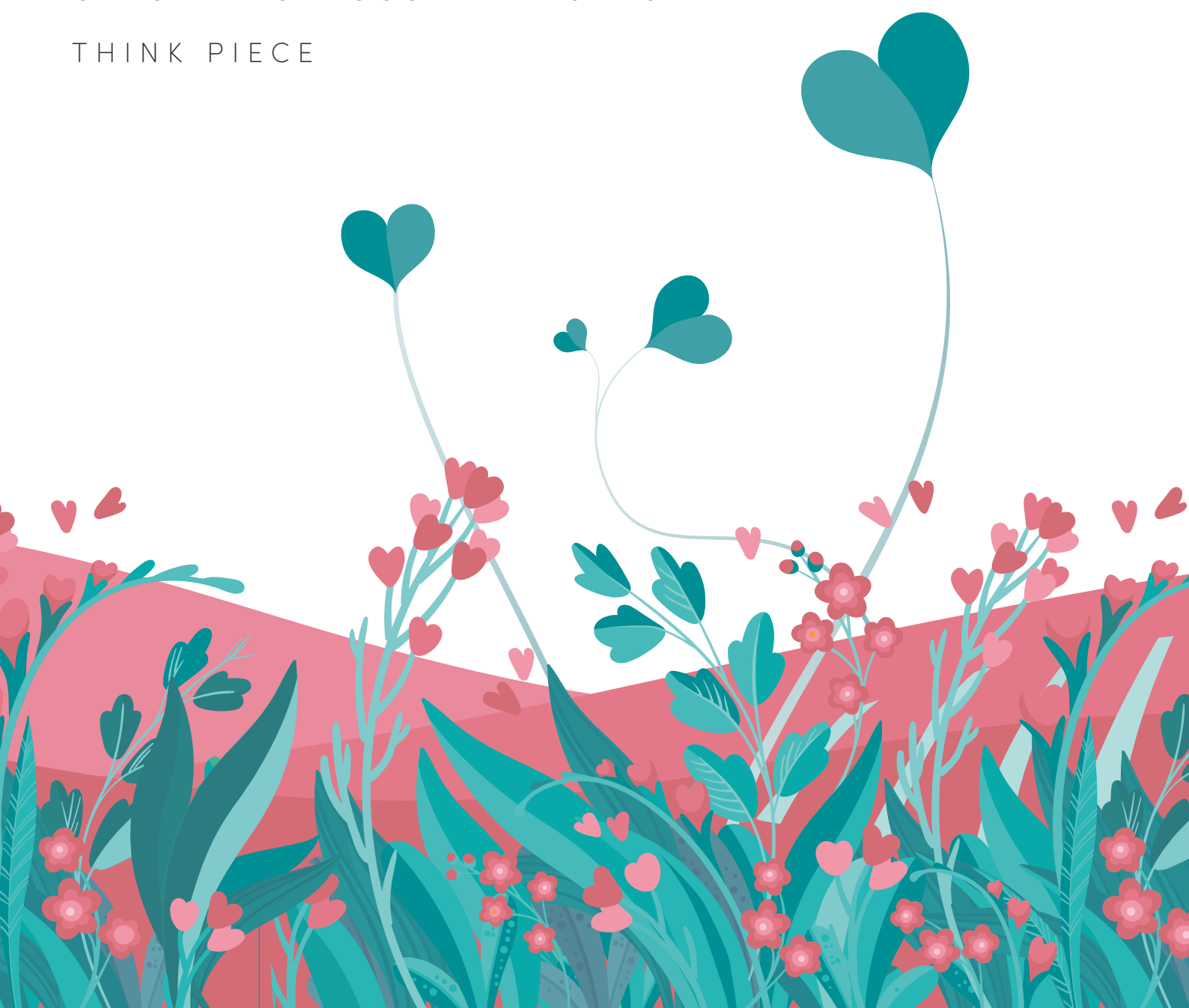


The heart of society: why addressing cardiovascular disease is critical to achieving wider societal goals

THOUGHT LEADERSHIP FORUM
ON CARDIOVASCULAR DISEASE

THINK PIECE



About the Thought Leadership Forum on Cardiovascular Disease

The Thought Leadership Forum on Cardiovascular Disease is a project from The Health Policy Partnership (HPP), advised by a multidisciplinary group of senior stakeholders seeking to ignite greater political urgency in cardiovascular disease (CVD). It was established in 2022 to stimulate new strategic debates in CVD to ultimately accelerate policy leadership and health system transformation in the societal interest.

HPP acts as Secretariat to the Forum, providing research, lead authorship and editorial oversight. The Forum and all its outputs are independent, non-promotional and free from commercial bias, representing a broad societal and expert-based consensus for the consideration of policymakers. All participants in the Forum provide their time for free and on an advisory basis. HPP retains editorial control of all outputs.

This initiative is made possible with financial support from Amgen, Bayer AG, Bristol Myers Squibb, Novartis Pharma AG and Novo Nordisk. The funders are also contributing members of the initiative.

About this think piece

This think piece seeks to address a major knowledge gap in this field by exploring the linkages between CVD and wider societal priorities, and how addressing CVD could contribute to achieving these.

It was written by Laura Smith, Ed Harding, Aditi Karnad and Matt Handcock, and edited by Madeleine Murphy and Kasia Trojanowska, all at HPP. Research was based on existing literature and input from expert stakeholders. Editorial comments were received from sponsors, participants in the Forum and selected external experts. No one interviewed for this think piece was remunerated for their contributions.

This think piece will be followed by an action statement in autumn 2022, exploring key recommendations for policymakers to aid in addressing CVD.

Contents

Acknowledgements	4
Executive summary	6
Why CVD needs support from a broader range of stakeholders and society.....	7
1 Healthy ageing and economic growth	8
Why is healthy ageing a policy priority?.....	9
How is addressing CVD relevant to healthy ageing and economic growth?	10
What should be done?	15
2 COVID-19 recovery	16
Why is health system resilience a policy priority?	17
How is CVD linked with health system resilience and COVID-19 recovery?	18
What should be done?	19
3 Health inequalities	20
Why is addressing health inequalities a policy priority?.....	21
How is CVD linked with inequalities?	22
What should be done?	24
Where next?.....	25
References	27

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To find out more, please read our previous publications, *Making the case for political urgency in cardiovascular disease* and *Finding inspiration within prominent national cardiovascular disease plans*, or contact us at CVDTLF@hpolicy.com

Executive summary

An effective response to cardiovascular disease (CVD) could play a critical role in achieving several wider societal goals, including securing long-term economic growth in the context of population ageing, COVID-19 recovery and dealing with widening social inequalities.

Even in terms of its direct impact, CVD remains a leading driver of morbidity and mortality in Europe,¹ which can severely impact quality of life and years of life lived in good health:

- **CVD is still the leading cause of death in Europe.**¹ From 1990 to 2015, CVD cases in Europe rose by 34% in men and 29% in women.¹ This is exacerbated by trends such as population ageing, along with the growth in the prevalence of associated conditions, such as diabetes and obesity.^{2,3}
- **People are living longer, but not always healthier, lives**⁴ – and CVD is a major reason why. In some Organisation for Economic Co-operation and Development countries, CVD mortality rates have been plateauing or even increasing, partly because of stalled progress in tackling and preventing CVD.³

A significant proportion of CVD-related deaths and events are preventable,³ yet more could be done by governments to act on this. For example, across Europe, several essential elements of the CVD prevention and care pathway are greatly underserved.⁵ Furthermore, many formal national plans and strategies to address CVD and associated conditions in a consistent and strategic manner are outdated or lacking in concrete investment and implementation measures.^{6,7}

The benefits of addressing CVD warrant a new era of political leadership, backed by wider society. A multi-generational commitment to tackling CVD would help people to live longer and healthier lives, which should contribute to social and economic participation, ensure a more resilient health system in the face of future pandemics, and tackle some of our worst societal inequalities.

We call on governments to commit to the following cross-departmental actions:

- **Develop health-driven economic strategies that take into account the impact of non-communicable diseases (including CVD) on societal and economic participation**
- **Prioritise CVD within national post-COVID-19 health system resilience strategies**
- **Acknowledge and mitigate the links between CVD and health/social inequalities**

Why CVD needs support from a broader range of stakeholders and society

Cardiovascular disease (CVD) offers a fascinating story of human endeavour, and of great success alongside missed opportunities. Over the past 50 years, European countries have seen significant transformation in life expectancy,³ largely due to major improvements in CVD² such as smoking bans, greater investment in life-saving care and improvements in basic medications. All of these have brought major societal benefits. However, progress in CVD has stalled – in some countries we are now seeing an increase in premature deaths and CVD mortality rates, and a lag in innovation.^{2,3} Furthermore, mainstream progress towards comprehensive, multidisciplinary chronic disease management models has been slow.⁷

In recent years, European countries have seen a steady rise in the number of CVD cases, which has significant implications for the long-term sustainability of healthy societies. Moreover, it hinders any progress made towards achieving target 3.4 of the United Nations' (UN's) Sustainable Development Goals: a 30% reduction in premature mortality due to non-communicable diseases (NCDs) by 2030.⁸

Yet at this moment, CVD is one of several urgent and competing priorities governments are facing. Of these, some of the most pressing agendas include: securing long-term economic growth in the context of population ageing, COVID-19 recovery and dealing with widening social inequalities.

CVD could make a powerful contribution to all these agendas, even if this potential is not yet widely understood. To this end, political interest in tackling CVD should extend beyond the remit of just ministries of health to other governmental departments such as finance, pensions, employment and social affairs. We believe this coming together of stakeholders from different sectors is integral to ensuring longevity of central investment in CVD prevention and management.

This think piece seeks to explore the evidence and linkages between CVD and these societal goals, with an aim of helping patient and clinical advocates in CVD to approach new stakeholders. We hope it facilitates discussion and new alliances from sectors in health and beyond, to unite in this critical societal endeavour.

Healthy ageing and economic growth

Addressing CVD will help people to live longer and healthier lives, with benefits for individuals, wider society and the economy

What should every government know?

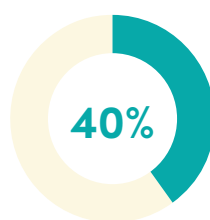


Because of conditions such as CVD,⁹ **healthy life expectancy is not keeping pace with longevity.**^{10 11}



Around **37%** of working-age people give up work after experiencing a stroke.¹⁴

If EU countries could mirror Iceland's employment among **people over 50**, they could see an average **11%** boost in GDP.¹³



People aged **50 and over** could comprise up to **40% of workers** by 2035.¹²

38% of first strokes occur in people aged **40 to 69**.¹⁵



What should every government do?

Economic strategies should be developed to take into account the impact of NCDs (including CVD) on economic participation, in the context of healthy ageing. This warrants cross-departmental involvement in setting, funding and achieving long-term goals, such as a reduction in heart attacks, strokes and hospital admissions for CVD, and reduced burden of CVD morbidity and mortality. These national strategies must also provide actions to mitigate barriers to participation in society.

Governments should link investments in CVD to wider goals to transition to a knowledge-based, digitally enhanced, innovative and high-value economy, noting the significant contribution of the health sector (and CVD) to these areas.



Why is healthy ageing a policy priority?

Populations are ageing across Europe, and governments must understand the importance of investment in health as the foundation of a prosperous society. In 2017, Europe had the highest median age in the world.⁹ In 2019, there were 30 older people for every 100 working-age people in Europe and North America; this is projected to increase to 49 by 2050.¹⁶ The fact that people are living longer is a significant achievement of modern times, but it requires important adaptations to our societies and economies. National debates on the economy traditionally focus on financial management, infrastructure and innovation, but decision-makers must also understand the importance of investment in health for the longevity of a productive society.

People living longer and healthier lives could contribute to economic growth. People aged 50 and over are projected to comprise up to 40% of the workforce across G20 countries by 2035, an increase from 29% in 2018.¹² If EU countries could mirror Iceland's high employment rates of people in this age group, they could see an average 11% boost to their GDP.¹³ In addition to the economic benefits of a larger workforce, people living longer and with a better quality of life also contribute to the economy through consumer spending, taxation, volunteering and by supporting working parents through childcare.^{17 18}

However, trends in chronic disease prevalence threaten to undermine the goal of supporting a productive ageing society. Chronic diseases double the risk of a person transitioning from employment to a disability pension.¹⁹ This has the effect of reducing not just their quality of life, but also years lived in good health and their choice over whether to remain in the workforce.



How is addressing CVD relevant to healthy ageing and economic growth?

CVD is a major contributor to the stalling progress in healthy life expectancy

Life expectancy has plateaued in the UK and the US, partly because of stalled progress in addressing CVD. According to an analysis by the Organisation for Economic Co-operation and Development (OECD) and The King's Fund, a deceleration of improvements in CVD mortality has been a major contributor to plateauing life expectancy.³ Deaths from CVD are even increasing in some countries, such as Latvia, Estonia, Greece and Portugal,³ which could have implications for life expectancy. These trends can be partially attributed to the rising prevalence of conditions such as hypertension, diabetes, obesity and high cholesterol, which are associated with a greater risk of developing CVD, as well as environmental risk factors such as air pollution.³

Healthy life expectancy is not keeping pace with longevity, with the burden of CVD rising. The number of years lived in good health has remained relatively static, suggesting that although people may be living longer, the proportion of those years lived in poor health and with a lower quality of life is growing,⁴ with increases in the prevalence of chronic diseases such as CVD.²⁰ As age is a non-modifiable risk factor for CVD, population ageing is inevitably associated with a rise in CVD cases and CVD-related morbidity. From 1990 to 2015, the absolute number of CVD cases in Europe has risen by 34% in men and 29% in women,¹ corresponding with the ageing population. Globally, disability associated with CVD is also increasing – compared with 1990, disability-adjusted life years owing to CVD increased by almost 40% in 2017, with ischaemic heart disease (a type of CVD) and stroke being the largest contributors to the disease burden.²¹

Living with CVD or caring for someone with CVD may force people out of the labour market

CVD should not be thought of as a disease that only affects people who have already retired. According to analysis from Public Health England, strokes greatly affect younger working populations; in 2016, 38% of people who experienced their first stroke were aged between 40 and 69.¹⁵ Heart attacks occur in young people too. Data from 2002–2015 in England show that 19.8% of the heart attacks occurring in men were among those aged 55–64.²² In France, an analysis of data from 2007 and 2015 suggests that 20% of hospitalisations for heart attacks occurred in people aged 35 to 54.²³

As pensionable age (statutory age of retirement) increases across high-income countries, older people who have a higher risk of developing CVD will be increasingly included in the workforce. According to the Finnish Centre for Pensions, eight Western countries are planning to increase retirement age to 67 (Belgium, Bulgaria, Croatia, France, Germany, the Netherlands, Spain and the US), with Denmark and Italy already having done so.²⁴ Policymakers must therefore also consider the implications of CVD as a growing barrier to labour market participation and social and economic productivity, given that CVD is a major driver of disability and death,²¹ and is more prevalent in older age groups.⁹

People living with CVD should not have to retire early because of poor health, yet this is commonplace. CVD has been shown to cause people to take extended periods of time off work (which is worsened by repeat CVD events)²⁵ and, in some cases of people receiving inpatient treatment for heart failure, to not return to work at all.²⁶ CVD can also have a significant impact on a person's loved ones, affecting their ability to work if they have to care for the person.^{25 27 28} (Box 1).



Box 1. Impact of CVD on the labour market and productivity

CVD is associated with worse employment prospects, whereas associated diseases (such as diabetes and obesity) have been linked with reduced labour productivity.²⁹

- Living with multiple CVD-related diseases increases the risk of exiting paid employment. In the Netherlands, people living with both type 2 diabetes and CVD were 43% more likely to leave paid employment than people living with type 2 diabetes alone.³⁰
- UK survey data from 2018 indicate that 37% of working-age people gave up work after experiencing a stroke.¹⁴
- Danish registry data indicate that 25% of people do not return to work at all in the year following their first hospital admission for heart failure.²⁶
- People lost an average of 59 productive working days in the first year following a heart attack, and 56 productive working days in the first year following a stroke.²⁵
- According to data analysed by the OECD, across Europe men are more than twice as likely to take early retirement six years after receiving a CVD diagnosis.²⁹

CVD has a substantial impact on a person's loved ones, affecting their ability to work because of the need to look after someone with CVD:

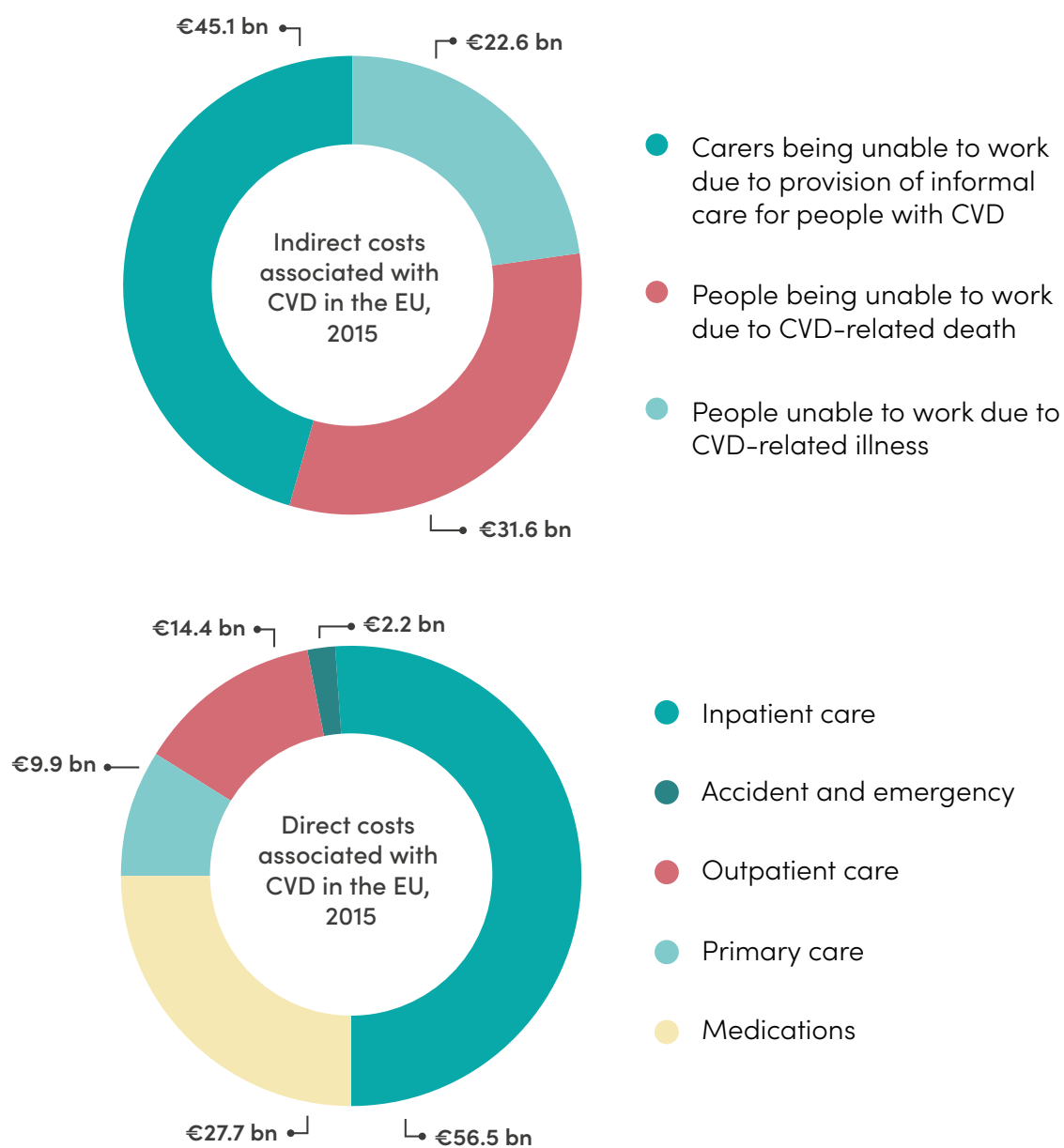
- People who are caring for someone who has experienced a major cardiovascular event, such as a stroke or heart attack, lose an average of 11 productive working days in the year following the event.²⁵
- In southern Europe, informal caring for older relatives has been found to negatively impact employment opportunities.^{27 28}

Policymakers must realise the critical role of CVD in supporting economic growth – and the increasing cost of inaction

Governments must already reckon with CVD as a major economic concern, if only through the lens of existing direct spend and indirect cost. Estimates from 2015, the most recent year for which data are available, suggest that CVD already costs the EU economy around €210 billion per year.¹ Approximately half (47%) of this cost came from indirect sources (*Figure 1*).¹ For example, in 2017, across 32 European countries, €5 billion was spent on nursing and residential care (based on the number of days spent in care homes) for people who had a stroke, and €16 billion was spent on informal care by loved ones.³¹ Having CVD also substantially increases the cost of treating associated diseases: a global systematic review found that treating people with both CVD and type 2 diabetes cost 112% more than treating type 2 diabetes alone.³² The demands of CVD and other chronic diseases on public funds are set to increase, corresponding with population ageing and the increasing prevalence of CVD and other NCDs. From 2015 to 2030, the cumulative economic burden of NCDs across OECD countries is expected to reach \$32 trillion, including over \$4 trillion for CVD and over \$1 trillion for diabetes.²⁰

Actively promoting healthy ageing and preventing CVD could result in substantial cost savings for governments. According to the OECD, mitigating the effect of CVD and other chronic diseases on healthy life expectancy would have a positive impact on the economy, as well as being an important societal goal in its own right.²⁹ In fact, people living longer may incur lower healthcare costs in the last year of life; a UK study found that adjusted healthcare costs for people aged 90 and older were around 20% less than for people aged 60–64.³³ Prioritising chronic disease prevention will be key to promoting healthy ageing and supporting longevity. Analysis in England supports this, reporting that optimising detection of CVD for people who have more than a 10% risk of developing CVD in the next ten years would save £59 million within two years.³⁴ In addition, optimising detection and management of diabetes could prevent almost two million CVD events in 20 years, resulting in cost savings of £169 billion.³⁴

Figure 1. Proportion of total healthcare expenditure on CVD in the EU in 2015



Data from: European Heart Network. 2017.¹



What should be done?

Governments should develop a joint national strategy for health-driven economic growth. A joint strategy should involve ministries of labour, industry and science, alongside ministries of health, communities and social affairs. The strategies should incorporate responses to ageing populations, including the mitigation of barriers to social and economic participation, such as poor health and societal inequalities. As part of this, European governments should adopt the commitments recently outlined as part of the UN's Decade of Healthy Ageing (2021–2030), which is in alignment with the Sustainable Development Goals (SDGs).³⁵ Also aligned with the SDGs, particularly in achieving goal 3.4 (reducing premature mortality from NCDs by one third by 2030), is the World Health Organization's (WHO's) action plan for the prevention and control of NCDs, which has been recently extended to 2030.³⁶

Greater investment in better-integrated care and CVD prevention is required to enable people to live longer and healthier lives. Up to 80% of premature CVD deaths could be prevented through better public healthcare.³⁷ The European Alliance for Cardiovascular Health's European Cardiovascular Health Plan recognised the need for action, calling for prioritisation of primary and secondary prevention through early intervention (facilitated by early detection via cardiovascular health checks) and rehabilitation.³⁸ Such preventive approaches require investment in integrated care systems, especially in light of increases in multi-morbidity as highlighted in the EU Commission's Healthier Together NCD initiative.³⁹ Governments must also recognise that better-coordinated care of CVD will have a positive knock-on impact on management of other related conditions, such as diabetes.

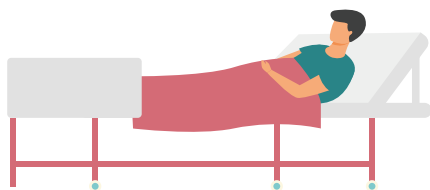
With CVD being a leading cause of illness and death in most European countries, and with a well-recognised lag in research and innovation, economic and finance ministries should demand greater ambition in this area. Investment in CVD is well aligned with wider strategic goals to stimulate growth by evolving digitally enhanced, knowledge-based economies, as well as benefiting people. The importance of healthcare as a focus for strategic growth has been recognised by France's Healthcare Innovation 2030 strategy, which aims to ensure a leading role for France in the global life sciences economy; the government has committed €7.5 billion to fund its recommendations.⁴⁰ In the UK in 2019, the life science sector had a turnover of over £80 billion.⁴¹ Recognising the potential for innovation, the UK government has worked closely with industry through the 2017 Life Sciences Industrial Strategy, aiming to position the UK as a leader for innovative and emerging industries such as digital health, early-stage diagnostics and advanced therapies.⁴¹

COVID-19 recovery

Prioritising CVD within health system resilience plans will help mitigate the impact of future shocks

What should every government know?

People with CVD were **three times more likely** to have severe symptoms or die from COVID-19 than those without.⁴³



In 2020, **COVID-19** was estimated to cost **8%** of global GDP.⁴²

Only **half of countries** surveyed by the WHO had any long-term resilience plan for healthcare preparedness.⁴⁵



Worldwide, CVD diagnostic procedures fell by **64% in April 2020** compared with March 2019.⁴⁴



50%

What should every government do?

Every country must have a long-term plan to ensure its health system recovers from the pandemic and is prepared for, and resilient to, future shocks. These plans must acknowledge the linkage between infectious disease and high-risk groups, including people with existing NCDs and other associated conditions (such as CVD, diabetes, obesity, hypertension and high cholesterol).

Governments should invest in innovative approaches (such as telehealth, remote monitoring and electronic healthcare records) to enable health systems to become more adaptable and resilient to future crises.



Why is health system resilience a policy priority?

The COVID-19 pandemic has placed enormous strain on healthcare.

Governments have been under pressure to simultaneously relieve an exhausted health system, plagued by major backlogs in basic and urgent care, and future-proof against the vulnerabilities the pandemic has exposed. More than 90% of countries responding to a 2021 WHO survey reported continued disruption to essential healthcare services, including primary care (53% of countries), emergency and critical care (38%), rehabilitation and palliative care (48%) and community care (54%)⁴⁵ – all of which are essential for management of NCDs. Reduced access to normal healthcare services for people living with chronic conditions will have a lasting impact on health, with backlogs likely to affect services for years to come. In addition, COVID-19 has placed a huge strain on the health workforce, with 20–30% of front-line care workers in the US considering leaving the healthcare profession during the pandemic.^{46 47}

Resilience plans are crucial as many countries seek to improve health and wellbeing while reducing inequalities. Post-pandemic rebuilding must include developing health systems that provide equitable care and address the increasing burden of disease in innovative and efficient ways. Recognising the need for a recovery strategy in response to the pandemic, the European Commission launched its EU4Health 2021–2027 plan, which includes a focus on disease prevention along with strengthening healthcare resilience.⁴⁸ The WHO, the UN Development Programme and the UN Inter-Agency Task Force on the Prevention and Control of NCDs have also set out post-pandemic priorities for tackling NCDs, highlighting the need for investment in prevention.⁴⁹ However, only half of WHO-surveyed countries had any long-term resilience plan for healthcare preparedness in light of the COVID-19 pandemic.⁴⁵



How is CVD linked with health system resilience and COVID-19 recovery?

Disruption to CVD care has amplified the burden of COVID-19, with people and the health system likely to experience the aftershocks for years to come

CVD is one of the leading risk factors for severe COVID-19 infection, hospitalisation and death. People living with existing CVD are three times more likely to develop severe symptoms or die from COVID-19 than those without.⁴³ The pandemic has also severely impacted people already living with diseases connected with CVD. In a Swedish study, people living with type 2 diabetes were twice as likely to require inpatient treatment, require intensive care and die if infected with COVID-19 than a control group without diabetes.⁵⁰

On the other hand, being infected with COVID-19 is linked with an increased risk of developing CVD and associated diseases, such as diabetes. Some of the mechanisms behind damage to the heart induced by a COVID-19 infection include systemic inflammation⁵¹ and the formation of harmful blood clots,⁵² which can lead to heart attacks and strokes. Two US studies found that in the year following COVID-19 infection, people's risk of developing arrhythmia or heart failure was increased by over 70%⁵³ and a risk of developing diabetes was increased by 40%.⁵⁴ This is of significant concern for health systems and future resilience planning, as not only has COVID-19 caused worse outcomes in CVD populations, but it may also have caused more people to develop CVD and associated diseases.

Detection, care and management of CVD have suffered during the pandemic, owing to significant disruptions to healthcare services.

Worldwide, there was a 64% reduction in CVD diagnostic procedures in April 2020 compared with March 2019.⁴⁴ Although diagnosis has recovered across Europe, gaps remain in lower-income countries, where recovery had reached only 30% of pre-pandemic levels by April 2021.⁵⁵ In terms of treatment, around 80% of cardiologists and cardiovascular nurses surveyed across 141 countries reported a reduction in the number of people presenting with heart attacks during the COVID-19 pandemic.⁵⁶ Worryingly, 76% of cardiac rehabilitation programmes across the world stopped, with only 39% providing alternative delivery formats.⁵⁷ Danish registry data indicate that there were almost 50% fewer new diagnoses of atrial fibrillation in the first three months of 2020 compared with the same period in 2019.⁵⁸ Another trend was observed in Italy, where almost 50% fewer heart attack admissions occurred in 2020 than in 2019.⁵⁹ Preventive treatments were also reduced: between March and October 2020, 470,000 fewer new preventive cardiovascular prescriptions were issued in the UK than in the same period the previous year.^{60 61}

Severe backlogs have impacted the management of diseases connected with CVD, which will likely lead to poorer outcomes. There has been significant data collection in the UK, revealing that across England in April 2020, the rate of diabetes health checks fell by 76–88% compared with the previous ten years.⁶² The worst-affected diabetes health check was blood pressure testing (a key risk factor for poor outcomes⁶³); there was a 47% reduction in tests between March and December 2020.⁶² Across Europe, a 2020 survey found that 47% of diabetes nurses felt that services had decreased ‘quite severely’ or ‘extremely’, and 39% believed that high blood sugar episodes had increased ‘a lot’ during the pandemic.⁶⁴ Reduced monitoring of people living with diabetes throughout the pandemic will likely increase cardiac events in the long run.⁶²

Without intervention, health service backlogs will continue for years to come. It has been estimated that, owing to disrupted care for CVD, in a worst-case scenario there could be more than 550,000 people waiting for cardiac care and diagnosis in England by January 2024.⁶¹ In the absence of enhanced detection and management of CVD, analysis suggests that a further 12,000 avoidable heart attacks and strokes will occur in the UK by 2025.⁶⁰



What should be done?

National health systems should use pandemic-era lessons on vulnerable groups to plan comprehensively for future shocks, and seize the moment to instigate major reforms. Investment in integrated health systems, with a focus on primary care and chronic disease prevention and management, should be supported to avoid siloes and optimise patient pathways.⁶⁵

Prioritising innovative approaches to prevention and management of CVD and associated diseases would reduce the burden on services and foster more adaptable systems able to better deal with future crises. Improvements in telehealth and data sharing as a result of the COVID-19 pandemic could help overcome persistent structural barriers to the mainstream expansion of guideline-based, integrated chronic care programmes and, ultimately, offer huge potential improvements in outcomes. Combining investment with multidisciplinary CVD care models that use remote monitoring, telehealth applications, electronic health records and big data registries could also release massive efficiencies. For example, an analysis of data on behalf of the European Commission has estimated that greater use of digital approaches in health could save €120 billion across all 27 EU countries.⁶⁶

Health inequalities

Addressing health inequalities, and understanding the role CVD plays in driving them, will help build a fairer society

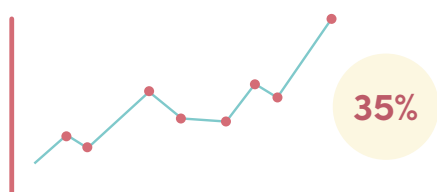
What should every government know?



Across Europe, CVD accounts for **almost half of the excess deaths** among lower socioeconomic groups.²



Worldwide, South Asian populations have a **35% higher** incidence of coronary heart disease than White populations.⁶⁷



If health outcomes in 'left behind' neighbourhoods in England were improved, productivity gains could generate **£29.8 billion** per year.⁶⁸

What should every government do?

At a national level, governments must acknowledge and understand the interconnectivity between health inequalities, the social determinants of health and how CVD manifests in marginalised groups. National strategies must outline actions to address these avoidable inequalities in CVD management and outcomes.

At a local level, elected officials should demand targeted community outreach strategies for high-risk groups, to support the national vision for a more healthy and prosperous society.

Further sustainable cross-governmental interventions could be supported through more research to better understand the link between CVD and health inequalities, including how the interaction of biological, psychosocial and environmental factors can lead to increased risk of CVD.



Why is addressing health inequalities a policy priority?

Health inequalities present a huge moral and financial cost to society.

Avoidable discrepancies in health outcomes for vulnerable groups not only cause unjust suffering,⁶⁹ but also increase costs for society and health systems.^{70 71} Estimates from 2011 to 2012 in England suggest that socioeconomic inequalities cost the health system £4.8 billion per year for inpatient hospital stays alone.⁷¹ If health outcomes in 'left behind' neighbourhoods in England were brought to the same level as the rest of the country, improvements in productivity could generate £29.8 billion per year.⁶⁸

Health inequalities also impede goals to support active ageing strategies in light of major demographic trends. As people age, inequities compound and amplify.⁷² Although genetics are a key factor in how people age, the environment and people's socioeconomic position play a crucial role in healthy ageing.⁴ In its *World Report on Ageing and Health*, the WHO has recognised that health inequalities underpin the ability for people to age in a healthy way.¹⁷ The report calls on governments to make concerted efforts to reach the most disadvantaged groups to mitigate this problem.¹⁷

International organisations are increasingly prioritising health inequalities.

The UN's Sustainable Development Goals 3 and 10 both contain a specific focus on health and inequality.⁷³ Meanwhile, the WHO's Health 2020 European policy begins with a strategic objective to reduce health inequalities and improve health for all.⁷⁴ The European Commission also included health inequalities as part of Europe's 2020 strategy for smart and inclusive growth,⁷⁵ and there is an equity dimension across its entire Healthier Together NCD initiative.⁷⁶



How is CVD linked with inequalities?

CVD is a major contributor to the unequal burden of death and disability in society

People in lower socioeconomic groups are disproportionately at risk of developing or dying from CVD. Across Europe, CVD accounts for almost half of the excess mortality rates among people of a lower socioeconomic position.² Major socioeconomic risk factors associated with CVD are income level, education level, employment status and environmental factors.⁷⁷

It was also found that the 'most deprived' 10% of the UK population are almost twice as likely to die from CVD as the 'least deprived' 10%.⁷⁸ In total, in England alone almost 900,000 premature deaths between 2003 and 2018 were attributable to socioeconomic inequality; one of the largest contributors was ischaemic heart disease, accounting for over 150,000 excess deaths.⁷⁹ In Spain, people of the lowest education level were approximately one and a half times more likely to die from a cardiovascular cause than people of the highest education level.⁸⁰ Additionally, a 12-year longitudinal study in the Netherlands found that unemployed people had a 37% greater risk of coronary heart disease than those who were employed.⁸¹

Common diseases and risk factors connected with CVD are also associated with social inequalities. For example, in 'left behind' neighbourhoods in England, there is a higher prevalence of people living with diabetes, obesity and high blood pressure.⁸² Across Europe, people with a lower household income were over twice as likely to smoke than people with a higher income;⁸³ smoking drives 15–17% of the socioeconomic differences for CVD.⁸⁴

A lower socioeconomic position and educational attainment increase the risk of living with obesity, which also increases the risk of CVD. In Germany, the prevalence of obesity in 2008–2011 was over three times higher among women of lower educational attainment than among those of high educational attainment.⁸⁵ In the 2018 health survey for England, obesity rates were far greater in the most deprived areas (35% men, 37% women) than the least deprived (20% men, 21% women).⁸⁶ Concerningly, obesity is a key risk factor linked with CVD and associated diseases. An analysis by the European Association for the Study of Obesity stated that overweight and obesity are associated with 35% of ischaemic heart disease cases, 80% of type 2 diabetes cases, and 55% of high blood pressure cases.^{87 88}

CVD inequalities are starkly aligned with ethnicity, gender and mental health status, and have been exacerbated by the pandemic

Women are disproportionately impacted by CVD, largely driven by delayed and missed diagnosis and exclusion from clinical trials. In Eastern Europe, 80% of excess deaths among women are due to CVD; this figure is less than 50% for men.² Inequities in outcomes for women with CVD are driven by several factors, including exclusion from clinical trials. This impedes the identification of sex-specific differences needed in management and response to treatment,⁸⁹ as well as leading to a poorer understanding of the mechanisms behind CVD. Reliance on diagnostic criteria geared towards men contributes to delayed diagnosis in women,⁸⁹ who are 50% more likely to receive the wrong initial diagnosis for a heart attack than men.⁹⁰

People from minority ethnic groups are more affected by CVD than White people. Worldwide, South Asian populations have a 35% higher incidence of coronary heart disease than White populations.⁶⁷ According to an analysis by The King's Fund, some minority ethnic groups are at a higher risk of negative CVD outcomes; for example, South Asian people are more likely to die from heart disease (with death rates in men 20–38% higher than among White men),⁹¹ and incidence and mortality rates from hypertension and stroke are higher than average in Black populations.³⁷ These health inequalities could be attributable to myriad factors, including a complex relationship between socioeconomic position, genetics, the environment, and health-related behaviours, among others.³⁷

The prevalence of diseases associated with CVD (specifically, diabetes and obesity) is also higher in minority ethnic groups than among White populations. In England, the prevalence of diabetes in South Asian people and Black ethnic groups is almost double that seen in White, mixed or other ethnicities (15.2% vs. 8.0%).⁹² This is largely due to a clustering of risk factors seen in South Asian populations, such as being particularly predisposed to excess abdominal fat.³⁷ The prevalence of diabetes among Black people is three times higher than among White people.³⁷ There is also a greater prevalence of excess abdominal fat among Black populations (67.5%) than White populations (63.7%),³⁷ which is a key risk factor for CVD and diabetes.⁹³

People living with a severe mental illness have a greater risk of developing and dying from CVD. In the UK, people living with a severe mental illness have a 53% greater risk of developing CVD and an 85% greater risk of dying from CVD.⁷⁸ Their life expectancy is 15–20 years lower than the general population.⁷⁸

The COVID-19 pandemic has exacerbated existing CVD health inequalities, especially in minority ethnic groups and people of a lower socioeconomic position. Being from a minority ethnic group or of lower socioeconomic position has been shown to increase the risk of experiencing poorer outcomes from a COVID-19 infection,^{94 95} especially for CVD-related complications.^{96 97} As people from these groups are disproportionately affected by CVD,^{2 37} and COVID-19 is more dangerous for people living with CVD,⁴³ this has widened health inequalities. Backlogs in treatment waiting times also demonstrate a social gradient; in England, people living in the most deprived areas are almost twice as likely to wait over a year for treatment than those living in the least deprived areas.⁹⁸



What should be done?

Addressing health inequalities within CVD at all levels – prevention, quality care and management – could be an important step towards closing gaps in health outcomes. At a national level, governments must acknowledge the interconnectivity between health inequalities and how CVD manifests differently in affected groups. National strategies must outline actions to address the social determinants of health which underpin avoidable inequities in CVD management and outcomes among women, minority ethnic groups, people of a lower socioeconomic position and people living with severe mental illness.

Policymakers must target national and community-level public health strategies at people from different marginalised groups, recognising that immediate action is required to identify and address CVD in these groups. Local-level strategies for CVD could include tackling the wider determinants of health through approaches such as outreach within the community, which would simplify access. This could be through mobile CVD screening or detection services in specific neighbourhoods. Utilising local community services could also help with language translation during CVD screening, improving accessibility to a wider population. This would ensure that proactive, preventive interventions can occur in a timely manner for at-risk populations, supporting the national vision for a more prosperous, equitable and healthier society. Population-level primary prevention could also potentially minimise inequalities within CVD. For example, modelling in England found that banning trans fats from foods could reduce inequalities in death from coronary heart disease by 15%, and would have provided net cost savings of £65 million between 2015 and 2020.⁹⁹

More population-level research is needed to understand the biological, environmental and psychosocial interactions leading to increased CVD risk in marginalised populations. A better understanding of CVD risk in different populations could aid in developing sustainable cross-governmental interventions to help close gaps in health outcomes.

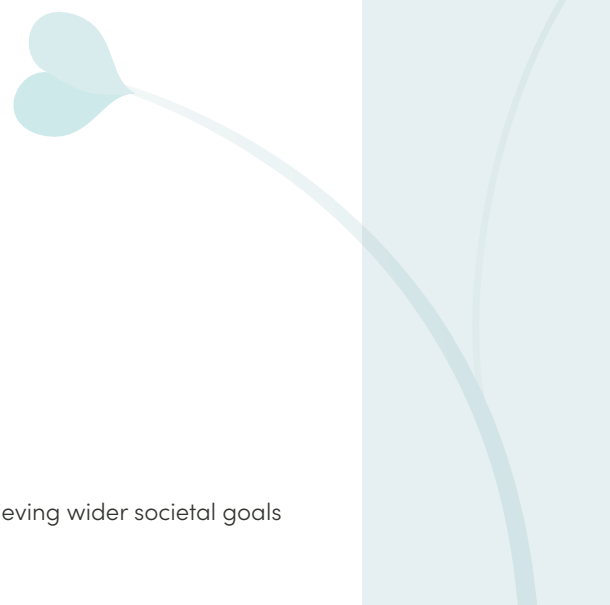
Where next?

Uniting stakeholders from multiple sectors towards addressing CVD is a 'win-win' scenario

CVD presents an opportunity for real progress to be made towards addressing many societal challenges. Societies are ageing, COVID-19 has put an unprecedented strain on health systems, and health inequalities have subsequently widened. These issues can be treated as competing priorities, or we can strive to see how they are interlinked and how we can deliver on multiple goals at the same time. CVD is one such example, where investment in improved prevention, care and management could be tracked against multiple intended economic and social benefits, not least that healthier populations are able to actively engage with their communities for longer.

It is critical to develop a broader base of political support for tackling CVD.

Despite historical achievements, the past decade has seen a stagnation in political urgency and the development of national strategies for CVD in many European countries, which raises concerns as to the path of future progress. We believe that the whole of society must understand the benefits of tackling CVD if the next generation of CVD strategies is to secure long-term investment and deliver genuine transformation. Relevant stakeholders outside of the healthcare sector must unite in this critical societal endeavour, and lend their support for greater investment in prevention and integrated care approaches for CVD, in return for a promise of measurable impact on their wider goals.



We call on governments to commit to the following cross-departmental actions:

- **Develop health-driven economic strategies that take into account the impact of NCDs (including CVD) on societal and economic participation**, with cross-departmental involvement in setting long-term goals, to ensure continued prosperity and social participation through the demographic transition. This should also consider the powerful contribution of the health sector, and CVD, in the transition to a knowledge-based, digitally enhanced, innovative and high-value economy.
- **Prioritise CVD within national post-COVID-19 health system resilience strategies**. This should establish a robust vision of future resilience and sustainability that incorporates more effective and adaptable chronic disease management, in the community and home setting.
- **Acknowledge and mitigate the links between CVD and health/social inequalities**. Policymakers must target national and community-level public health strategies at people from different marginalised groups, recognising that immediate action is needed to combat the compounding of CVD risk factors, in both prevention and treatment of CVD.

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