THE EFFECTIVENESS OF A PRIMARY CARE NURSE-LED PREDIABETES INTERVENTION PACKAGE (PIP)

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BACKGROUND

Prediabetes increases the risk of progression to a diagnosis of type 2 diabetes. Lifestyle changes to improve glycaemic control can reduce the risk. Gaps exist in understanding how best to support people to make life-style changes within real world, busy clinical environments.

CONTEXT AND AIMS

We examined the implementation and feasibility of a 6 month multilevel primary care nurse-led prediabetes lifestyle intervention compared with current practice in four intervention practices and four control practices in two neighbouring provincial cities in New Zealand. The primary outcomes were weight and glycated haemoglobin (HbA1c).

METHODS

This study used a convergent mixed methods design involving a 6 month pragmatic non-randomised pilot study with a qualitative process evaluation, a structured dietary intervention tool was delivered by primary care nurses with visits at baseline, 2-3 weeks, 3 months and 6 months. Data were collected as part of clinical care. Semi-structured interviews were conducted with 20 participants, purposively selected to ensure representation by ethnicity, gender and glycaemic outcome. Thematic analysis of the interviews was undertaken.

RESULTS

One hundred fifty-seven people diagnosed with prediabetes participated (85 intervention, 72 control), 47.8% female and 31.2% Maori. Co-morbidities were common, particularly hypertension (49.7%), dyslipidaemia (40.1%) and gout (15.9%). Baseline and 6 month measures were available for 91% control and 79% intervention participants. After adjustment, the intervention group lost a mean 1.3 kg more than the control group ($p < 0.001$). Mean HbA1c, BMI and waist circumference decreased in the intervention group and increased in the control group, but differences were not statistically significant. Participants described a number of factors that supported them to make positive changes: A determination not to develop diabetes, the provision of clear information on diet and support to develop manageable strategies, and supportive family relationships. Barriers to making changes were described as: A lack of family support, financial constraints, social expectations around food, and competing chronic health issues. Strategies for overcoming challenges included growing and sharing food, using frozen vegetables and meal planning. Challenges related to cultural expectations around providing and partaking of food were more evident for indigenous Maori participants. Implementation fidelity was high, and the intervention described as highly acceptable to both patient participants and stakeholders.

CONTRIBUTION TO POLICY, PRACTICE AND RESEARCH

Study findings confirm the feasibility and acceptability of primary care nurses providing structured dietary advice to people with prediabetes in busy general practice settings. The small but potentially beneficial mean weight loss among the intervention group supports further investigation. A second study, currently in the recruitment phase will explore factors predicting regression to normoglycaemia in this population.

TRIAL REGISTRATIONS (ANZCTR)

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