COCHRANE NURSING CARE CORNER

*Summaries of Nursing Care-Related Systematic Reviews from the Cochrane Library***Individual patient education for people with type 2 diabetes mellitus****Question**

For people with type 2 diabetes, is individual face-to-face patient education more effective than other forms of patient education?

Relevance to nursing care

Nurses in both the community and hospital setting are frequently the initial points of contact for diabetics and important providers of education and health promotion. The advent of nurse-led clinics and autonomous community practitioners make it important for nurses to have the knowledge base to be able to provide both effective and efficient methods of patient education.

Study characteristics

Nine studies were included in the review. All studies were randomised controlled trials, involving a total of 1359 participants. Six studies compared individual patient education with other 'usual' care; this included receiving standard care such as regular follow up with the health provider, or no specific intervention. Three compared individual education with group education. Methodologically, studies were of poor quality, with most having a high risk of bias because of small numbers within the trials, high dropout rates, inadequate allocation concealment and the possibility of movement of subjects between treatment groups. The content of the education typically covered pathophysiology, glycaemic control through diet, exercise, medication, and diabetic complications, such as foot care, among others. All studies assessed outcome using glycaemic control as shown by percentage HbA1c content of blood samples measured for a minimum of 6 months. Most studies involved 2–4 h of face-to-face individual consultation and education. The majority of the education was delivered by diabetes educators and dietitians, although one study used a non-medically trained link worker. A number of studies were excluded because they used a mix of individual and group education methods. An overall meta-analysis was not undertaken because of the studies being too diverse and not comparable in kind. Meta-analysis was possible for a number of study subgroups, specifically changes in glycaemic control as measured by HbA1c, content of blood samples, systolic and diastolic blood pressure, cholesterol and body mass index, at time intervals of 6–9 and 12–18 months.

The main findings showed that individual face-to-face patient education, as compared with other forms of patient education:

- Did not, overall, have a significant impact on HbA1c percentage. However, a post-hoc subgroup analysis of 221 subjects found that for participants who had an HbA1c value greater than 8%, individual education had a significant benefit, lowering this value by an average of 0.31% ($P = 0.007$). A time frame was not given for this result.
- Did not produce significant differences for other outcome indicators, including body mass index, cholesterol, smoking or extent of retinopathy.

Implications for nursing care

- The evidence underpinning the use of individual face-to-face patient education in comparison with other forms of patient education as a major component of caring for diabetic patients is not strong.
- Overall, individual face-to-face patient education was not shown to be more effective in controlling blood sugar levels in people with type 2 diabetes, as measured by HbA1c than other forms of patient education.
- There is some evidence that it may be effective in controlling blood sugar levels in patients who maintain an HbA1c higher than 8%, and so may be helpful in supporting patients who have poor control of blood sugar.
- Given that it is an expensive intervention because of its intensive use of staff time, it is unlikely to be cost-effective with the majority of diabetic clients.

Implications for research

- A review of research exploring interventions that mix individual and group education methods would be useful.
- Longitudinal studies linking to clinically relevant outcomes such as incidence and prevalence of complications associated with diabetes are needed to clarify the clinical benefits of one-to-one education

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Reference

1. Duke SAS, Colagiuri S, Colagiuri R. Individual patient education for people with type two diabetes. *Cochrane Database Syst Rev* 2009; (4). Art. No.: CD005268. doi: 10.1002/14651858.CD005268.pub2