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MobilE Artificial IntelLIgence Solution for DiabeteS Adapted Care (MELISSA)

MELISSA

Better Quality of Life for People Living with Diabetes Through Validated Innovative Artificial Intelligence Applications

ABOUT MELISSA

The MELISSA project aims to innovate diabetes treatment and care for people with insulin-treated diabetes through the development of a clinically validated, efficient and cost-effective artificial intelligence-based digital diabetes management solution.

The project contributes to every person with insulin-treated diabetes receiving tailored treatment and care according to their individual needs, habits and diabetes evolution, leading to a better quality of life. Health care providers will be able to better predict patients' responses to the individually tailored treatment. They will also benefit from better clinical guidelines supported by novel, clinically validated and (cost-) effective AI solutions.

Diabetes mellitus, commonly known as diabetes, is a condition characterised by high blood sugar levels, called hyperglycemia, over a prolonged period of time. There are two main types of diabetes:

Type 1 diabetes: The body cannot produce insulin, requiring insulin therapy.

Type 2 diabetes: The body gradually loses the ability to produce insulin, often leading to the need for insulin therapy over time.

WHY MELISSA IS NEEDED

- Diabetes is on the rise – In Europe alone 61 million people live with diabetes; by 2030, over 10% of the population could be affected
- Severe impact – Increased complications, premature frailty, death, and overwhelmed healthcare systems
- Access remains a challenge – Despite medical advancements, not all patients can afford or access innovative treatments
- Insulin therapy is complex – Requires continuous effort, affecting daily life for millions
- AI-powered solutions are a gamechanger – Personalized treatment could save 400.000 lives annually in Europe
- Significant economic benefits – Potential annual savings of €200 billion and 1.8 billion staff hours across Europe

APPROACH

Presently, there is no smartphone app with an artificial intelligence-based insulin and carb calculator available for the wider diabetes community. The MELISSA project aims to fill the gap between AI and its validated application in daily diabetes management routine by introducing the world's first fully automated holistic AI-driven treatment personalisation and optimisation platform. The platform will have two applications for personalised medicine to support both people with diabetes and health care providers in making informed decisions regarding treatment choices and adjustments:

IMPACT

- A more carefree daily routine in living with diabetes for those relying on insulin.
- Reducing premature mortality from non-communicable diseases.
- Promoting mental health and wellbeing.
- Reducing the health burden in the EU and worldwide.