

# EU Cardiovascular health plan-

*Improving CV health across EU countries*

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President Elect of ESC 2024-2026



**ESC**

European Society  
of Cardiology



# Why are we here?

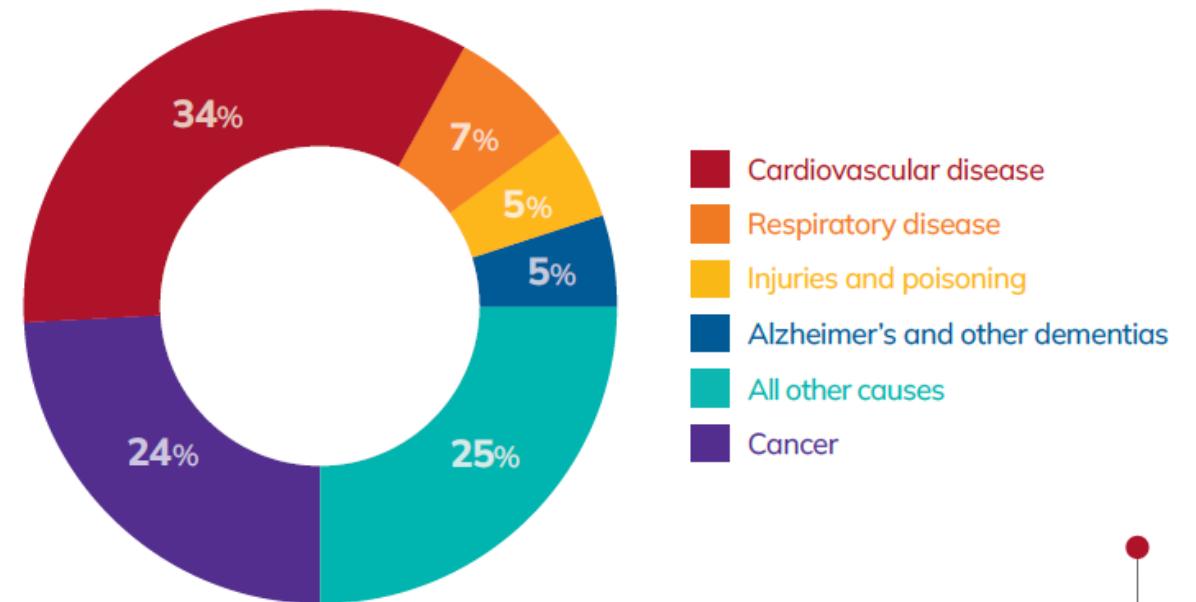
- **CVD** is EU's biggest killer

- **1,7 million deaths** per/year

- **+ 5 million new CVD cases** diagnosed annually

- **+ 62 million** people live with CVD

Causes of death in EU27

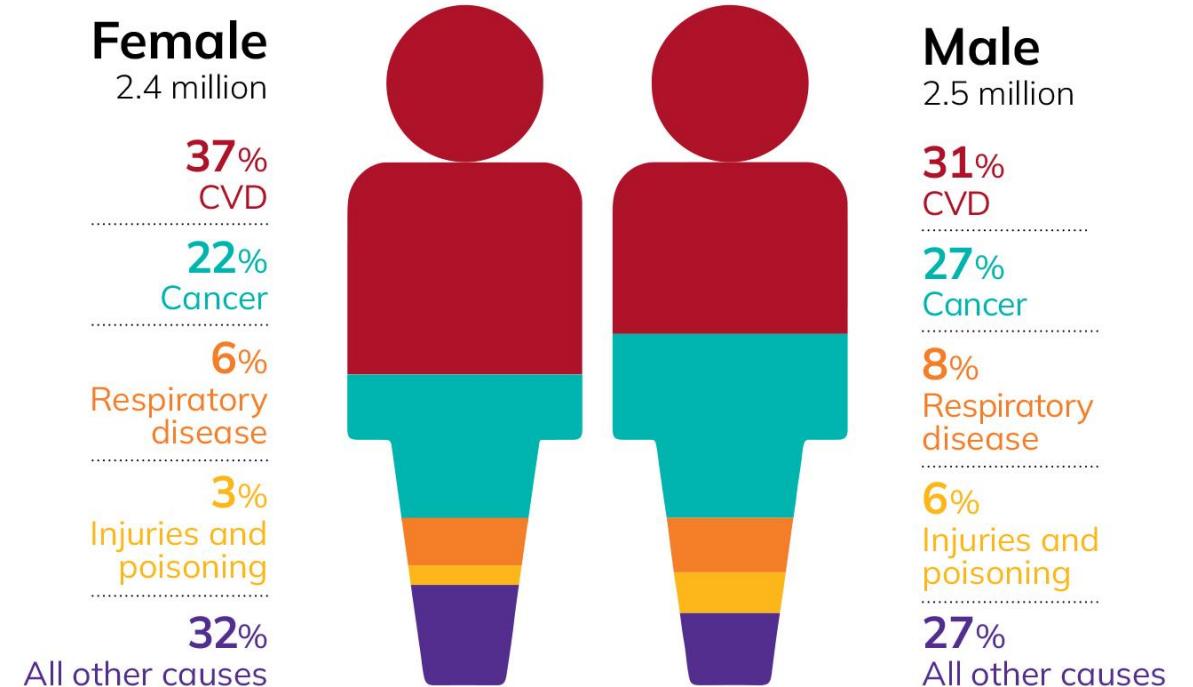


# The wake-up call for women and CVD

- More **CVD deaths in women** than all cancers combined
- **37% of all deaths** in women are CVD
- Mortality following heart attack is **20% greater in women** vs men
- Women **underrepresented** in research

CV Health action means  
**Gender equality**

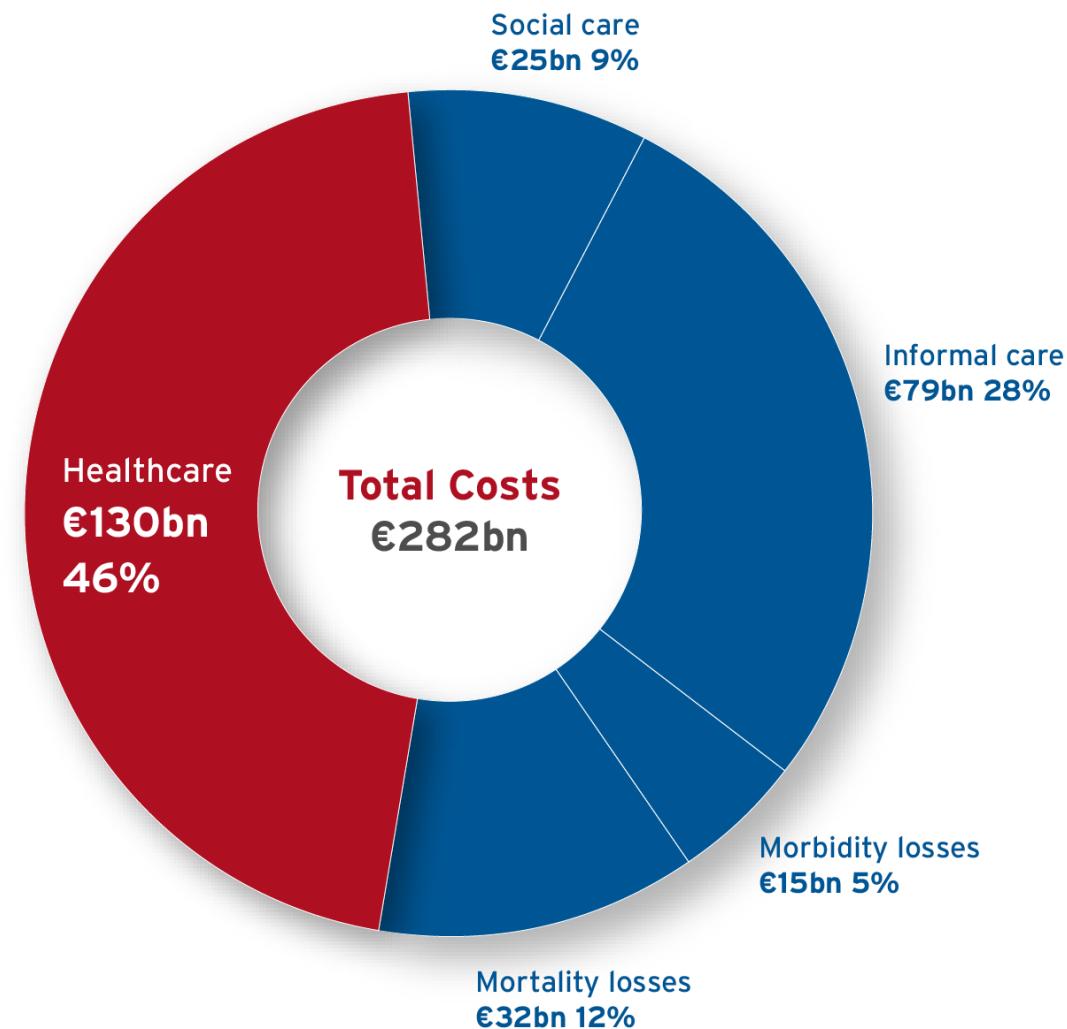
## Causes of Death in EU27: Gender Comparison



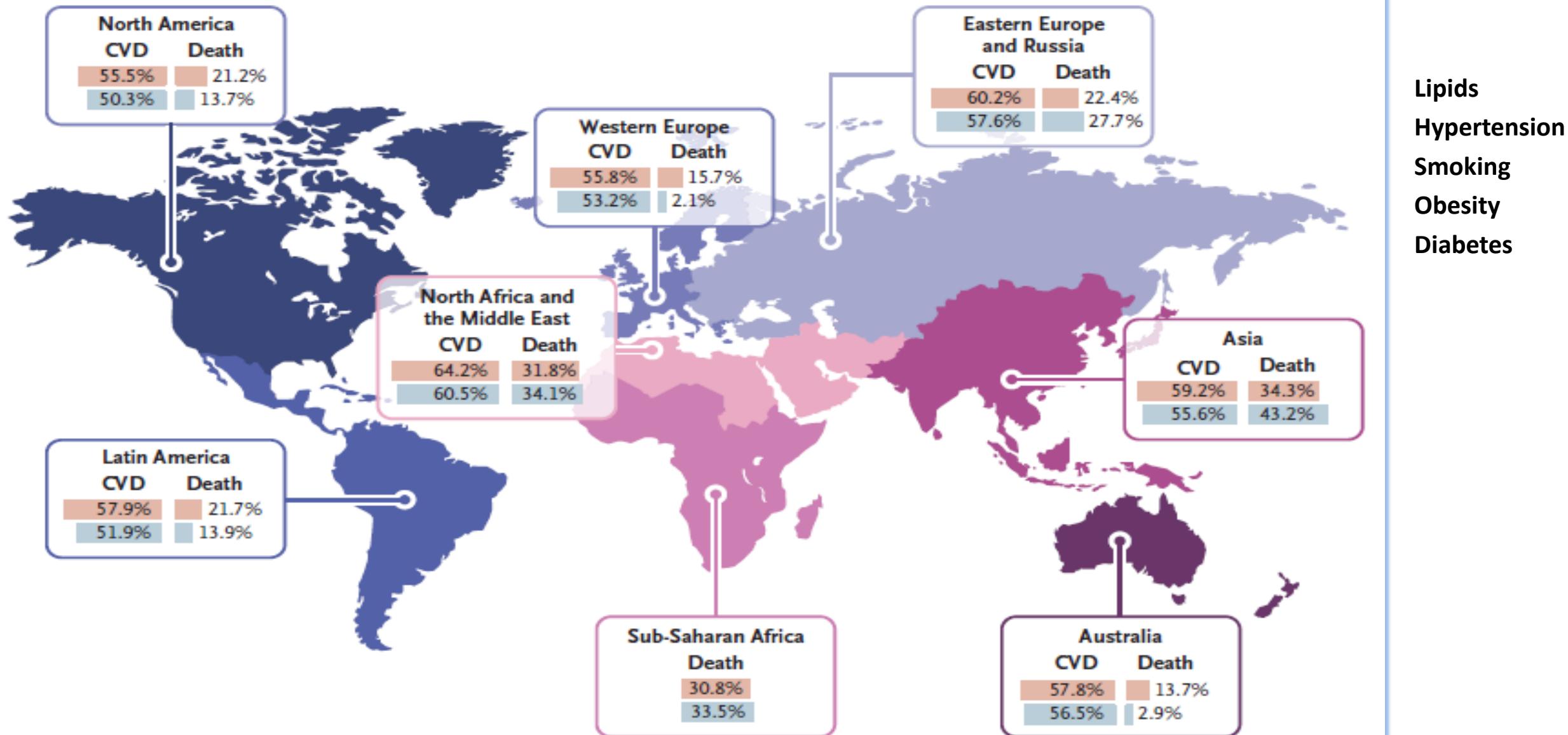
# What does CVD cost the EU economy?

- CVD cost EU **€282 billion** in 2021
- **100 billion euros more** than EU budget
- Cost to healthcare systems and society

Stop paying for CV disease later  
**Invest in a CV health now**

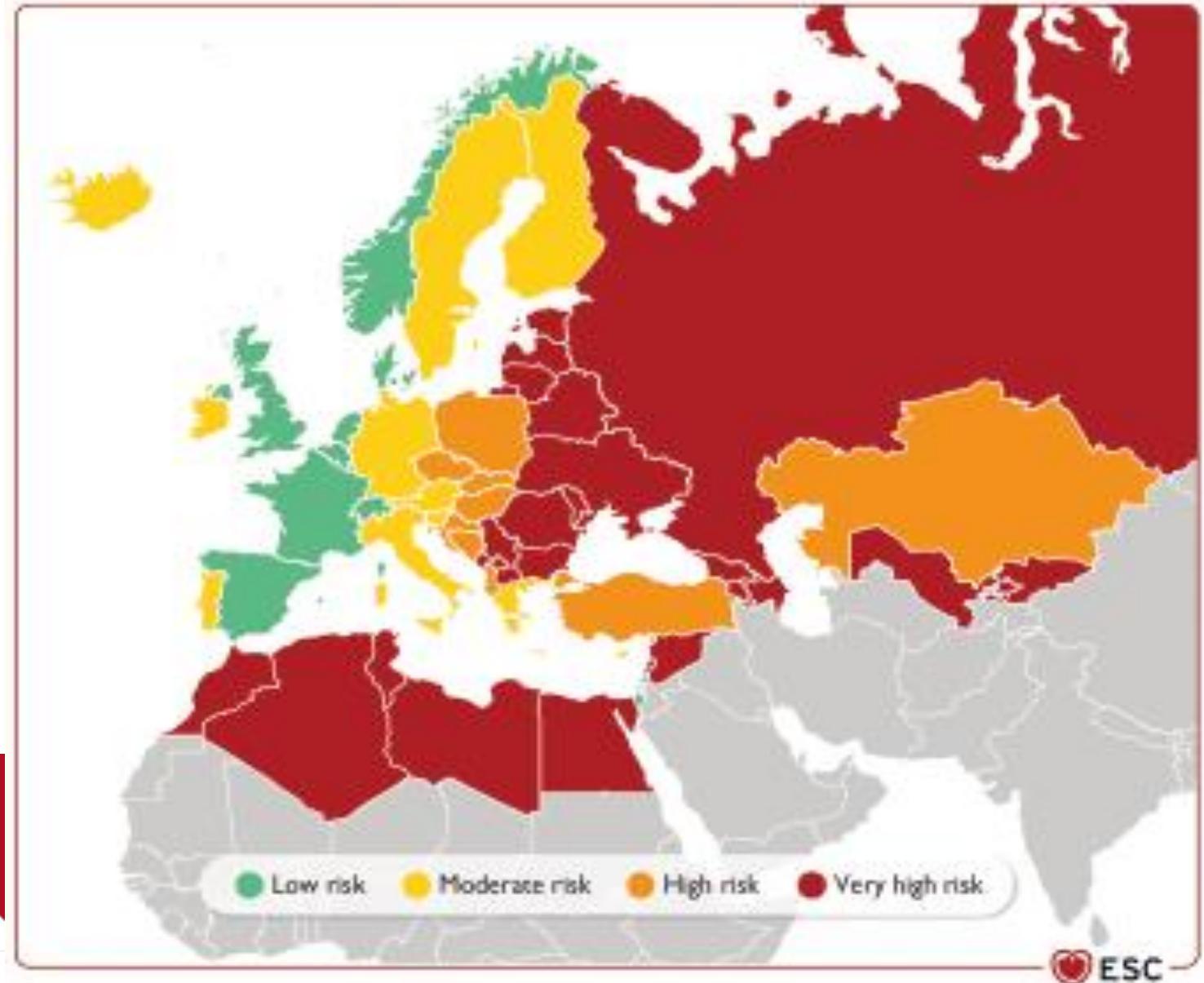


**B Population-Attributable Fractions According to Different Regions for Five Modifiable Risk Factors Combined**



**Figure 3. Population-Attributable Fractions of the 10-Year Incidence of Cardiovascular Disease (CVD) and 10-Year All-Cause Mortality.** Population-attributable fractions were estimated with the use of Weibull models. For the five modifiable risk factors combined, the aggregate global population-attributable fractions are shown in Panel A and the aggregate population-attributable fractions according to geographic region are shown in Panel B. Population-attributable fractions for the individual risk factors according to geographic region are provided in Figure S9 in the Supplementary Appendix.

# The ATLAS presents health data on ESC member countries



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# Action on Cardiovascular health to promote a more equal EU



## CVD mortality varies across EU

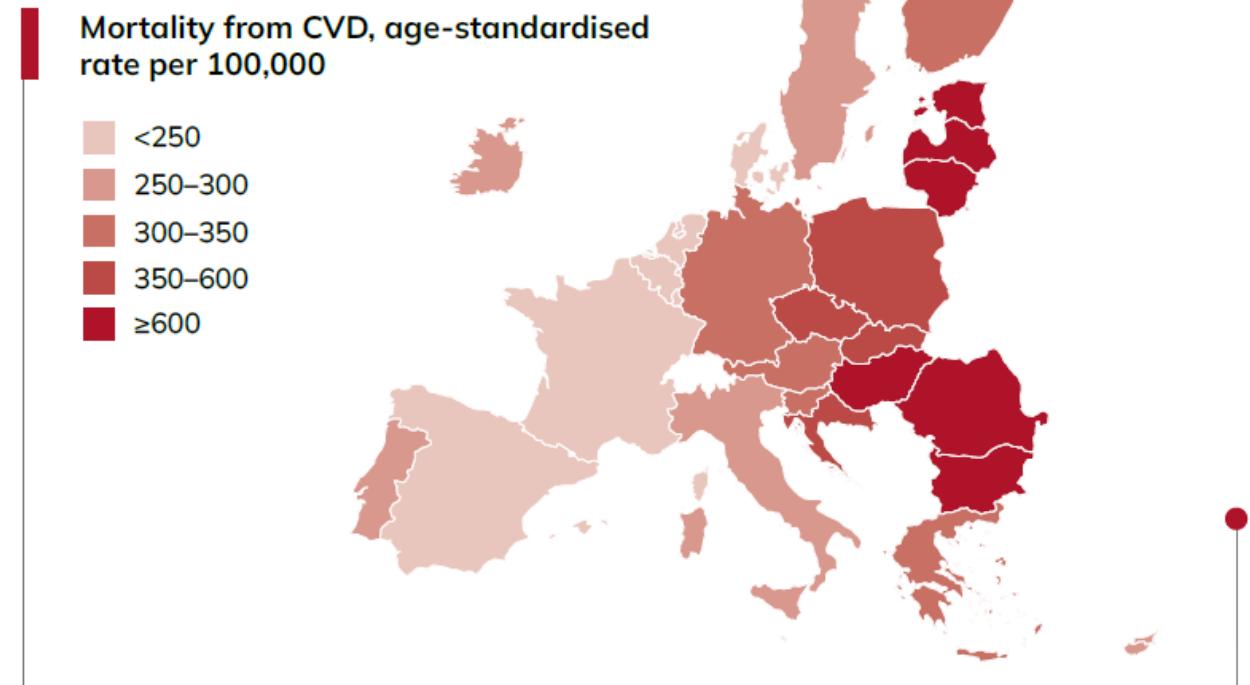
- **20%** at its lowest to **65%** at its highest

### Population disparities within countries

- **Age, gender, ethnicity, socioeconomic status and region**

The fight for CV health  
is the fight for equality

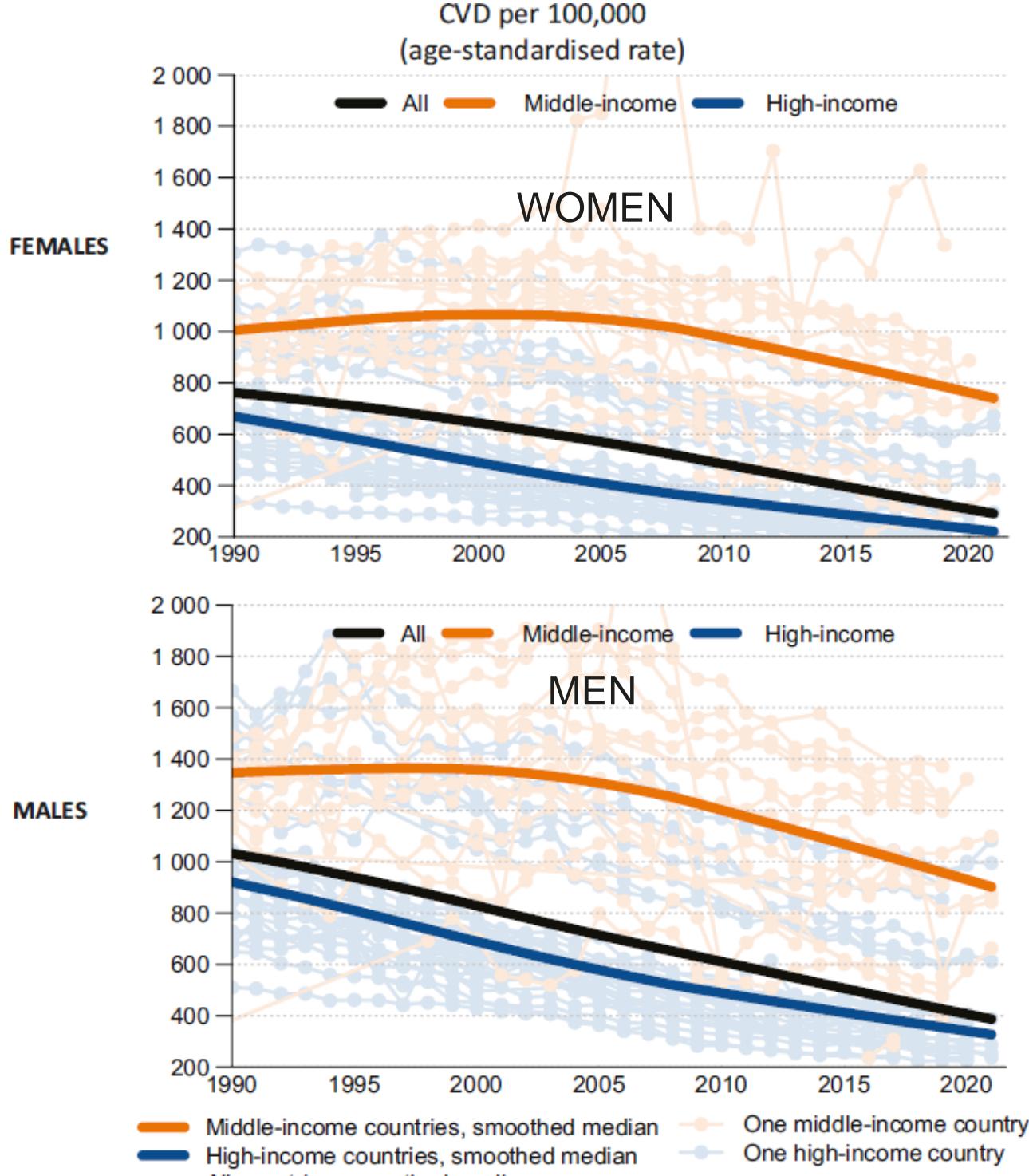
west to east across the EU



Prevalence of CV/100.000 is related to country income level both in women and men

Definition of income level according to the World Bank

| TABLE 1. Sample indices of socioeconomic status |             |                            |             |                                |             |
|---|-------------|----------------------------|-------------|--------------------------------|-------------|
| GDP PER CAPITA (\$)                             |             | COMPLETED 2° EDUCATION (%) |             | NATIONAL UNEMPLOYMENT RATE (%) |             |
| Middle-income                                   | High-income | Middle-income              | High-income | Middle-income                  | High-income |
| 15.6K   | 48.3K       | 68.3%                      | 77.4%       | 11.1%                          | 6.2%        |

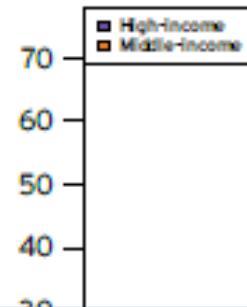


# What are diversities?

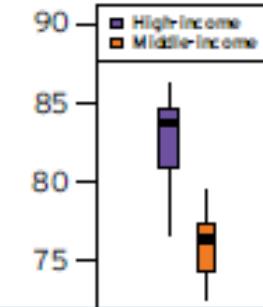
- Sex/ Gender
- Ethnicity
- Age
- Socio-Economic situation
- Geographical position
- Environment

Age distribution (>65 years) and life expectancy in ESC member countries, stratified by national income status (2021).

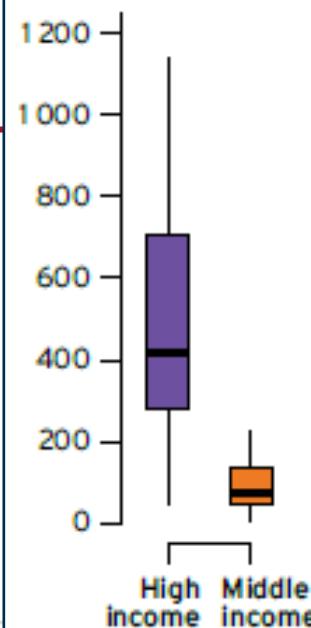
>65 years (%)



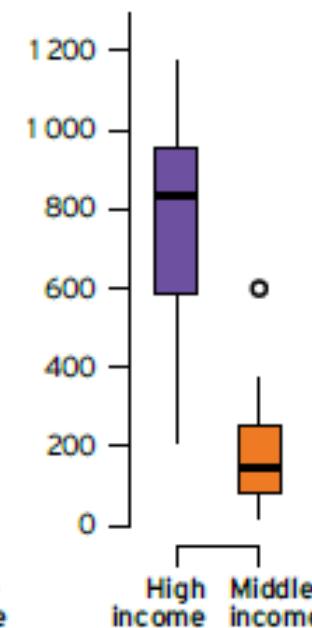
Life Expectancy (years)



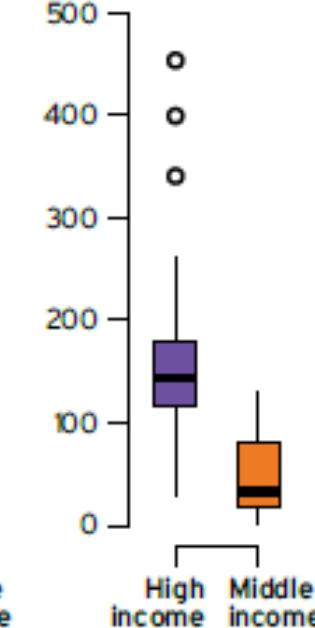
Ablations



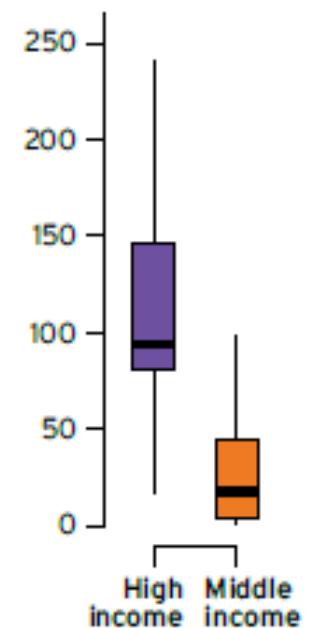
Pacemaker implants



ICD implants

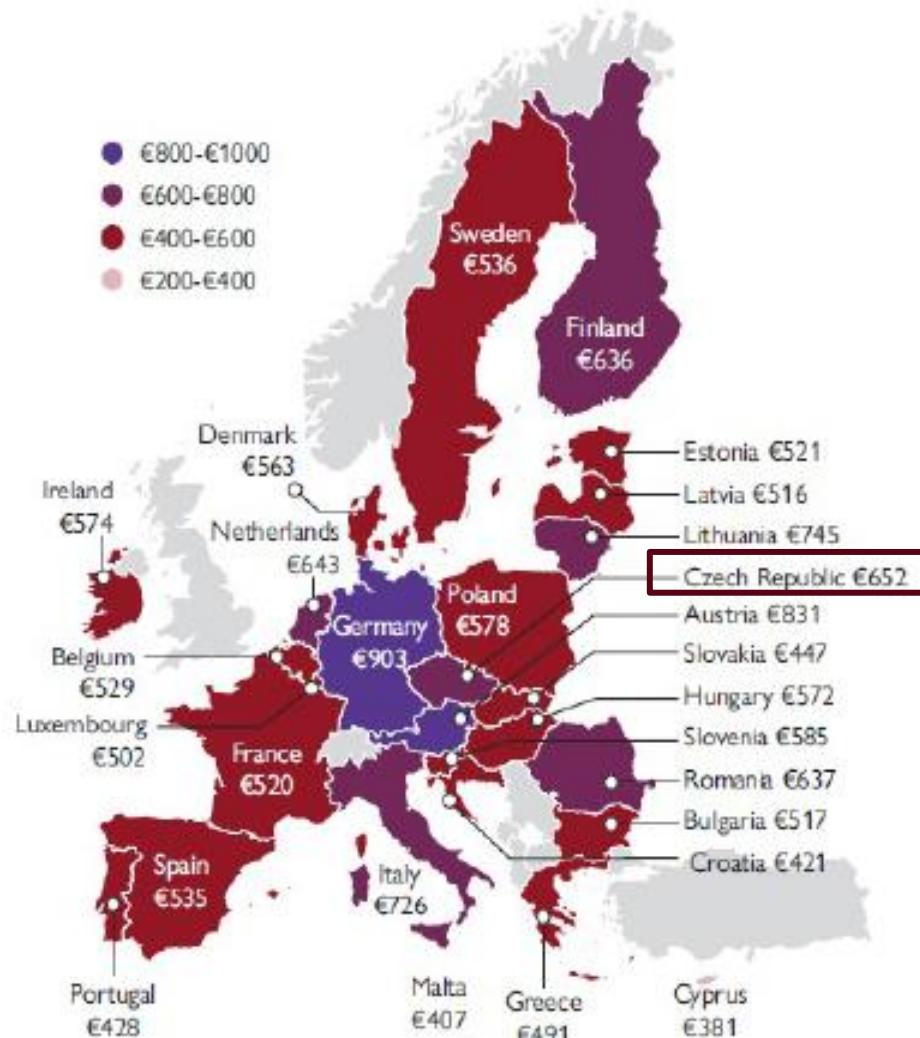


CRT implants



# Costs per capita across EU member countries

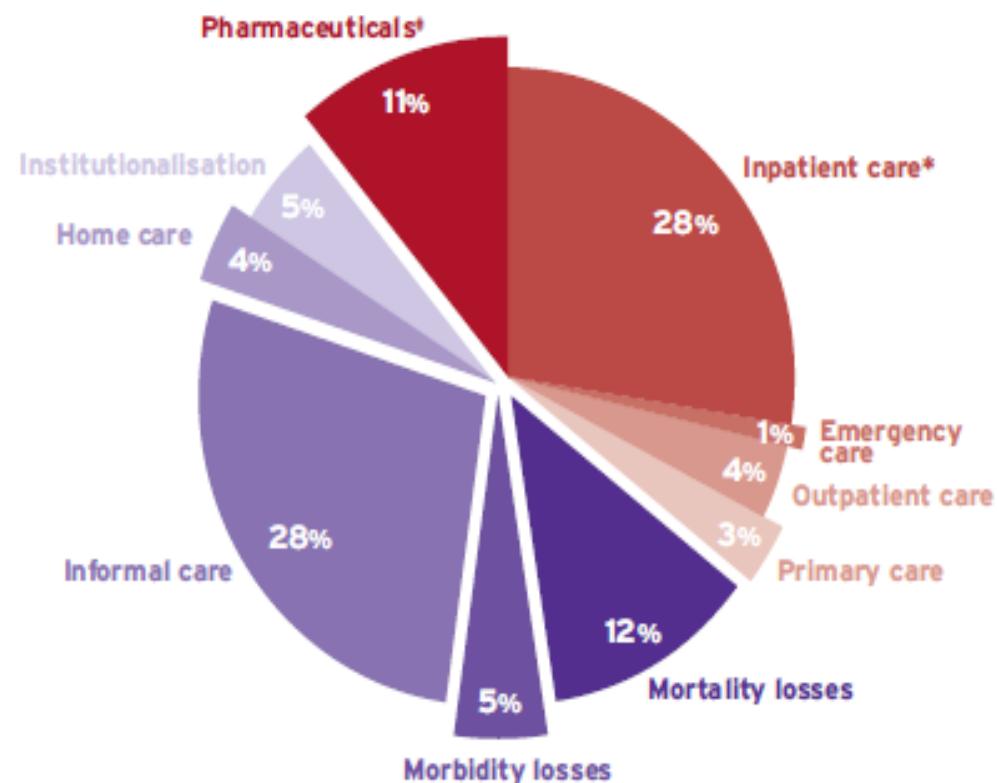
**FIGURE 17** CVD - Related costs per capita, adjusted for price differences.



**Data source:** Ramon Luengo-Fernandez, Marjan Walli-Attai, Alastair Gray, Aleksandra Torbica, Aldo P Maggioni, Radu Huculeci, Firoozeh Bairami, Victor Aboyans, Adam D Timmis, Panos Vardas, Jose Leal, Economic burden of cardiovascular diseases in the European Union: a population-based cost study, *European Heart Journal*, Volume 44, Issue 45, 1 December 2023, Pages 4752-4767, <https://doi.org/10.1093/eurheartj/ehad583>

**TABLE 2**

|                  | Costs, € bn     |
|------------------|-----------------|
| Health care      | 130 (46%)       |
| Social care      | 25 (9%)         |
| Informal care    | 79 (28%)        |
| Morbidity losses | 15 (5%)         |
| Mortality losses | 32 (12%)        |
| <b>Total</b>     | <b>€ 282 bn</b> |

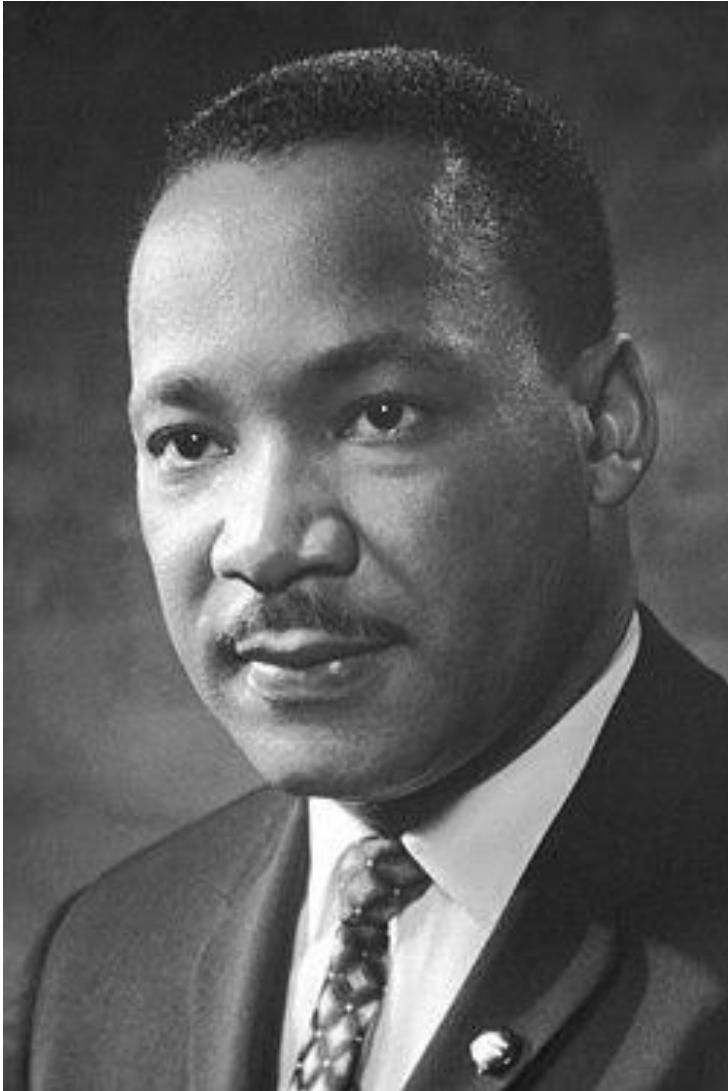


# No of cardiologists per mill in ESC countries from the ATLAS

**FIGURE 13** (A) Cardiologists total, per million people (median year 2022, years range 2015-2023). (B) Proportion of female cardiologists (%) (median year 2022, years range 2015-2023). All data in ESC member countries.



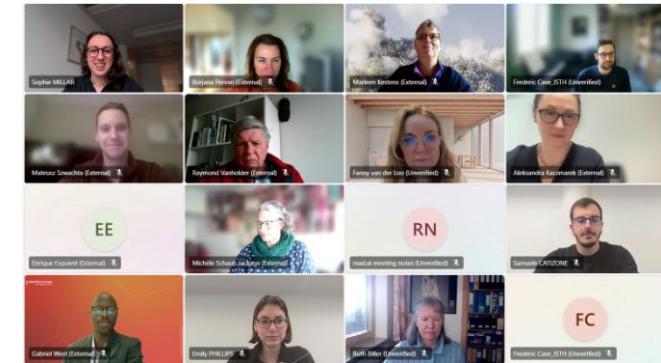
**Trends.** The median number of cardiologists per million people has increased across biennial surveys of ESC member countries from 80.9 in the 2019 survey to 85.1 in the 2021 survey and to 95.0 in the 2023 survey. This increase has been mainly driven by the increasing number of cardiologists in high-income countries, from a median of 90.8 per million people in 2019 to 100.4 in 2023. In middle-income countries numbers have declined from a median of 61.8 per million people in 2019 to 54.8 in 2023. The gender gap, however, is narrowing, with the proportion of women increasing from 28% in 2019 to 38.6% in 2023.



Of all the forms of inequality, injustice in health is the most shocking and inhumane.

**Martin Luther King, 1929 -1968**

Nobel Prize laureate (1964)



# ESC and the EU: Support by the NCS



# A crucial announcement reaffirming strong political momentum for CVH

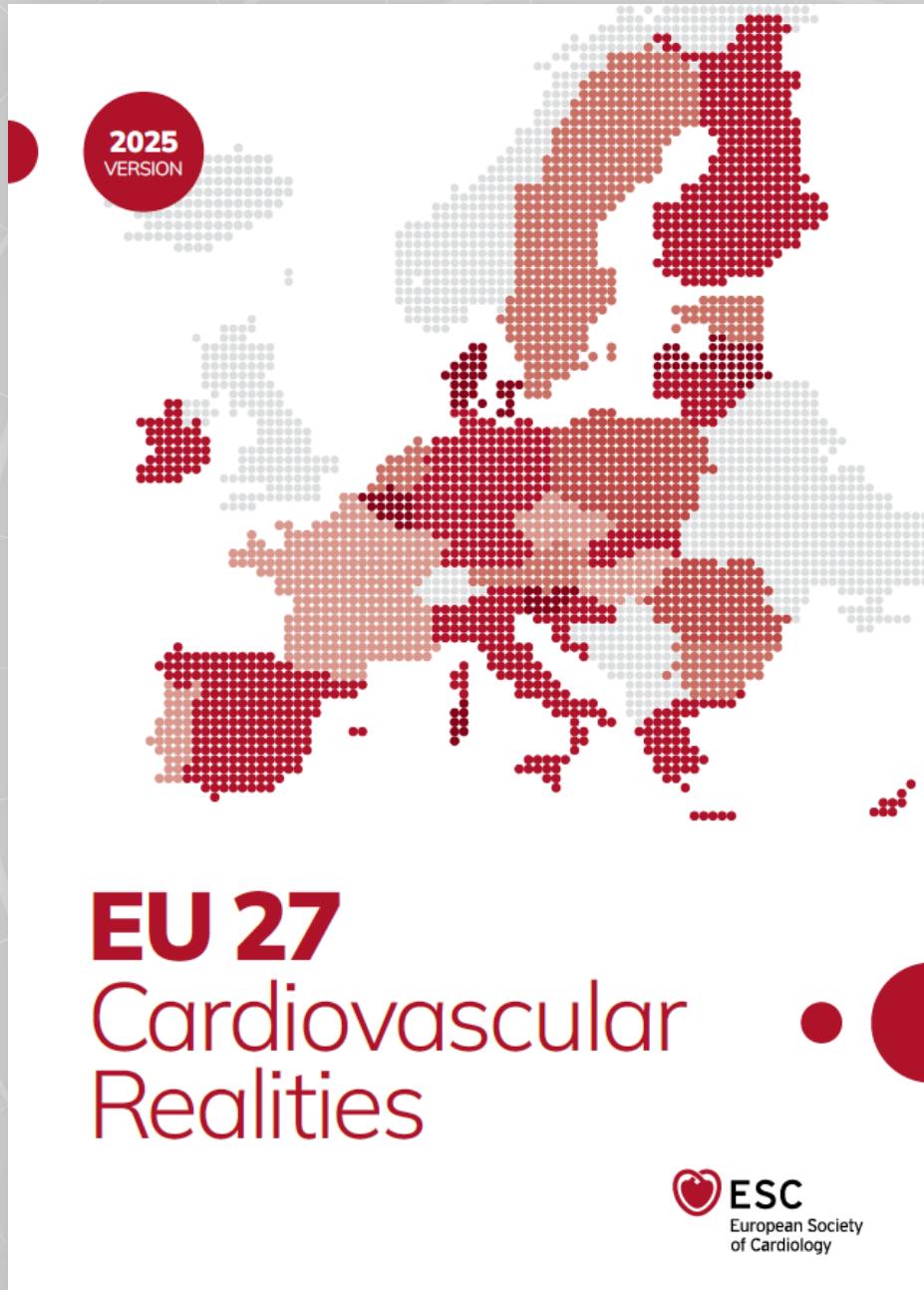
“

*This Commission will develop a new European Cardiovascular Health Plan. This Commission will want to put cardiovascular health front and centre.”*



*European Commissioner for Health and Animal Welfare, Olivér Várhelyi, during EU Health Ministers meeting, 3 December 2024*





**EU Cardiovascular  
Realities 2025** provides  
country-level data for  
all EU nations

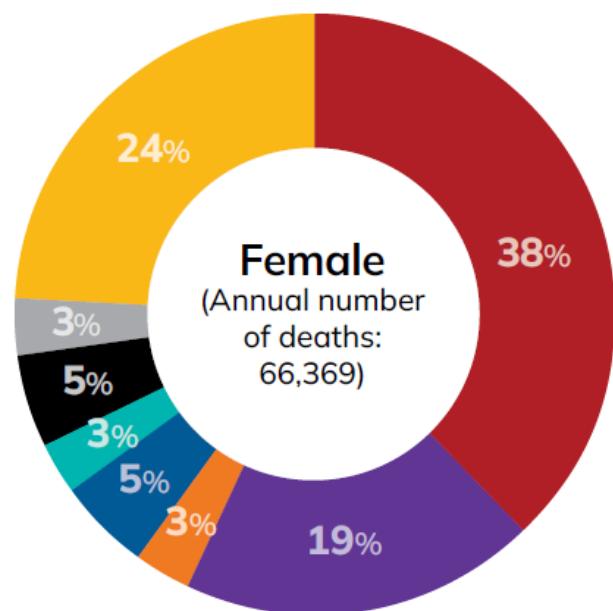


**ESC**

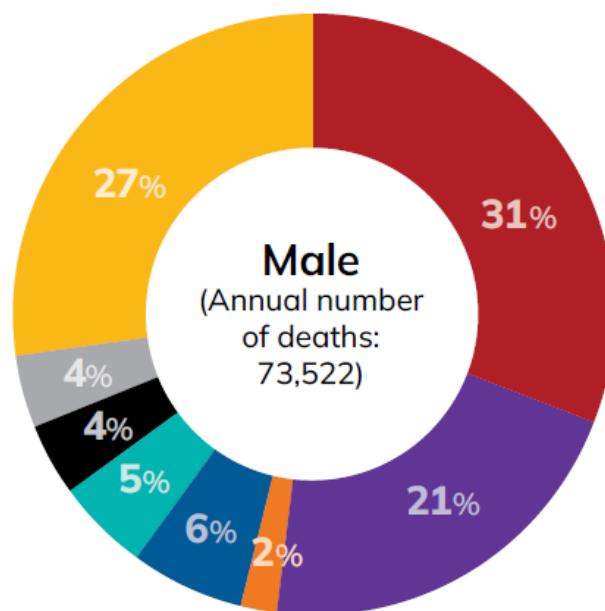
European Society  
of Cardiology

# EU 27 Country level data - Czech Republic

## Mortality from different causes

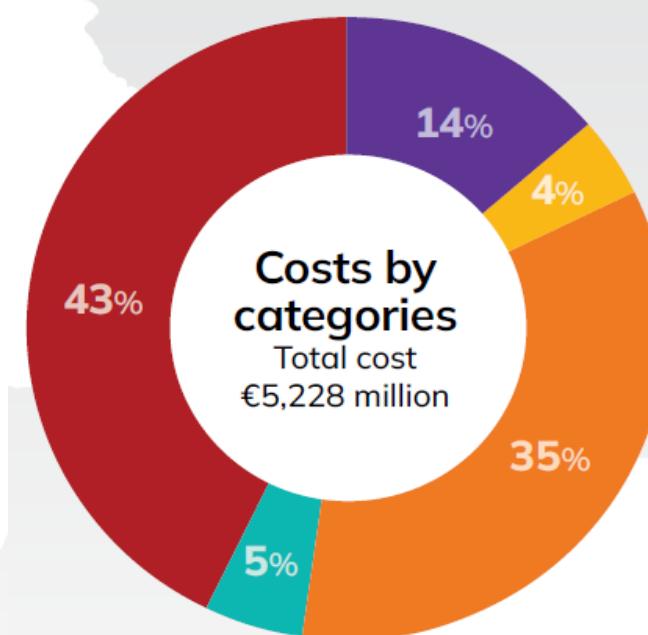


- Deaths due to CVD
- Deaths due to cancer
- Deaths due to nervous system diseases
- Deaths due to respiratory diseases



- Deaths due to external causes
- Deaths due to endocrine system diseases
- Deaths due to digestive system diseases
- Deaths due to other causes

## Economic burden of CVD (annually)

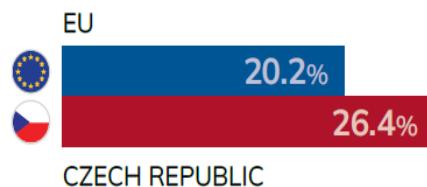


- Health care
- Mortality losses
- Morbidity losses
- Informal care
- Social care

# EU 27 Country level data - Czech Republic

## Smoking (estimate of current tobacco smoking prevalence (%)) (age-standardised rate))

### Females

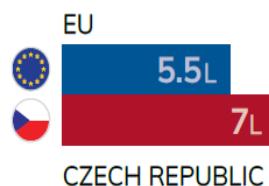


### Males



## Alcohol consumption (litres per person per year)

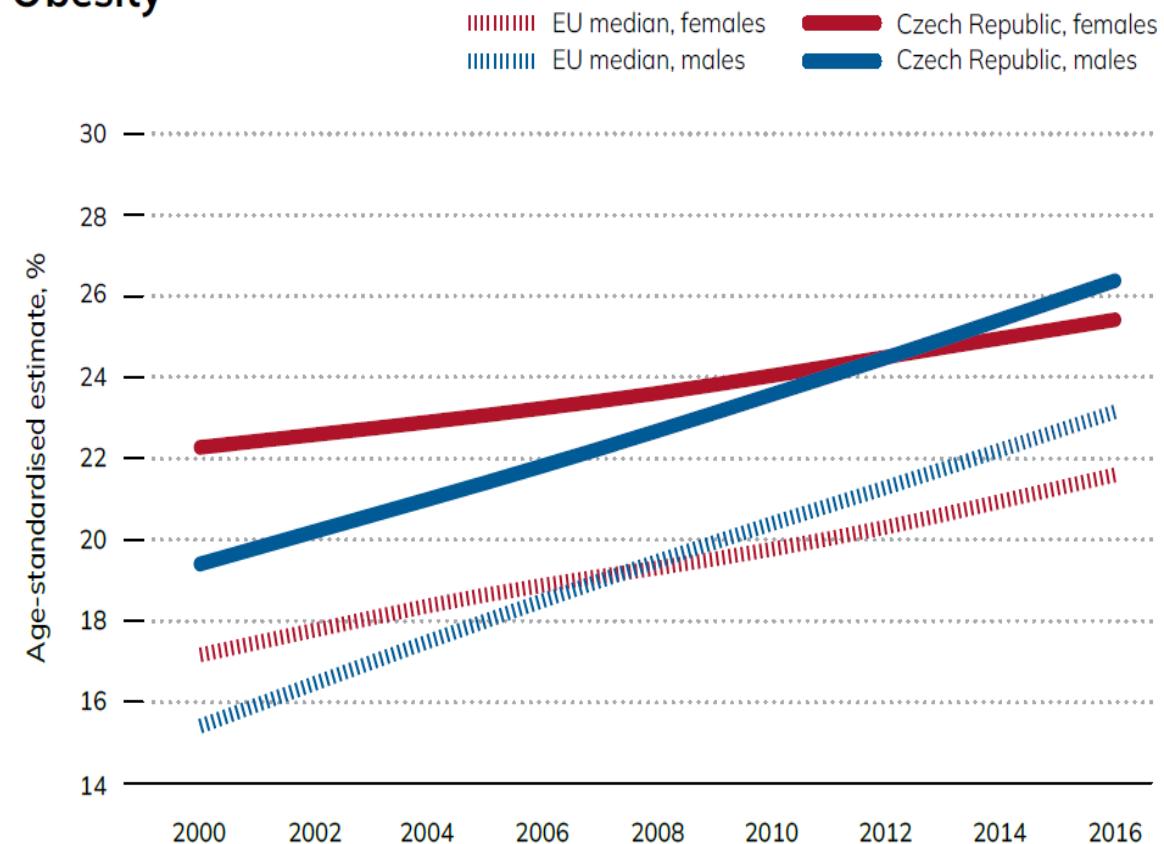
### Females



### Males



## Obesity



- **Primary and secondary prevention**



# Primary prevention can reduce premature mortality and morbidity at population level

## Risk Factors:

- Tobacco use 
- Unhealthy diet 
- Physical inactivity 
- Alcohol 
- Microplastics 
- Ultra-high processed foods 
- Obesity 

## Challenges:

- Population-wide CVD interventions are underutilized
- Adoption & adherence are crucial for success

## Future Initiatives:

- **EU CVH Plan + Healthier Together Initiative + Beating Cancer Plan**
- Focus on high-risk individuals, especially in countries without dedicated programs



# Why is air pollution a CV health issue?

## Air pollution is as deadly as smoking for CVD

Pollution increases the risk of CVD and stroke by:

- **23%:** Ischemic Heart Disease mortality
- **24%:** Stroke mortality
- **13%:** Incident stroke
- **8%:** Incident heart attack

**World Heart Federation report shows positive impact of tackling pollution.**

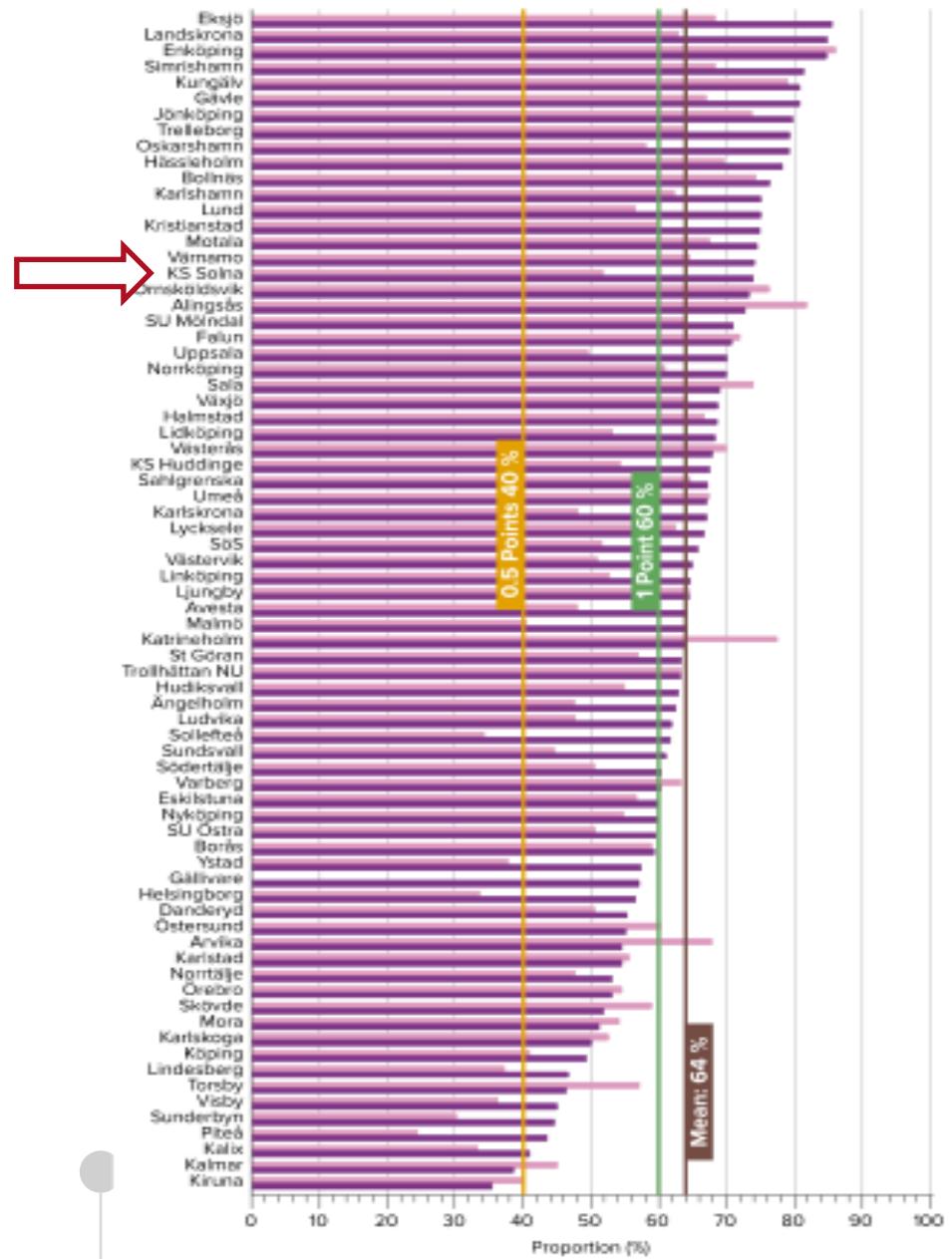
Air pollution (PM2.5) **higher** than WHO recommendations.

# We need to enhance secondary prevention and early detection of CVD

Early detection of CVDs and its risk factors could prevent premature death and future costs to the healthcare system



# How secondary preventive goals are reached in the Swede Heart Registry for ACS patients- LDL



**Figure 30.** Quality Indicator: Proportion of patients with LDL cholesterol at goal < 1.4 mmol/L at 2nd follow-up. There has been a continuous improvement in LDL cholesterol goal attainment since 2009. At the 2nd follow-up in 2023, 64 % of patients reached the LDL cholesterol goal of < 1.4 mmol/L (56 % in 2022 and 52 % in 2021). Similar to previous years, there has been a large improvement in LDL cholesterol goal attainment between the 1st and 2nd follow-up. This variable is included in the SWEDEHEART Quality Index. Centres receive 0.5 points if  $\geq 40\%$  and 1 point if  $\geq 60\%$  have LDL cholesterol < 1.4 mmol/L.

***Continuous efforts are needed to reach treatment targets  
AI apps may help in the future***

## A European Cardiovascular Health Plan: The need and the ambition



# An EU Cardiovascular Health Plan

## Cardiovascular disease in the EU: Key facts and figures



An estimated **60 million people** live with cardiovascular disease in the EU<sup>1</sup>



Cardiovascular disease costs the EU **€282bn** due to direct healthcare costs, productivity loss, and informal care by caregivers<sup>2</sup>



Cardiovascular disease accounts for around **1/3** of all deaths in the EU<sup>1</sup>

## EACH calls for a dedicated Cardiovascular Health Plan and Mission that focuses on:



**Primary prevention** to decrease premature mortality and morbidity.



**Secondary prevention** through timely screening, early detection, and diagnosis.



**Early intervention**, access to care and quality treatment.



**Rehabilitation** including counselling, medical treatment and psychological support.



**Quality of life** and other psychosocial outcomes.

## An inclusive and ambitious EU Cardiovascular Health Plan should also include horizontal cross-cutting actions, including:



**A European Cardiovascular Health Knowledge Centre**, to address the current fragmentation and significant gaps in reliable data and ensure connectivity across the spectrum of cardiovascular disease and related conditions and cross border collaboration.



**The Co-Creation of National Cardiovascular Health Action Plans** to reflect the national context and culture and provide an essential framework for national implementation of an EU Cardiovascular Health Plan with appropriate emphasis, investment and targets on primary, secondary and tertiary prevention.



**A European Cardiovascular Health Observatory**, to capture important developments in all areas of cardiovascular health in Europe, highlighting beacons of excellence, and how these could be replicated and scaled across Europe.



**Creating an incubator and progressive policy environment for digital transformation in Cardiovascular Health** to help create a progressive policy environment and facilitate digital health solutions across the Cardiovascular Health community across Europe.

### About EACH

The European Alliance for Cardiovascular Health brings together leading European and international organisations around joint activities to promote cardiovascular health as a policy priority at EU level. The Alliance provides a platform to aggregate knowledge and expertise of key stakeholders active in the field of cardiovascular health, and to advise and guide policymakers.  
[cardiovascular-alliance.eu](http://cardiovascular-alliance.eu)

### References:

1. Global Burden of Diseases, Cardiovascular Network. Global Burden of Disease Study 2019 (GBD 2019) Results: Smartest United States: Institute for Health Metrics and Evaluation (IHME), 2022. Available from: <https://rhm.ihmeuw.edu.org/gbd-2019/>
2. Luengo-Fernandez et al. Economic burden of cardiovascular diseases in the European Union: a population-based cost study. *European Heart Journal* 2023. <https://doi.org/10.1093/eurheartj/ehad024>



**MISSION  
LETTER**

**Ursula von der Leyen**  
President of the European Commission



Council of the  
European Union

Brussels, 14 November 2024  
(OR. en)

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LIMITE  
SAN 634

**NOTE**

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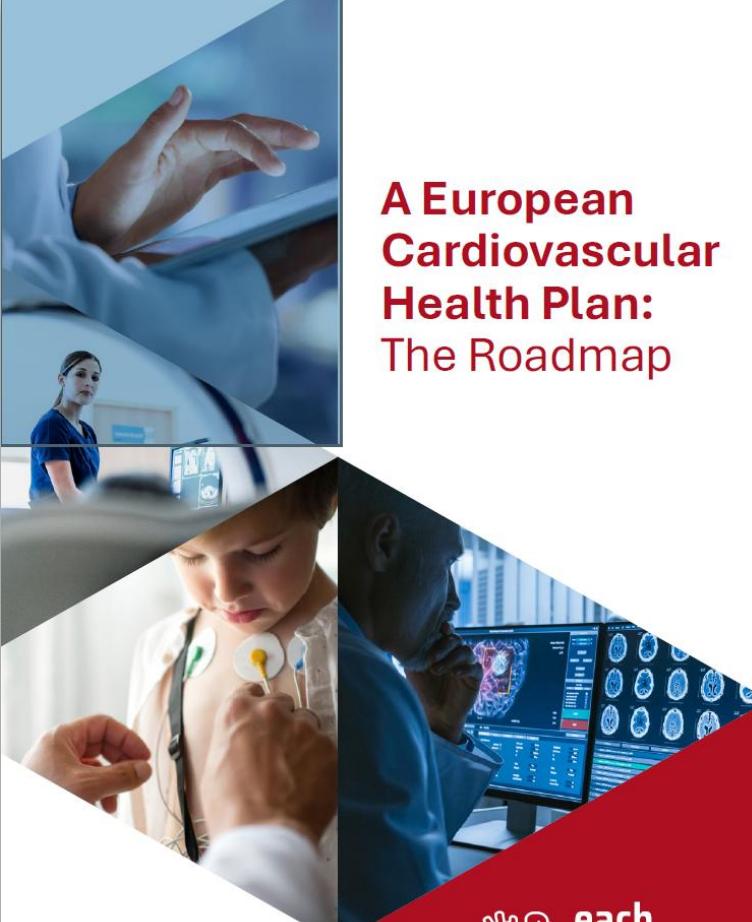
From: General Secretariat of the Council

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To: Council

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Subject: Conclusions on the improvement of cardiovascular health in the European Union  
- Approval



**A European  
Cardiovascular  
Health Plan:  
The Roadmap**

cardiovascular-alliance.eu



**each**  
European Alliance for  
Cardiovascular Health

# EACH Road map for CV health presented at the EU Parliament for the MEP group of health 23th April

## Members



[MEP Maria WALSH](#)



[MEP Vytenis Povilas ANDRIUKAITIS](#)



[MEP András Tivadar KULJA](#)



[MEP Tilly METZ](#)



[MEP Tomislav SOKOL](#)



[MEP Carlo CICCIOLI](#)



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[MEP Elżbieta Katarzyna ŁUKACIJEWSKA](#)



[MEP Romana JERKOVIĆ](#)



[MEP Kateřina KONEČNÁ](#)



[MEP Aurelijus VERYGA](#)



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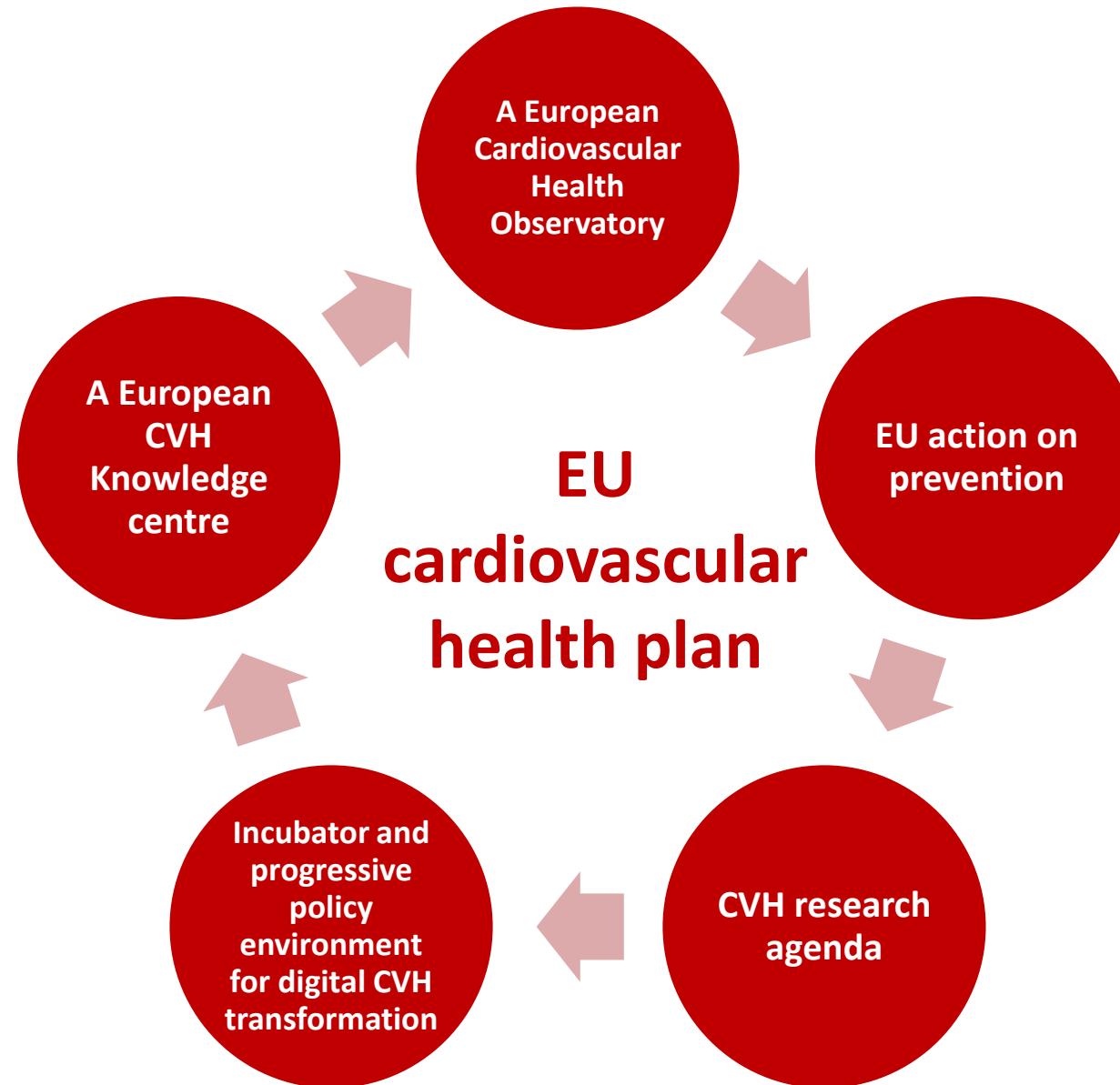
# Vertical/Member State led Actions with EU coordination

## National Action Plans

-  Primordial, primary, secondary and tertiary prevention
-  Early intervention and access to optimal treatment
-  Rehabilitation
-  Quality of life and psychosocial aspects
-  A life-course approach to CVH and tackling inequalities



**European  
Cardiovascular  
Health Check  
implementation**



# ESC Advocacy committee gathered feedback from constituent bodies

- Responses from 28 ESC groups

1. ESC Digital Cardiology & Artificial Intelligence
2. ESC Clinical Practice Guidelines
3. ESC Gender Taskforce
4. ESC Quality of Care Group
5. ESC Data Science
6. ESC Patient Forum
7. ESC Taskforce for Environment and Sustainability
8. ESC Education
9. ESC Thinktank Innovation
10. ESC Young Committee
11. Association Forum - HFA
12. Association Forum - EACVI
13. Association Forum - ACVC
14. Association Forum - EHRA – SCD
15. Association Forum - EHRA – AF
16. Association Forum - EAPC
17. ESC Council on Cardiovascular Genomics
18. ESC Council on Cardio-oncology
19. ESC Council on Cardiology Practice
20. ESC Council on Stroke
21. ESC WG on Aorta & Peripheral Vascular Diseases
22. ESC WG on Cardiovascular Pharmacotherapy
23. ESC WG on Cardiovascular Surgery
24. ESC WG on Cellular Biology of the Heart
25. ESC WG on Development Anatomy and Pathology
26. ESC WG on e-Cardiology
27. ESC WG on Pulmonary Circulation & Right Ventricular Function
28. ESC WG on Myocardial and Pericardial Diseases

Directors at the EU commission DG Sante' are writing the EU CV health plan



Marco Macella



Antonio Parenti

Meeting with Prof Luscher, Linde , Szymanski 23<sup>rd</sup> April

Have received the EACH roadmap and ESC specific input  
Will interact with the Advocacy group at ESC Brussels on regular terms

# Next steps for EU CVH plan



# CVH plan – where we stand in one slide



Commission is moving ahead rapidly with the EU CVH Plan and the ESC is in contact with them on the drafting.



Commissioner wants to have AI as a central theme of the plan;



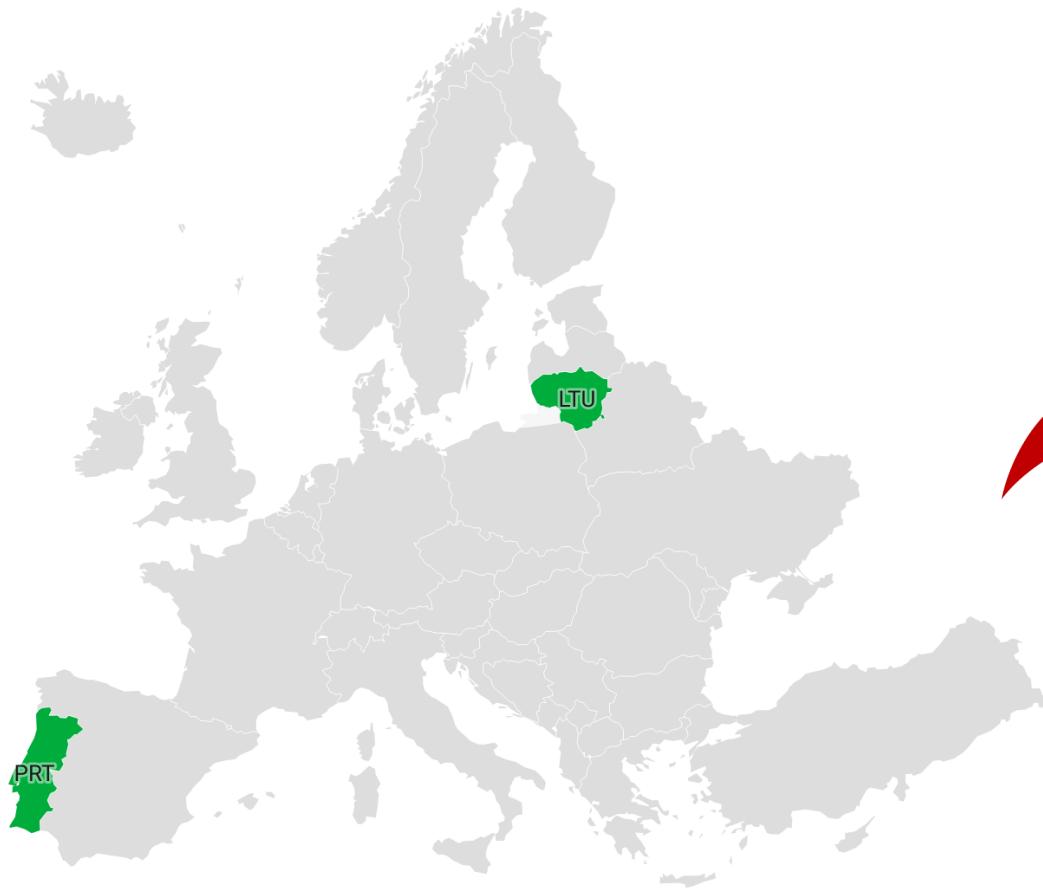
ESC is working through EACH and individually to ensure the ESC membership views are featured in the upcoming plan that could come as early as Q1 2026 or even end 2025.



**Need the help of NCS** when it comes to the next EU budget and making sure enough funds are set aside for the plan.

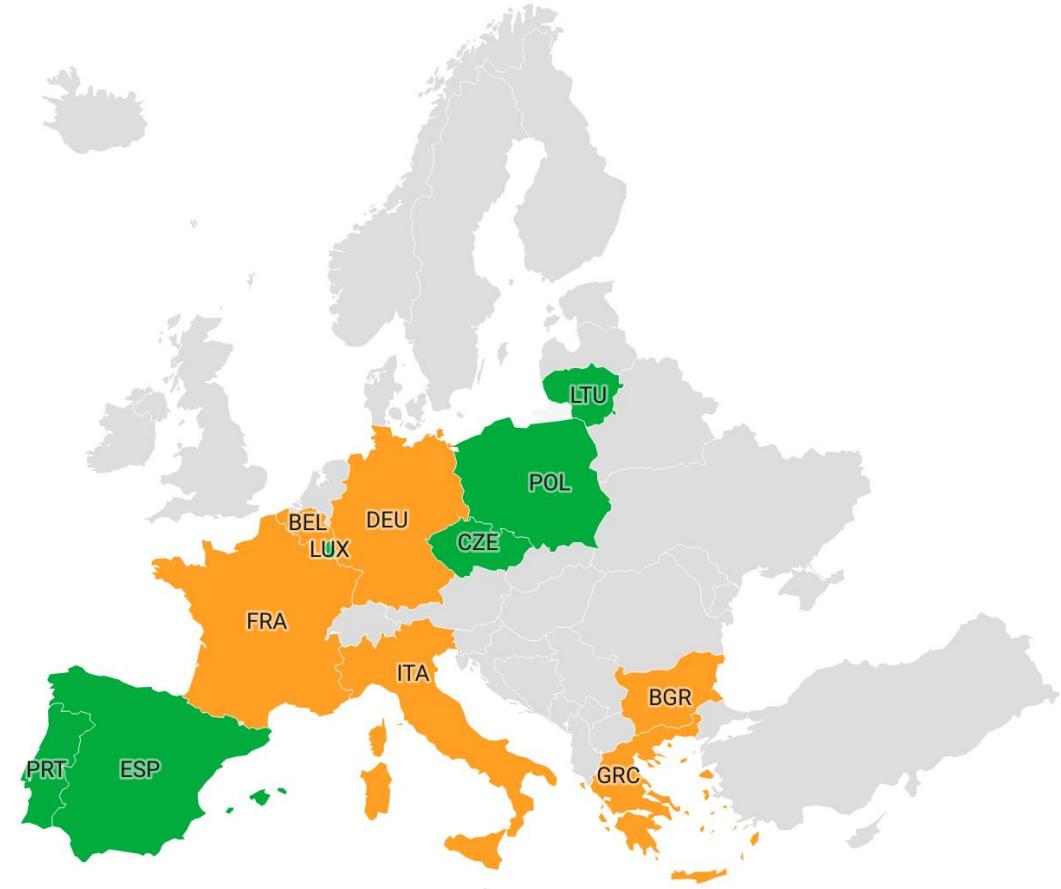
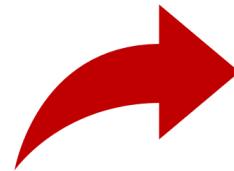
# National Cardiovascular Health plans expanding across Europe

■ National CVH plans published by National Government ■ National CVH plans expected / in progress



Created with Datawrapper

**Situation in 2020**



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**Situation in 2025**

# Your CV health plan



MINISTERSTVO ZDRAVOTNICTVÍ  
ČESKÉ REPUBLIKY

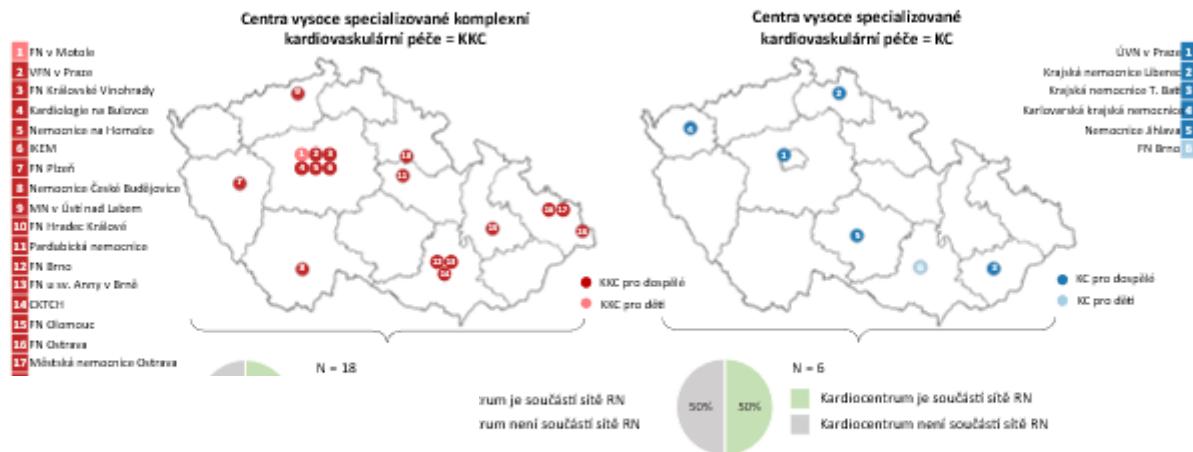
The vision of the NCVP is

"To ensure that every person in the Czech Republic can prevent the development of cardiovascular disease and, in the of its development, to ensure the highest possible quality of care and life, regardless of geographical location or stage of the disease."

# NÁRODNÍ KARDIOVASKULÁRNÍ PLÁN ČESKÉ REPUBLIKY NA OBDOBÍ 2025–2035

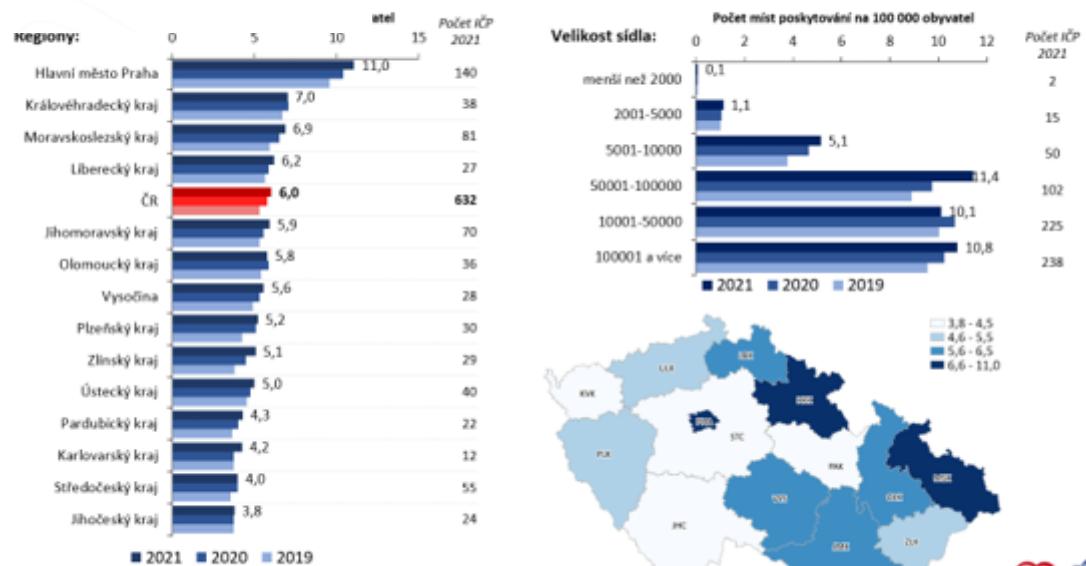
Verze 4.0

## Datová základna systému CZ-DRG – síť referenčních nemocnic: pokrytí center vysoce specializované komplexní kardiologické péče a center kardiologické péče



Podíl více než 70 % KC center vysoce specializované kardiologické péče v současnosti

## úložby ambulantní kardiologie 2019-2021



# Goals and action plans and evaluations



| <b>SC 1</b> |  | <b>The effectiveness of cardiovascular disease prevention is increased and helps prevent the onset of the disease</b>   |
|-------------|--|---|
| 1.1         | Increase positive motivation to change lifestyle, increase health literacy and improve prevention of cardiovascular disease  |   |
| 1.2         | Increasing the efficiency and use of the system of preventive check-ups, primary care and gynaecological care (e.g. prevention of thromboembolic disorders for contraceptive users or care for pregnant women) |   |
| 1.3         | Increasing the efficiency of early diagnosis of risk factors for cardiovascular diseases. Setting up a follow-up care system for high-risk   |   |
| <b>SC 2</b> |  | <b>The availability and organisation of patient-centred care leads to ensuring the highest possible quality of life, during illness, after cure or in the terminal stage</b>    |
| 2.1         | Ensuring the availability of all forms of follow-up, long-term and palliative care. Care is modern and efficient   |   |
| 2.2         | Ensuring uniform availability and coverage of emergency medical services and systems for direct communication and transport of patients with circulatory diseases directly to cardiovascular centres           |   |
| 2.3         | Ensuring regional availability of specialised and outpatient care in all regions of the Czech Republic   |   |
| 2.4         | Ensuring changes in reimbursement for outpatient cardiology, angiology and primary care in favour of patient education and cooperation   |   |
| 2.5         | Streamlining centralised care for patients with cardiovascular disease through a network of highly specialised cardiovascular care centres   |   |
| 2.6         | Setting up coherence of care in the cardiovascular care system   |   |
| 2.7         | Improving planning and increasing access to care   |   |
| 2.8         | Ensuring access to innovative practices and maintaining high quality in cardiovascular care  |   |
| <b>SC 3</b> |  | <b>The provision of modern health care is ensured by qualified staff, modern diagnostic and therapeutic facilities and innovative</b>   |
| 3.1         | Ensuring a sufficient number of quality, qualified and motivated medical staff in the field of cardiovascular medicine   |   |
| 3.2         | Improving the infrastructure of individual cardiovascular care providers   |   |
| 3.3         | Setting up quality of care monitoring for individual cardiovascular care providers   |   |
| <b>SC 4</b> |  | <b>Science and research in cardiovascular diseases are carried out at a high level integrating the latest medical knowledge and in the context of international cooperation</b> |
| 4.1         | Promoting research and international cooperation in cardiovascular medicine  |   |
| 4.2         | Harnessing the benefits of digitisation and telemedicine   |   |

| Action Plan / Evaluation  | Annual evaluation |   | Overall assessment of the implementation of the Action Plan |   | Preparation of a follow-up action plan |   |
|---------------------------|-------------------|---|---|---|--|---|
|                           | Preparation       | Submission for approval to the management of the Ministry of Health | Preparation   | Submission for approval to the management of the Ministry of Health | Preparation                            | Submission for approval to the management of the Ministry of Health |
| Action Plan for 2025-2027 | 2025              |   |   |   | /                                      | /   |
|                           | 2026 for 2025     | January/February 2026   |   |   |  |   |
|                           | 2027 for 2026     | January/February 2027   |   |   |  |   |
|                           | 2028 for 2027     | January/February 2028   | 2028  |   | 2027                                   | October/November 2027   |
| Action Plan 2028-2030     | 2029 for 2028     | January/February 2029   |   |   | /                                      | /   |
|                           | 2030 for 2029     | January/February 2030   |   |   | /                                      | /   |
|                           | 2031 for 2030     | January/February 2031   | 2031  |   | 2030                                   | October/November 2030   |
| Action Plan 2031-2034     | 2032 for 2031     | January/February 2032   |   |   | /                                      | /   |
|                           | 2033 for 2032     | January/February 2033   |   |   | /                                      | /   |
|                           | 2034 for 2033     | January/February 2034   | 2035  |   | /                                      | /   |
| Final evaluations         |                   |   |   |   |  |   |

Source: own processing

Budget should be allocated proportionate to the burden of **CVD** as the **number one killer in Europe**

(The EU Beating Cancer Plan received 4 billion of EU funding)



# Our Mission

To reduce the burden of  
cardiovascular disease