

“Reducing the burden of non-communicable diseases by providing a multidisciplinary lifestyle treatment intervention for type 2 diabetes”

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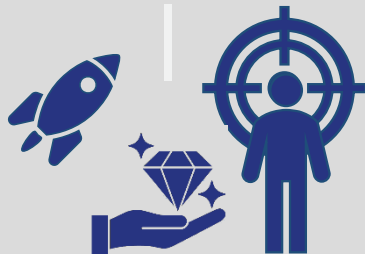


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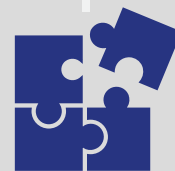


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What is Type 2 Diabetes?

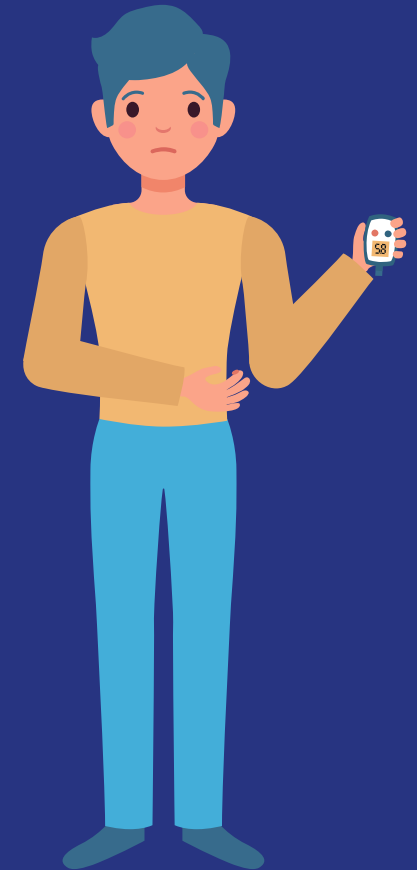
What is the Care4Diabetes initiative?

Care4Diabetes Joint Action (C4D):

Addressing the Rising Prevalence of Type 2 Diabetes in Europe

Type 2 Diabetes (T2D) is a growing health concern across Europe and is primarily attributed to increasing rates of overweight and obesity, unhealthy diets, ageing, and physical inactivity. If not managed properly, T2D can lead to serious complications. T2D is also associated with high healthcare costs and represents a significant proportion of global health expenditure. Appropriate interventions are needed to reduce the burden of T2D and its associated complications.

The C4DJA initiative aims to transfer and implement an intervention to improve the quality of life of people with T2D. It will address this growing issue by promoting evidence-based policies and actions for the cost-effective management of T2D, while improving the efficiency of health investments.



Executive Summary

The main objective of the C4D is to improve and foster health in the EU Member States (MS) by reducing the burden of T2D and related risk factors, both at societal and personal level, through effective lifestyle treatment programs.

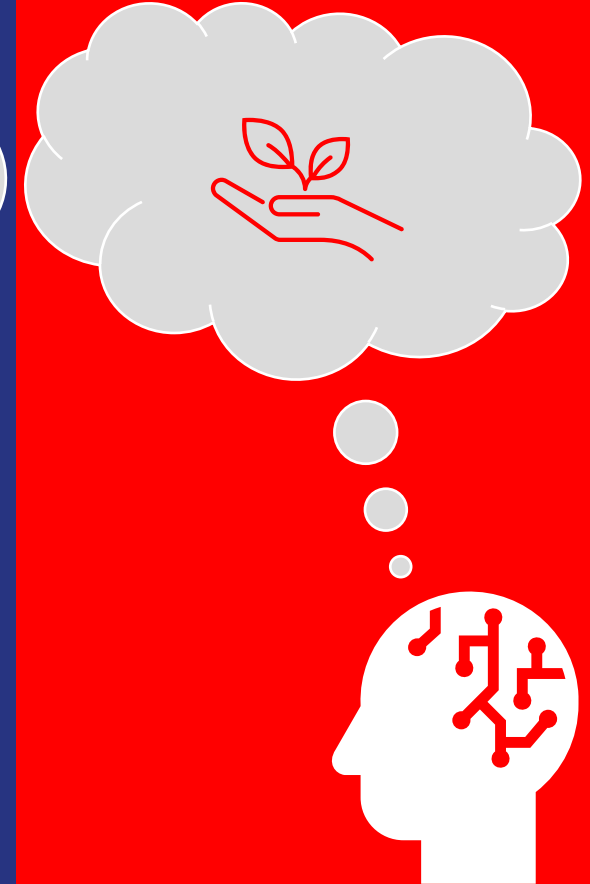
The expected outcomes are to increase people's health and quality of life, reduce healthcare associated costs, and promote capacity building of health systems towards more innovative and integrated T2D interventions based on people's lifestyle changes.

The C4D will be aimed at transferring and implementing an identified best practice across 12 MS. The best practice is an evidence-based, reimbursed Dutch lifestyle treatment program for T2D, named **"Reverse Diabetes2Now"**. Its rationale lies in the promotion of lifestyle changes that can bring improved quality of life in people with T2D and healthier blood glucose levels with potential lower medication consumption.

Fixed Mindset



Growth Mindset



Background and Rationale

C4D is a Joint Action cofounded by the European Health and Digital Executive Agency (HADEA) in the framework of the EU4Health Program. The EU4Health Program is one of the largest European Union's (EU) health programs and aims to address the resilience of European healthcare systems and to contribute to a healthier Europe. The C4D responds to the EU4H 2021-2027 2nd Wave call and answers the topic "Direct grants to Member States' authorities: implementation of best practices and research results on prevention of non-communicable diseases and risk factors". Furthermore, to strengthen strategies for the treatment of diabetes and to enhance sharing best practice among MS, the EU4H Program established a JA grant specifically under the thematic area of diabetes. That is the C4D.

Non-communicable diseases (NCDs), such as T2D, represent major causes of disability, ill-health, health-related retirement, and premature death in the EU and cause a considerable social and economic impact. According to the International Diabetes Federation (IDF), in 2021, approximately 537M adults were living with diabetes worldwide, and there were about 60M in Europe.

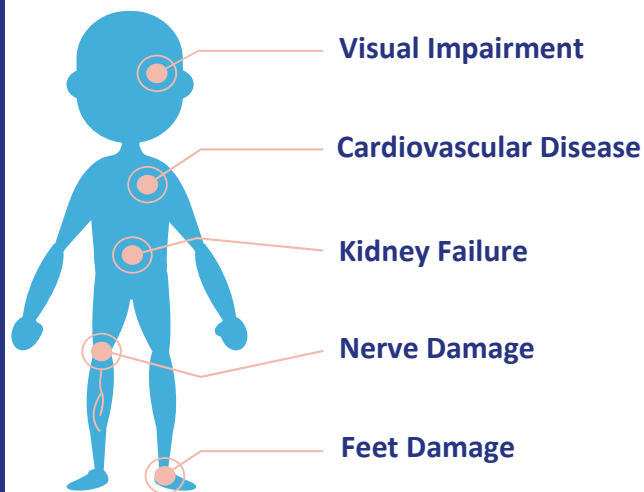
In the frame of the NCDs, **Diabetes Mellitus** (DM) is a chronic metabolic disease characterized by high levels of glucose in the blood. There are different types of diabetes resulting from defects in insulin secretion, insulin action or both, the hormone that regulates the level of blood sugar. T2D is the most common form accounting for 90% of all cases of diabetes. It typically appears at adult age, even if in the last years its prevalence has been increasing in younger people.

Prevalence of T2D is increasing in Europe. If diabetes is not managed correctly, people are likely to become progressively ill and debilitated. The overall risk of dying among people with T2D is at least, double the risk of their healthy peers. Over time, the disease can damage the heart, blood vessels, kidneys, eyes, and nerves. Overall, diabetes leads to high costs sustained by governments.

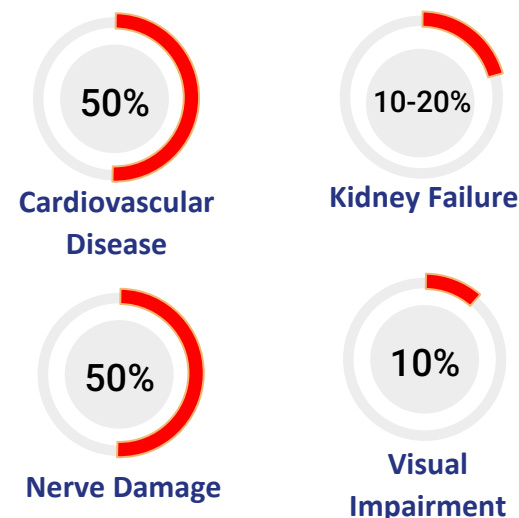
IDF numbers: <https://www.idf.org/aboutdiabetes/what-is-diabetes/facts-figures.html>

Percentage % about complications: <https://www.idf.org/aboutdiabetes/what-is-diabetes/facts-figures.html>

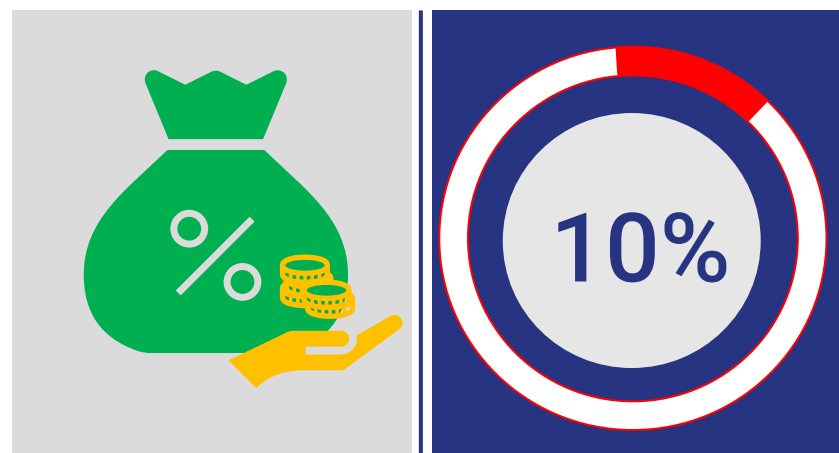
Affects of Diabetes



Damage Percentages



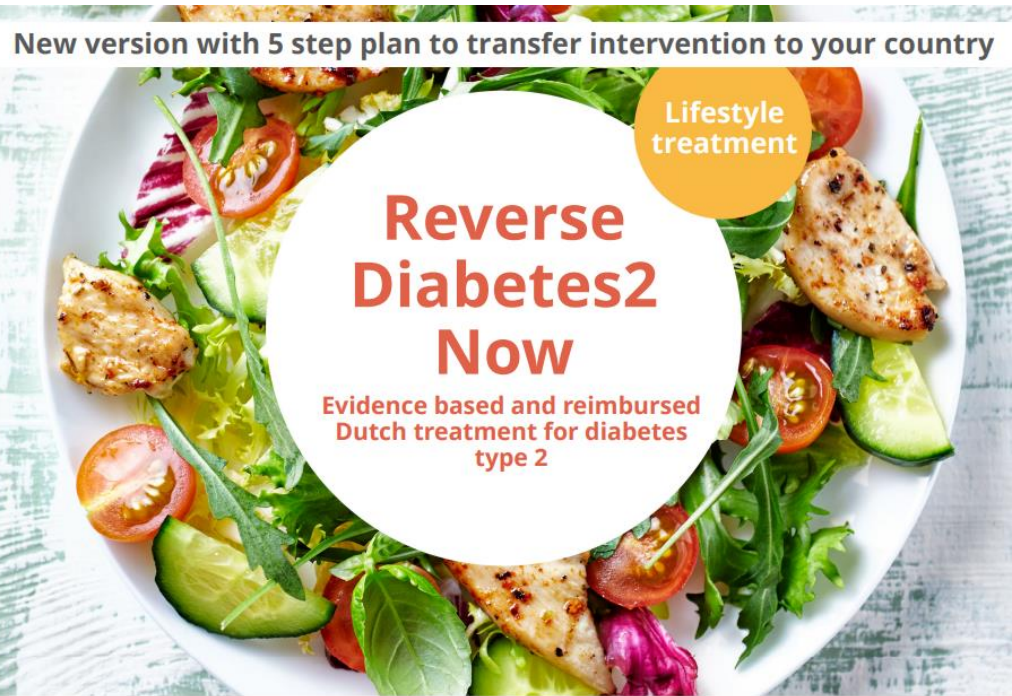
Global Health Expenditure



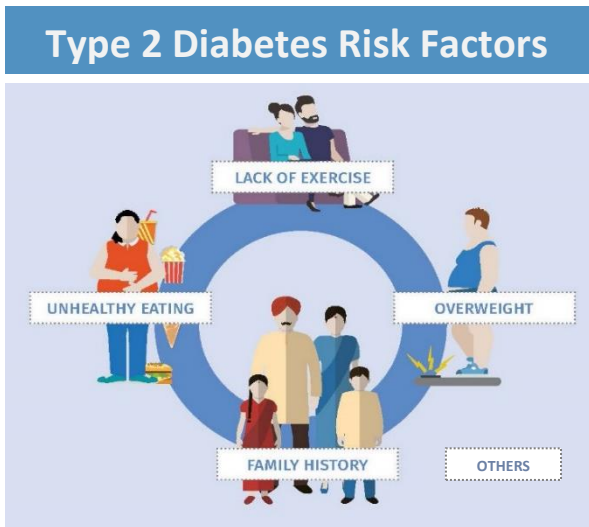
Appropriate interventions are indispensable measures to reduce the health and economic burden of T2D and its associated complications. **A cornerstone for effective T2D management is a healthy lifestyle**, which includes a balanced diet, regular physical activity, not smoking, maintaining a healthy body weight, good mental health, including good sleep habits and relaxation techniques practices. Individual responsibility for T2D management is important, but governments and societies must also play their part.

The selected best practice for the C4D is the REVERSE DIABETES2NOW experience. It is an evidence-based and reimbursed Dutch lifestyle treatment and training program for T2D, developed and promoted by the Dutch non-profit organization VOEDING LEEFT, that will support the consortium during the execution of the C4DJA. The rationale behind this program lies in the implementation of effective lifestyle treatment and training programs, which can bring improved quality of life in people with T2D and healthier blood glucose levels with potential lower medication consumption.

Accordingly, **the C4D will support the transfer and implementation of this best practice via pilot actions in 12 EU MS.** Multidisciplinary teams of healthcare professionals will be involved from all implementing countries (including program coordinators, general practitioners/ internists, nurses, dieticians, and lifestyle coaches/ psychologists, depending on local circumstances).



Voeding Leeft®



Healthy lifestyle:
[https://doi.org/10.1016/S2213-8587\(20\)30117-0](https://doi.org/10.1016/S2213-8587(20)30117-0)
<https://doi.org/10.1007/s00394-019-02147-6>

About ReverseDiabetes2Now:
<https://doi.org/10.1136/bmjnph-2018-000012>
<https://doi.org/10.1136/bmjnph-2020-000081>
<https://reversediabetes2now.com/healthcare-professionals/>
https://health.ec.europa.eu/system/files/2021-07/ev_20210630_co05_en_0.pdf

Type 2 Diabetes Risk Factors:
<https://www.idf.org/aboutdiabetes/type-2-diabetes.html>



C4D Purposes, Values and Intentions

1. Promote Healthy Lifestyle Choices:

Governments and societies must encourage individuals to make healthy lifestyle choices. The policy environment should promote and nudge people towards healthy habits, making healthy choices easier and automatic.

The C4D initiative can play an essential role in raising awareness and acceptance of lifestyle interventions to prevent complications derived from T2D.

2. Strengthen Healthcare Systems:

Healthcare systems must be strengthened to manage the rising prevalence of T2D effectively. MS should take inspiration from the C4D pilot actions and implement new evidence-based policies and actions to empower participants and promote health promotion in people with T2D.

The C4D initiative aims to promote cost-effective management of the disease while improving the efficiency of health investments.

3. Support Cross-National Collaboration:

It is essential to engage groups of interest, promote integration, and ensure sustainability of approaches to achieve a high-level impact of existing and future EU Health strategies.

The C4D initiative aims to support cross-national collaboration of MS implementers together with EU decision-makers.

4. Provide Guidelines for Transferability:

These guidelines will help national competent authorities to analyze the proof-of-concept case studies and extend and scale up the experience at their national/ regional levels.

The results and conclusions from the C4D pilot actions should be used to produce guidelines for transferability of the intervention in the EU to guide next generation initiatives for diabetes.

5. Promote Innovation and Research:

There is a need to promote innovation and research to develop new evidence-based policies and actions for the cost-effective management of T2D.

The C4D initiative should encourage MS to invest in research and innovation to address the growing burden of T2D in Europe.

6. C4D: Ongoing Evaluation to Ensure Sustainability:

A cornerstone of the C4D revolves around monitoring and evaluation of the pilot actions' evolution and adaptation and the results and definition of pathways for long-term vision of the project and sustainability.

The C4D initiative aims to come up with final recommendations and future action plans for MS after the JA period.



C4D in Figures

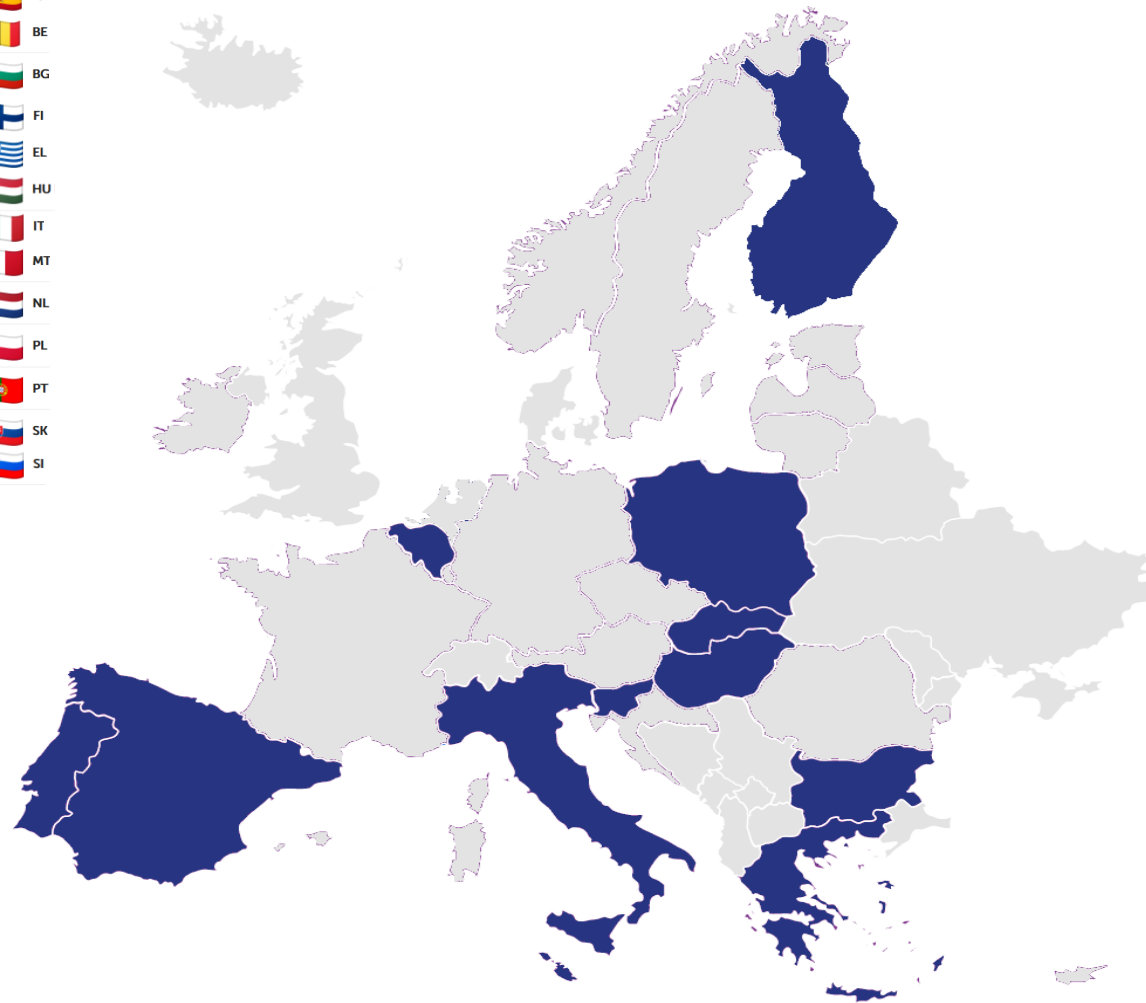
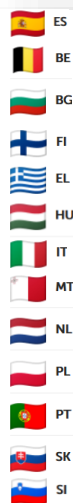
This project will target the population affected by T2D across **12 EU MS**, involving at least **860 participants with T2D**.

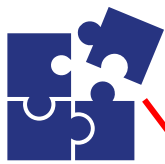
The project includes **18 affiliated entities and 1 associated partner** from 12 different EU MS, ensuring a wide geographical coverage and bringing in different cultural and language groups (in total 30 partners).

Up to 120 healthcare professionals, organized in multidisciplinary local teams, will be trained, with potential for further reach-out as several countries plan to train additional personnel needed for local pilot actions.

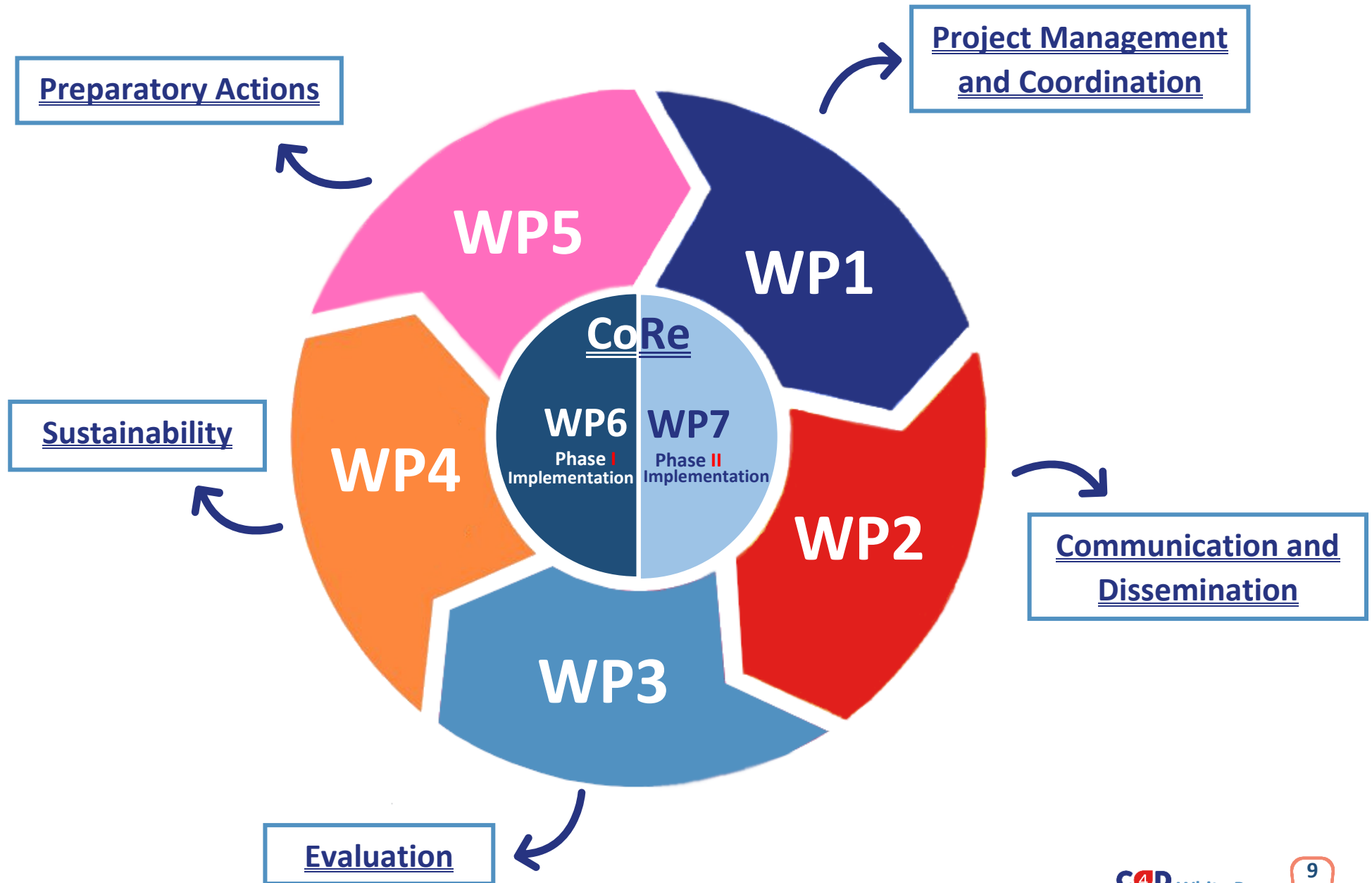
The **project duration** is **36 months**, from **1 February 2023** till **31 January 2026** (Granting Authority: HADEA/EU).

PARTNERS





C4D Work Packages Structure





How does it work?

The C4D development includes a preparatory phase and 2 subsequent phases where participants acquire new concepts and ensure their new habits' adoption: the immersion and the follow-up phases, respectively.

In the **preparatory phase**, the knowledge necessary for the development of pilot projects is gained. Professionals are trained through a training of trainers' process, where necessary materials and guidelines are received, to ensure that it is faithfully adapted to the original practice.

The **immersion phase** involves professionals already trained to train groups of people with T2D to improve their management of the disease through face-to-face or online sessions.

The **follow-up phase** ensures the durability of acquired habits with nutritional support, coaching, reinforcement of peer network bonds, support, and follow-up.

The training is continuously monitored for improvement, and satisfaction. Opinions are collected from participants and healthcare professionals for evaluation and fine-tuning purposes.

The project encourages interaction between professionals and participants through social networks and digital platforms, and a **virtual community** will be created to offer support, information, and a means of exchanging experiences.

The project also uses other means of dissemination and communication to provide visibility and support to users, participating entities, and other stakeholders.





How can you participate in the C4D Study ?

Only people with T2D can participate in the C4D Study.

Participation in the study is **voluntary** and **free**: strong motivation to make lifestyle changes.

Inclusion Criteria

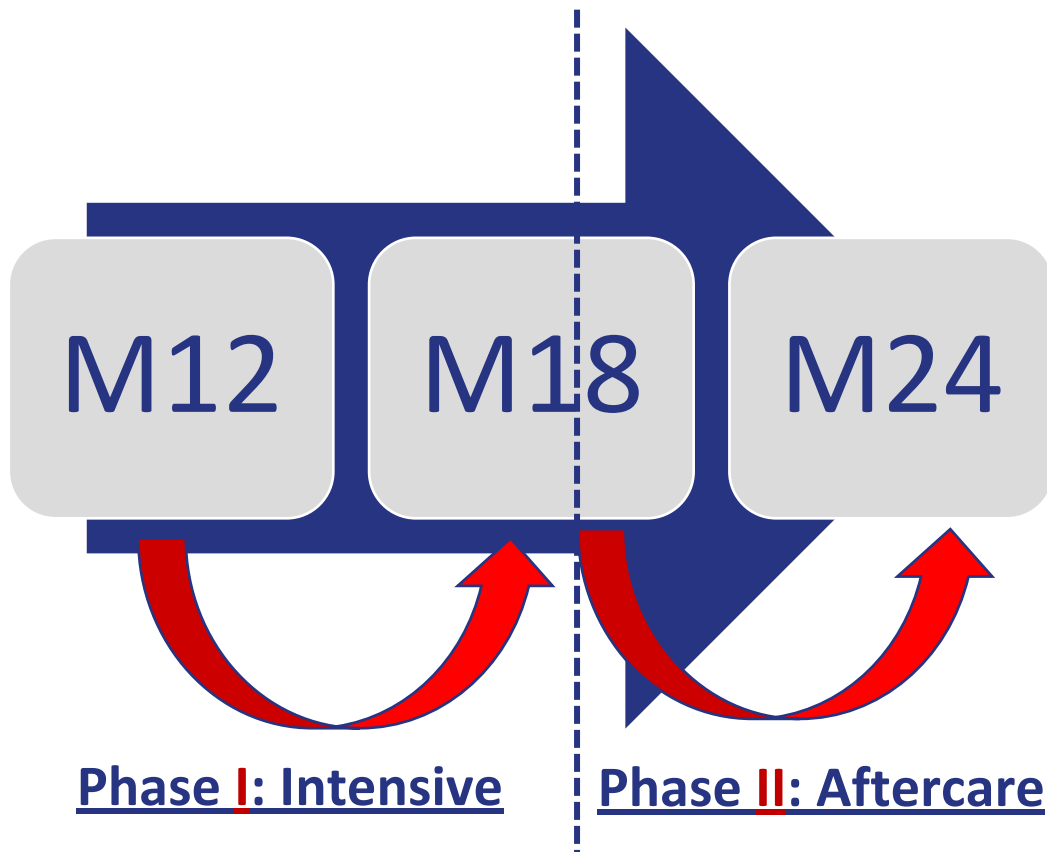
- ✓ **Being diagnosed with T2D** [treated with oral or injectable medication, including insulin]
- ✓ **Being above 20 and under 80 years of age** (age: 20-80 years)
- ✓ **Having a body mass index (BMI) between 25 and 40** (BMI: 25-40)
- ✓ **Not having severe comorbidities**
- ✓ **Being able to measure their glycemic levels** (at home)
- ✓ **Having a minimum digital tools management ability** (access to internet etc.)
- ✓ **Motivated for lifestyle change**

- × **Having severe chronic obstructive pulmonary disease (COPD)**
- × **Having undergone bariatric surgery**
- × **Having an eating disorder**
- × **Having kidney failure**
- × **Having heart failure**
- × **For women, being pregnant**



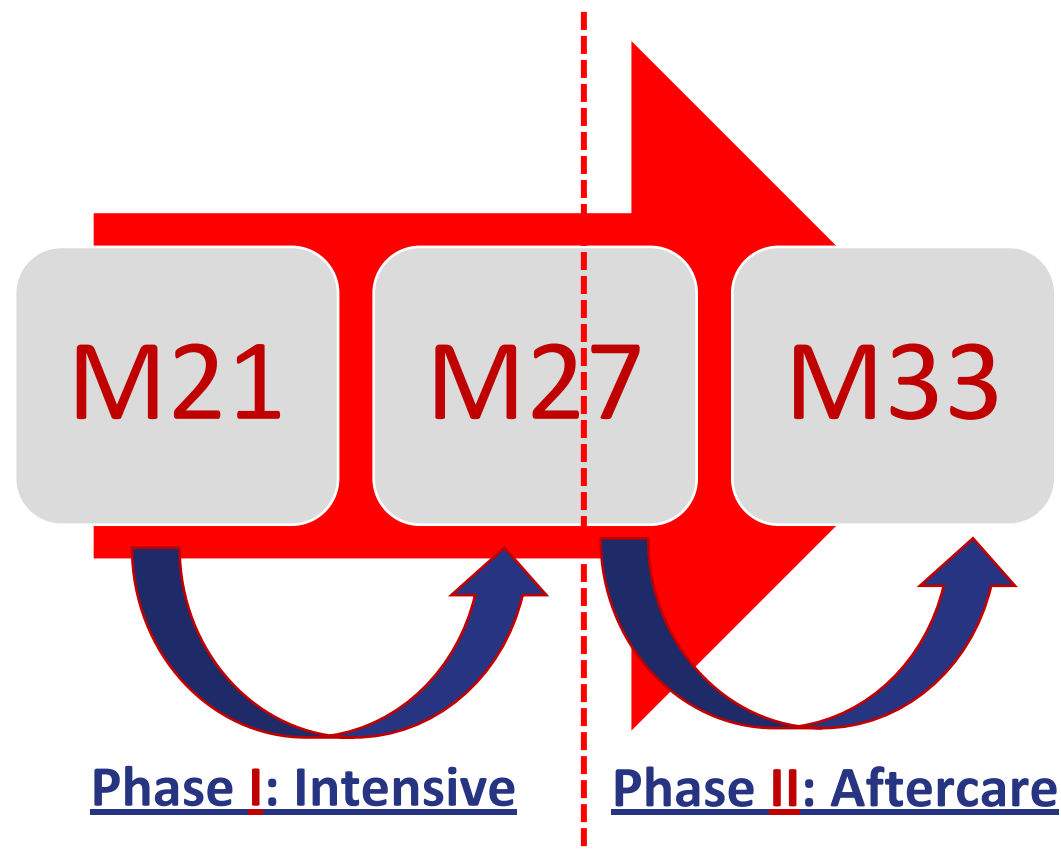
Phases

1st PDSA Cycle



N= 340
Participants

2nd PDSA Cycle



N= 520
Participants



Conclusion

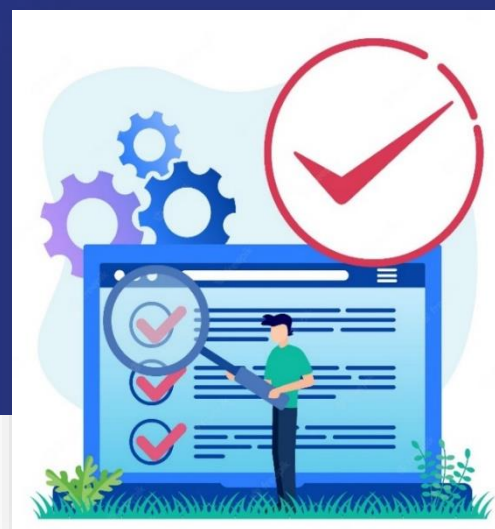
The C4D initiative has a significant policy relevance as it promotes evidence-based policies and actions for the cost-effective management of T2D, while improving the efficiency of health investments.

The initiative has the potential to support MS in promoting the implementation of new policies and actions on patients' empowerment, health promotion in people with T2D, and cost-effective management of the disease.

It will maximize the exploitation of lessons learned through a clear strategy, engaging groups of interest, promoting integration and sustainability of approaches to achieve high-level impact of existing and future EU Health strategies.

The C4D initiative should be seen as a model for other settings outside the partnership and for EU authorities to develop innovative approaches to tackle the rising prevalence of T2D in public health and healthcare systems.

All the C4D Partners are dedicated to achieve all the above mentioned.





Keep in Touch and Stay Updated

- Contact the **C4D Consortium Leader** who can guide you about the program's procedures:

www.astursalud.es

dgcuidados@asturias.org

C4D_CoordinationTeam@ficyt.es

- Get in contact with **your country's C4D Partner** (competent authorities and affiliated entities) via the following **Link**:

<https://c4djointaction.eu/partners/>

- Visit the **C4D official website** that has already been released:

Link: <https://c4djointaction.eu/>

- Subscribe to the **C4D e-newsletter** via the website.

- Follow the **C4DJA social media accounts**:



[@C4DJointAction](https://twitter.com/C4DJointAction)



<https://www.linkedin.com/company/care4diabetes>

- Use this white paper as a starter discussion point at your next meeting to raise awareness about the C4D.



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