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Towards an integrated cardiovascular health strategy for Belgium

*A proposed cardiovascular health agenda from the Belgian Society of
Cardiology and Belgian Heart League*

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Endorsed by

- Belgian Society of Cardiology (BSC; Prof. Dr. R. Willems, president; Prof. Dr. A. Bondue, president elect)
- Belgian Heart League (BHL; Prof. Dr. E. Rietzschel, chair of the scientific committee; R. Vanhoof, CEO; H. De Rocker, president board of directors)
- Domus Medica (Dr. S. Teughels, medical director)
- Belgian Société Scientifique de Médecine Générale (SSMG; Dr. H. Ballout, secretary general)
- Association of Pharmacists Belgium (APB; H. De Rocker, secretary general; Koen Straetmans, president)
- Belgian working group preventive cardiology (BWGPC; Prof. Dr. G. Claessen, president)
- Belgian working group on heart failure (BWGHF; Dr. Ph. Timmermans, president)
- Belgian Atherosclerosis Society (BASOC; Prof. Dr. F. Demeure; Prof. Dr. E. Rietzschel, president)
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- Belgian Society of Nephrology (BSN; Prof. Dr. F. Jouret, president)
- Belgian Working Group on Cardiovascular Nursing (BWGCN; Prof. E. Goossens, president)
- Belgian Stroke Council (BSC; Prof. Dr. Noémi Ligot, president; Prof. Dr. Jelle Demeestere, president of the scientific board)

Authors

Rik Willems¹, Guido Claessen^{2,3}, Bert Vaes⁴, Nicolas Delvaux⁴, Hanna Ballout⁵, Hendrik De Rocker⁶, Philippe Timmermans^{2,7}, Sofie Brouwers⁸, Stefan Teughels⁹, Rik Vanhoof¹⁰, Antoine Bondue¹¹, Ernst Rietzschel¹²

Affiliations

1 Department of cardiovascular sciences, KU Leuven and cardiology, university hospitals Leuven, Leuven, Belgium and the president of the Belgian Society of Cardiology

2 Faculty of medicine and life sciences, Hasselt University and cardiology, Jessa hospital, Hasselt, Belgium

3 President of the Belgian Working Group on Preventive Cardiology

4 Department of public health and primary care, KU Leuven, Leuven, Belgium

5 Secretary General, Société Scientifique de Médecine Générale, Brussels, Belgium.

6 Secretary general of the Association of Pharmacists Belgium (APB), Brussels, Belgium

7 President of the Belgian Working Group on Heart Failure

8 Cardiovascular Center Aalst, AZORG Hospital, Aalst and Department of Experimental Pharmacology, Vrije Universiteit Brussel, Brussels, Belgium

9 Medical Director, Domus Medica, Antwerpen, Belgium

10 CEO of the Belgian Heart League, Brussels, Belgium

11 Department of Cardiology, Hopital Erasme and Institut de Recherche Interdisciplinaire en Biologie humaine et moléculaire, Université Libre de Bruxelles, Brussels, Belgium; president-elect of the Belgian Society of Cardiology; past-chair of the scientific committee of the Belgian Heart League; chair-elect of the ESC council on Cardiovascular Genomics of the European Society of Cardiology

12 Department of Cardiology Ghent University Hospital, and Ghent University, Department of Internal Medicine and Pediatrics, Faculty of Medicine and Health Sciences, Ghent, Belgium; chair of the scientific committee of the Belgian Heart League

Executive summary

A critical health challenge with Belgian commitments aligned to European objectives

Cardiovascular diseases (CVD) are among the most significant health and socio-economic challenges in Belgium. More than 1 million people currently live with a cardiovascular condition. Each year, CVD accounts for nearly 30,000 deaths (around one quarter of all mortality) and over 300,000 hospitalizations. The annual societal cost is estimated at €4.5 billion, representing 8% of total healthcare expenditure.

While Belgium performs relatively well compared to other European countries, the decline in cardiovascular mortality has stalled in recent years. Premature cardiovascular mortality (<75 years) remains above the EU-15 average, with pronounced regional, socio-economic and gender disparities. CVD remains the leading cause of death among women and a major contributor to productivity loss in the working-age population.

Belgium has committed to the WHO target of a 30% reduction in premature cardiovascular mortality between 2020 and 2030, which requires preventing approximately 1,500 additional premature deaths per year by 2030. This target is achievable, as up to 80% of CVD is preventable through an integrated approach addressing five modifiable risk factors: BMI/obesity, blood pressure, cholesterol (target non-high-density lipoprotein cholesterol depending on underlying risk), smoking and diabetes. Working on these risk factors will also reduce other growing challenges, such as diabetes and chronic kidney diseases.

With the publication of the European Cardiovascular Plan (*Safe Hearts Plan*)¹, Member States are encouraged to develop and implement standalone² or integrated national cardiovascular health plans by 2027, setting out integrated strategies for subsequent implementation. The federal government declaration confirms Belgium's intention to develop a national cardiovascular action plan together with the federated entities, focusing on early detection and treatment and with a strong emphasis on population health management. This creates clear policy momentum to strengthen CVD policies within a single, coherent framework.

Strategic objectives of the national cardiovascular plan

¹ https://health.ec.europa.eu/publications/communication-eu-cardiovascular-health-plan-safe-hearts-plan_en

² A specific, separate national plan focused exclusively on cardiovascular health, rather than including it solely as part of a broader plan (for example, a general NCD plan or a cancer plan).

The national cardiovascular action plan should be guided by one clear and measurable overarching objective: a 30% reduction in premature cardiovascular mortality (<75 years) by 2030 (relative to the 2020 baseline), in line with the WHO targets.

In addition to this overarching mortality reduction target, the plan should pursue a set of strategic objectives.

1. The cardiovascular health plan should be coordinated interfederally with clear governance and funding: Approve a national plan with measurable 2030 targets, a dedicated budget, and region-specific implementation. Establish an interfederal Cardiovascular Health Council to coordinate prevention, care pathways, workforce, and data policy across authorities, scientific societies, and patient representatives.
2. Implement a life-course strategy on a healthy lifestyle across all sectors: Promote healthy living from childhood to adulthood across education, workplaces, and public spaces. Strengthen regulation of tobacco, alcohol, and unhealthy foods, expand subsidies for healthy options, and implement a national physical activity plan with integrated education, infrastructure, and workplace measures.
3. Make proactive risk detection the default in primary care and the larger community: Integrate cardiovascular risk assessment into EHRs in primary care, expand public awareness campaigns, provide feedback via a prevention barometer, and enable task-sharing with allied health professionals for assessment, counselling, and follow-up.
4. Make high-quality prevention standard of care: Ensure evidence-based primary and secondary prevention for all, extend multidisciplinary obesity care to adults, guarantee structured rehabilitation and coordinated secondary prevention, and implement quality indicators linked to EHR–registry data.
5. Build a data-driven, equitable and patient-centered cardiovascular ecosystem: Invest in interoperable data linking clinical, behavioral, socio-economic, and patient-reported outcomes. Use AI and wearable tools for prediction and personalized care and establish disaggregated reporting to reveal inequalities and guide targeted, evidence-based interventions.

Need for effective policy coordination

Belgium's main challenge is not a lack of expertise or initiatives, but fragmented data, policy and care, resulting in insufficient proactive prevention, persistent inequalities in access to prevention and care, and limited capacity for systematic monitoring and policy adjustment.

A national cardiovascular action plan should bridge this fragmentation by establishing an interfederal cardiovascular health strategy with measurable objectives, coordinated through an interfederal council responsible for governance, financing, and data policy. Each region can then translate this shared framework into region-specific implementation plans that address local needs and vulnerable populations.

Priority actions - primary prevention

The Heart Health Check: a proactive foundation for CVD control (federal level)

A central policy lever for reducing cardiovascular burden is the implementation of a structured, data-driven Heart Health Check within primary care. Rather than passive screening, this is a proactive systematic, data-driven cardiovascular risk assessment to identify individuals at increased risk, in primary care by integrating scattered data in the electronic health records (prioritizing the Belgian Integrated Health Record, BIHR). The goal is to automatically evaluate cardiovascular risk using validated risk scores (e.g. SCORE2, SCORE2OP, LIFE-CVD) using, amongst others, BMI, smoking status, blood pressure, lipids, glycaemia and renal function. As such general practitioners could take timely preventive interventions in high-risk patients. This targeted approach ensures that data-driven insights are immediately followed by timely, personalized preventive interventions where they are needed most.

From a governance perspective, this Heart Health Check falls primarily under federal competence, given its reliance on reimbursement frameworks, organization of primary care, electronic health records (BIHR) and quality standards. Its implementation should, however, be aligned with regional prevention strategies, particularly for outreach to vulnerable populations and integration with community-based initiatives.

This strategy is strongly supported by the EU Safe Hearts Plan, which includes the development of an EU protocol on health checks in 2026 to support timely detection of cardiovascular diseases, diabetes, and obesity, reduce health inequalities, and lower healthcare costs.

Overarching actions: creating a heart-healthy society (federal/regional level)

While the Heart Health Check addresses individual risk, it must be supported by broader structural measures. General prevention should focus on embedding cardiovascular health as a societal norm through three main pillars:

1. Strengthening structural and environmental measures (*federal/regional*): At federal level, this includes fiscal and regulatory levers targeting tobacco and nicotine (including e-cigarettes), alcohol, food composition and marketing standards, as well as product regulation and environmental health norms. At regional level, this translates into policies on healthy nutrition environments, physical activity promotion, active mobility, spatial planning and local infrastructure, as well as implementation of environmental measures in living and working environments. Air and noise pollution should be explicitly integrated into cardiovascular policy within a One Health framework³.
2. Reinforcing life-course health promotion and health literacy (*regional, with federal support*): Structural programs should span from education to the workplace. Special attention should go to low socio-economic groups, women, and regions with a high CVD burden. Prevention also requires building a smarter healthcare system. GPs remain central, but patients, cardiologists, other medical specialists, pharmacists, nurses, dietitians, tobacco and movement coaches, psychologists, and community volunteers can all contribute. They can help with risk assessment, counseling, and follow-up. Community networks working with GPs allow early detection and ongoing support. Allied health professionals' frequent contact with patients makes it easier to identify risk factors, support lifestyle changes, and monitor therapy adherence. Integration of systems such as the Virtual Integrated Drug Information System (VIDIS) with electronic health records (EHR), together with the concept of a 'family pharmacist', improves medication safety and strengthens care coordination.
3. Empowering people to take charge of their cardiovascular health (*federal/regional*): Awareness of personal cardiovascular risk remains low. Everyone should know their cardiovascular risk and everyone should be aware of the lifestyle changes they can make to improve this risk. Public campaigns should make proactive risk assessment more accessible. These initiatives encourage people to discuss their cardiovascular risk with their primary care physician. Education should also cover cardiovascular alarm signals and basic life support skills. Embedding this knowledge early in life creates a generation prepared to respond effectively to acute events.

“Everyone should know their cardiovascular risk — and everyone should know the lifestyle changes that can improve it.”

Priority actions - tackling obesity and strengthen secondary prevention (federal level, regional implementation support)

³ An integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems

Excess body weight is a key driver of hypertension, dyslipidemia, insulin resistance and systemic inflammation. These mechanisms accelerate atherosclerosis and substantially increase the risk of recurrent cardiovascular events. In Belgium, nearly half of the adult population lives with overweight, and obesity rates continue to rise across all age groups. A pronounced socioeconomic gradient further amplifies this challenge. Without targeted action, the cardiovascular burden will continue to increase. Belgium has taken an important step with the stepped-care model for childhood obesity, embedded in a broader interfederal action plan. In contrast, adult obesity care remains fragmented. Structured support is often only initiated once severe comorbidities have developed. Extending a similar stepped-care approach to adults would address this gap. Such a model, aligned with BASO recommendations, would ensure timely, equitable and evidence-based access to multidisciplinary care, pharmacotherapy (including GLP-1 receptor agonists) and bariatric surgery when indicated.

Secondary cardiovascular prevention must move beyond a generic call for multidisciplinary care and be operationalized through clearly structured, risk-stratified care pathways that explicitly address obesity as a major cardiovascular risk factor. General practitioners and cardiologists must work in close collaboration. Care should systematically address risk factor control, medication adherence, lifestyle intervention, psychosocial support and cardiac rehabilitation. Obesity management should be an explicit component of this approach. Collaboration with dietitians, movement coaches, mental health professionals and, when appropriate, specialized obesity clinics is essential. This is particularly important for patients with very high cardio-renal-metabolic risk or multiple comorbidities.

Quality and outcomes in secondary prevention must be measurable. Clearly defined indicators should be systematically embedded in electronic health records and linked to national registries. These indicators should include LDL cholesterol control, blood pressure management, smoking cessation, participation in cardiac rehabilitation, adherence to preventive medication and structured obesity management. The data should support regular audits and benchmarking at practice, regional and national level. This creates a direct feedback loop between frontline care and health policy.

Finally, equitable access to multidisciplinary revalidation, innovative cardiovascular and obesity therapies must be guaranteed. Reimbursement frameworks should be scientifically grounded and aligned with evidence-based clinical guidelines. This will ensure timely treatment intensification when targets are not met, reduce unwarranted variation in care and contribute to measurable reductions in recurrent cardiovascular events.

Priority actions - data, monitoring and inequalities (federal/regional level)

Effective policy requires robust data infrastructure. This includes accelerating the rollout of the Belgian Integrated Health Record (BIHR), establishing a national cardiovascular registry modelled on the Belgian Cancer Registry, and developing barometers for primary and secondary prevention. These indicators should be divided by sex, region and socio-economic status to support targeted policy adjustment and address inequalities.

Conclusion

Belgium has the expertise, care structures, and policy levers required to deliver an ambitious national cardiovascular action plan. Current European and federal momentum offers a unique opportunity to accelerate the transition towards an integrated, equitable and effective approach. Cardiovascular experts stand ready to engage constructively with policymakers to shape and support the plan's implementation. Crucially, patients must be involved in the development of the plan to ensure that prevention and treatment strategies reflect real-life needs and lived experiences.

“Belgium has the expertise, care structures, and policy levers required to deliver an ambitious national cardiovascular action plan.”

Introduction

Cardiovascular disease (CVD) remains a leading cause of mortality and a major contributor to disability, placing a heavy burden on individuals, families, and society. In Belgium, it is estimated that more than 1 million people suffer from CVD, accounting for more than 300,000 hospitalizations per year.⁽¹⁾ CVD continues to impose a substantial economic burden in Belgium, with annual costs reaching €4.5 billion, equivalent to 8% of the country's total healthcare expenditure.^(2, 3)

“CVD remains the leading cause of death — and a major driver of disability and productivity loss across Belgium.”

Yearly, CVD claims almost 30,000 lives, representing a quarter of all deaths and making it a leading cause of death in our country, together with cancer.⁽⁴⁾ CVD remains the number one killer among women and the second most common cause of death in men (*figure 1*). Although often associated with the geriatric population, CVD is the second most important cause of premature death in people younger than 75 years. In fact, approximately 10% of CVD deaths in Belgium occur before the age of 50 and 23% before the age of 75.⁽⁴⁾ In 2019, Belgium's age-standardized premature mortality rate for both men and women exceeded the EU-15 average, 12th for men and 10th for women among the EU-15 countries.⁽⁵⁾ Cardiovascular diseases and risk factors still remain overlooked in women and at a younger age. The socio-economic status remains strongly associated with cardiovascular risk.

On a positive note, Belgium demonstrates favorable outcomes in CVD-related mortality compared to many other European nations. In fact, with 23.9% of deaths attributed to CVD, Belgium fares better than the European average of 32.7%, placing Belgium among the countries with the lowest proportions of CVD-related deaths in Europe.⁽⁶⁾

Although there was a long-term decline in CVD-related mortality over the past decades, recent data indicate that this progress has plateaued and premature CVD-related mortality may even be on the rise.⁽⁷⁾ This highlights the need for renewed focus on prevention and intervention strategies. Demographic changes and the rising prevalence of risk factors, including obesity an unhealthy lifestyle and environmental pollution and the aging population, are likely to drive an increase in the incidence of non-communicable diseases, like CVD, diabetes and chronic kidney disease (CKD) in the coming years. In line with this, the World Heart Federation estimates that the number of CVD-related deaths in high-income

countries will increase with 4% by 2030.⁽⁸⁾ This forecast is supported by other reports from high-income countries, such as the Netherlands.⁽⁹⁾ These projections are at odds with the World Health Organization's (WHO) target of reducing CVD-related deaths before the age of 75 by 30% between 2020 and 2030. Belgium has committed to this WHO target. A 30% reduction in Belgium would require the additional prevention of approximately 1,500 premature CVD-related deaths annually by 2030.⁽⁴⁾

While this target may seem challenging, available data demonstrate that it is attainable. Some of the risk factors associated with CVD, such as family history, age or sex cannot be modified but should not be forgotten. Others on the other hand are modifiable and can be influenced through lifestyle changes (like smoking, physical inactivity, unhealthy diet), societal regulations (pollution) or medical interventions (e.g., high blood pressure, elevated cholesterol levels, diabetes, CKD, obesity and others). In fact, according to the World Heart Federation, up to 80% of all CVD cases are preventable.⁽¹⁰⁾ As reported in a recently published analysis of the global cardiovascular risk consortium, 57% and 53% of incident CVD cases among women and men, respectively, may be attributed to 5 modifiable risk factors (i.e., body-mass index, systolic blood pressure, non-high-density lipoprotein cholesterol, smoking status and diabetes).⁽¹¹⁾ There is overwhelming evidence that policy interventions aimed at controlling these modifiable risk factors offer a powerful tool to influence cardiovascular health and decrease preventable CVD-related mortality.^(10, 12-14)

With the current legislature ending in 2029, the current governments have a window to curb the rising burden of CVD and meet the WHO target of a 30% reduction in premature CVD deaths by 2030. While the federal policy statement acknowledges the critical importance of cardiovascular prevention, translating this commitment into effective action will require close coordination across the 3 regions (Flanders, Wallonia and Brussels) responsible for prevention, with a shared federal strategic vision. This paper hopes to serve as a resource for policymakers in the design and implementation of a comprehensive cardiovascular health plan across Belgium.

Given the substantial regional disparities in CVD prevalence, risk factors, and outcomes, such a plan should prioritize targeted, region-specific prevention and intervention strategies to ensure equitable cardiovascular health nationwide (*figure 2*).⁽⁴⁾

RC1 The CVH-plan should be designed, coordinated, followed and adjusted interfederally and coordinated by an interfederal Cardiovascular Health Council from all stake holders, including scientific societies, and patient representatives.

RC2 The CVH-plan should allow region-specific implementation to address differences in healthcare needs

A healthy lifestyle as a foundation for cardiovascular health

As the majority of CVD cases are preventable, targeting the 5 modifiable risk factors: obesity, hypertension, cholesterol, smoking status and diabetes, represents a powerful opportunity to reduce the CVD burden and enhance population health.⁽¹⁵⁾ Accordingly, the promotion of healthy lifestyle changes should form the cornerstone of any comprehensive cardiovascular health plan. Moreover, working on these risk factors will also reduce other growing challenges in healthcare, like diabetes and CKD. Control of those risk factor should follow the guidelines, with targets according to the patient's overall risk (including heredity and associated comorbidities).

Striving for a smoke-free generation

Smoking is a leading, preventable risk factor for CVD and poses a significant public health challenge. It accelerates atherosclerosis, elevates blood pressure, reduces oxygen delivery, and substantially increases the risk of heart attacks and strokes and has a detrimental effect on kidney function. Both active smoking and exposure to secondhand smoke contribute to this heightened risk, underscoring the importance of comprehensive tobacco control policies as a central component of any cardiovascular prevention strategy.⁽¹⁶⁾ According to data generated by the Belgian Health Interview Survey (BHIS) in 2018, about a fifth of the Belgian population (19.4%) above the age of 15 was an active smoker, with 15.4% being a daily smoker.⁽¹⁷⁾ The daily smoking prevalence was highest in the Walloon Region at 18.8% followed by the Brussels Capital Region (16.5%) and the Flemish Region (13.3%). In addition to these regional variation, smoking behavior is characterized by large socio-economic disparities, with a smoking prevalence of 29% among individuals in the lowest income quintile. The socio-economic impact on smoking is further illustrated by a markedly higher rate of regular smokers among adolescents in the vocational secondary education (17.2%),

compared to adolescents following a technical (7.7%), or general (4.2%) secondary education.⁽¹⁸⁾

Importantly, the prevalence of smoking has steadily declined over the past decades, decreasing from 30.3% in 1997 to 19.4% in 2018. A key factor contributing to this reduction has been the implementation of comprehensive anti-tobacco legislation during this period. To give some examples: a ban was imposed on advertisement for tobacco products, laws were voted prohibiting smoking in restaurants, bars, and at the workplace, and health warnings on packaging of tobacco products became mandatory. Despite the investment from the government in campaigns to discourage smoking and stimulate smoking cessation, recent data indicate that the decline in smoking may be slowing down and even flatten in certain subgroups.⁽¹⁹⁾ As such, stronger incentives from the authorities, including the planned ban on smoking in public places, will be essential if Belgium wants to move decisively toward a smoke-free generation.

Unfortunately, the gradual drop in smoking prevalence over time has been paralleled by an increasing uptake of nicotine-loaded vapes, or e-cigarettes. In 2023, 4% of the adult population in Belgium were regular users of e-cigarettes, which is higher than what is seen in other EU-15 countries.⁽²⁰⁾ The fact that e-cigarettes do not burn tobacco fuels the misconception that vaping e-liquid is less harmful than inhaling cigarette smoke. However, an increasing number of biological and clinical studies show that e-cigarette aerosol and nicotine exposure may also produce acute cardiovascular effects.⁽²¹⁾ This includes an increased heart rate and blood pressure, endothelial dysfunction and greater arterial stiffness, changes that could contribute to the development of CVD. While Belgium has led Europe by banning disposable vapes, the growing uptake of e-cigarettes demands swift and decisive further action for which the first steps have been taken recently. In line with measures applied to traditional tobacco products, this encompasses restrictions on the use and visibility of e-cigarettes, increased taxation, and the introduction of more stringent regulations, such as prohibiting flavored e-liquids and limiting permissible nicotine levels.⁽²²⁾

Primary care physicians and community pharmacists play a complementary role in supporting smoking cessation by offering accessible, personalized counseling and evidence-based treatments such as nicotine-replacement therapy or prescription medications. This could be supported by dedicated training programs, reimbursing cessation counseling and medications and running public awareness campaigns that direct patients to their healthcare providers for help.

RC3 Introduce higher taxes and more strict legal regulations on the advertisement for and use of all tobacco and nicotine-related products

Active lives, healthier hearts, body and minds

Physical inactivity plays an important role in several of the 5 modifiable risk factors (hypertension, dyslipidemia, obesity, type 2 diabetes), and as such in the development of CVD.⁽²³⁾ Evidence consistently shows that structured physical activity reduces the incidence and progression of CVD.⁽²⁴⁾ Importantly, prolonged sedentary time, such as long periods of sitting at work, long commutes, or extended leisure screen time, creates an additional and independent risk, even in individuals who meet recommended exercise levels.⁽²⁵⁾

According to the WHO, sufficient physical activity for adults is defined as at least 150–300 minutes of moderate-intensity exercise, or 75–150 minutes of vigorous-intensity activity per week.⁽²⁶⁾ In Belgium, data from the 2022–2023 Sciensano food consumption survey revealed that 70% of young adults (18–39 years) meet these recommendations, compared with 79% of middle-aged adults (40–64 years) and 77% of older adults (≥65 years).⁽²⁷⁾ For children and adolescents, the WHO has set a higher bar and recommends an average of 60 minutes of moderate-to-vigorous activity daily, with vigorous exercise on at least three days per week.⁽²⁶⁾ Yet, compliance among children and adolescents to these recommendations is worryingly low, with only 31% of children (3–9 years) and 19% of adolescents (10–17 years) achieving them. A sex difference is observed among children, where boys are more likely than girls to meet the guidelines, though this gap disappears during adolescence. Even more concerning is the clear downward trend: between 2014–2015 and 2022–2023, the proportion of children meeting the recommendations dropped from 42% to 31%, and from 29% to 19% among adolescents.⁽²⁷⁾ At the same time, Belgian children and adolescents spend an average of 5 to 7.5 hours per day in sedentary activities. While this is about an hour less per day compared to 2014–2015, this sedentary time remains too high. Of note, excessive screen time is especially common among children and adolescents from families with a lower educational background, pointing to persistent inequalities in health behaviors.⁽²⁷⁾

To improve on these metrics, national and regional policies should prioritize physical activity promotion as a cornerstone of primary CVD prevention. In addition to public health campaigns raising awareness on the protective effects of exercise, this includes emphasis on physical education in the curricula for all ages, an urban planning and transport policy that

supports an active lifestyle through safe walking/cycling infrastructure, accessible recreational spaces, and (financial) incentives for active commuting. In promoting physical activity, campaigns should emphasize the fact that the largest cardiovascular risk reduction is seen when moving from a sedentary lifestyle to a relatively low level of activity.⁽²⁸⁾ To further mitigate the detrimental effects of sedentary behavior, an effective prevention strategy should combine structured exercise with efforts to break up sitting time with light movement (e.g., standing, walking, stretching) throughout the day. Also, employers can stimulate physical activity by providing supportive infrastructure, offering financial incentives and flexible work arrangements, and embedding a culture of movement into their daily routine. Exercise prescription within routine primary care to counsel patients on physical activity should be incentivized in line with the existing initiatives like ‘exercise on prescription’.

It is encouraging to see the growing public interest in physical activity and sports participation. In fact, the massive interest in mass sporting events, such as marathons, trail running, or gran fondos clearly reflects an increased awareness on the health and social benefits of physical activity. Despite this positive trend, physical inactivity remains prevalent, particularly among high-risk groups such as older adults, individuals with chronic disease, and those in lower socioeconomic strata. Generic approaches to promote physical activity apparently fail to address the barriers faced by these groups. Focusing interventions where they have the greatest effect facilitates a more efficient allocation of resources and hopefully leads to an increased uptake of physical activity among high-risk groups. More targeted incentives may include subsidized access to gyms, recreational facilities, and community-based exercise programs for low-income households, active transport incentives for less mobile people (e.g., vouchers, tax benefits, employer subsidies), digital health tools and personalized coaching for patients with chronic disease, or culturally adapted campaigns for underserved communities.

Mental and cardiovascular health are closely interconnected. Chronic stress, anxiety, and depression can increase cardiovascular risk by influencing inflammation, blood pressure, lifestyle habits, and adherence to treatment. Vice versa cardiovascular disease can lead to or increase mental problems. Regular physical activity improves both mood and heart health. Supporting mental wellbeing not only enhances quality of life but also strengthens prevention, treatment outcomes, and long-term recovery of patients at risk for CVD.

RC4 Take measures to increase physical activity on all levels: in daily life by providing sufficient walking/cycling/sport infrastructure, in schools by compulsory physical education

and in the professional environment with facilitation of active commuting and other workplace movement policies.

Food for protection

Diet plays a central role in the development and prevention of CVD and other non-communicable diseases, like diabetes and CKD.⁽²⁹⁾ In fact, a diet that is high in saturated or trans fats, salt, and added sugars is strongly associated with hypertension, dyslipidemia, obesity, and diabetes, all of which elevate the cardiovascular risk.⁽²³⁾ In contrast, a healthy dietary pattern, rich in fruits, vegetables, whole grains, vegetables, fish, and unsaturated fats, has been consistently shown to lower blood pressure, improve lipid profiles, reduce inflammation, and decrease the incidence of heart disease, stroke, diabetes and CKD.⁽³⁰⁻³²⁾ Promoting healthy eating is therefore a cornerstone of effective cardiovascular prevention strategies.

The Belgian diet is characterized by excessive consumption of red meat, processed meat and sugar sweetened beverages and by an insufficient consumption of fruits, vegetables, nuts and seeds, milk, eggs and fish. Except for a reduced intake of red meat, these patterns have only slightly improved over time.⁽³³⁾ In 2018, only 12.7% of the population aged ≥ 6 years consumed the daily recommended amount of fruit and vegetables and a fifth of the population drank sugary drinks on a daily basis.⁽³³⁾ Also in terms of diet substantial demographic differences are observed, with women, older people and people with a tertiary education having better nutritional habits.⁽³³⁾

The average salt intake among Belgians is too high. While the WHO has set the upper salt intake level at 5 g/day, the average among Belgian adults was reported at 8.3-9.4 g/day. In fact, less than 5% of the population meets the WHO recommendation.⁽³⁴⁾

Promoting a healthy diet requires a comprehensive policy approach that addresses both the 'food environment' and individual behavior. Fiscal and regulatory measures are among the most powerful levers. For example, governments can introduce taxes on sugar-sweetened beverages and other ultra-processed foods high in salt, sugar, and saturated fats, while simultaneously subsidizing fruits, vegetables, legumes, and whole grains to improve their affordability. Policies that set targets for reducing salt, sugar, and trans fats in processed products can further shift the overall nutritional quality of the food supply. Equally important are measures that empower consumers to make healthier choices. In addition to national

awareness campaigns on the importance of a healthy diet, this should include restrictions on persuasive or misleading advertising for unhealthy foods, particularly to children. In addition, nutrition labeling systems, like Nutri-score, can guide consumers at the point of purchase. Possible actions to be taken were nicely summarized by Sciensano in 2024.⁽³⁵⁾

Efforts should also be made to promote a healthy food environment in schools and workplaces. Providing nutritious school meals, limiting access to sugary drinks and unhealthy snacks, and embedding nutrition education into curricula ensures that healthy habits are formed early. In parallel, workplace canteens and catering services should be encouraged or required to follow nutrition standards, creating a supportive environment for adults.

Healthcare professionals, should be trained and incentivized to provide routine nutrition counselling, integrating dietary advice into patient care. A better and affordable access to dietitians and digital tools that provide personalized dietary feedback can help individuals to have a better idea of their alimentary habits and translate these recommendations into daily practice.

RC5 Implement the top 3 Sciensano recommendations to improve the food environment: (a) affordability of healthier and more sustainable diets; (b) subsidies for healthier and more sustainable foods; (c) restrictions on children's exposure to marketing through all media.⁽³⁵⁾

Rethink the drink: the cardiovascular cost of alcohol

Excessive alcohol consumption is a well-established risk factor for CVD, significantly contributing to hypertension, atrial fibrillation, stroke, and cardiomyopathy.⁽³⁶⁾ The relationship between alcohol intake and cardiovascular risk is largely dose-dependent, with higher consumption being linked to greater harm. Reducing alcohol consumption is therefore an important component of comprehensive strategies to prevent CVD.⁽²³⁾

According to WHO estimates for 2019, the total consumption of alcohol in Belgium was 10.8 liters of pure alcohol per capita (≥ 15 years), which is lower than the EU-15 average (11.1 liters). While the consumption of alcohol is gradually decreasing over time, still about 7% of men and 4% of women (≥ 15 years) reported a hazardous consumption of alcohol in 2019.⁽³⁷⁾ Furthermore, one in ten young people in the age group 15-24 years reported weekly heavy episodic drinking, defined as the consumption of at least 6 glasses of alcohol at a single occasion.⁽³⁷⁾

Interventions to reduce the alcohol-related cardiovascular burden are similar to what has been described for smoking. This includes increased taxation on alcoholic beverages and the

regulation of its availability, through restrictions on sales hours and an increase of the minimum drinking age (>18 years). To limit exposure, bans or restrictions on alcohol advertising and sponsorship can be considered, especially when they target youth. In addition, public awareness campaigns can be designed to highlight the risks of alcohol, challenging the misconception of “safe” drinking. Given the fact that alcohol-related harm disproportionately affects lower socioeconomic groups, these campaigns should ideally target these populations.

RC6 Increase taxation on alcoholic beverages and regulate more strictly the advertisement and availability of all alcohol-containing drinks, through restrictions on sales hours and an increase of the minimum drinking age (>18 years).

Weight of the matter: tackling obesity to protect the heart

Excess body weight is strongly linked to hypertension, dyslipidemia, insulin resistance, and systemic inflammation, all of which accelerate the development of atherosclerosis and related complications such as coronary heart disease, stroke, and heart failure.⁽³⁸⁾ Like in many industrialized countries, overweight and obesity also pose an important challenge in Belgium. Data indicate that almost half (49.7%) of the adult population in Belgium is living with overweight, with 17% being obese (*figure 3*).⁽³⁹⁾ The prevalence of overweight is 53.1% among men and 46.4% among women, with a notable upward trend in women since 2001.⁽³⁹⁾ Forecasts for 2030 are alarming, with a predicted obesity prevalence of 17.2% among women and 27.6% among men.⁽⁴⁰⁾ In children and adolescents, 19% struggle with overweight and 4.8% have obesity.

The prevalence of overweight and obesity among adults is markedly higher among individuals with a secondary (64.6%, and 19.8%) compared to a higher education diploma (43.7%, and 13.1%). Similarly, the prevalence of obesity is significantly higher among children or adolescents living in households with a secondary education diploma (24.7%) compared to those from households with a higher education diploma (16.7%).⁽³⁹⁾ This disparity underscores a clear socioeconomic gradient, highlighting the need for targeted policies to address inequalities in diet, physical activity, and access to preventive healthcare.

With obesity rates continuing to rise across all age groups, the associated cardiovascular burden is set to increase, underscoring the urgent need for comprehensive prevention and management strategies. Beyond the initiatives and incentives outlined in the section on

healthy living, efforts must also focus on the dissemination of accurate information to reduce stigma. It is essential that both healthcare providers and the public recognize that obesity is a complex, multifactorial disease rather than merely the consequence of insufficient motivation to change lifestyle habits.

In December 2023, Belgium has introduced a stepped-care model for childhood obesity that stratifies children by risk and aligns treatment intensity accordingly. While primary care providers manage lower-risk cases with lifestyle counselling and follow-up, multidisciplinary outpatient centers provide more intensive support for children with moderate risk or insufficient response. Children with severe obesity or complex comorbidities are referred to specialized centers of expertise for advanced care, including pharmacotherapy or surgery when appropriate. The model emphasizes family-centered care, reimbursement for dietary counselling, and systematic monitoring through quality indicators, thereby ensuring equitable access and continuity of care across all levels.⁽⁴¹⁾ This care model is embedded within a broader interfederal action plan for childhood and adolescent obesity in Belgium, which provides a coordinated national framework across federal and federated levels. The plan addresses obesity through prevention, early intervention, and equitable access to care. It emphasizes cross-sectoral collaboration, spanning health, education, agriculture, sports, and urban planning, alongside evidence-based strategies in nutrition, physical activity, and marketing regulation, supported by systematic monitoring of health indicators.

In contrast, adult obesity management remains fragmented. In fact, obese adults are often left without structured support until comorbidities such as sleep apnea or diabetes emerge, despite the availability of effective treatment modalities ranging from cognitive behavioral therapy to pharmacotherapy (e.g., GLP-1 receptor agonists) and bariatric surgery. Belgium currently lacks a comprehensive care pathway for adults with obesity that integrates these treatment strategies into a holistic, stepped approach.⁽⁴²⁾ To address this gap, we call for an extension of the interfederal action plan to also include adults. This would allow to develop an overall structured obesity policy in Belgium in line with the recommendations for customized integrated care as expressed by the Belgian Association for the Study of Obesity (BASO).⁽⁴¹⁾

RC7 Extend the childhood obesity stepped-care model to adults, with reimbursement of multidisciplinary coordinated care and clear criteria for lifestyle interventions, pharmacotherapy and bariatric surgery.

Pollution and cardiovascular risk: an overlooked public health challenge

Environmental pollution and global warming are increasingly recognized as a major contributor to CVD. Long-term exposure to air pollutants such as fine particulate matter, nitrogen oxides, ozone and sound pollution are strongly associated with hypertension, atherosclerosis, myocardial infarction, stroke, and premature mortality.⁽⁴³⁻⁴⁵⁾ While ambient air quality in Belgium is generally improving, a considerable part of the population is still breathing contaminated air. In fact, Belgian air quality is still considered poor by international standards, ranking below-average compared to similar EU countries for most pollutants.⁽⁴⁶⁾

Both the WHO and the European Society of Cardiology (ESC) emphasize that reducing environmental exposures is an essential component of CVD prevention.⁽²³⁾ Policy action should therefore prioritize stricter air quality regulation, including the reduction of emissions from traffic, industry, and energy production, alongside accelerated investment in renewable energy sources. Urban planning measures can further enhance cardiovascular health by expanding access to green spaces, reducing traffic congestion, and encouraging active transport such as walking and cycling. Importantly, these environmental interventions not only reduce harmful exposures but also create opportunities for healthier lifestyles. As such the national cardiovascular health plan could fit within the WHO's One Health principle by integrating human and environmental health factors to address shared drivers of cardiovascular disease—such as pollution, food systems, and urban design—through coordinated, multisectoral action.

Healthcare professionals should be trained to recognize environmental exposures as cardiovascular risk factors, while public health campaigns should raise awareness of the link between air quality and heart health. In these initiatives, particular attention must be given to equity, as low-income populations are disproportionately exposed to polluted environments and thus bear a higher burden of disease.

RC8 Take measures to further decrease air- and sound pollution for all Belgian citizens.

Raising the bar: ambitious goals for primary and secondary cardiovascular prevention

Cardiovascular prevention is a shared societal responsibility, requiring the active engagement of policymakers, patients, general practitioners, pharmacists, nurses, paramedical and allied

health professionals, cardiologists, and other medical specialists. At the same time, prevention should be embedded in daily living, in schools, workplaces, and communities, reflecting the understanding that CVD prevention is as much a public responsibility as it is a clinical one. In Belgium, this calls for an inter-federal cardiovascular prevention program. Such a program bridges federal and federated responsibilities between Belgium, Flanders, Wallonia and Brussels, ensuring coherent strategies across health promotion, education, healthcare delivery, and reimbursement. Setting up a coordinated framework avoids fragmentation, guarantee equitable access to preventive services, and provide continuity of care throughout the life span. When combined with population health management, such a framework allows for the systematic identification of high-risk groups and the efficient targeting of interventions where the greatest health gains can be achieved. By moving beyond a one-size-fits-all approach that primarily reaches already motivated and health-conscious individuals, resources can be better directed toward populations carrying the greatest burden of risk factors, whether determined by age, SES, or comorbidities, while ensuring that lower-risk groups still receive appropriate, less intensive follow-up. This not only enhances the effectiveness of cardiovascular prevention but also improves efficiency by reducing unnecessary testing and treatment.

While prevention remains a cornerstone of cardiovascular health, it is important to acknowledge that not all CVD are preventable. Genetic predisposition, age, and other non-modifiable factors play a significant role. Acknowledging this reality will help to reduce stigma by moving away from the notion that CVD is solely the result of individual lifestyle choices. At the same time, it underscores the importance of early risk detection, so that individuals at higher inherent risk can be identified and supported with timely, tailored interventions.

From reactive to proactive risk detection

In Belgium more than 80% of patients have a global medical record (GMD) with a primary care physician. As such, primary care is the first and most frequent point of contact with the health system, placing it in a unique position to detect and treat the earlier described 5 modifiable risk factors at an early stage. Strengthening risk assessment and early detection of hypertension, diabetes and CKD in primary care could therefore be the cornerstone of effective disease prevention.

At present, however, cardiovascular risk assessment largely depends on physicians reacting on the request for preventive examination from patients. The overall knowledge of cardiovascular risk factors among the Belgian population is low and information on risk factors is scattered over different sources. This leads to a reactive approach limiting early detection of patients at risk and leading to missed opportunities. Prevention should instead be embedded in an educative, proactive and centralized system. Patients at risk should be identified by a ‘heart health check’ in primary care. A stratified screening approach, in which prevention efforts and diagnostic testing are targeted towards those most likely to benefit seems a sustainable strategy. By embedding appropriateness as a guiding principle, Belgium can balance equity, efficiency, and effectiveness in cardiovascular prevention, avoiding unnecessary medicalization while still capturing individuals at the greatest risk. Integrated data from different care providers in the electronic health record (EHR) of the patient could be used for this risk stratifying ‘heart health check’. This fits with the aim of the Belgian Integrated Health Record (BIHR), which is meant for enhancing the interoperability of existing systems to facilitate seamless data flow. The implementation of BIHR should be supported and appropriately funded, but also easily accessible for the patient and all caregivers appointed by the patient.

Embedding validated questionnaires and cardiovascular risk scores using this integrated data in the EHR (e.g., SCORE2, SCORE2-OP, LIFE-CVD) could allow a real-time risk estimation (‘health check’) using available data such as age, sex, familial history, blood pressure, cholesterol, triglycerides, smoking status, kidney function and diabetes. Automated alerts or pop-ups when increased risk is detected could ensure that risk factor optimization is performed by the primary care physician and that prevention becomes the default rather than the exception. Implementing these software-possibilities would make better use of the wealth of health data already being collected and could be made mandatory for health authorities-approved and funded software for electronic patient records.

This risk calculator would also allow to incorporate validated tools to discuss the pros and cons of further testing and treatment with the patient and come to a shared decision on which actions to take depending on the CV risk.⁽⁴⁷⁾ Screening of familial hypercholesterolemia during childhood could be implemented in children with parents with highly elevated cholesterol levels and a positive familial history of early cardiovascular diseases.

Advances in science offer opportunities to refine this cardiovascular risk prediction and identify high risk individuals who should receive targeted attention and a reduced threshold to treatment. To improve early detection of end-organ damage, screening for albuminuria or

proteinuria can be done in patients with hypertension and other individuals at cardiovascular risk. In addition, a once-in-a-lifetime measurement of lipoprotein(a) may be considered to further refine cardiovascular risk assessment.⁽⁴⁸⁾ This cholesterol variant is elevated in 20-30% of the population, and emerging data show that lipoprotein(a) measurement is cost-effective and intensification of preventive therapies might be associated with better outcomes.⁽⁴⁹⁻⁵¹⁾ Other developments, like polygenic risk scores may hold promise to evolve even to a more personalized stratification but need confirmation on their clinical relevance and cost-effectiveness.

Finally, primary care is central to both administration of and patient counseling on vaccines. Infections such as pneumonia, influenza and SARS-CoV-2, among others, exacerbate heart failure and increase the risk of major cardiovascular events. Vaccination can not only prevent infections, but also reduce cardiovascular complications, particularly in at-risk patients with existing cardiovascular disease and should be implemented in preventive strategies.⁽⁵²⁾

To ensure accountability and continuous improvement, aggregated data on cardiovascular risk assessment could be incorporated in practice-based quality indicators in primary care practices. As such the proportion of eligible patients with an up-to-date risk score, the percentage of high-risk patients under active management, and adherence to prevention targets could be followed in a performance assessment system or 'barometer'.

RC9 Develop and implement a 'heart health check' in primary care aggregating validated questionnaires, risk scores, existing and novel risk indicators in the EHR allowing for easy individualized cardiovascular risk calculation and advice, and subsequent lifestyle and therapeutic actions

RC10 Develop and implement a performance assessment system or 'barometer' on CV prevention in primary care

Building a smarter healthcare system

GPs remain central in the care for patients, but the patient him/herself and other healthcare professionals should also play a more active role in cardiovascular prevention. In fact, patients, pharmacists, nurses, dietitians, tobacco specialists, health coaches, physical activity coaches, psychologists and lay-volunteers can all contribute to the initial risk assessment and follow-up of at-risk individuals.

In community network together with GPs, patients, volunteers, pharmacists and other healthcare professionals may play a role in the prevention and early detection of CVD.^(53, 54) Their unique position within communities, characterized by accessibility and frequent contact with patients, allows them to identify risk factors and support long-term management. Given their proximity to the population, pharmacists can provide tailored information and lifestyle counseling. They can contribute to the follow-up of patients by monitoring therapy adherence and clear communication of prevention goals.^(53, 54) Close collaboration with GPs and an effective data-sharing system could ensure that relevant information on medication use flow seamlessly between pharmacists, GPs, and other care providers, supporting continuity and avoiding duplication.⁽⁵⁴⁾ Integration between the Virtual Integrated Drug Information System (VIDIS) and the EHR could offer opportunities to keep the medication profile up to date and monitor patient compliance. Within this framework, the concept of the ‘family pharmacist’, responsible for monitoring a patient’s overall medication status, further enhances medication safety, optimizes therapy, and strengthens coordination across the care pathway.⁽⁵⁵⁾

RC11 Facilitate and remunerate task sharing between GPs, pharmacists, nurses, dietitians, tobacco and movement coaches and other allied professionals for risk assessment, counselling and follow-up.

Right care at the right level: a stratified pathway for cardiovascular prevention

An effective cardiovascular prevention strategy requires a stratified care pathway in which responsibilities are clearly defined across the different levels of care. Most of the cardiovascular risk reduction could be organized within primary care, where general practitioners are best placed to initiate, coordinate, monitor, and adjust preventive treatment in a multidisciplinary setting together with a dietician and if necessary, a movement-coach, tobacco-specialist or mental health professional. This ensures early intervention and continuity in the person’s own living environment. In case of a higher cardio-renal-metabolic risk, the presence of multiple comorbidities, or specific diagnostic or therapeutic concerns, patients should be referred to a cardiologist or endocrinologist involved in an obesity clinic for specialized assessment and management. Such a stepped approach guarantees that preventive interventions are delivered at the most appropriate level, avoids unnecessary specialist referrals, and optimizes the use of healthcare resources while ensuring that patients at greatest risk receive timely, expert care. To operationalize this model, clear referral criteria and robust data-sharing mechanisms between GPs and

specialists are required, ensuring coordinated decision-making and continuity across the care pathway. Potential referral criteria in primary prevention may include:

- Patients considered to be at very high estimated cardiovascular risk due to documented atherosclerotic cardiovascular disease on medical imaging.
- Morbid obesity with a body mass index (BMI) ≥ 40 , or a BMI ≥ 35 with obesity-related health problems.
- Very high LDL cholesterol despite maximal tolerated statin therapy.
- Suspected familial hypercholesterolemia.
- The combination of multiple high-risk comorbidities (e.g., diabetes with microvascular complications, chronic kidney disease).
- Symptoms suggestive of underlying CVD (e.g., chest pain, dyspnea on exertion, unexplained palpitations).
- Premature CVD in first-degree relatives, known familial genetic cardiac structural or arrhythmogenic disease and other possible newer risk factors like an elevated lipoprotein-a or a high polygenic risk.

Secondary prevention after CVD should always be performed in a collaboration between GPs and cardiologists and other involved specialists, like vascular specialists, neurologists, endocrinologists or nephrologists.

At the primary care level, quality control mechanisms to ensure that risk assessment, follow-up, and treatment are carried out consistently and effectively could be incorporated in a performance assessment system or 'barometer', allowing regular audits of key indicators, and benchmarking practices against regional and national targets, determined in close collaboration with the professional organizations. Examples of key quality indicators could be the percentage of high-risk patients reaching targets for blood pressure control, the proportion of high-risk patients receiving lipid lowering therapy in line with guidelines, the percentage of patients with smoking status documented and offered cessation support, adherence rates to prescribed preventive medication (e.g., statins, antihypertensives), etc. These indicators should be validated before being incorporated in this monitoring system, but afterwards could be regularly monitored at practice, regional, and national levels to evaluate performance, reduce variation, and better guide resource allocation.

These practice-level indicators could be systematically fed into national monitoring tools. By aggregating and analyzing local data, policymakers can monitor trends, identify gaps, and evaluate progress at regional and national levels. This creates a feedback loop between

frontline care and health policy, ensuring that local practices are supported, resources are directed to where the need is greatest, and prevention strategies remain evidence-based and outcome-driven.

RC12 Facilitate and renumerate the multidisciplinary approach on very high-risk patients of CVD and in secondary prevention.

Strengthening secondary prevention

While secondary cardiovascular prevention is more systematically implemented than primary prevention, there remains substantial room for improvement. Targets for blood pressure, cholesterol, and glycemic control are not consistently achieved in practice, and many patients fail to receive treatment intensification even when goals are not met.⁽⁵⁶⁻⁵⁹⁾ Adherence to medication is often suboptimal, fueled by misinformation, concerns about side effects and costs, or lack of structured follow-up, which undermines long-term effectiveness.

To address these gaps, there is a need for clear communication that highlights both the benefits of secondary prevention therapies and the risks of discontinuation. Coordinated input from GPs, cardiologists, pharmacists, nurses, dietitians, physiotherapists and other medical specialists can improve adherence, address side effects in a timely manner, and support lifestyle modification alongside pharmacological treatment. Clear evidence-based practice guidelines should guide the use of innovative pharmacological treatments for hypertension, hypercholesterolemia and obesity in secondary prevention of CVD. Affordable access to the therapeutic options based on these guidelines should be the overall goal.

Equally important is the use of structured data systems, such as EHRs linked to national registries, allowing for systematic monitoring the performance of secondary prevention efforts. Examples of key quality indicators could include the percentage of patients with prior myocardial infarction on statins, the proportion achieving target levels of LDL cholesterol, or the number of patients with recurrent events despite therapy. Embedding such indicators into routine practice could enable benchmarking and continuous quality improvement at both the provider and system level. Innovative electronic and wearable devices could help in improving adherence to treatment and could in the coming years be implemented in this scheme.

Finally, secondary prevention must extend beyond pharmacological management to include cardiac rehabilitation programs, psychosocial support, and sustained lifestyle interventions.

Despite strong evidence on the benefit of these non-pharmacological interventions, they remain underfunded and underutilized in Belgium.⁽⁶⁰⁻⁶²⁾

In brief, a more coordinated, science and data-driven multidisciplinary approach is required to fully realize the potential of secondary prevention and reduce recurrent cardiovascular events.

RC13 Strive for structured secondary prevention and multidisciplinary rehabilitation for all patients suffering from CVD, including risk factor optimization, lifestyle support, psychosocial care coordinated between primary care, cardiologist and other professionals.

RC14 Develop and implement a performance assessment system or 'barometer' on secondary CV prevention in cardiology.

From education and awareness to action: working towards a heart-smart society

Given the strong relationship between lifestyle choices and CVD, popular education on cardiovascular risk factors stands out as the most powerful, cost-effective and sustainable preventive strategy. In fact, proper education can shape behaviors, influence choices, and empower individuals to take control of their health.

Education on cardiovascular prevention must adopt a life-course perspective. In fact, the seeds of cardiovascular risk are often planted early in life through an unhealthy diet, physical inactivity, smoking, or exposure to environmental stressors. Conversely, healthy habits adopted in childhood tend to persist into adulthood and reduce the risk of disease. Schools, workplaces, and community settings therefore play an essential role in promoting awareness and embedding healthy behaviors from the very beginning of life. At older ages, continued education remains equally important, particularly for those with existing risk factors such as hypertension, diabetes, or obesity.

Nowadays, people are still insufficiently aware of their personal cardiovascular risk and what they themselves can do to prevent cardiovascular diseases. It is important for everybody have an insight in his or her personal risk and know which lifestyle changes they can make to improve these risk factors.^(63, 64) For example, many patients experience a myocardial

infarction or stroke as a sudden and unexpected “storm,” even though their underlying risk had been elevated for years. This lack of awareness underscores the urgent need to empower people to recognize and monitor their own cardiovascular health. Public campaigns emphasizing the importance to know and work on your cardiovascular risk in the media, at community events, in public spaces or in community pharmacies may bring prevention closer to citizens and normalize a proactive cardiovascular risk assessment. As such people could be made aware to discuss their heart health check with their primary care physician. Importantly, this awareness must also extend to the recognition of cardiovascular alarm signals, such as chest pain, shortness of breath, one-sided paresis or sudden fainting, and clear understanding of what immediate actions to take. To maximize survival, basic life support and resuscitation skills should be widely spread across the population, ensuring that bystanders can respond effectively in case of an emergency. Embedding this education early in life, when children are eager to learn and adopt new skills, will create a generation that is better prepared to recognize and respond to cardiovascular risk and acute events.

The rapid development of artificial intelligence (AI) and digital health technologies offers unprecedented opportunities to enhance education and awareness in cardiovascular prevention. Wearable devices and smartphone applications can provide real-time feedback on activity levels, heart rate, or even early warning signs of cardiovascular risk. AI-powered tools can personalize information, calculate individualized risk scores, and deliver tailored recommendations for lifestyle change. Integrating these tools into EHRs will ensure that individuals and healthcare providers work together based on shared, transparent data. By making cardiovascular risk visible and tangible, IT innovations may help to transform abstract medical concepts into actionable insights that empower individuals to engage actively in their own prevention, and their incremental value could be investigated.

RC15 Design and support lifelong education on healthy living, from kindergarten through higher education and into the workplace, emphasizing practical actions individuals can take to prevent cardiovascular disease.

RC16 Enable and fund public campaigns offering cardiovascular checks to raise awareness on cardiovascular health.

RC17 Support research investigating the introduction of wearables and AI-based digital tools for prediction, diagnostics and personalized care.

Avoid stigma and victim-blaming

While education and awareness on cardiovascular risk are essential, it is equally important to ensure that these messages are delivered in a way that avoids stigma and victim-blaming. As indicated before, CVD is influenced by a complex interplay of genetic, biological, social, and environmental factors. Framing CVD purely as a matter of individual responsibility risks oversimplifies the problem and unfairly blames patients for their illness. This not only undermines motivation but can also create barriers to seeking care. Campaigns and education strategies must therefore acknowledge that prevention is a shared responsibility of individuals, healthcare systems, and society at large. In addition, we must avoid creating an ‘us versus them’ atmosphere in public health communication, in which people living with risk factors or disease are implicitly contrasted with those who are considered ‘healthy’. Such framing can reinforce social divisions and discourage those at highest risk from engaging in prevention programs. Instead, education initiatives should emphasize inclusivity, shared benefits, and collective progress. Messages such as ‘every step counts’ or ‘small changes make a big difference’ foster a sense of empowerment rather than exclusion.

Person-centered plan

Involving patients in the development of a national cardiovascular health plan is essential because it ensures that prevention and treatment strategies reflect real-life needs, lived experiences, and priorities that medical experts may overlook. Patient input helps to better understand barriers to healthy behavior, access to care, medication adherence, and the emotional and social dimensions of living with CVD. This involvement can be achieved through representation in advisory boards, and continuous feedback mechanisms with the patient forum of the Belgian cardiologic league or European Society of Cardiology. This input can be used to prioritize needs-driven research and development aimed at unmet health-related patient and societal needs. The NEED-approach developed by the knowledge center and Sciensano may serve as an example.⁽⁶⁵⁾ It is important to include women and people with lower SES who face greater barriers to prevention and care to make sure that policies and interventions truly address disparities and could improve outcomes for all.

RC 18 Include patients in the design of the CVH plan.

Data driven approach for better cardiovascular care

Patient data are fragmented across multiple sources, and data exchange remains insufficiently interoperable, which can leave healthcare providers without timely access to essential information to identify at-risk individuals early, deliver appropriate care to patients with CVD, and monitor the quality and outcomes of that care. To streamline patient care and enhance treatment outcomes, general practitioners, cardiologists, and pharmacists should have easy access to all relevant data. Standardization is essential for combining data. We can learn from the FHIN project involving nine Belgian hospitals, which focuses on standardizing data to enable reuse (including transmural reuse).⁽⁶⁶⁾ The BIHR, currently under development, aims to establish such a standardized framework for recording and accessing integrated data within patient records, enabling existing and future information sources to connect seamlessly. The further development of BIHR should receive necessary priority and funding. The role of medical professionals in coding and transferring data within BIHR should be recognized and sufficiently honored.

Beyond access to clinical data, comprehensive patient care requires the integration of behavioral information (such as smoking, diet, and physical activity), socio-economic circumstances, living environment, and patient preferences, including care goals and advance directives, to provide a holistic view of the patient. It therefore seems important to integrate data from non-medical caregivers, like pharmacists, home-nurses, dieticians, ergo- and physiotherapists easily and transparently within the BIHR. New digital technologies like wearables and smart phone apps are increasingly used and provide opportunities to monitor and steer prevention and treatment of CVD. Extra attention should be given to the integration of data from these digital tools such as telemonitoring, wearables, patient-input apps, or communication tools in the EHR.

The key lies in the actionability of the data collected. Both for health promotion, prevention and effective care delivery, maximum use must be made of this data.

Data to improve prevention

The integration of risk calculators in the EHR of individual patients and use of aggregated data in 'barometers' has been described extensively. This approach could be implemented both in primary and secondary prevention for earlier detection of CVD and societal-wide improvements in prevention.

Data for better quality of care

A data-driven approach improves the quality of cardiovascular care by giving healthcare providers complete and integrated information. This not only supports earlier identification of individuals at-risk, but also more accurate diagnoses, personalized treatment plans, and better monitoring of outcomes. When all relevant medical, behavioral, and digital health data flow seamlessly into the patient record, care becomes more coordinated, proactive, and effective. This could facilitate the development of intelligent big data driven AI-tools that can guide and automate diagnostics, enhance clinical decision-making and optimize individualized patient care.

Data for research

Standardized and linked data across the healthcare system strengthen cardiovascular research by providing a richer, more reliable evidence base. Researchers can analyze large, diverse datasets to identify risk factors, evaluate treatments, and track long-term outcomes. This accelerates innovation, improves the design of prevention strategies, and enables the development of new interventions, like data-driven AI-applications.

This would allow the Belgian Society of cardiology to participate in initiatives from the European Society of Cardiology like the Atlas and EuroHeart/EORP surveys.⁽⁶⁷⁾ These initiatives provide high-quality, comparable data that help to understand the European cardiovascular health landscape, benchmark performance, and identify areas where care can improve. These datasets can support evidence-based national policy, strengthen Belgium's voice within European cardiology, and create opportunities for Belgian centers to engage in influential research and quality-improvement projects. It would transform Belgian cardiology from a consumer of European evidence into a co-creator of the European cardiovascular knowledge base.

Data for policy, with an emphasis on understanding and remediating inequalities in cardiovascular care and outcome

Coordinated by the recently established Health Data Agency and in close collaboration with regional authorities, Belgium should launch a national CVD registry, modeled on the Belgian Cancer Registry and SWEDEHEART.⁽⁶⁸⁾ To monitor progress and inform the initiation or adjustment of policy measures, regular in-depth scientific analyses of the registry should be conducted by independent research institutions, such as Sciensano or the Belgian Health Care Knowledge Centre (KCE). This would enable comprehensive, recurring scientific assessments of cardiovascular disease in Belgium, conducted every three years to monitor key parameters and adherence to clinical guidelines, and every five years to evaluate the impact of policy measures. These assessments would quantify the burden of CVD in terms of quality of life, life expectancy, functional limitations, and associated financial direct across both hospital and non-hospital settings. Progress over time could be tracked through a KPI dashboard, informed by data from the CVD registry. The analyses would also identify unmet needs using the NEED framework developed by KCE and Sciensano and assess the costs and benefits of specific technological innovations and policy interventions for CVD prevention and management.

Persistent inequalities in cardiovascular care and outcomes remain a major challenge in Belgium, particularly between women and men, across regions, and between socio-economic groups. Sex-based disparities include ongoing gaps in awareness, diagnosis, tailored prevention, representation in research, and sex-specific treatment approaches, all of which contribute to unequal cardiovascular outcomes for women and men. In addition, marked regional differences in cardiovascular disease burden are observed, likely reflecting underlying variations in socio-economic conditions across Belgium. Socio-economic inequalities further exacerbate these disparities. Individuals with lower socio-economic status face greater barriers to prevention, timely diagnosis and treatment, access to healthy living environments, and tailored support, resulting in higher cardiovascular risk and poorer outcomes compared with more advantaged groups. Comprehensive, linked data encompassing clinical, behavioral, socio-economic, and environmental factors are essential to identify and disentangle these intersecting inequalities related to sex, income, education, and living conditions. By making disparities visible, a data-driven approach can inform targeted policies, tailored interventions, and proactive outreach to high-risk populations, ultimately reducing inequities in cardiovascular prevention, care, and outcomes.

RC19 Systematically report periodically on CVD and prevention in Belgium and disaggregate indicators by sex, region and socio-economic status to make inequalities visible and guide targeted interventions.

RC20 Facilitate secure, ethical use of anonymized linked datasets for research.

Conclusions

Belgium stands at a critical crossroads in its fight against CVD. Despite decades of progress in reducing CVD-related mortality, the rising prevalence of obesity, unhealthy lifestyles, and environmental pressures, underscores the urgency for a renewed action to promote cardiovascular health.⁽⁶⁹⁾ Achieving the WHO target of a 30% reduction in premature CVD deaths by 2030 will require a coordinated, inter-federal strategy that integrates prevention, early detection, and long-term management across all sectors of society. This means embedding healthy living into schools, workplaces, and communities, strengthening proactive risk detection in primary care, and ensuring equitable access to high-quality prevention and treatment pathways. GPs, cardiologists, other medical specialists, pharmacists, nurses, allied health professionals, and patients must be empowered as active partners, supported by digital innovation, AI-driven risk tools, and robust quality indicators. Crucially, all efforts must balance effectiveness with fairness, focusing on hard-to-reach, high-risk groups, avoiding stigma and ensuring inclusivity. By acting decisively now, Belgium can build a heart-smart society and safeguard cardiovascular health for future generations.

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Figures

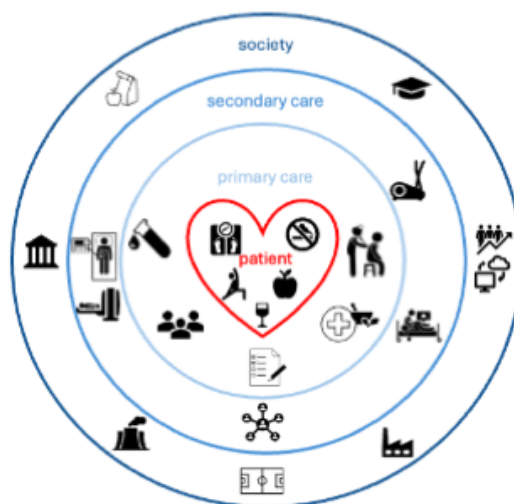
Central illustration

Patient

-  • Weight control
-  • Stop smoking
-  • Physical activity
-  • Healthy diet
-  • Limit alcohol

Society

-  • Make healthy choices easy choices
-  • Legislation on smoking, alcohol and food
-  • Lifelong education on healthy living
-  • Limit pollution
-  • Infrastructure promoting healthy living
-  • Healthy professional environment
-  • Integrated health records, datasets for research and performance assessment systems



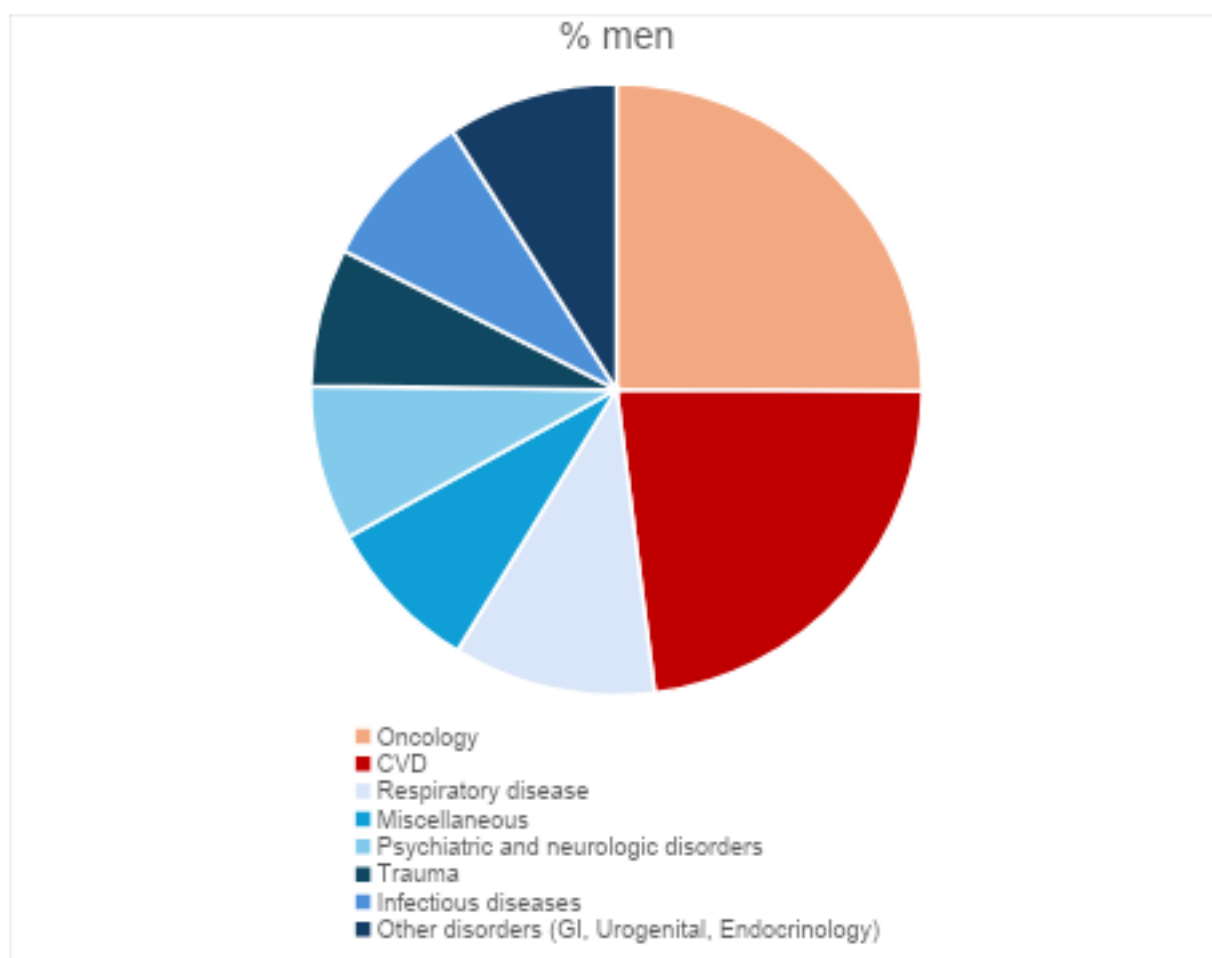
Primary care

-  • Cardiac health check
-  • Existing and novel risk indicators
-  • Integration in EHR
-  • Multidisciplinary task sharing
-  • Medication

Secondary care

-  • Revalidation
-  • Obesity stepped care model
-  • Very high risk patients
-  • Research investigating the introduction of advanced screening methods, wearables and AI-based digital tools for prediction, diagnostics and personalized care

Figure 1: Causes of mortality in Belgium (data from sciensano)



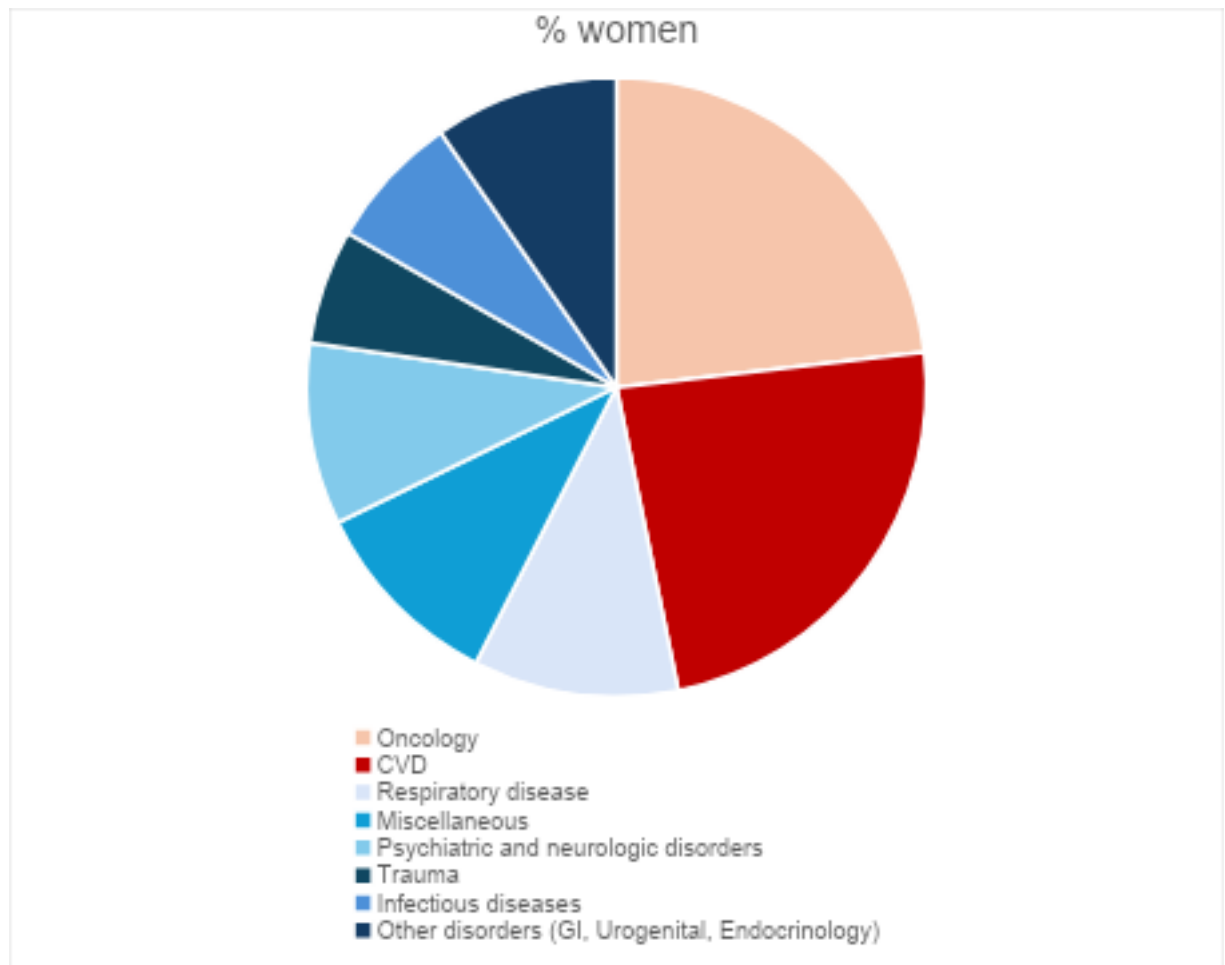


Figure 2: Premature mortality rates in different regions in Belgium (data from sciensano)

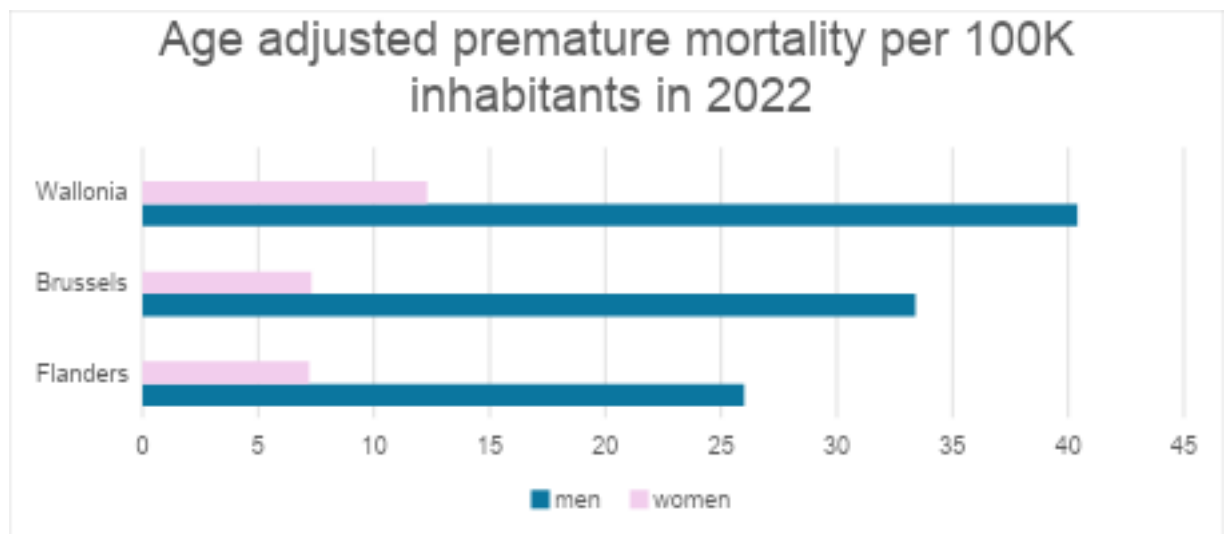


Figure 3: Overweight and obesity by age in Belgium (data from sciensano)

