

THE SOUTH GLOUCESTERSHIRE DIABETES PREVENTION PILOT PROJECT (SGDPP)

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Background

The prevention of Type 2 Diabetes (T2D) is a public health priority

– one in ten people are estimated to develop T2D by 2034 ⁽¹⁾.

South Gloucestershire has a population of 260,000 with 25 GP practices. Within this population, between 2014/15 and 2015/16:

- diabetes prevalence increased by 6.29%;
- 511 (8.5%) patients had a raised HbA1c identified during routine Health Checks.

The SGDPP was developed in response to this need:

- NICE recommends intensive lifestyle change programmes for 'at-risk' individuals, to prevent or delay the onset of T2D ⁽²⁾.
- The X-POD education programme from X-PERT Health was chosen for delivery (<http://www.xperthealth.org.uk>).
- 300 patients from one GP surgery were identified as being 'at risk' of T2D, meeting specific eligibility criteria. Each patient received an invitation to the locally run six-week programme.
- The pilot project was evaluated six months post-delivery to determine the impact of the intervention.

Methods

Outcome evaluation: Pre-post intervention data was collected and anonymised by SGC, then 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, self-reported physical activity, diet, health status and psychological wellbeing.

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

Economic evaluation: Unit cost evaluation of the SGDPP was carried out using data collected from project time and cost information questionnaires completed by the project team.

Co-authors:

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PATIENT



REPS

HEALTH EDUCATION

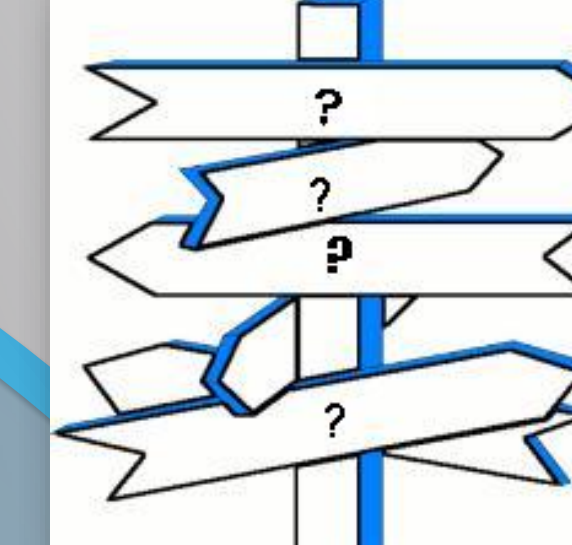
X-POD 6-week education programme

Two trained Educators delivered each session

- ✓ What is pre-diabetes?
- ✓ Nutrition for health
- ✓ Carbohydrate awareness
- ✓ Physical activity
- ✓ Reducing risk
- ✓ Personal health check
- ✓ Food labels



LOCAL



SERVICES

Advice & Support

- ✓ Dietary behaviours
- ✓ Physical activity
- ✓ Lifestyle and behaviour

Awareness, Empowerment

- ✓ Raising patient awareness & empowerment

X-PERT Prevention of Diabetes (X-POD) Programme

PREVENTION

- Identification of individuals 'at risk'
- Inviting 'at risk' population to an education programme
- Supporting self-management and the expert patient
- Goal-setting

- Opportunistic screening
- Raising staff awareness to encourage referrals
- Health Checks
- Ongoing patient support post course

HEALTH PROTECTION

- 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'



Key Recommendations

- Collect 12-month data to evaluate longer-term outcomes, and provide local insight into patterns of retention and resources needed to maintain contact.
- Use learning from the SGDPP to support and advise NHS DPP service providers.
- Deliver similar programmes alongside other local community-based lifestyle and self-care initiatives, to add value and develop sustainable services.
- Work in partnership with community-based volunteers, patients and Health Champions to improve diabetes prevention initiatives.

Results

- Group attendance maintained above **84%** over six months.
- **Significant improvements** across **main measures** of weight and blood glucose levels for the **91** participants who provided data:

Measure	Baseline mean (SD)	6-month mean (SD)	Mean diff. (95% CI)
Weight (kg)	93.50 (16.38)	89.45 (16.28)	-4.04* (-5.01, -3.08)
BMI (kg/m ²)	33.81 (5.95)	32.38 (6.10)	-1.43* (-1.77, -1.09)
Waist circumference (cm)	107.37 (12.22)	102.05 (12.50)	-5.32* (-6.37, -4.27)
HbA1c (mmol/mol)	42.24 (5.26)	38.79 (3.46)	-3.45* (-4.30, -2.60)

Note: * $p \leq 0.001$

- **Significant improvements** also observed for measures of physical activity and self-reported dietary behaviour.
- **Organisation, clarity of goals, and educators' personal qualities** identified as crucial to the programme's success.
- **Estimated cost/person = £167** for a six-months programme.

Conclusions

Close partnership with stakeholders was crucial to programme success in terms of:

- high acceptability
- reduced risk of T2D
- positive dietary and physical activity impacts
- potential cost-effectiveness

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.

References:

1. NHS England (n.d.) NHS Diabetes Prevention Programme [Online] Available at: <https://www.england.nhs.uk/diabetes/diabetes-prevention/>.
2. National Institute for Health and Care Excellence (2012) Type 2 Diabetes: prevention in people at high risk. London: National Institute for Clinical Excellence.