Introduction

The prevention of Type 2 Diabetes (T2D) is a public health priority.
• Five million people in England are at high risk of developing T2D.
• One in three people are predicted to be obese by 2034, and one in ten will develop T2D.

South Gloucestershire has a population of 260,000 with 25 GP practices. Within this population:
• Diabetes prevalence increased by 6.29% (from 10,954 to 11,690 patients) between 2014/15 and 2015/16.
• In 2015/16, 511 patients (8.5%) had a raised HbA1c identified during routine Health Checks.

NICE recommends intensive lifestyle change programmes for ‘at-risk’ individuals, to prevent or delay onset of T2D. Despite this, there was no local provision of services for patients in South Gloucestershire diagnosed as being ‘at risk’ of developing T2D.

The SGDPP was developed in response to this need, to deliver a coordinated, tailored and effective programme to meet the needs of those at risk of T2D. The pilot project was evaluated six months post delivery to determine the impact of the intervention.

The X-POD programme from X-PERT Health (https://www.xperthealth.org.uk) offers group education to prevent the onset of T2D, which:
• Aims to provide an enjoyable way to learn about pre-diabetes.
• Uses visual aids and discovery learning.
• Empowers patients to make informed decisions and set goals to improve their own health.

Working with one GP surgery, 300 patients were identified as being ‘at risk’ of T2D following application of specific criteria. These patients were sent letters inviting them to attend a six-week education programme, delivered at their local health centre.

Methods

Outcome evaluation

Pre-post intervention data was collected by the project team at SGC, then anonymised and exported to UWE for analysis using SPSS Statistics Version 22.0. Changes from baseline to six months were assessed for weight, BMI, waist circumference, HbA1c, and self-reported physical activity, diet, health status and psychological well-being.

Process evaluation

Focus groups and interviews were conducted with participants, staff and wider stakeholders to assess programme implementation. Audio-recorded data was transcribed and thematically analysed using NVivo 10.

Economic evaluation

A unit cost economic evaluation of the programme was conducted. Transcribed and thematically analysed information questionnaires completed by the project team, participants, project staff and wider stakeholders were used to assess programme implementation.

X-PERT Prevention of Diabetes (X-POD) Programme.
X-PERT Resources (handbook, waist circumference tape measure, food label guide).

X-POD 6-week education programme

Two trained educators delivered each session:
• What is pre-diabetes?
• Nutrition for health
• Carbohydrate awareness
• Food labels
• Physical activity
• Reducing risk
• Personal health check

Prevention

• Identification of individuals ‘at risk’
• Inviting ‘at risk’ population to an education programme
• Supporting self-empowerment and the expert patient
• Goal-setting

Prevention

• Health Checks
• Opportunistic screening
• Raising staff awareness to encourage referrals
• Ongoing patient support and contact post course
• Health Checks to identify individuals ‘at risk’
• HbA1c testing at course entry and six months
• BP and weight monitoring
• Access to an education programme if confirmed to be ‘at risk’

Conclusions

Close partnership with all stakeholders was crucial to the success of this project. It provides evidence of:
• High acceptability
• Reduced risk of T2D
• Positive dietary and physical activity impacts
• Potential cost-effectiveness of a group-based diabetes prevention education programme

Recruitment, retention and six-month outcomes exceeded initial expectations. This information enables best practice to be embedded locally, forming a robust foundation to support development and rollout of the NHS DPP.