International Diabetes Federation
Europe

IDF EUROPE POSITION PAPER

Optimising the EU Cardiovascular Health Plan
Embedding joined-up thinking on diabetes and other NCDs for better CVD health

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Optimising the EU Cardiovascular Health Plan –

Embedding joined-up thinking on diabetes and other NCDs for better CVD health outcomes

Executive Summary

What is at stake?

- **Cardiovascular and other non-communicable diseases** (NCDs)**, particularly diabetes and obesity, are strongly interconnected**, sharing common risk factors and pathophysiological mechanisms, which drive disease prevalence and exacerbate each condition's severity:
  - **One in three of the 33 million people living with diabetes (PwD) in the EU will develop cardiovascular disease (CVD) in their lifetime.** Conversely, one in three people with coronary artery disease live with type 2 diabetes (T2D) or intermediate hyperglycaemia.
  - In 2024, diabetes care alone cost the EU €120bn – 75% of which is driven by complications, which are often preventable with early and effective care.
  - **The number of PwD continues to increase**, **with an alarming rise in early-onset T2D**, a much more aggressive form of the disease, with even greater rates of complications and negative societal impact.
- **The (co)-occurrence of multiple long-term conditions (MLTCs) decreases quality of life, places considerable strain on healthcare and societies and weakens EU competitiveness** through decreased household income, increased costs and reduced productivity.

What can be done?

- **Achieving better cardiovascular health (CVH) outcomes requires a shift in approach** – **the primordial and primary prevention of CVD needs to be accompanied by a dedicated focus not only on the prevention of obesity and diabetes but also on their timely, robust and comprehensive management**, **rather than solely treating CVD, once it has developed.**
- **This means finding risk earlier, systematically. Implement population-level risk stratification and make screening routine for people at risk and all people living with CVD, diabetes and/or obesity, covering a fully comprehensive set of shared risk factors.**
- **It also necessitates implementing condition-specific policies that address the unique prevention and management needs of each disease**, in addition to those required for CVD prevention and management.
- **Effective management of diabetes and prevention of CVD for the 11 million people living with diabetes and CVD in the EU** requires adequate access to medicines, technologies (especially newer ones with a direct impact on glycaemic management and CVD / **Chronic Kidney Diseases** (CKD) outcomes) and self-management education in healthcare systems organised with integrated, person-centred approaches by design.
- **Accelerating research is key to foster better CVH outcomes** – this needs to focus on unmet diabetes medical needs and the pathophysiological link between diabetes and CVD. The setup of an EU Cardiovascular and Diabetes Research Mission complemented by a European Cardiovascular and Diabetes Health Observatory can close this gap.
- **Harnessing innovation and digitalisation holds significant potential** – this entails deploying innovation, using big data frameworks and Artificial Intelligence (AI), and digitalising healthcare systems at scale, facilitated by the setup of a European Accelerator.
- **Placing people at the centre is critical to transforming health journeys** – **ensuring people with lived experience are given a voice in everything that matters to them.**

Background

The European Commission has launched a call for evidence in preparation for the development of an EU Cardiovascular Health (CVH) Plan, scheduled for release in Q4 2025. The objective of the Plan is to support Member States (MS) address the significant burden of cardiovascular disease and contribute to the achievement of Sustainable Development Goals 3.2 and 3.4. Specifically, the Plan seeks to reduce existing inequalities, strengthen population health outcomes and enhance the competitiveness of Europe's health and technology sectors. The EU CVH Plan is expected to be structured around three strategic pillars: prevention, early detection and screening, management, care and rehabilitation.

Introduction

Cardiovascular diseases (CVD) rarely occur in isolation. Rather, they are inextricably linked to other non-communicable diseases (NCDs), sharing risk factors and playing off one another to drive prevalence and exacerbate each condition's severity. Living with one chronic condition already represents a huge physical, mental and financial burden. However, living with diabetes or CVD often means living with one or more additional long-term condition, further compounding these challenges.

A healthier population strengthens human capital, enhances workforce resilience, drives productivity and supports innovation. By contrast, the (co)-occurrence of multiple long-term conditions decreases quality of life and places considerable strain on healthcare and societies, through decreased household income, increased health expenditure and reduced productivity (lower labour participation and tax revenues, acceleration of early retirement and increased sick leave)[iiiiii]. In the EU, diabetes-related health expenditure alone is estimated at €119 billion per year, with about 75% of costs linked to the treatment of often preventable diabetes-related complications, such as CVD and chronic kidney disease (CKD).

In addition to economic and health system pressures, the burden of CVD and related conditions is not evenly distributed. Vulnerable groups, including those with lower income, less access to healthcare, or facing social disadvantage, are disproportionately affected by multimorbidity and its financial strain. Addressing these inequalities is critical, as policies that improve prevention, care and quality of life for the most at-risk populations will deliver the greatest overall gains, both in health outcomes and in reducing long-term costs.

This close interplay between CVD, diabetes and obesity means that for many, better CVD outcomes can only be achieved through improved prevention and management of diabetes, obesity and some other NCDs. Addressing CVD effectively therefore requires moving beyond siloed, single disease frameworks towards integrated policies and initiatives that reflect the interdependence of chronic conditions. Policies prioritising comprehensive and coordinated prevention, early detection and holistic approaches that ensure that each condition's management reinforce all conditions' outcomes have the potential to deliver improved population health and individuals' quality of life, reinforce healthcare system resilience and strengthen the EU's broader economic and social competitiveness.

This position paper sets out recommendations to reinforce and guide the EU CVH Plan. Recognising the strong bidirectional link between CVD and diabetes, it highlights targeted diabetes-related policy actions essential to driving improvements in CVD health outcomes across the EU.

These recommendations are based on the extensive work conducted by IDF Europe with its networks of 73 national diabetes associations across 45 European countries and dedicated PwD networks. It also draws on IDF Europe's work with the Commission and the European Parliament, notably in its capacity as Secretariat of the MEP Mobilising for Diabetes Interest Group (MMD). Notable publications and collaborations supporting this work include:

- Delivering Value through Innovation in Diabetes Care Delivery
- An overview of access to diabetes care in Europe
- IDF Europe's Position Paper on the SANT Committee INI on NCDs
- MMD Blueprint for Action on Diabetes in the European union by 2030
- IDF Europe-WHO Europe Declaration on Accelerating Action on Commitments to improve Diabetes Detection and Quality of Care
- Type2 Diabetes – A Preventable Catastrophe ?

The interplay between CVD, diabetes, obesity and other NCDs

The relationship between CVD and other major NCDs – notably diabetes, obesity and chronic kidney disease (CKD) – extends far beyond the simple co-occurrence resulting from shared risk factors. These conditions are biologically and clinically interconnected, creating a reinforcing cycle in which the inadequate management of one condition frequently precipitates or exacerbates another. This mutual reinforcement accelerates disease progression and significantly worsens health outcomes.

Nearly every major organ system is affected by the suboptimal management of these NCDs. For example, in addition to being a key driver of CVD, diabetes is also responsible for many other conditions including diabetes retinopathy and neuropathy, potentially causing blindness and amputations as well as neurodegenerative diseases such as dementia. It is also a leading cause of mental health issues (see Appendix 1). This underscores the imperative for integrated and coordinated policy responses.

The scale and impact of the interplay between CVD, Diabetes and other NCDs in the EU

- **33 million people live with diabetes in the EU**, 62 million with CVD, 55 million with CKD and more than half of the EU adults live with overweight and obesity.
- **One third of PwD develop CVD**[iv]; **are at an increased risk of having a heart attack and are twice more likely to develop heart failure** than people living without diabetes[vvi].
- **About one third of people with coronary artery disease live with type 2 diabetes (T2D);** more than one third are dysglycaemic; and one third may be living with these conditions undetected[vii].
- **T2D and intermediate hyperglycaemia increase the risk for CVD by 2-4 times**[viii].
- **PwD with acute coronary syndromes are at particularly high risk** of recurrent cardiovascular events and premature death[ix].
- **CVD and renal diseases are the leading causes of death for people living with type 1 diabetes** (T1D), an auto-immune form of the disease. People living with T1D have mortality rates 3-18 times higher than those living without diabetes largely due to CVD-related complications, with great disparity between men and women[x].
- **About one third of PwD and a third of people living with CVD also develops CKD**[xixii].
- **The cardiovascular risk doubles already at early stages of CKD** and rises up to hundred- to thousand-fold in young people at advanced stages[xiii].
- **Obesity drives insulin resistance**, which itself can lead to intermediate hyperglycaemia an T2D[xiv].
- **Gestational diabetes**, a type of diabetes which develops during pregnancy, **is a major risk factor for the development of T2D in mothers and babies**[xv].

Structuring the Cardiovascular Health Plan

Transforming the cardiovascular health journey requires addressing three interconnected elements: (1) **individual health factors and disease pathways;** (2) **external influences** such as social, commercial, economic and environmental determinants and their biological response to it and (3) **the healthcare ecosystem**, including research, access and delivery.

A **health-in-all-policies** framework, paired with **person-centred, integrated care**, is essential to reflect the interdependence of CVD with diabetes, obesity and CKD and to close equity gaps. It aligns public-health action and clinical services across the **life course**, translating shared determinants and pathways into coordinated **prevention, early detection, treatment and rehabilitation**, so that gains in one condition reinforce outcomes across all. This is how prevention and care can be structured for **maximum impact** across conditions.

Adopting this approach **hardwires equity and quality of life as core objectives**, with measurable targets across regions and populations, while accelerating a sustainable transition and driving social and economic progress. It **maximises the likelihood of transformative impact** for millions of Europeans living with CVD, diabetes and other NCDs, benefits their families, and **strengthens EU competitiveness,** ensuring no one is left behind.

The Commission's proposed approach rightfully calls for comprehensive action from prevention through management and rehabilitation. To be fully effective, the Plan should be underpinned by a concerted, integrated strategy for the prevention and management of diabetes and other NCDs, and a clear focus on research, data & innovation and people empowerment.

Implementation should be enabled across the EU – both at regional and national levels – through tools and financing mechanisms such as the European Semester and the Recovery and Resilience Funds, complemented by culturally and settings-adapted national plans (with clear milestones and implementation monitoring).

Pillar 1: Healthy foundations – addressing the primordial and primary drivers of CVD

Reducing the incidence of CVD and other chronic diseases, while addressing disparities in health outcomes linked to socio-economic factors requires a three-pronged approach:

1. Addressing the primordial[1] drivers of population health.
2. Strengthening primary prevention[2].
3. Taking early action to identify people at risk, and once identified, to reverse or slow disease progression (discussed in Pillars 2 & 3).

As most risk factors are shared across NCDs, an integrated approach will deliver benefits across multiple conditions, strengthen health system resilience and reduce inequalities. **Any primordial and primary prevention policy action must be framed in the broader context of "action on NCDs" rather than narrowly focusing on CVD alone**, so as to avoid fragmented messaging and stakeholder confusion, and maximise reach and impact.

Action should cover all key drivers of ill-health – environment, food systems, green healthcare, targeted social support and stronger regulation of commercial actors.

- **Healthier environments could prevent almost one quarter of the global disease burden** (WHO). Environmental determinants including air pollution, unsustainable agriculture and climate change have a major bi-directional relationship with diabetes, CVD and other NCDs, and healthcare systems themselves.
- **Air pollution is a major risk factor for CVD, diabetes and chronic respiratory diseases**, with particulate matter (PM) 2.5 µm linked to one fifth of global T2D cases.
- **Unsustainable agriculture** drive disease incidence[xvi], while heavy consumption of highly processed foods combined with food deserts and swamps also negatively affect people's ability to follow healthy diets, themselves a key driver of T2D and CVD[xvii].
- **Climate change's impact on healthcare systems has been growing.** The healthcare sector contributes about 5% of total global carbon emissions, of which care pathways account for 40%[xviii]. Preventing the development of diabetes-related complications reduces carbon emissions and their impact on climate change (it is estimated that the associated emissions for a PwD developing late-stage kidney disease and requiring dialysis are 70 times greater than those for a person managed with insulin[xix]).
- **The social determinants of health account for an estimated 30-55% of health outcomes.** They drive inequalities in NCD incidence and access to care. Adults in poor and near-poor households have the highest rates of diabetes and low-income populations are more likely to develop the condition.

[1] **Primordial prevention** focuses on stopping the development of risk factors for chronic diseases by addressing the root causes in social, economic and environmental conditions before disease even has a chance to develop. It is a population-wide strategy aimed at preventing the initial emergence of risk factors by promoting healthy environments, policies and lifestyles from a very young age, or even before birth.

[2] **Primary prevention** focuses on individuals or groups who are already exposed to risk factors. It aims to prevent the onset of disease by managing those existing risks.

- **Commercial determinants,** notably through the use of marketing strategies driving (over) consumption of unhealthy product and product composition, fuel consumption of unhealthy products and undermine prevention efforts[xx].

Primordial prevention must be accompanied by a strengthening of primary prevention, notably through improved public awareness-raising campaigns and education. As discussed earlier, public health messaging needs to be broad, across NCDs, and non-judgmental – acknowledging the complexity of NCDs, and the impact of social inequalities. Health education and awareness need to start early, and must address evolving changes across the life course.

Going hand-in-hand with this is a strengthening of primary and community care through appropriate investment in infrastructure, adequate staffing levels and upskilling of primary professionals. Primary/community care often represents the first point of contact with individuals at risk. Primary care professionals (PCPs) are best placed to identify people at risk, and help them address modifiable behavioural risk factors as well as undertake screening (see next section).

Recommendations

As part of the CVH Plan, we recommend adopting the following cross-cutting measures for **primordial and primary prevention** across all NCDs, including CVD and diabetes, by acting on shared risk factors.

- **Create health-enabling environments:** healthier urban design and transport, expanded green space, and cleaner air (aligned with best-practice guidelines) to make active, healthy choices the default.
- **Transform food systems end-to-end:** support sustainable agriculture; mandate clear front-of-pack labelling and reformulation targets; use fiscal levers (e.g., sugar-sweetened beverage taxes); and restrict marketing of high-fat, high-sugar, high-salt foods to children across all media, including digital.
- **Promote active living through infrastructure:** implement urban planning and transportation policy that prioritise safe walking and active living.
- **Address the socio-economic determinants of health and empower citizens:** improve affordability and availability of healthy options, strengthen health literacy and digital tools, and provide targeted social support so people can act on prevention
- **Green healthcare by design:** re-orient delivery models toward prevention, decarbonise care pathways and procurement, and cut waste, lowering disease risk and emissions together.
- **Start early in education settings:** embed non-stigmatising health education from early childhood and enable schools to lead as healthy living environments (nutrition standards, physical activity, mental wellbeing).
- **Equip primary and community care for risk reduction:** resource and upskill teams for brief behaviour interventions, opportunistic risk assessment/screening, and follow-up in integrated CVD–diabetes–CKD pathways.
- **Set measurable targets and track equity:** define a small set of indicators (e.g., $PM_{2.5}$ exposure, healthy-diet uptake, physical-activity adherence, smoking prevalence, hypertension and HbA1c checks) with equity breakdowns and publish an annual dashboard.
- **Enable implementation and accountability:** use EU instruments (European Semester, Recovery and Resilience Facility, the upcoming European Competitiveness Fund, ESF+, Cohesion Policy, Horizon Europe) and require culturally and settings-adapted national plans with milestones, transparent reporting and safeguards for conflicts of interest.

Pillar 2: Strong starts – early, comprehensive detection and screening across risks and diseases

CVD and diabetes often progress silently for years before being detected, **with symptoms emerging once complications have developed.** This delayed diagnosis (and treatment) drives higher healthcare costs, worsens health outcomes and quality of life, and amplifies long-term social and economic burdens.

Early detection and screening are therefore essential to lower the risk of disease progression or even reverse its trajectory. This requires not only identifying people at risk but also ensuring that screening translates into joined-up, timely action.

- **In Europe, more than one third of people currently living with diabetes remain undiagnosed**, and it is estimated that **diagnosis is often delayed by many years** (ranging from 2 to 12 years), due to the silent nature of the disease[xxixxii]. The high share of undiagnosed diabetes greatly contributes to the disease burden: the longer a person lives with the condition undiagnosed or inadequately managed, the more likely it is that they will develop life-altering and costly complications.
- **By the time of diagnosis, many already have developed one or more diabetes-related complications**, including half of them showing signs of cardiovascular complications[xxiii].
- Similarly, **an estimated 20-40% of heart attacks occur in people previously undiagnosed** with CVD[xxiv].
- **Recent years have witnessed a strong increase in early-onset T2D** (below the age of 40). Early onset is associated with a high risk of cardiovascular complications, and has a strongly negative societal impact given it often affects people in their working years. The disease in even more aggressive in younger age groups (10-19), when complications occur at a faster rate than for T1D[xxv].
- **Achieving tight glycaemic control early in the diabetes disease course**, which requires early diagnosis, is estimated to **reduce mortality and myocardial infarction risks**[xxvi].
- **Incidence of T2D in people diagnosed with intermediate hyperglycaemia receiving pharmacological interventions is lower than for people with no intervention**. A similar picture emerges for those receiving lifestyle modification vs no intervention[xxvii].

Given the interconnected nature of CVD, diabetes and obesity, screening strategies in undiagnosed individuals must address all shared risk factors such as weight (indicated by BMI measurements); blood glucose levels to identify both intermediate hyperglycaemia and T2D in the form of an HbA1C, cholesterol (LDL), blood pressure and tobacco use. **This must be followed by joined-up early action** – addressing both shared modifiable risk factors and each condition's specific requirements, be they in the form of further prevention or immediate treatment. **All people living with obesity, CVD or diabetes should also be screened systematically across all risk factors to detect co-morbidities early**.

Traditionally, early action for people detected with intermediate hyperglycaemia or T2D **has focused on self-management education, lifestyle modification programmes and where needed, medication** – all designed to support weight and blood glucose management, and active living. More recently, new therapeutic options, largely focused on promoting weight loss, have become available as have new technologies, notably in the form of continuous glucose monitors.

To guarantee effective screening, while reducing disparities in outcomes in the EU, a common framework for screening (defining what and who to screen) would provide a more efficient and consistent approach than population-wide programmes which have not, to date, demonstrated significant benefits[xxviii]. Screening tools such the one being developed in Finland, as part of the JACARDI project, can offer common solutions. WHO's Global Diabetes Targets suggests 80% of people with diabetes should be diagnosed. Given this level is quite close to reality in many EU countries, it needs to be adapted for the EU.

While screening/detection protocols are largely similar across most NCDs, condition-specific barriers must be addressed for maximum impact. **An example of this is the stigma and discrimination often experienced by PwD**, which hinders prevention campaigns and can discourage people from undergoing screening.

Crucially, screening and early action require a well-resourced strong primary care sector, integrating a multi-disciplinary team of skilled professionals, able not only to identify people at risk, but also initiate timely action.

Recommendations

As part of the CVH plan, we recommend that the following approaches be used, which acknowledges the connection between CVD and other chronic conditions:

- **Adopt Council Recommendations for targeted, integrated health checks including screening for all types of diabetes. These Recommendations would include:**
  - **Defining effective EU screening criteria/approaches/targets and promote systematic screening of people at risk** (joint or individual based on risk factors – e.g. genetic, auto-immune related, modifiable risk factors and pre-existing risks – e.g. intermediate hyperglycaemia/obesity).
  - **Developing a common screening tool across Europe with guidelines to avoid fragmented national standards and ensure common standards.**
  - **Making the data EHDS-ready by requiring interoperability, common terminologies and registry fields to enable benchmarking.**
  - **Promoting the exchange of best practices among national and international stakeholders.**
  - **Supporting the implementation of joint, integrated screening at the primary care level, across shared risk factors** (BMI, HbA1C, LDL, blood pressure, tobacco use), including beyond GP practices – community pharmacies, optometry/retinal services, workplaces, schools and mobile clinics for opportunistic checks.
  - **Calling for systematically screening people with an identified condition for the others** – e.g. obesity and diabetes, CVD event and diabetes, diabetes and CVD/other NCDs.
  - **Ensuring the inclusion of life-course priority cohorts:** pregnancy & postpartum (GDM screening + postpartum re-testing at 6–12 weeks and annually), early-onset T2D (<40), menopause, migrants/high-risk ethnic groups.
  - **Defining closed-loop standards:** time-to-referral and time-to-treatment targets (e.g., if positive screening, action within 30 days).

- **Support national level implementation:**
  - **Support the development and implementation of national NCD plans in all EU MS,** which include a risk reduction and screening component at a minimum for CVD and diabetes.
  - **Support MS in strengthening primary and community care.**

- **Address condition-specific barriers:**
  - **Complement the broad approach to shared risk factors with tailored policies** specifically targeting an improvement in the development of conditions associated with cardiovascular health – e.g. for diabetes, addressing stigma and discrimination.
  - **Develop a European Diabetes Code**, driven by PwD and backed up by scientific evidence. This code would represent a distinct approach to risk-reduction and management initiatives by educating PwD not just, as is often the case in traditional educational initiatives, to be able to better self-manage, but in empowering them to seek the care to which they are entitled.
  - **Co-design non-stigmatising communication with PwD**, providing language/cultural mediation and targeted outreach for underserved groups.

- **Promote further research in the benefits of screening and early interventions**, notably in the prevention of negative health outcomes in people with intermediate hyperglycaemia and ensure that research is conducted alongside any new interventions.

Pillar 3: No-one left behind – holistic care and disease-specific solutions

Preventing the onset of diabetes and obesity which are root causes of CVD is key to reducing the CVD burden. **Equally, for the 11 million PwD who will develop CVD, improved cardiovascular health outcomes are predicated on the timely, robust and comprehensive management of diabetes, rather than on CVD interventions alone.**

- **One third of PwD develop CVD**, largely due to suboptimal management of blood glucose and other risk factors including blood pressure and cholesterol.
- **The need for prompt action is illustrated by the PwD "legacy effect**". A study of over 100,000 people with T2D found that a delay of one year in achieving tight glycaemic control led to a significant increase in the risk of myocardial infarction, stroke, heart failure and composite cardiovascular events[xxix]. Other studies have discovered a similar "legacy effect" with blood pressure and lipid-lowering therapies.
- **Regrettably, up to half of PwD do not meet their treatment targets**[xxx] and/or develop diabetes-related complications[xxxixxxiixxxiii].

Diabetes is a highly complex, lifelong condition. Its management is hard, relentless and all-consuming. PwD and/or their relatives/carers need to take care of their diabetes seven days a week, 24 hours a day, to prevent the development of life-altering diabetes-related complications such as CVD, kidney disease, retinopathy and more. This is achieved through controlling glycaemic levels and managing co-morbidities as well as through preventative approaches aiming to prevent organ and tissue damage. Less visible and front-of-mind, but no less damaging, are mental health-related complications. Besides the mental stress of those potential long-term complications, the everyday routine of treating a life-long condition for a minimum of 20-30 and potentially, up to 80+years, can become overwhelming.

Managing diabetes (and CVD) effectively[xxxivxxxv] therefore requires:

- **Uninterrupted access to medicines and care** including psychological support to help manage glycaemia and prevent the development of, and/or treat, cardiovascular diseases and other conditions.
- **Access to supplies, tools and technologies** to support the administration of insulin and for glucose monitoring.
- **Self-management education** and overall health literacy.
- **The deployment of integrated, person-centred and personalised care**, incorporating not only the management of glycaemia but associated risk factors, comorbidities and diabetes-related complications.

Accessing medicines, technologies and quality care

Today, great inequalities persist within and between EU countries in what is the cornerstone of effective diabetes management – uninterrupted, affordable access to the required diabetes medicines, technologies, supplies and care. Barriers to adequate access are numerous:

- **Diagnosis and access to the right treatment at the right time and place** as well as regular reassessments and screening for complications are, for example, often adversely affected by the current shortage of HCPs or lack of sufficient knowledge. Treatment intensification is often undertaken too late.

- **Delayed availability of innovation.** New diabetes medicines and technologies only become available to PwD months later in some EU countries than in others. This is especially prevalent for newer medicines such as SGLT-2s (which have cardio-renal protection properties) and GLP-1s (which offer significant improvements in glucose management for people living with T2D who have not achieved their blood glucose targets as well as promoting weight loss).
- **Unequal access to technologies.** Newer technologies such as Continuous Glucose Monitors (CGMs), insulin pumps, and automated insulin delivery (AID) systems remain unevenly available, despite the role they play in improving health outcomes[xxxvi].
- **Coverage gaps.** While most EU countries have achieved universal health coverage, the range of medicines and the scope of reimbursement varies considerably, creating significant disparities.

- A study that followed over 145,000 people living with T1D found that the use of CGMs led to a 43% reduction in severe hypoglycaemia episodes and a 29% reduction in life-threatening diabetic ketoacidosis cases[xxxvii].
- Another study focusing on adults with T1D on multiple daily injections also demonstrated a significant reduction in HbA1c levels[xxxviii].

Empowering PwD

Diabetes is a condition essentially managed by those living with it. In addition to the right medicines, technologies and care, **structured comprehensive education is required for optimal diabetes management and should be provided** at the time of diagnosis and on an ongoing basis thereafter**,** although in practice, it is often neglected or lacking in scope.

PwD need to understand their condition to take an active role in their care; make informed decisions together with their healthcare team; and have the motivation to keep up with the round-the clock management of their condition over many years.

Self-management education and access to care rely on adequate (digital) health literacy. For those **who cannot take advantage of it, effective disease management is an insurmountably complex task.** A low degree of health literacy has been associated with poorer diabetes management and health outcomes.[xxxixxlxli] Conversely, higher health literacy has been associated with better glycaemic control.[xlii]

HCP self-management training has also been shown to be effective in ensuring better uptake, implementation and effectiveness of self-management programmes but is rarely offered as a matter of policy[xliii].

Towards integrated, person-centred and personalised care

People living with diabetes and/or CVD often live with other MLTCs, meaning they require access to a variety of HCPs – general practitioners (GPs), endocrinologists and diabetologists, diabetes specialist nurses, dieticians, exercise physiologists, psychologists, and others.

Yet, for the most part, healthcare systems are not optimally set up to manage complex, chronic diseases, nor are they necessarily designed with people's needs in mind. **Rather, they are often organised into silos according to specialities/care levels.** This fragmentation constrains access to the right expertise, hinders the effectiveness of the care received and generates higher preventable costs, resulting from delayed interventions and the development of complications, a burden reflected in avoidable hospital admissions, longer stays and escalating resource pressures.

Adapting to the needs of people with chronic diseases and potentially LTMCs **requires healthcare systems to** take a radically different perspective and **adopt an integrated, coordinated, personalised, and person-centred rather than disease-oriented approach, with strong primary care systems.**

Strengthening primary care systems requires several coordinated actions, including: adequate funding and staffing; organisational reforms to enable coordination and integration across services and to expand the role of primary care professionals (PCPs) such as nurses, pharmacists and community health workers who can help prevent and manage chronic conditions; community engagement to co-design health service and care delivery approaches that are tailored to people's needs and the adoption of digital health tools such as electronic health records (EHRs)and telemedicine to provide more efficient and person-centred care.

Recommendations

As part of the CVH plan, we recommend that the following approaches be used:

Transversal actions supporting CVD, diabetes and other conditions

Better disease management

- **Define a set of KPIs to measure CVD outcomes which also integrates diabetes KPIs and outcomes.** This will help identify diabetes prevention and management gaps, hindering improvement in CVH outcomes.
- **Foster the adoption at national level of the latest scientific guidelines** both on the management of CVD and on that of diabetes and, as relevant, integrate them.
- **Support education and upskilling of primary care professionals,** notably in terms of knowledge and implementation of the latest scientific guidelines.
- **Address HCPs shortages**; **competing priorities** and administrative tasks which limit time spent with patients; **limited access to decision-making tools** that could help HCPs tailor care to individual needs more easily and effective; **outdated guidelines** that prevent them from adopting the latest, most effective treatments; **and regulatory barriers** such as slow approval and reimbursement processes of new therapies, medicines and technologies.
- Support the creation of a EU-wide diabetes health literacy programme to reduce stigma and improve uptake of technologies and medicines.
- **Mental health as standard.** Routine screening for depression/anxiety/diabetes distress with reimbursed referral pathways.
- **Equity KPIs & public dashboard.** Track outcomes with equity breakdowns (sex, age, income, migration status) and publish annually.

Recommendations (Cont'd)

Health system organisation

- **Support an extensive review and overhaul of national models of care with a focus on investment in primary care and healthcare system digitalisation**, guided by the European Semester, to reduce inequalities across EU MS and improve the resilience of EU health systems.
- **Task-sharing & multi-disciplinary team models.** Expand roles for diabetes nurses, pharmacists and community health workers.
- **Promote the development and adoption of person-centred, integrated care pathways – at individual disease level and across other MLTCs, adapted to each MS national requirements.**

Access to medicines, technologies, education and care

- **Foster more transparency and explore greater collaboration and common EU approaches to medicines development and procurement** beyond critical medicines.
- **Assess options relating to the pricing of medicines across EU countries.**
- **Encourage greater competition and product substitution** wherever appropriate, ensuring full transparency for people needing them and their HCPs.
- **Support broader engagement between the EU, individual MS, health systems and the private sector** (providers and payers) to ensure access to innovation that will benefit citizens and healthcare systems.
- **Support MS in implementing effective financing** schemes and best-practice management.
- Support the use of EU-level joint procurement where appropriate to reduce access delays and cost gaps (value-based procurement)
- **Timely access & shortage resilience.** Horizon scanning, early-warning/shortage monitoring, fast-track HTA/reimbursement for cardio-renal protective therapies and essential technologies.

Disease-specific action for diabetes

- **Develop frameworks and conditions to guarantee early, affordable and continued access to all required diabetes medicines, supplies, technologies and care,** including disease-modifying medicines and technologies and psychological support.
- **Perform cost-effectiveness assessments** to build evidence on the long-term health and economic benefits of reimbursing innovative treatments and technologies.
- **Integrate the broader use of real-world evidence** and patient-reported **outcomes in reimbursement decisions.**
- **Foster best-practice sharing across MS on integrating self-management training** and the training of HCPs in supporting and motivating PwD within an integrated system of care.
- **Offer adequate access to self-management education**, at diagnosis and through the life course.
- **Support the integration within national health systems of peer-to-peer support programmes** as part of the diabetes education programme
- **Foster harmonisation across the EU of the role and scope of specialist diabetes nurses**, for example, the ability to prescribe diabetes medicines, and promote their deployment as part of multi-disciplinary teams.

Powering change –research, innovation and empowerment

Action on three areas is required to advance the implementation of the goals outlined in the three pillars:

1. Accelerating investment in basic, translational and behavioural research
2. Digitalising healthcare systems and facilitating the adoption of innovation
3. Empowering people with lived experience of CVD/Diabetes and other NCDs

1. Accelerating Research

Looking at the two closely related conditions – diabetes and CVD – the setup of an **EU Cardiovascular and Diabetes Research Mission with adequate funding**, complemented by a **European Cardiovascular and Diabetes Health Observatory**, would create the conditions for transformative change.

There currently exist a number of unmet needs for both conditions that would be best addressed through a dedicated **Cardiovascular and Diabetes Research Mission,** along the lines of that developed as part of BECA. The **Research Mission** would focus on basic science into the mechanisms and the development of more targeted treatment as well as translational science and behavioural insights. The research would also explore integrated care models including the development of guidelines and best practices surrounding disease prevention and the management of people living with co-morbidities, for example people living with CVD and diabetes.

Key unmet diabetes needs supporting better CVD prevention [xliv]

- **Prevention of T1D**. Although there was a major breakthrough in 2022 with a new drug able to delay the onset of Stage 3 T1D, more research is needed to broaden the range of preventive agents and address the side effects of the existing treatment.
- **Prevention and Remission of T2D**. Lifestyle modification can be effective but are difficult to achieve. Some pharmacological interventions, potentially associated with lifestyle modifications, can delay the onset of T2D and potentially promote its remission, thereby lowering the risk of CVD. More research is required in the most effective approaches and ensuring remission sustainability. Gestational diabetes (GDM) is also a key risk factor for T2D, but effective prevention of GDM and optimal follow-up screening strategies still need to be better explored as does the evaluation of social interventions.
- **Cure for T1D and T2D**. A cure remains the ultimate unmet need, which could restore the body's ability to produce insulin naturally, or address insulin resistance and the progressive decline in insulin-producing cells and beta-cell function and mass.
- **Diabetes management**. Despite advances, achieving glycaemic target goals remain difficult. Alternative insulin administration routes, such as the intestinal or oral route, need to be further evaluated and expanded. More research also needs to be conducted on agents offering cardio-renal protection for people living with T1D. New classes of therapeutic agents for T2D, with organ-protection properties, also require further investigation to determine optimal usage and identify specific populations that would benefit the most from these treatments.

A European Cardiovascular and Diabetes Health Observatory would serve as an extensive repository of best practices and approaches. It would also seek to understand which specific interventions (medicines, tools, approaches) lead to best possible health outcomes. It would identify the most useful indicators and outcome measures to track at a European level, to be able to best influence diabetes and CVD prevention, management and care, in line with the European Health Data Space.

A consensus on these indicators and outcome measures would be sought by engaging all key stakeholders (HCPs, policymakers, healthcare systems, people with lived experience, etc.). For example, the Observatory would integrate basic indicators (e.g. HbA1C, LDL measures, individual complications in PwD) as well as more in-depth data such as the type and number of interventions (e.g. type of behavioural change programme used in prevention) alongside a diabetes/integrated care pathway (from prevention through to complications management), health outcomes and costs.

One key benefit would be to focus on what works. The current data gaps hinder the analysis of what is really effective in diabetes/CVD prevention, diagnosis, management and care both at individual and community levels. Larger, comparable data sets might help more precisely and rapidly identify effective and impactful policies across systems, accounting for differing health system structures and approaches. The availability of this type of data would foster the development of the most effective/required types of interventions and provide the tools for the evaluation of the quality of the interventions provided.

By engaging in cutting-edge research, the **EU Cardiovascular and Diabetes Research Mission would support the EU's ambition to boost competitiveness and economic prosperity, and foster scientific and industrial leadership.**

A European Cardiovascular and Diabetes Observatory would also empower EU citizens to make more informed choices on how best to manage their health by giving them access to their own data.

Recommendations

As part of the CVH plan, we recommend that the following approaches be used:

- **Launch a EU Cardiovascular and Diabetes Research Mission** backed by a **European Cardiovascular and Diabetes Health Observatory**, in line with the European Health Data Space.
- **Allocate dedicated funding** for diabetes and diabetes/CVD research through across all EU instruments, especially Horizon Europe and IHI.
- **Mandate inclusive, diverse and representative research and co-design with people with lived experience** at all stages of research – from the identification and prioritisation of research objectives through to the assessment and evaluation of the value of the final research outcomes.
- **Create EU-backed testbeds/sandboxes** in primary/community care for integrated CVD–diabetes pathways (digital risk tools, e-referrals, remote monitoring).
- **Boost research and innovation, as well as the capacity and knowledge of health technology assessment organisations and notified bodies** to accelerate the development of novel treatments and technologies that address unmet needs for PwD.

2. Digitalising healthcare systems and facilitating the adoption of innovation

The deployment and scaling up of innovation and healthcare system digitalisation in the EU holds the potential for a major advance in diabetes and cardiovascular prevention and improvement in health outcomes. Digitalisation and the broader use of data sets including those based on real-world evidence, supported by big data analytics and artificial intelligence (AI), and based on the creation and implementation of national registries and electronic health records interoperable with the European Health Data Space, can help:

- **Improve prevention, management and early intervention –** Big data can help identify people who have not been diagnosed, clearly identify their specific individual characteristics and determine when action is most needed.
- **Move towards personalised medicine –** AI including machine learning, deep learning and artificial neural networks can analyse large data sets from a variety of sources, individually tailoring prevention, diagnosis and treatment.
- **Strengthen decision-making – AI-driven decision-support tools** can help **HCPs and citizens adapt treatments** through the identification and prediction of patterns for better outcomes**.**
- **Promote advanced virtual models – Complex care platforms can combine, display and analyse information from different devices** (blood glucose meters, CGM devices, insulin pumps, and even fitness trackers) **and other tools** (nutrition and exercise diaries). These platforms may also include other functionalities such as education material and support and can also be linked to telemedicine and telemonitoring strategies. They offer a number of advantages over traditional care such as creating more space for discussion (data can be analysed ahead of time); more flexibility in the schedule and format of consultations; alert mechanisms, e.g. in the case of diabetes for hypo or hyperglycaemia and reducing the disease burden.

All of these support the resilience of healthcare systems through better evaluation of healthcare interventions and improved planning of healthcare resources. **To deliver these advances at scale, a European Accelerator could be established to help deploy** the most advanced and innovative prevention and education initiatives, treatment and care practices across EU healthcare systems, with a focus on new technologies and digital solutions by solutions' type (e.g. digital therapeutics, devices) and/or one or more types of healthcare systems (innovative care pathways, digital tools, AI-supported population health management, decision-support systems for HCPs, etc.). Action would build on three pillars:

- bringing together relevant expertise in the field of digital therapies and digital services (e.g. people with lived experience, HCPs from primary to specialist care, scientists, and researchers across a full range of specialities, industry, and other key stakeholders),
- reviewing best practices and developments in Europe and elsewhere and,
- curating novel developments and practices for deployment across European MS.

Recommendations

As part of the CVH plan, we recommend that the following approaches be used:

- **Support the development of an EU-wide Accelerator Programme** focused on diabetes and co-morbidities.
- **Invest into the digitalisation of health services in Europe** to contribute to improved resilience of EU health systems, also supported by EU structural funds.
- **Foster the adoption of innovation and advanced therapies** through improved monitoring and data collection shared across EU countries.
- **Set European and national coverage** targets for improving diabetes-related outcomes and ensure the data system captures this across the patient care pathways.
- **Encourage the collection of data across the EU** around a commonly-agreed set of indicators, including PROMs/PREMs.
- **Ensure that all relevant issues relating to the increased digitalisation and use of data –** ethics, privacy and liability consideration, and their integration in the process of care delivery, are addressed in the set-up, further development and usage of European and national data frameworks and further digitalisation of health services.
- **Require human-in-the-loop AI with bias/performance audits and post-market monitoring.**
- **Ensure digital inclusion** (accessibility, low-bandwidth/offline options, non-digital alternatives).

3. Empowering people with lived experience of CVD/Diabetes and other NCDs

Transforming health journeys is impossible without the full engagement of those living them. People with lived experience must be given a voice in everything that matters to them – from defining research needs to designing clinical trial protocols, developing and implementing awareness and education campaigns, evaluating interventions, medicines and medical devices and informing reimbursement decisions, and participating as equal partner in every care decision.

Delivering meaningful change requires a comprehensive framework that ensures:

- **Improved awareness and education**: understanding diabetes and CVD; the key principles of management; and how the healthcare system works.
- **Access to the required tools:** web portals, telemedicine, digital education services and digital therapeutics that are grounded in the individual patient experience.
- **Personalised information and advice:** algorithms tailored to the individual, and peer-to-peer support.
- **Integrating new systems into established healthcare systems**, pathways and payment modalities.

Only through such concerted and comprehensive engagement and involvement can a meaningful impact be made for individuals and the society at large.

Recommendations

As part of the CVH plan, we recommend that the following approaches be used for both diabetes and CVD:

- **Establish a common EU framework** for outcome measures that matter most to PwD/people living with CVD. This should guide research and policy, by allowing for disease monitoring and risk assessments, identification and spread of best practices in health and social care; and strengthening the assessment of health and social care systems performance.
- **Representative co-creation**: require paid participation of people with lived experience in EU/MS committees, with diversity targets (sex, age, SES, migration status, rural/urban) and minimum seats in governance of the CVH Plan and national roll-outs including evaluation of its implementation.
- **Ensure meaningful engagement with people with lived experience in all EU consultation processes,** definition and implementation of new work programmes and policies and other initiatives at the EU level such as Horizon Europe and within MS.
- **Community outreach & microgrants (guaranteed EU funding):** Ring-fence multi-year funding for NGOs and community groups under the current EU4Health programme and the next MFF, with simplified access for small CSOs, to co-design culturally adapted programmes (including language mediation) for underserved groups, tied to clear outcome and equity targets.

Conclusion

Europe will not deliver better cardiovascular outcomes without treating diabetes prevention and robust diabetes management as core levers of the EU CVH Plan. The evidence is clear: CVD, diabetes, obesity and CKD form a single cardio-renal-metabolic nexus. The Plan must therefore move decisively from siloed programmes to a life-course, health-in-all-policies approach that tackles primordial and primary prevention (Pillar 1), embeds early, integrated detection and screening (Pillar 2), and guarantees timely, person-centred, treat-to-target care with mental-health support and access to effective medicines and technologies (Pillar 3).

This transformation requires hard commitments, not aspirations. Set measurable, time-bound targets (with equity breakdowns) and publish an annual public dashboard. Make data EHDS-ready by default (open standards, interoperability, federated analytics). Establish an EU Cardiovascular & Diabetes Research Mission, backed by a European Cardiovascular and Diabetes Health Observatory, to generate and scale what works, and pair them with an innovation accelerator and testbeds so proven digital tools, decision aids and remote-care models reach primary and community care fast, safely, ethically and with human-in-the-loop oversight.

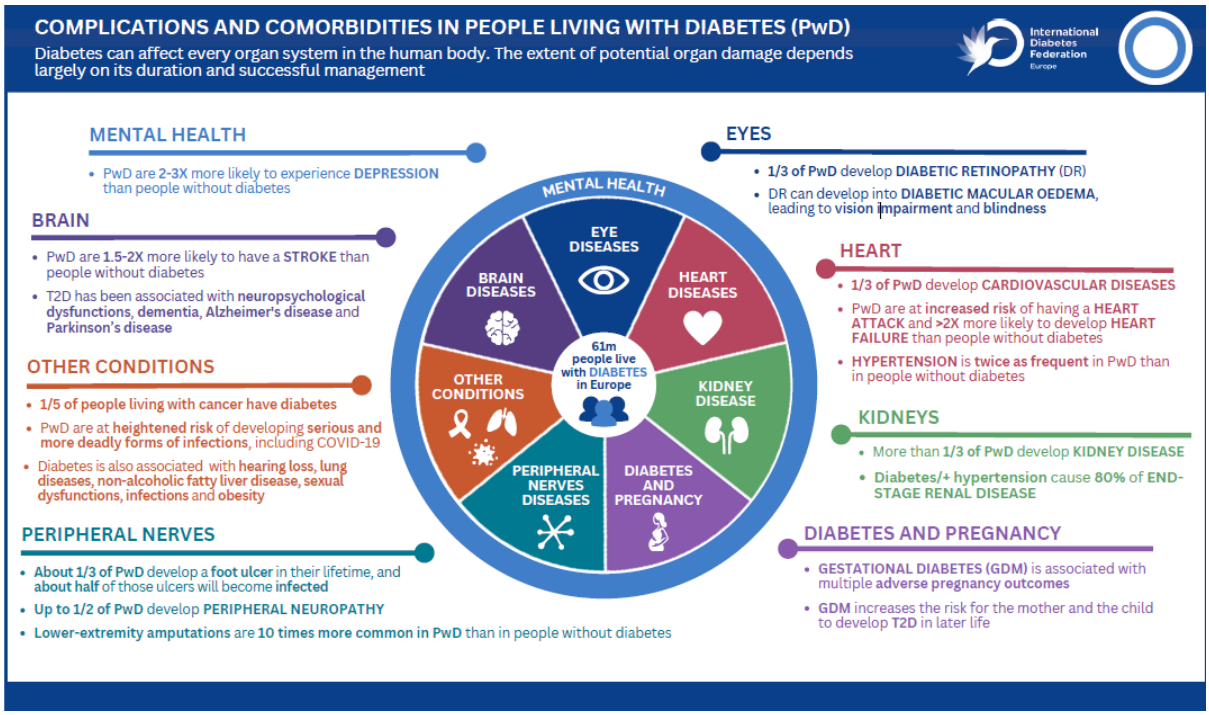
Implementation must be financed and governed. Ring-fence multi-year funding, including for NGOs and community partners, through EU4Health and the next MFF, and drive adoption via the European Semester, RRF, and aligned HTA/regulatory pathways (including coverage-with-evidence-development). Require national, culturally adapted plans and guaranteed access to structured education, navigation and digital inclusion so no one is excluded.

If the EU commits to these actions (clear targets, interoperable data, empowered people, and secured funding), it can cut avoidable deaths and complications, strengthen resilience and competitiveness, and ensure that no one is left behind.

Appendix 1 - *What is diabetes and how does it affect other non-communicable diseases?*

There are many types of diabetes, of which Type 1 and Type 2 are the most common[xlv]. Irrespective of its type, the main consequence of diabetes (whether caused by the destruction of insulin-producing cells, by the body's inability to produce enough insulin, or the cells' inability to use insulin properly) is high blood glucose.

Beyond the impact on NCDs of other risk factors such as overweight and obesity, high blood pressure and cholesterol, **high blood glucose directly damages small and large blood vessels**, causing macrovascular and microvascular complications[xlvi]. **Once the complications of hyperglycaemia have developed, they are irreversible.**



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