

Global Guideline

for Type 2 Diabetes

Chapter 3: Education

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Recommendations

■ Standard care

- ED1 Make structured patient education an integral part of the management of all people with Type 2 diabetes:
- from around the time of diagnosis
 - on an ongoing basis, based on annual assessment of need
 - on request.
- ED2 Use an appropriately trained multidisciplinary team to provide education to groups of people with diabetes, or individually if group work is considered unsuitable. Where desired, include a family member or friend.
- ED3 Include in education teams a health-care professional with specialist training in diabetes and delivery of education for people with diabetes.
- ED4 Ensure that education is accessible to all people with diabetes, taking account of culture, ethnicity, psychosocial, and disability issues, perhaps delivering education in the community or at a local diabetes centre, and in different languages.
- ED5 Use techniques of active learning (engagement in the process of learning and with content related to personal experience), adapted to personal choices and learning styles.
- ED6 Use modern communications technologies to advance the methods of delivery of diabetes education.

■ Comprehensive care

- ED_c1 This would be as for *Standard care* but would also include the availability on demand of individual advice, through a named key contact.

■ Minimal care

- ED_M1 This would be as for *Standard care* but education would be provided by an appropriately skilled individual rather than a team.
- ED_M2 Consider how available technologies can best be used to deliver education.

Rationale

Education in the broadest sense underpins diabetes care, at every contact between the person with diabetes and the health-care team. This has made it difficult to isolate those aspects of education which best contribute to its effectiveness. Recognition that 95 % of diabetes care is provided by people with diabetes themselves, and their families, is reflected in the current terminology of 'diabetes self-management education' (DSME) programmes. With the understanding that knowledge itself is not enough to enable people to change behaviour and improve outcomes [1,2], new approaches emphasizing active learning have been introduced and continue to be developed.

Evidence-base

Systematic reviews of the evidence are generally critical of the quality of reporting and methodology in many of the studies in this field, and point out the need for further research, and possible strategies for this [3-7]. In the technology report informing its guidance on the use of patient-education models, NICE provided a review, rather than formal meta-analysis, due to differences in design, duration, outcome measures and reporting of studies [4].

NICE excluded foot self-care education but otherwise reviewed the evidence on both general and focused self-management education in Type 2 diabetes. The evidence from eight trials (6 RCTs, 2 CCTs) suggested that general self-management education has a limited impact on clinical outcomes, although few long-term data were available. The evidence from eight trials (7 RCTs, 1 CCT) of focused self-management education (focused on one or two aspects of self-management) suggested that this may have some effect in reducing or maintaining HbA_{1c} levels, although there was little evidence of impact on other clinical outcomes, partly because of short study durations. Also reviewed were four trials (3 RCTs, 1 CCT) that included people with Type 1 or Type 2 diabetes, where there was some evidence that education may improve glycaemic control and quality of life, but little evidence about the longer-term benefits of education. The other reviews painted a similar picture of educational interventions producing modest improvements in glycaemic control [5-7]. The NICE review commented that generally those studies reporting significant results used group interventions [4].

NICE found that costs depended on the type of programme offered, starting with a diabetes centre-based teaching programme spread over three afternoons. Although there is very little evidence regarding the cost-effectiveness of

patient education in general, it was concluded that, given the relatively small costs associated with educational programmes, only small improvements in terms of morbidity or health-related quality of life were needed to make educational interventions cost effective [4].

Consideration

Despite the patchy evidence, certain common principles emerge and are reflected in the recommendations. Assessment of needs is fundamental to tailoring education to the perspective of the person with diabetes, while identified needs of the population served will determine the curriculum. Delivery of advice on nutrition (see *Lifestyle management*) or foot-care (see *Foot care*) or any other aspect of diabetes care would apply the same underlying educational principles outlined in these recommendations. It is noted that diabetes education was an integral part of intensification of care in the DCCT (in Type 1 diabetes), and that nutritional advice made a significant impact in the UKPDS cohort prior to randomization. Accordingly diabetes education is taken as an essential part of diabetes care.

Implementation

Major components of implementing these recommendations are the recruitment of personnel and their training in the principles of both diabetes education and behaviour change strategies. These staff then need to develop structured education programmes for people with diabetes, supported by suitable education materials matched to the culture of the community served. Attention needs to be given to provision of space in an accessible location, and access to communication tools such as telephones. Levels of literacy and understanding need to be considered.

Evaluation

NICE suggests measures that could be used, for instance, to audit education for people newly diagnosed with diabetes [4]. These will include the presence of the multidisciplinary team, space and education resources, together with a local curriculum. There will be an entry within individual records of the offering and provision of education around the time of diagnosis, of annual assessment of educational need subsequently, and of provision of such education when the need is identified.

References

1. Brown SA. Meta-analysis of diabetes patient education research: variations in intervention effects across studies. *Res Nurs Health* 1992; 15: 409-19.
2. Glasgow RE, Osteen VL. Evaluating diabetes education. Are we measuring the most important outcomes? *Diabetes Care* 1992; 15: 1423-32.
3. Norris SL, Engelgau MM, Narayan KMV. Effectiveness of self-management training in type 2 diabetes. A systematic review of randomized controlled trials. *Diabetes Care* 2001; 24: 561-87.
4. NICE. Technology Appraisal 60. Guidance on the use of patient-education models for diabetes. London, National Institute for Clinical Excellence, 2003. <http://www.nice.org.uk>
5. Piette JD, Glasgow RE. Education and home glucose monitoring. In: Gerstein HC, Haynes RB (eds) *Evidence-based Diabetes Care*. Hamilton, Ontario: BC Decker, 2001: pp 207-51.
6. Gary TL, Genkinger JM, Gualler E, Peyrot M, Brancati FL. Meta-analysis of randomized educational and behavioral interventions in type 2 diabetes. *The Diabetes Educator* 2003; 29: 488-501.
7. Warsi A, Wang PS, LaValley MP, Avorn J, Solomon DH. Self-management education programs in chronic disease. A systematic review and methodological critique of the literature. *Arch Intern Med* 2004; 164: 1641-49.

Other useful resources

Diabetes patient education is a large topic, and many health-care professionals are unfamiliar with modern educational principles. The following documents are chosen as helpful resources for those wishing to develop materials (curriculum) and skills in this area.

- *IDF Consultative Section on Diabetes Education. International Curriculum for Diabetes Health Professional Education. Brussels: IDF, 2002. www.idf.org*

This comprehensive document deals with education of the diabetes health-care professionals, and is directed towards (though not solely applicable to) the diabetes educator.

- *European Diabetes Policy Group 1999. A Desktop Guide to Type 2 Diabetes Mellitus. Diabet Med* 1999; 16: 716-30. www.staff.ncl.ac.uk/philip.home/guidelines

This formal consensus guideline succinctly covers in three pages the appropriate approach to the education of someone with diabetes (initial and ongoing), and some of the content and issues which need to be addressed.

- *Diabetes Education Study Group of the European Association for the Study of Diabetes. Basic Curriculum for Health Professionals on Diabetes Therapeutic Education. 2001. www.desg.org*

This approachable booklet sets out step by step to address the issues and skills which need to be understood and acquired by anyone seeking to deploy educational techniques in helping people with diabetes.

- *WHO Working Group Report. Therapeutic Patient Education: Continuing education programmes for healthcare providers in the field of prevention of chronic diseases. Copenhagen: WHO Regional Office for Europe, 1998.*

This document again addresses the competencies needed by those delivering 'therapeutic patient education', and in so doing addresses to some extent the detail of areas to be covered in delivering a comprehensive education programme.