**QUALITY IMPROVEMENT**

Group visits improved concordance with American Diabetes Association practice guidelines in type 2 diabetes


In uninsured or inadequately insured patients with uncontrolled type 2 diabetes, does healthcare delivery through group visits promote concordance with American Diabetes Association (ADA) standards of care?

**METHODS**

- **Design:** randomised controlled trial.
- **Allocation:** (concealed)*.
- **Blinding:** blinded (outcome assessors).
- **Follow up period:** 6 months of treatment.
- **Setting:** an adult primary care centre at the Medical University of South Carolina, USA.
- **Patients:** 120 uninsured or inadequately insured patients >18 years of age (mean age 54 y, 78% women) who had type 2 diabetes and glycated haemoglobin (HbA1c) >8.5%. Exclusion criteria included a primary diagnosis of substance abuse or dependence, pregnancy, dementia, and inability to speak English.
- **Interventions:** group visits (n=59) or usual care (n=61). Group visits were modelled after the Cooperative Health Care Clinics approach. Groups of 19–20 patients were co-led by a primary care physician and a diabetes nurse educator and met monthly for 6 months. Each group visit session lasted 2 hours and consisted of warm up and socialisation (15 min), presentation of a health related topic (30 min), a break (15 min), questions and answers (15 min), and one on one consultation with the physician (30 min). Key preventive measures could be done during group visits. Usual care consisted of seeing a medical professional at least quarterly as recommended by the ADA.
- **Outcomes:** concordance with 10 ADA clinical practice recommendations including up to date HbA1c, and lipid concentrations; urine for microalbumin; use of angiotensin converting enzyme inhibitors, angiotensin receptor blockers, or lipid lowering agents when indicated; daily use of aspirin; annual foot examinations; annual referrals for retinal examinations; and immunisation against streptococcal pneumonia and influenza.
- **Patient follow up:** 99%.

*Information provided by author.*

**MAIN RESULTS**

Analysis was by intention to treat. The mean total number of ADA clinical practice recommendations met per patient was greater in the intervention group than in the usual care group (8.75 ± 7.22, p<0.001). More patients in the intervention group had >8 of the 10 recommendations addressed (table). The groups did not differ for actual HbA1c concentrations or lipid profiles.

**CONCLUSION**

In uninsured or inadequately insured patients with uncontrolled type 2 diabetes, healthcare delivery through group visits was more effective than usual care for promoting concordance with American Diabetes Association standards of care.

**Commentary**

Although several studies have explored diabetes education in groups, few have examined group care. The study by Clancy et al provides evidence that group visits for people with type 2 diabetes may have advantages over individual consultations. A significant improvement in achieving standards of care was observed. There were trends, but no statistically significant differences towards improvements in metabolic or lipid control.

A similar study by Trento et al,1 with 4 years of follow up, reported stabilised glycaemic control, decreased body mass index, increased high density lipoprotein cholesterol as well as improved knowledge of diabetes, quality of life, and healthcare behaviours in people with type 2 diabetes managed by systematic group education. These results are clinically significant because the usual course of type 2 diabetes is progressive deterioration in biomedical and other outcomes. Perhaps the 6 month follow up of the study by Clancy et al was not long enough to see such clinical improvement.

Strengths of the study by Clancy et al included a low drop out rate and intention to treat analysis; however, most of the patients were women, which may limit generalisability of the findings. The intervention group had increased costs. However, Trento et al concluded that preventing deterioration of glycaemic control and quality of life without increasing pharmacological treatment was cost-effective.1 Further work is needed to replicate these studies in different care delivery systems and with longer follow up. However, diabetes care professionals, particularly those in primary care, should consider using groups to provide education and care for people with type 2 diabetes because it may be both more cost efficient and effective than individual consultations.

Maggie Watkinson, RGN, MSc
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**Table: Group visits v usual care in uncontrolled type 2 diabetes at 6 months**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Group visits</th>
<th>Usual care</th>
<th>RBI (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with ≥8 of 10 process of care indicators addressed</td>
<td>86%</td>
<td>47%</td>
<td>85% (42 to 153)</td>
<td>3 (2 to 5)</td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary; RBI, NNT, and CI calculated from data in article.*
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