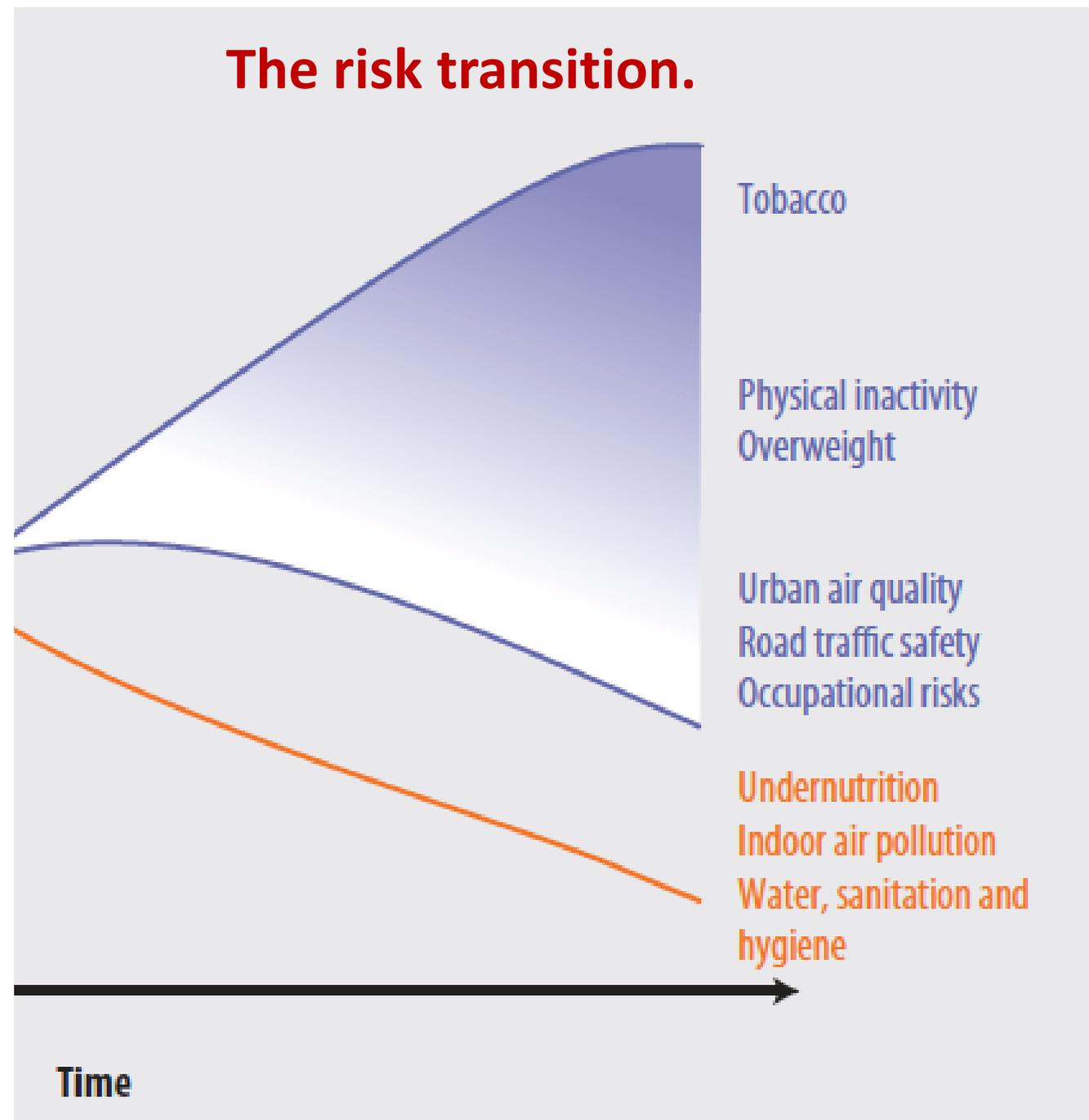


Source: Eurostat.

■ € per inhabitant ● PPS per inhabitant

Invest US\$ 1	→		→	Return US\$ 7.43	
Invest US\$ 1	→		→	Return US\$ 12.82	
Invest US\$ 1	→		→	Return US\$ 9.13	
Invest US\$ 1	→		→	Return US\$ 2.80	
Invest US\$ 1	→		→	Return US\$ 3.29	
Invest US\$ 1	→		→	Return US\$ 2.74	

The risk transition.



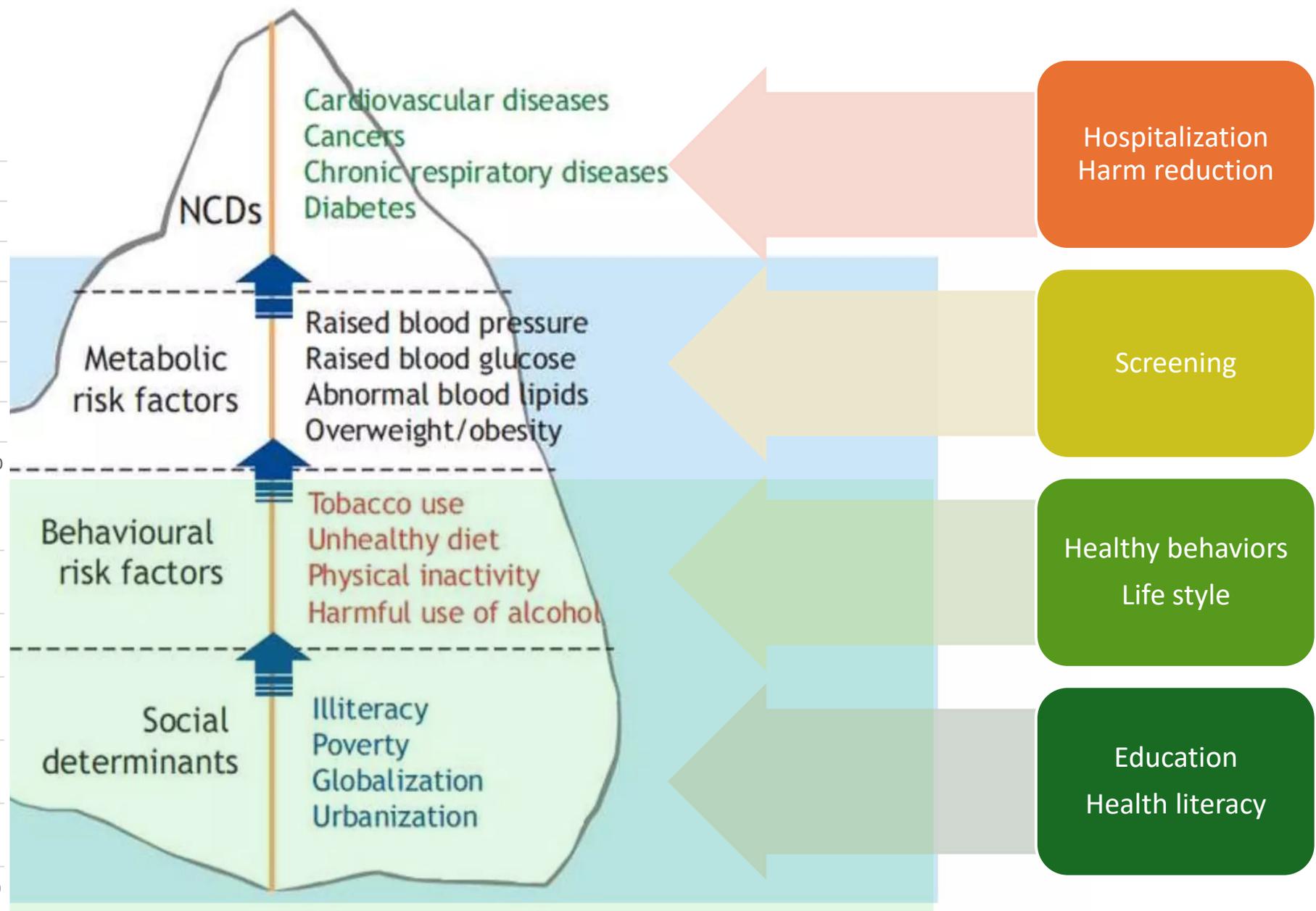
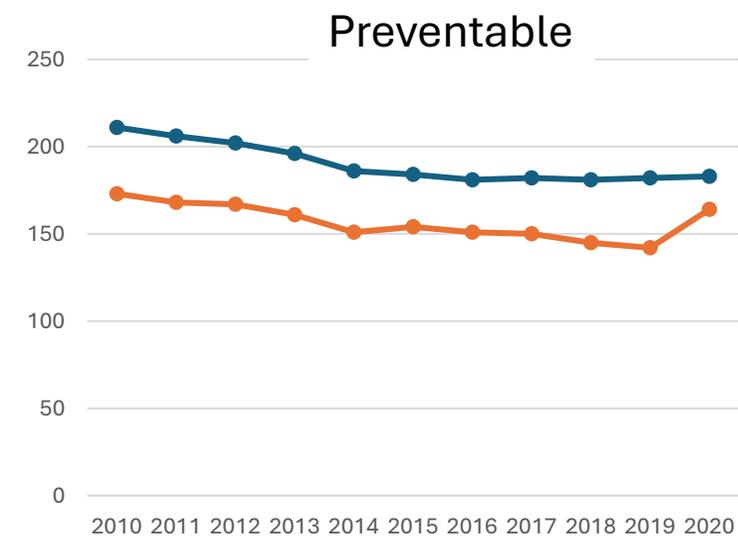
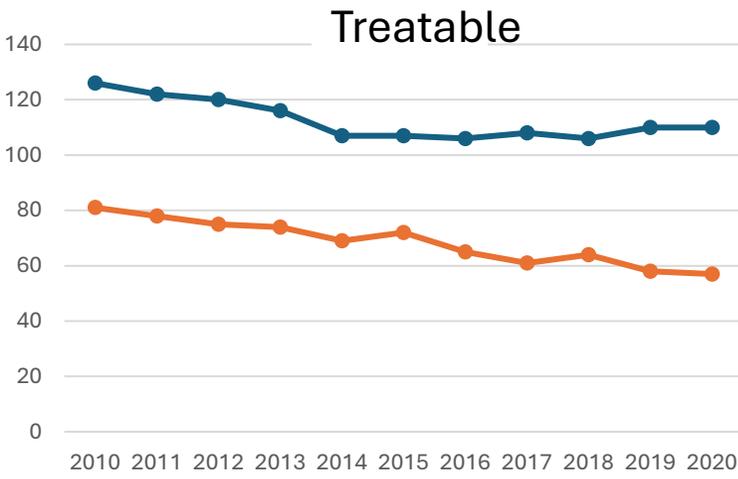
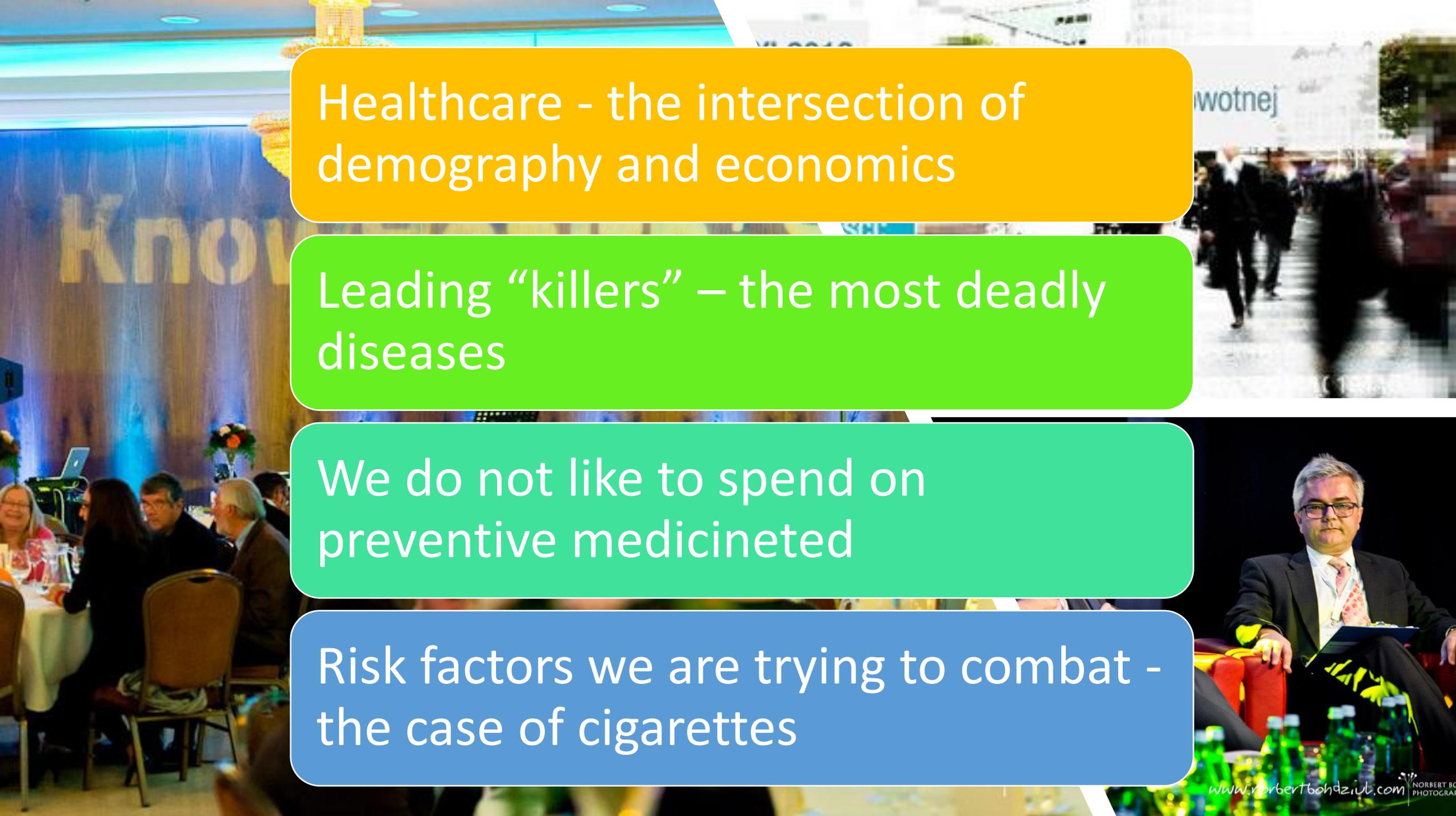


Fig 3:



Healthcare - the intersection of demography and economics

Leading “killers” – the most deadly diseases

We do not like to spend on preventive medicine

Risk factors we are trying to combat - the case of cigarettes

Table 10: Status of tobacco use prevalence reduction target by WHO region, proportion of region's population in each category, 2024

WHO region	Proportion of region's population ^a living in countries that...					
	are likely to achieve a 30% relative reduction	are likely to achieve a decrease in prevalence but less than 30%	are unlikely to experience a significant change in prevalence	are likely to experience an increase in prevalence	did not have enough data for calculating a trend	were assessed in total
Global	46%	45%	3%	3%	3%	100%
African Region	57%	27%	0.2%	10%	6%	100%
Region of the Americas	71%	25%	—	0.04%	5%	100%
South-East Asia Region	90%	10%	0%	—	—	100%
European Region	17%	63%	18%	1%	1%	100%
Eastern Mediterranean Region	32%	30%	7%	16%	16%	100%
Western Pacific Region	11%	89%	—	0.002%	0.01%	100%

^a Population figures are for all ages in 2024.

WHO global report on trends in prevalence of tobacco use 2000–2024 and projections 2025–2030



Table 13: Prevalence of current cigarette smoking and number of adolescents aged 13–15 years smoking cigarettes, by sex, by WHO region and by World Bank country income group

	Prevalence among persons aged 13–15 (%)			Estimated number of cigarette smokers aged 13–15 (millions)		
	Both sexes	Boys	Girls	Both sexes ^a	Boys	Girls
WHO region						
African Region	4.5	6.3	2.7	3.9	2.8	1.2
Region of the Americas	5.7	5.6	5.7	2.6	1.3	1.3
South-East Asia Region	3.4	4.9	1.9	3.3	2.4	0.8
European Region	8.4	8.2	8.7	2.9	1.4	1.5
Eastern Mediterranean Region	4.3	6.5	2.1	2.2	1.6	0.8
Western Pacific Region	6.4	9.6	2.7	5.6	4.5	0.7
Global	5.1	6.8	3.3	20.4	14.1	3.2
World Bank country income group						
High-income countries	5.8	5.3	6.3	2.7	1.3	0.6
Upper-middle-income countries	6.8	9.2	4.1	8.0	5.7	1.7
Lower-middle-income countries	3.8	5.5	2.1	6.9	5.1	2.8
Low-income countries	5.2	7.3	3.2	2.7	1.9	10.0

The average estimates were constructed from surveys conducted in countries in the period 2014–2024 and applied to each country's Unit population estimate in 2023.
^a Totals may not tally due to rounding.

Table 14: Prevalence of smokeless tobacco use and number of users aged 13–15 years, by sex, by WHO region, and by World Bank country income group

	Prevalence among persons aged 13–15 (%)			Estimated number of smokeless tobacco users aged 13–15 (millions)		
	Both sexes	Boys	Girls	Both sexes ^a	Boys	Girls
WHO region						
African Region ^b	4.2	4.7	3.7	1.7	1.0	0.7
Region of the Americas	2.1	2.5	1.7	0.6	0.4	0.2
South-East Asia Region	4.2	4.8	3.6	3.5	2.1	1.4
European Region	2.9	3.4	2.3	0.5	0.3	0.2
Eastern Mediterranean Region	3.2	1.6	0.9	1.6	0.9	0.6
Western Pacific Region	1.7	2.1	1.4	2.1	1.4	0.7
Global	2.8	10.0	6.1	3.9	10.0	6.1
World Bank country income group						
High-income countries	1.8	0.6	0.4	0.2	0.6	0.4
Upper-middle-income countries	1.7	2.4	1.7	0.8	2.4	1.7
Lower-middle-income countries	3.4	5.8	3.4	2.4	5.8	3.4
Low-income countries	4.2	1.1	0.6	0.5	1.1	0.6

Table 15: E-cigarette use among adolescents aged 13–15 years

	Survey coverage (%)		Prevalence of current e-cigarette use among persons aged 13–15 (%)			Estimated number of e-cigarette users aged 13–15 (millions)		
	% of population aged 13–15 surveyed	% of countries with surveys	Both sexes	Boys	Girls	Both sexes ^a	Boys	Girls
WHO region								
African Region ^b	21	30	9.3	12.0	6.5	1.7	1.1	0.6
Region of the Americas	81	83	5.3	5.4	5.3	2.0	1.0	1.0
South East Asia Region ^c	4	20	13.6	16.1	10.9	0.5	0.3	0.2
European Region	86	89	14.3	13.6	15.0	4.2	2.0	2.1
Eastern Mediterranean Region	54	38	5.8	8.0	3.5	1.6	1.1	0.5
Western Pacific Region	100	82	5.4	7.5	3.0	4.8	3.5	1.3
Global	51	63	7.2	8.6	5.7	14.7	9.1	5.6
World Bank country income group								
High-income countries	97	86	10.0	9.2	10.8	4.6	2.2	2.4
Upper-middle-income countries	82	72	5.7	7.5	3.8	5.6	3.8	1.7
Lower-middle-income countries ^d	25	51	6.5	8.2	4.6	3.0	1.9	1.0
Low-income countries ^e	27	15	10.9	15.8	5.8	1.5	1.1	0.4

kadilci (redni in občasni kadilci skupaj)	2007	2014	2019
skupaj	24,9 %	24,2 %	23,2 %
moški	28,2 %	27,5 %	*25,0 %
ženske	21,7 %	21,1 %	21,5 %



Strategija za zmanjševanje posledic rabe tobaka

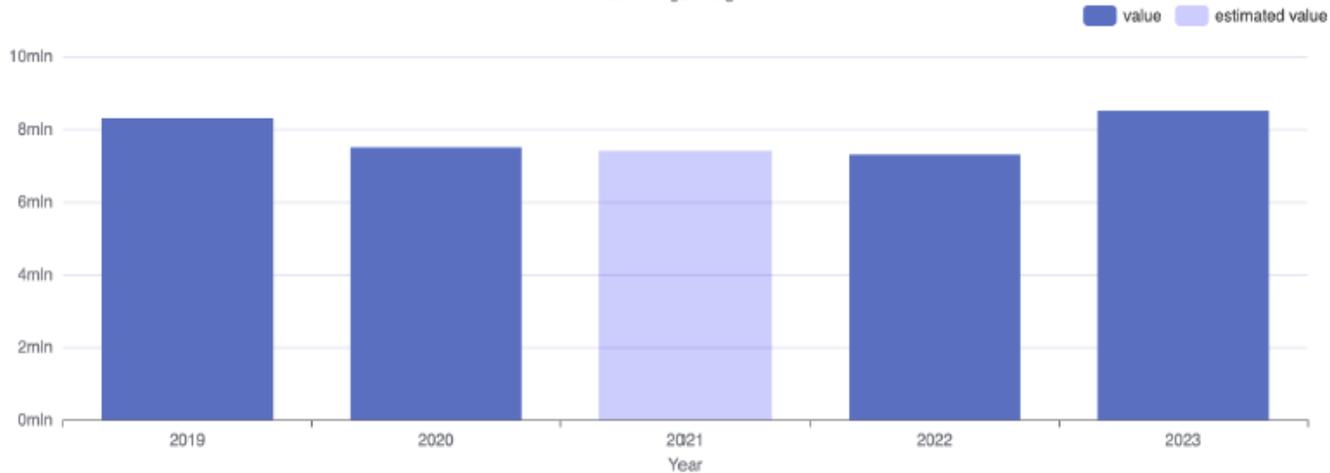
ZA SLOVENIJO BREZ TOBAKA

2022–2030



Poland
Number of current smokers

Data from gsthr.org



Year	Value	Reference/Comment
2019	8.3 million	1A
2020	7.5 million	1B
2022	7.3 million	1C A
	8.5 million	1D B

References:

1A 1. WHO global report on trends in prevalence of tobacco use 2000-2025, third edition. (2019). World Health Organization. <https://www.who.int/publications/i/item/who-global-report-on-trends-in-prevalence-of-tobacco-use-2000-2025-third-edition>. 2. Calculation based on population size data of people over 15 years of age (16+). Source of population data: World Population Prospects 2019 [Internet]. United Nations; 2019. (Department of Economic and Social Affairs, editor. Population Division). Report No.: Rev. 1. Available from: <https://population.un.org/wpp/Download/Standard/Population/>

1B 1. WHO. (2021). WHO global report on trends in prevalence of tobacco use 2000-2021 edition (4th ed). World Health Organization. <https://apps.who.int/iris/handle/10665/339888>. Calculation based on population size data of people over 15 years of age (16+). Source of population data: World Population Prospects 2019 [Internet]. United Nations; 2019. (Department of Economic and Social Affairs, editor. Population Division). Report No.: Rev. 1. Available from: <https://population.un.org/wpp/Download/Standard/Population/>

<https://gsthr.org/countries/profile/pol/1/>. Accessed 31.03.2025



WHO report on the global tobacco epidemic, 2025

Warning about the dangers of tobacco



m

Monitor tobacco use and prevention policies

p

Protect people from tobacco smoke

o

Offer help to quit tobacco use

w

Warn about the dangers of tobacco

e

Enforce bans on tobacco advertising, promotion and sponsorship

r

Raise taxes on tobacco

Between 2009 and 2019 the % of SHS exposure in Poland decreased:

 in the workplace - 19.2% to 6.5%.

 in transport services - 44.2% to 11.7%

 in bar or pub - 39.4% to 7.0%

 in restaurant - 25.9% to 4.6%

 in healthcare & public agencies - < 5%

We still have almost 30% of daily smokers.

Report – Polish Academy Of Science, Public Health Committee, April 2023

Country profile
Poland

Country profile
Slovenia

This may not sound very optimistic, but in my opinion, despite winning many battles, we are losing the war

Summary
Compliance i
The methods

M	MONITORING	SMOKE-FREE ENVIRONMENTS	CESSATION PROGRAMMES	HEALTH WARNINGS	MASS MEDIA	ADVERTISING BANS	TAXATION	CIGARETTES LESS AFFORDABLE SINCE 2012
		6				6	78.4%	NO

M	MONITORING	SMOKE-FREE ENVIRONMENTS	CESSATION PROGRAMMES	HEALTH WARNINGS	MASS MEDIA	ADVERTISING BANS	TAXATION	CIGARETTES LESS AFFORDABLE SINCE 2010
		78.7%	↔

2021.

MPOWER score colour key

Complete measure	Moderate measure	Minimal measure	No policy or weak measure	Not categorized/ No data
------------------	------------------	-----------------	---------------------------	--------------------------

Affordability category

YES cigarettes became less affordable	NO cigarettes did not become less affordable	↔ no trend change in affordability of cigarettes
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MPOWER score colour key

Complete measure	Moderate measure	Minimal measure	No policy or weak measure	Not categorized/ No data
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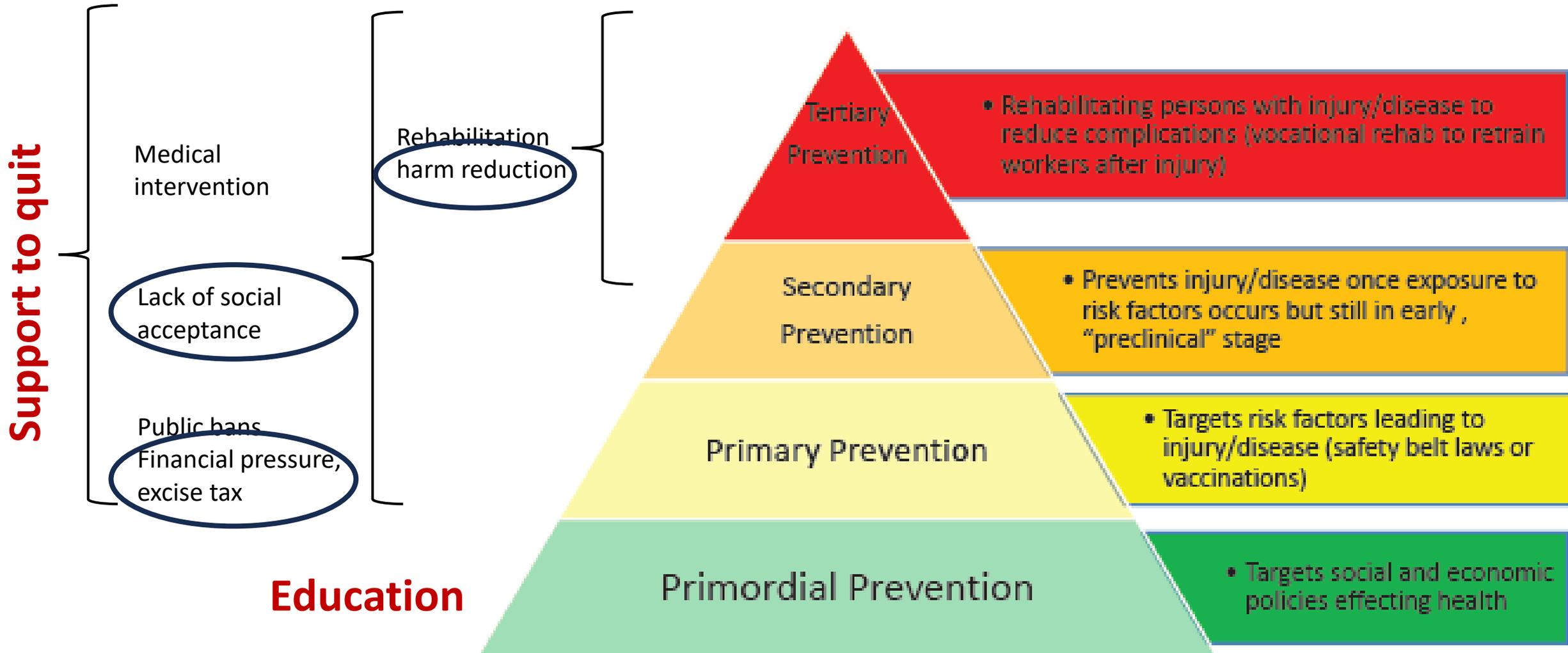
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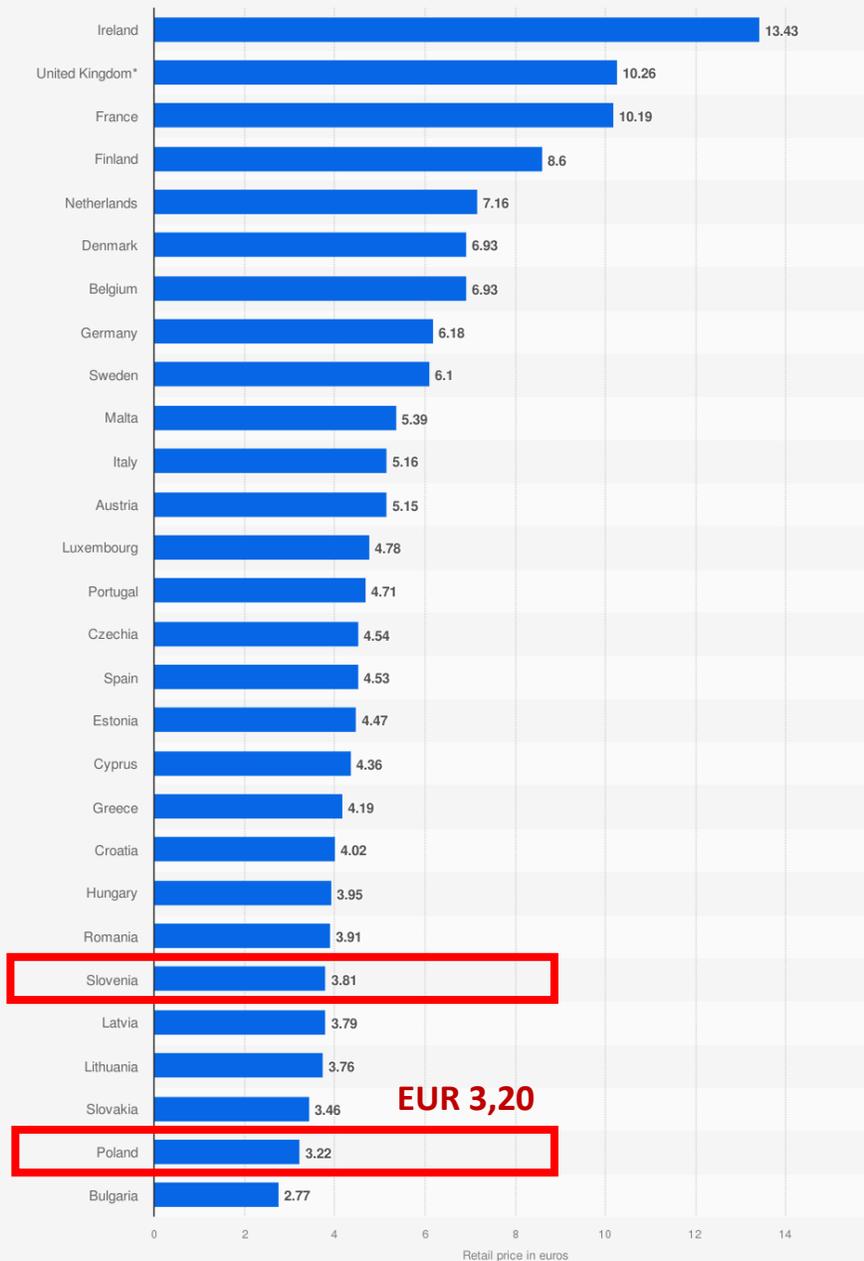
The colours are explained in more detail in the MPOWER legend on the last page of this document.
In all tables "..." means data are not available and "-" means data are not required.

The colours are explained in more detail in the MPOWER legend on the last page of this document.
In all tables "..." means data are not available and "-" means data are not required.

Public health stages of prevention



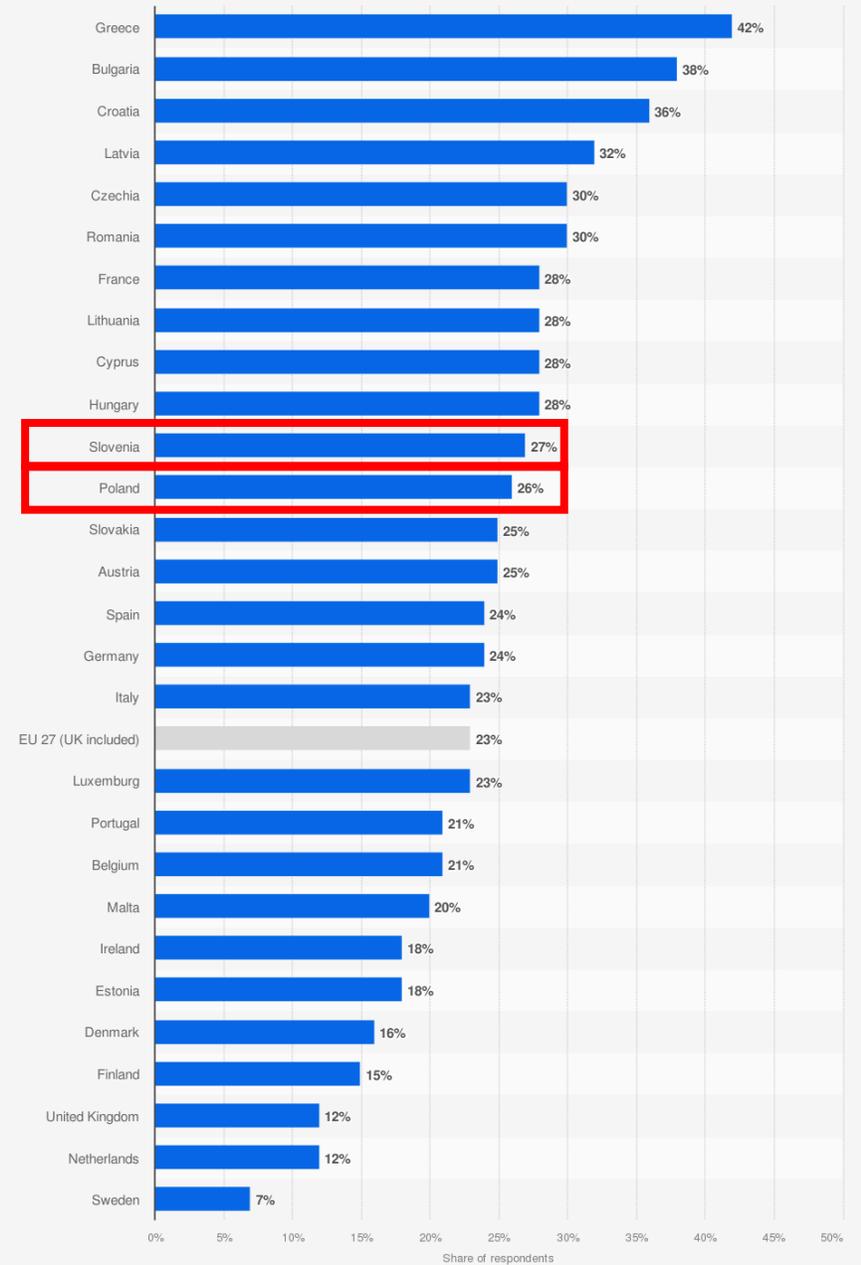
Retail price of a pack of 20 cigarettes in European Union countries in 2022 (in euros)



Source
European Commission
© Statista 2024

Additional Information:
EU, European Commission; 2022

Share of individuals who currently smoke cigarettes, cigars, cigarillos or a pipe in selected European countries in 2020



Sources
TNS; European Commission
© Statista 2024

Additional Information:
Europe; TNS; August to September 2020; 28,300 respondents; 15 years and over; Face-to-face interview

Harm reduction is a public-health approach focused on **reducing the negative consequences of risky behaviors** rather than insisting that people stop those behaviors entirely. It's grounded in compassion, practicality, and evidence.

Core idea

- People don't always—or can't always—stop behaviors that carry risks. Harm reduction asks: *How can we make those behaviors safer so fewer people are harmed?*

Key principles

- **Meet people where they are.** No judgment, no pressure to quit—just support.
- **Focus on safety.** Reduce illness, injury, and death even if the behavior continues.
- **Respect autonomy.** People make their own choices; the goal is to support healthier ones.

Examples in practice

- Providing **clean needles** to prevent infections.
- Offering **naloxone** to reverse opioid overdoses.
- Introducing **less harmful** solutions.
- Encouraging **seatbelts, bike helmets, or condoms**—all classic harm-reduction tools.
- Giving **safer-use information** to reduce risks.

Prevention has been and remains **the most economically and medically effective** way to prevent diseases and their consequences.

An aging population will increase medical costs, especially those related to NCDs.

The primary **cause of NCD development is unhealthy lifestyles**, particularly five basic behavioral factors.

Slovenia and Poland are high-risk countries; both societies are aging rapidly, healthcare spending is lower than the EU average, and we struggle to control the epidemic of behavioral factors, including cigarette smoking.

Despite a good MPOWER rating, our countries have not been successful in combating cigarette smoking.

To objectify the data, **we must focus on long-term fiscal policy in public health and possibly on harm reduction tools.**

Because **harm reduction in the context of cigarette smoking is not universally accepted as beneficial**, states should conduct research to **finally clarify whether and which products can be considered less harmful** and whether their use by smokers in order to combat addiction is justified.