Group education programmes might be most effective tool for helping patients accept their disease

Roger Gadsby, GP and Senior Lecturer, Centre for Primary Healthcare Studies, Warwick University

The first of the key priorities for implementation in the Quick Reference Guide of the new NICE guidelines on type 2 diabetes, published on 28 May 2008 is to "offer structured education to every person and/or their carer at and around the time of diagnosis with annual reinforcement and review. Inform people and their carers that structured education is an integral part of diabetes care" (NICE, 2008). The guideline goes on to define some of the characteristics of such patient education programmes including their quality criteria .

The DESMOND (Diabetes Education and Self Management for Ongoing and Newly Diagnosed) is one such structured education programme that has been developed. This paper (summarised alongside) describes a trial of this intervention in people newly diagnosed with type 2 diabetes.

The study design is of a cluster randomised trial of 824 patients newly diagnosed with type 2 diabetes in 207 general practices in the UK. The intervention is a structured group education programme lasting 6 hours delivered by 2 trained healthcare professionals. In this trial it was compared to "usual care".

The main outcome measure was HbA_{1c} at 12 months, with weight, smoking and a variety of psycho-social measures as other outcomes. The trial was well designed, well performed and well written up.

There was no statistically significant change in HbA_{1c} at 12 months between those receiving usual care and those who attended the group education programme. There was a statistically significant improvement in weight loss of around 1kg between the two groups and a statistically significant difference in smoking cessation between the groups, although the absolute numbers stopping smoking between the two groups wasn't that different. There were positive improvements in beliefs about illness in the DESMOND group.

It is perhaps disappointing that this group education intervention did not reduce HbA_{1c} at 12 months. The improvements in weight and smoking cessation are modest. The improvements in psycho-social measures are interesting and perhaps point to the idea that group education programmes should be seen as interventions that primarily help people with diabetes to deal with their condition, rather than interventions that have a profound effect on biomedical markers.

NICE (2008) *The management of type 2 diabetes: Quick reference guide.* NICE, London

BMJ

Group education positively affects weight loss

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓✓
WOW! factor	✓✓✓

1 This was a UK-based, randomised, multi-centre study comparing the efficacy of a group education programme on biomedical, psychosocial, and lifestyle measures for people with new-onset type 2 diabetes.

2 A total of 824 people with diabetes participated in the analysis; participants were separated into two treatment groups, the first receiving a structured group education programme for 6 hours delivered by two trained healthcare professional educators and the second received standard care.

3 Data on HbA_{1c} levels, blood pressure, weight, blood lipid levels, smoking status, physical activity, quality of life, beliefs about illness, depression, and emotional impact of diabetes were obtained from participants throughout the 12-month study.

4 At the end of the study, those receiving the special education intervention had decreased levels of HbA_{1c} levels compared with the control group (1.49% versus 1.21%), however this differene was not significant.

5 Weight loss, smoking cessation, and illness belief scores, and depression were all improved in the special intervention group, and depression was lower as well.

6 Consequently, the enhanced education intervention had positive effects on people with type 2 diabetes, despite little or no effect on HbA_{1c} levels.

Davies MJ, Heller S, Skinner TC et al (2008) Effectiveness of the diabetes education and self management for ongoing and newly diagnosed (DESMOND) programme for people with newly diagnosed type 2 diabetes: cluster randomised controlled trial. *BMJ* **336**: 491–5

DIABETES & METABOLISM

Cardioprotective therapy is underused in older people with type 2 diabetes

Readability	✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

'The management of cardiovascular risk in older people with type 2 diabetes is inappropriate.'

1 This population-based inception cohort study was carried out in Canada to assess the use, by older people with type 2 diabetes, of a comprehensive cardioprotective regimen (CCR) – consisting of antihypertensive, lipid-lowering and oral blood-glucose lowering agents.

2 Using the Quebec Diabetes Surveillance System, the authors identified 48 505 individuals who were eligible for the study.

3 Inclusion criteria were: a diagnosis of type 2 diabetes, aged over 66 years and had an oral blood-glucose lowering agent initiated between 1 January 1998 and 21 December 2002. Individuals were excluded if they had received insulin or any oral blood-glucose lowering agent during the 365 days prior to the date of the first claim for the agent.

4 Of the individuals included in the cohort, 9912 started a CCR in the first year following initiation of an oral blood-glucose lowering agent. The chance of receiving a CCR increased significantly over the study period ($P<0.0001$).

5 In the year before initiation of an oral blood-glucose lowering agent, 42 220 individuals had not received a drug from any of the classes making up the CCR. Following initiation, 10.1% did so the following year.

6 The authors found that three main factors were associated with CCR initiation: being male, having a history of CVD, and initiation of oral blood-glucose lowering agent within 14 days of hospitalisation.

7 Overall, the authors concluded that, as only 20% of older people with type 2 diabetes received a CCR after initiation of an oral blood-glucose lowering agent, the management of cardiovascular risk in older people with type 2 diabetes is inappropriate.

Sirois C, Moisan J, Poirier P, Grégoire JP (2008) Underuse of cardioprotective treatment by the elderly with type 2 diabetes. *Diabetes & Metabolism* **34**: 169–76

'After 9 months of treatment, the authors observed reductions in HbA_{1c} (-1.7%) and fasting blood glucose (-71.4 mg/dL [-4.0 mmol/L]) in patients receiving additional treatment with insulin glargine with their oral treatment.'

DIABETES TECHNOLOGY AND THERAPEUTICS

Addition of long-acting insulin helps maintain target HbA_{1c} levels

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓

1 Control of HbA_{1c} levels, that is keeping HbA_{1c}<7% in people with type 2 diabetes is important for reducing the risk of complications; previous studies have demonstrated the efficacy of adding insulin glargine to existing therapy in achieving lower HbA_{1c} levels.

2 This study investigated the effect of daily treatment of 1915 patients with type 2 diabetes with insulin glargine in addition to existing oral therapy on glycaemic control over 32 months.

3 After 9 months of treatment, the authors observed reductions in HbA_{1c} (-1.7%) and fasting blood glucose (-71.4 mg/dL [-4.0 mmol/L]) in patients receiving additional treatment with insulin glargine with their oral treatment; these improvements were maintained at the end of the study, with HbA_{1c} reduced by 1.6% and fasting blood glucose by 71.8 mg/dL [-4.0 mmol/L]).

4 The observed improvements with additional insulin glargine treatment were consistent throughout the treatment group, regardless of body mass index.

5 Consequently, addition of insulin glargine is recommended for maintining target HbA_{1c} in patients with type 2 diabetes on existing oral therapies.

Schreiber SA, Ferlinz K, Haak T (2008) The long-term efficacy of insulin glargine plus oral antidiabetic agents in a 32-month observational study of everyday clinical practice. *Diabetes Technology and Therapeutics* **10**: 121–7

DIABETOLOGIA

HbA_{1c} and weigh benefits of a long-acting insulin analogue

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓

1 This multicentre trial compared effect of additional therapy with basal insulin analogues detemir and glargine to oral treatment of type 2 diabetes on maingaining target HbA_{1c} levels.

2 A total of 582 patients participated and were randomly allocated to one of two treatment groups over 52 weeks.

3 Insulins detemir and glargine were effective at lowering HbA_{1c} and fasting plasma glucose levels, from 8.6% at baseline, to 7.2% and 7.1%, respectively.

4 Insulin detemir was modestly more effective at reducing weight gain, particularly in the group receiving once-daily insulin.

Rosenstock J, Davies M, Home PD et al (2008) *Diabetic Medicine* **51**: 408–16

BMJ

Diabetes screening *plus* intervention is cost effective

Readability	✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 This study aimed to determine the most cost-effective method of identifying people with type 2 diabetes in order to best enable early detection and treatment.

2 Participants aged over 45years with an above-average risk of diabetes were screened using four different models for type 2 diabetes and compared: screening aiming at early detection and treatment; screening for impaired glucose tolerance (IGT), including provision of lifestyle interventions for those diagnosed with IGT, aiming to delay or prevent diabetes; screening for IGT providing pharmacological interventions; and no screening at all.

3 The screening models that included intervention, either lifestyle or pharmacological, for those with IGT were cost-effective, however cost-effectiveness for diabetes screening alone without an intervention was not confirmed.

Gillies CL, Lambert PC, Abrams KR et al (2008) Different strategies for screening and prevention of type 2 diabetes in adults: cost effectiveness analysis. *BMJ* **336**: 1180–5

DIABETES CARE

Lifestyle intervention effective at short-term reduction of diabetes risk factors

Readability	✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

1 This study aimed to assess the efficacy of the modified Diabetes Prevention Program Group Lifestyle Balance (GLB) intervention in reducing the risk of diabetes and cardiovascular disease in people with metabolic syndrome based in an urban community with suboptimal medical care.

2 A total of 573 patients were included in this study; the patients receiving GLB showed improvements in weight loss, with 87.5% of patients maintaining the improvements after 6 months.

3 Additional improvements were observed in their metabolic syndrome, as well as waist circumference (P<0.009) and blood pressure levels (P=0.04).

Seidel MC, Powell RO, Zgibor JC et al (2008) Translating the Diabetes Prevention Program into an urban medically underserved community: a nonrandomized prospective intervention study. *Diabetes Care* **31**: 684–9