"Diabetes and You": A multidisciplinary approach to education for people with newly diagnosed type 2 diabetes

Margaret Daley, Maureen Wallymahmed

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Article points

1. "Diabetes and You" is a locally developed education programme for newly diagnosed people with type 2 diabetes. It is based on an assessment of local needs and delivered by a experienced local multidisciplinary team (MDT).
2. All staff were involved in a "train the trainers" programme. This has provided an opportunity for the MDT to work in collaboration to ensure the programme reflects learning theories. The redesign allowed change from a didactical approach to incorporate more Social Learning Theory.
3. Working in collaboration with other MDTs, from a variety of Trusts gives a greater understanding of each person's role, supports networking and improves communication, which is a key factor in delivery of health care.

Key words

- Cross-team collaboration
- Diabetes education
- Local programme
- Multidisciplinary teams

Authors

Authors' details can be found at the end of the article.

People with diabetes have to make multiple daily choices about the management of their condition, often with minimal input from a their healthcare professional. The necessary lifestyle changes, the complexities of management and the side effects of therapy make education a central part of diabetes management and it is recommended that structured education is made available to all people with diabetes at the time of initial diagnosis and on an ongoing basis This article describes how a number of multidisciplinary teams, across three NHS trusts, collaborated to standardise education for people with newly diagnosed type 2 diabetes. A previously developed structured education programme, "Diabetes and You", was re-evaluated to the meet the needs of the local population.

In the United Kingdom there are approximately 3 million people with diagnosed diabetes and this is estimated to rise to 5 million by 2025 (Diabetes UK, 2012). In addition, it is estimated that around 850 000 people have diabetes but have not yet been diagnosed; therefore, more than one in 20 people in the UK has diabetes, either diagnosed or undiagnosed (Diabetes UK, 2012). The burden of diabetes is well known, with over 10% of the NHS budget being attributed to inpatient care and treating diabetes-related conditions (Department of Health [DH], 2012). The psychological and physical impact of diabetes on individuals is immeasurable as people with diabetes are more likely to have heart disease, stroke, kidney failure, blindness, depression and amputation of a lower limb than people without diabetes (Healthcare Commission, 2007).

People with diabetes have to make multiple daily choices about the management of their condition, often with minimal input from a healthcare provider (Jarvis et al, 2010). The necessary lifestyle changes, the complexities of management and the side effects of therapy make education a central part of diabetes management (National Collaborating Centre for Chronic Conditions, 2008).

The *National Service Framework* (NSF) for diabetes (DH, 2001) recognises the importance of education in facilitating self-management as the cornerstone of diabetes care. National guidance (NICE, 2003) states that education for people with diabetes must be:

> *"A planned and graded programme that is comprehensive in scope, flexible in content, responsive to an individual's clinical and psychological needs and adaptable to his or her educational and cultural background"*

It is recommended that structured education is made available to all people with diabetes at the time of initial diagnosis and then, as required, on an ongoing basis, based on a formal, regular assessment of need (NICE, 2003; 2009a).

The NICE (2011) document *The Quality Standards for Diabetes In Adults* includes 13 patient-centred quality statements. One of the statements is that people with diabetes and/or their carers receive a

structured educational programme that fulfils the nationally agreed criteria, from the time of diagnosis, with annual review and access to ongoing education.

This article describes how a number of multidisciplinary teams (MDTs), across three NHS trusts (including both primary and secondary care providers), collaborated to standardise education for people with newly diagnosed type 2 diabetes. A previously developed structured education programme, "Diabetes and You" was re-evaluated to the meet the needs of the local population.

"Diabetes and You"

The education programme "Diabetes and You" was originally designed and delivered by a local secondary care provider, Aintree University Hospital NHS Trust. However, in 2004, a new community service, South Sefton Community Diabetes Team, was commissioned to deliver diabetes care closer to home and this programme was rolled out to community settings. Following the publication of the *NSF* for diabetes and NICE guidance on structured patient education, a local assessment of educational needs, seeking the views of people with type 2 diabetes, was undertaken in both secondary and primary care settings (Daley et al, 2006). The results informed a review of the education provided for people with type 2 diabetes and an education pathway was developed for both group and individual education (Daley et al, 2008). At this time consideration was given as to whether a national programme, such as X-PERT or DESMOND (Diabetes education and self-management for ongoing and newly diagnosed), should be implemented, or whether a new local education programme should be developed.

The original "Diabetes and You" programme was developed in secondary care and delivered weekly over a 4-week period. However, attendance declined after the second week and feedback from those who attended indicated that the programme was too long. For this reason it was felt that the X-PERT programme, which is delivered over six weeks, would be too long for our local population. The DESMOND programme, which is 6 hours delivered either in one day or over two half days, had a similar time frame to the "Diabetes and You" programme. However, the team felt a programme that was developed locally and based on assessment of patient needs was more suitable for the local population. In addition, both national programmes had greater cost implications and local diabetes networks are increasingly exploring ways of delivering structured diabetes education, based on national guidance, in a more affordable way (Turner, 2008).

External influences

In recent years, the north of Liverpool and surrounding areas have seen several organisational changes, which have led to merging of services and commissioning of new services. This has involved several trusts, including Aintree University Hospital NHS Trust, Liverpool Community Health NHS Trust and the Southport and Ormskirk Hospital NHS Trust. Each service was delivering a different education programme and a decision was made to standardise education offered to people with type 2 diabetes. Representatives from local primary and secondary care diabetes services were invited to take part in the review. Several of the participants, now working in different Trusts, had been involved in the development of the original programme and subsequent reviews.

Review of the programme

The group met on a regular basis over an 8-month period and reviewed all sections of the existing "Diabetes and You" programme. The following documents were used to guide the process:

- *Patient education programme for people with type 2 diabetes: Commissioning guide* (NICE, 2009b).
- *Structured patient education in diabetes: Report from the patient education working group* (DH and Diabetes UK, 2005).

All structured education programmes for people with diabetes should meet the following 4 criteria:

1. A structured curriculum

The structured curriculum needs to have a patient-centred philosophy. The group reviewed the philosophy that had been adapted from the Diabetes Education Network (www.diabetes-education.net). This philosophy supports self-management, attitudes, belief, knowledge and skills and reinforces the need for the programme to be centred around people with diabetes. Living with diabetes not only affects the individual but can also affect the family (Turner, 2008). It was, therefore, important that the philosophy included the role of carers.

Page points

1. A local assessment of educational needs, seeking the views of people with type 2 diabetes, was undertaken in both secondary and primary care settings. The results informed a review of the education provided for people with type 2 diabetes and an education pathway was developed for both group and individual education.
2. A previously developed structured education programme, "Diabetes and You", was re-evaluated to the meet the needs of the local population.
3. Representatives from local primary and secondary care diabetes services were invited to take part in the review. The group met on a regular basis over an 8-month period and reviewed all sections of the existing "Diabetes and You" programme.

Page points

1. The development group involved diabetes nurses, dietitians and podiatrists and each discipline was requested to review their section of the written curriculum.
2. The multidisciplinary team, including staff with a recognised national certificate in education, attended a "Train the trainer" programme.
3. The programme was subject to both internal and external quality assurance, in line with advice from The Diabetes Education Network.

The development group involved diabetes nurses, dietitians and podiatrists and each discipline was requested to review their section of the written curriculum. In addition, service users with type 2 diabetes were invited to contribute to the review. It was agreed that the aims of the sessions needed to be clearly defined and that each section could have two clear messages for the participants (the person with diabetes and/or their carer) to take home. Formosa et al (2012) suggest moving away from traditional didactic diabetes-related education to a person-centred approach, to improve better metabolic outcomes and quality of life for the individuals with diabetes.

The main changes within the curriculum were to change the teaching methods to be more interactive and to incorporate Social Learning Theory (Bandura, 1977) more throughout the programme. Social learning is the most widely used theory in education programmes and describes the ways that people become confident to carry out different behaviours, and includes problem solving in a group and learning from the experiences of others. There was a great deal of discussion on how much time should be allocated to each section and what education should be covered within the programme but it was also important to be realistic about the amount of time available to deliver the programme. The group also needed to consider the participants' ability to understand and remember the information, as the estimated average reading age in certain deprived areas is reported as 11 years. The programme needed to be flexible in order to adapt to the participants' needs and, therefore, it was felt that visual tools would be more appropriate as a teaching and learning aid. The programme would also be supported by either the locally developed resource called the *Diabetes education book*, which includes handheld records and/or Diabetes UK information.

It was agreed that at the end of the first session there should be a discussion on goal settings for each person, if they wanted to participate. This was conducted as a group discussion. Lesson plans would include aims and objectives, the educator's activity, the participant's activity, what resources were needed and the length of the session. An overall programme was developed and agreed (see *Table 1 and Table 2*).

2. Trained educators

When the initial programme was developed to meet this criterion, staff at Aintree Diabetes Centre and South Sefton Primary Care Trust worked with Edge Hill University to develop a "Train the Trainers" 2-day programme. The MDT, including staff with a recognised national certificate in education, attended the programme. This provided an opportunity to work together to change the programme to reflect learning theories. Since then, new staff have accessed "train the trainers" education in a variety of ways, for example, via Trusts' learning and development programmes, or local higher education institutes.

3. Be quality assured

The Diabetes Education Network actively supports the need for a quality assurance programme to be implemented in each centre to ensure continued development of the educators and the programme. The criteria include internal quality assurance through peer review and feedback from people with diabetes. To meet these criteria, the peer review form from the Diabetes Education Network was adapted and a feedback form was developed. In addition, there should be external quality assurance by an independent assessor. Each Trust has arranged external quality assurance, either through the Trust's Learning and Development Department or through the local higher education institute. This external quality assurance will focus on developing the skills of the educators. The aim is to implement the external quality assurance after six months of delivering the new programme. Regular meetings have been agreed to continually review the programme and make changes accordingly

4. Be audited

The key outcomes to measure the success of the education programme that might be included are:

- Biomedical (for example, HbA_{1c}, weight, lipid profile).
- Quality of life.
- Satisfaction with care.
- Experience of person with diabetes and/or carers.
- User involvement.
- Degree of self-management achieved as a result of the programme.

The present audit tool is still to be redesigned but includes a questionnaire given to the participants at the end of the programme. The questionnaire will cover whether people are satisfied with the education, whether they feel more confident looking

Table 1. "Diabetes and You" agenda: Day one.

Title	Subject	Activity/Time	Lead
Introduction and welcome	What the programme is about What people would like from the programme	5–10 minutes Write what participants want from the programme	Educator
What diabetes is and an introduction to its management	Different types of diabetes Causes of diabetes Symptoms Management: 1. Diet 2. Exercise 3. Medication 4. Knowledge	20 minutes Use flip chart to write the participants' symptoms	Educator
1. Diet: Eating for health	Different types of food What are carbohydrates, how they can affect diabetes? Sugars Fruit and vegetables	45 minutes Using food cards or food models	Dietitian
2. Exercise	What are the benefits to increasing activity? What are the barriers and how to overcome them? Local information about services Examples of activity to reduce calories	15 minutes Write the barriers to exercise and overcoming the barriers on flip chart	Dietitian
3. Medication	Awareness of side effects, action of medication and how to take medication correctly	15 minutes	Educator
4. Knowledge	Gaining knowledge to encourage empowerment Discuss what affects diabetes Write down one point participants would like to change and how, using examples	10 minutes Discuss what affects blood glucose levels using visual tool Handout on what changes would like to make Questions	Educator and Dietitian

after themselves and will ask the person to list the three main things have they learnt during the programme. The programmes are audited on the number of people invited and attendance rates. The group acknowledge the limitation of collecting biochemical data.

Discussion

This article describes the development and re-evaluation of a local education programme for people with type 2 diabetes. The programme was developed following an audit of the perceived educational needs of people with type 2 diabetes and

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"The programme is delivered by skilled and experienced MDTs, who have contributed to the development and evolvement of the programme and have knowledge of local needs and services."

Table 2. "Diabetes and You" agenda: Day two.

Title	Subject	Activity/Time	Lead
Welcome back	Did anyone make any changes? Questions from last week Recap: The four cornerstones of management	5–10 minutes	Educator and Dietitian
Looking after yourself	Discuss annual review What parts of the body can be affected by diabetes? What tests are needed for each part and what should they be aiming for? Monitoring Include driving, insurance, holidays, pre-conception care	25 minutes Use body to mark off what parts of the body can be affected by diabetes	Educator
Understanding feet	How to look after your feet What to look for if there is a problem Where to go to if there is a problem	30 minutes Use of foot models, creams, files and shoes	Podiatrist
Looking after your heart	Weight management How to change a recipe to reduce fat Types of fat and impact on cholesterol Advice on salt intake Alcohol	40 minutes Guess how much fat in meals quiz	Educator
Evaluation and the next step	Evaluation form Local education book or Diabetes UK information available	10 minutes	Educator

patient involvement has been sought at each stage of the re-evaluation.

The programme is delivered by skilled and experienced MDTs, who have contributed to the development and evolvement of the programme and have knowledge of local needs and services. The programme is easy to access, delivered at different times, including morning, afternoon and evening, and includes sessions at a variety of sites across north Liverpool and surrounding areas. Family and carers are welcome to attend, and it is delivered in an open and friendly approach, using the appropriate terminology.

Working in collaboration with other MDTs, from both primary and secondary care Trusts, gives a greater understanding of each healthcare professional's role within the team and also of the services that each Trust is able to contribute. This collaborative approach not only benefits people with diabetes but also supports networking and communication, which is a key factor in the delivery of health care. Being involved in the design of the programme may increase

a sense of ownership for the healthcare professionals involved and promote a positive approach to the review. Delivering a high-quality programme that can improve the life of a person with diabetes can also lead to greater job satisfaction for the healthcare professional.

The consensus of the advisory group (Healthcare Commission, 2007) felt that when people with diabetes are advised that structured patient education programmes are an integral part of diabetes care, services are likely to achieve a 60–90% take up. A review of each Trust's referral pathway and how the programme is being promoted by practice nurses may improve the uptake of the education programme. In the future, each Trust will monitor and compare uptake of the programme, discuss methods of promotion and share best practice .

The aim of the "Diabetes and You" programme is to promote self-management; however, the group acknowledge that there is a limit to what can be achieved in two sessions and that ongoing education is needed. Khunti et al (2012) report that a cohort of adults attending the DESMOND programme did not achieve sustained benefits in biochemical outcomes measures and lifestyle outcomes at three years, but some changes to illness beliefs were sustained. Ongoing education is essential as the psychological effects of diabetes changes over a period of time. Group education should be seen as additional to the routine advice, education and support provided by the usual care team on an on-going basis (NICE, 2009a). The next step is to look at developing a programme for people with established diabetes, which could include the emotional aspects of diabetes. Further consideration of the audit tool is needed. We are currently considering introducing a pre- and post-education questionnaire.

There are cost implications of developing a local programme, including: time to develop the programme; staff training (train the trainers); funding of external quality assurance and making staff available to deliver the programme. All services have managed to do this with the existing staff establishment, although development of the course is initially time consuming.

Conclusion

Collaborative working across different Trusts has greatly benefited the education programme and the staff delivering the programme. As a result, there is a closer link between services and this allows teams to share good practice. Within 8 months, the group has redesigned the programme and delivered a pilot, which included user involvement. There will be an internal peer review of the programme in 3 months and the main group will meet again in 6 months. External quality assurance of both the programme and educators will be conducted by either a local higher education institute or local Learning and Development Departments. The programme will be reviewed on a regular basis, taking account of feedback from internal and, external reviewers and people with diabetes and their carers.

Areas which may require further development include the referral pathway and how the programme is promoted by practice nurses. The redesign of the audit tool, which may include a recognised tool to measure self-management skills, knowledge and patient satisfaction, will also be developed. ■

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Authors

Margaret Daley is a Diabetes Coordinator/Diabetes Specialist Nurse for the Sefton Community Team under Liverpool Community Health NHS Trust, Liverpool; Maureen Wallymahmed is Nurse Consultant, Nurse Consultant, Aintree Diabetes Centre, Aintree University Hospital NHS Foundation Trust, Liverpool