



# Diabetes Prevention Programme

for The Health Service Executive Ireland

Executive Summary

**Evaluation Report 2023**

Pilot Phase June 2021 – Sept 2022

# Executive Summary

Worldwide 537 million people are living with diabetes (over 90% of these have type 2 diabetes), 541 million adults or 10.6% of the population have impaired glucose tolerance and an estimated 319 million or 6.2% of the adult population have impaired fasting glucose (IDF, 2021).

‘Prediabetes’ is a term used increasingly to describe people with impaired glucose tolerance and/or impaired fasting glucose. It indicates conditions of raised blood glucose levels above the normal range and below the diabetes diagnostic threshold, indicating a higher risk of developing type 2 diabetes and diabetes-related complications. The terms ‘prediabetes’, ‘non-diabetic hyperglycaemia’ and ‘intermediate hyperglycaemia’ are all used in the literature and there is no worldwide consensus on one definitive clinical definition.

For this project prediabetes is defined in line with the definition outlined in the Chronic Disease Management Programme for General Practice (CDM, 2019) which defines prediabetes as:

- HbA1c 42-47mmol/mol and Fasting Plasma Glucose 6.1 – 6.9mmol/l.

In Ireland, the prevalence rates for prediabetes are estimated to be anywhere between 5.5% (Leahy et al, 2015) to 19.5% (Balanda et al, 2014) of the adult population. Using the conservative figure from the Irish Longitudinal Study on Ageing, (TILDA) report of 5.5%, this would suggest that for every 150,000 of the adult population (the population served by the chronic disease hubs), 8,370 will have prediabetes. In 2020, Sláintecare funded this project to design, pilot and evaluate a National Diabetes Prevention programme for the Health Service Executive (HSE). This report describes that process, presents key findings from the evaluation of the pilot and makes recommendations for the future implementation and roll out of a National Diabetes Prevention Programme (DPP) by the HSE.

International evidence consistently shows that the best approach to preventing type 2 diabetes is to target high-risk individuals with interventions that focus on lifestyle modification, behaviour change and self-management supports over a long duration (Tuomilehto et al, 2023). The Diabetes Prevention Programme (DPP) for Ireland was designed to offer an evidence based lifestyle and clinical intervention to those with pre-diabetes and therefore, at highest risk of type 2 diabetes. It was designed to align with international best practice and was modelled on other international DPP that have successfully demonstrated effectiveness. The DPP was designed for the HSE and specifically for delivery by dietitians in the community specialist teams in Tier 2 services within the Model of Care for the Prevention and Management of Chronic Disease (ICPCD, 2019). While originally it was intended to design a programme for face-to-face delivery, due to the COVID-19 pandemic the pilot programme was designed for online delivery. The online programme will be adapted for in person /face-to-face delivery and will commence in 2024.

The pilot programme was offered to any adult referred by their GP to the community dietitian with a diagnosis of pre-diabetes as defined above. There was no exclusion on the basis of age and both private/GMS and GPVC holders were included. Participants were supported to gain the knowledge, skills and confidence to understand their risk and make appropriate lifestyle changes to reduce that risk.

The evaluation will inform the future scale up of the DPP and outcomes have demonstrated that early intervention may reduce risk and delay the progression to type 2 diabetes in high risk cohorts. In this pilot 50% of participants achieved normoglycaemia at 1 year. There were high levels of participation, positive clinical improvements and high levels of satisfaction from service users of the programme.

## The Intervention

- Delivered in six CHO areas, (CHO 2, 3, 4, 5, 8 and 9)
- Online 1:1 Dietitian Led Initial Assessment
- Synchronous Online Group Programme for 12 months – 14 sessions x 1.5hrs

## The Participants

- 73 people with pre-diabetes engaged in pilot.
- 53 % were male and 47% were female.
- Mean age = 60yrs, Range 35-82 years with 57% ≤ 65yrs

## The Results

### High Levels of Participation

- 92% attended at least 1 session
- 73% attendance at the first 6 sessions
- 72% retention for at least 50% of sessions
- 66% completion rate

### Positive Clinical Improvements

- **50% returned to normoglycaemia at 1 year**
- BMIs in the healthy range increased from 3% to 12%
- Rate of Obesity Class II decreased from 28% to 15%
- 73% of completers had lost weight at 1 year
- Mean reduction HbA1c of 5.1% (2.3mmol/mol) at 1 year

### Positive Service User Experience

- At 1 year participants reported;
- Increased **knowledge** of diabetes risk (increased from 39% to 59%)
  - Improved **skills** at shopping and planning for healthy food (up from 6% to 35%)
  - Improved **confidence** for engaging online, making healthy food choices, achieving goals for physical activity and weight
  - High levels of **satisfaction** with the overall programme. 95% described course as ‘Excellent’ or ‘Very Good’

