

Newly diagnosed type 2 diabetes: Building a comprehensive education programme

Margaret Daley, Jackie Rooney,
Jane Marks, Maureen Wallymahmed

Article points

1. In this survey, people with type 2 diabetes requested both individual and group education sessions.
2. A review of group education resulted in an increase in community venues and supporting literature.
3. Individual education provision was identified as a gap.
4. Information from the survey has been used to develop a structured education care pathway.

Key words

- Structured education
- Group sessions
- Individual sessions

Margaret Daley is a Diabetes Specialist Nurse, Jane Marks is a Diabetes Nurse Educator and Maureen Wallymahmed is a Nurse Consultant in Diabetes at University Hospital Aintree, Liverpool. Jackie Rooney is a Chronic Disease Facilitator at South Sefton PCT, Liverpool.

This article reports results of a survey, performed both in secondary and in primary care centres, which sought the views of people with established type 2 diabetes on their experiences of education in the past, and the education they would like to receive in the future. As a result of the survey, the authors have developed a care pathway to ensure the delivery of a minimum standard of education (comprising both group and individual sessions) for people with type 2 diabetes.

The journey towards the provision of a minimum standard of education for people with diabetes began with the publication of the National Service Framework (NSF) for diabetes (Department of Health [DoH], 2001b), which aimed at making best practice the 'norm'. As the number of people being diagnosed with type 2 diabetes continues to rise (Diabetes UK, 2005) the provision of structured education is paramount (National Institute for Clinical Excellence [NICE; now the National Institute for Health and Clinical Excellence], 2003). The NSF, Diabetes UK (2003) and the expert patient report (DoH, 2001a) all state that people with diabetes should be actively engaged in the decision-making process regarding diabetes management. With this in mind, we carried out a local assessment of the educational needs of people with type 2 diabetes in both secondary and primary care.

Aim

The aims of the needs assessment were as follows.

- To determine what type of education people with type 2 diabetes had received in the past and what education they would like to be offered, in a structured package, in the future.
- To identify whether there were any differences in the educational needs of people with type 2 diabetes attending clinics in primary versus secondary care settings.

Method

The method we used was a questionnaire-based survey. The questionnaire was divided into three sections.

- Section one asked questions relating to how, when, where and from whom people with type 2 diabetes had received education in the past.

- Section two asked if further education was requested, and, if so, how, when, where and by whom it should be delivered.
- Section three explored which topics they had received education on in the past and which they would like covered by a future education programme.

Participants

In secondary care the questionnaire was completed by 100 people with type 2 diabetes attending routine consultant-led clinics at Walton Diabetes Centre, Liverpool. Consecutive attendees at the clinic were asked if they would like to participate in the survey – a verbal explanation was given and confidentiality assured. The participants completed the questionnaire in clinic.

Five questionnaires were also sent out to each

of the 36 practices in South Sefton Primary Care Trust (PCT) with a covering letter explaining the aims of the survey. Practice nurses were asked to randomly distribute the questionnaires to people with type 2 diabetes at their annual review clinics. The selected participants were also given an explanatory letter and asked to fill in the questionnaire and return in the post. Participants were reassured that the questionnaire was anonymous.

In addition, 10 questionnaires were sent to the local Diabetes UK support group. All were completed and returned by members of the group with type 2 diabetes.

Results

In the secondary care setting fifty respondents (50%) were female, the mean age was 61 years old (range 26–85 years), and 59 people

Page points

1. In secondary care the questionnaire was completed by 100 people with type 2 diabetes attending routine consultant-led clinics at the Diabetes Centre, Aintree Hospital, Liverpool.
2. Questionnaires were also sent out to each of the 36 practices in South Sefton Primary Care Trust.

Table 1. Responses to questions in section one of the questionnaire (results are numbers of responses [%]).

	Primary care (n=71)	Secondary care (n=100)
Where was education received?*		
Hospital	19 (27)	54 (47)
GP surgery	40 (56)	37 (32)
Health centre	4 (6)	18 (16)
Other	1 (1)	6 (5)
No answer	7 (10)	–
Total number of responses	71	115
Who provided diabetes education?*		
Diabetes nurse	17 (24)	59 (45)
Practice nurse	35 (49)	27 (21)
GP	10 (14)	27 (21)
District nurse	2 (3)	11 (8)
Other	3 (4)	5 (4)
No answer	4 (6)	1 (1)
Total number of responses	71	130
Have you received enough education?		
Yes	31 (44)	79 (79)
No	28 (39)	19 (19)
Yes, but would like to learn more	12 (17)	2 (2)
Total number of responses	71	100
Would you like to receive more education?		
Yes	45 (63)	57 (57)
No	12 (17)	22 (22)
No answer	14 (20)	21 (21)
Total number of responses	71	100

*Some participants provided more than one answer.

Table 2. Responses to questions in section two of the questionnaire (results are numbers of responses [%]). This section dealt with participants' views on the delivery of education in the future.

	Primary care (n=71)	Secondary care (n=100)
Group or individual education?		
Group sessions	30 (42)	17 (17)
Individual sessions	12 (17)	25 (25)
Did not answer	29 (41)	58 (58)
Total number of responses	71	100
How should education be delivered?*		
Written information	34 (34)	45 (39)
Educational talks	36 (36)	26 (23)
Videos	14 (14)	25 (22)
Discussion groups	16 (16)	19 (17)
Total number of responses	100	115
Where should education be delivered?		
Local health centre	46 (65)	30 (30)
Diabetes centre	7 (10)	22 (22)
Hospital	5 (7)	16 (16)
At home	1 (1)	–
No answer	12 (17)	32 (32)
Total number of responses	71	100
When should education be delivered?		
Morning	14 (20)	24 (24)
Afternoon	22 (31)	16 (16)
Evening	12 (17)	9 (9)
All day	2 (3)	6 (6)
No answer	21 (30)	45 (45)
Total number of responses	71	100

*Some participants provided more than one answer.

(59%) were over the age of 60 years. In the primary care setting, the total number of questionnaires sent out was 190. There were 71 responses (response rate 37%). The mean age of these respondents was 69 years (range 38–82 years), and 30 of the respondents were female (42%).

Results from sections one and two of the questionnaire are summarised in *Tables 1* and *2*, respectively.

Section three: Educational list

Section three of the questionnaire contained a list of educational topics (see *Table 3*). Participants were asked to identify those topics on which they had received education in the past and those which they felt were needed in a future education programme. The results are presented in *Figures 1* and *2*.

Page points

1. In the primary care setting, the total number of questionnaires sent out was 190.
2. There were 71 responses (response rate 37%).

Table 3. Topics listed in section three of the questionnaire.

- What is diabetes?
- Diet
- Exercise
- Treatments
- Complications
- Hypoglycaemia
- Home blood glucose monitoring
- Driving
- Employment
- Sex
- Foot care
- Alcohol
- Illness
- Holidays
- Emotional aspects
- Other suggestions

Discussion

Past education

In secondary care 47% of respondents stated they received their education in hospital, while in primary care the majority (56%) received their education in the GP surgery. In secondary care, 66% of respondents stated that the main deliverer of education was the nurse (either the practice nurse or the diabetes nurse). The corresponding proportion of respondents in primary care was 73%.

In secondary care, 79% of participants stated they had received enough education, while in primary care only 44% of the participants felt they had received enough education. Fifty-seven per cent of respondents from secondary care stated they would, however, like to receive more education, with 63% in primary care also wanting to receive more education.

Future education: group or individual?

In secondary care the method by which participants would like to receive education was inconclusive, since 58% of the respondents did not answer the question on whether they would like group or individual sessions. In primary care, 42% of the participants said they would like group education (41% did not answer).

Thirty-six per cent of the primary care group participants said they would like educational talks, while in secondary care only 23% wanted them. Both groups expressed an interest in receiving written information (39% of secondary care and 34% of primary care respondents). Many participants (30% in secondary care and 65% in primary care) wanted the education to be delivered in the local health centre.

Many in both secondary and primary care stated they would prefer the education to be either in the morning or afternoon, with only 8 people in total requesting all-day sessions.

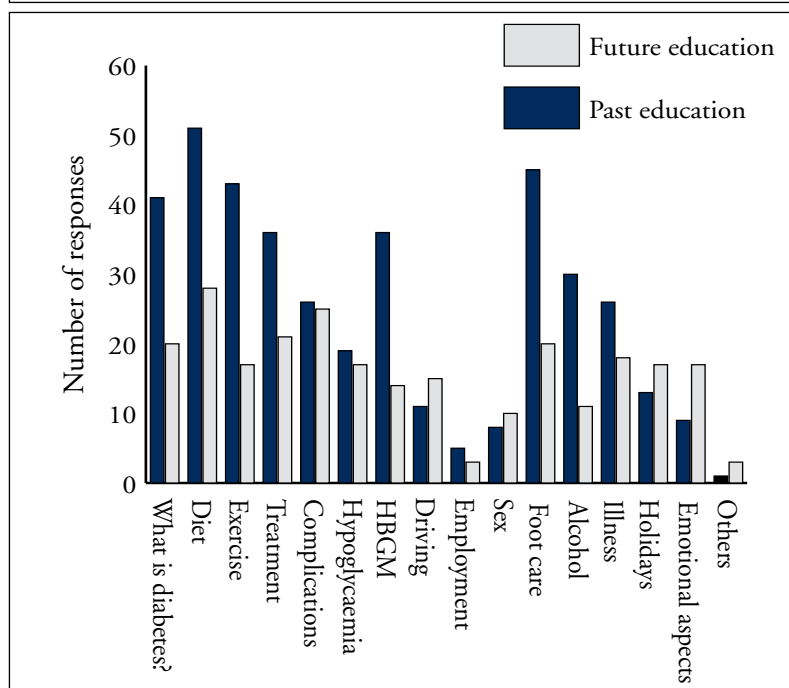
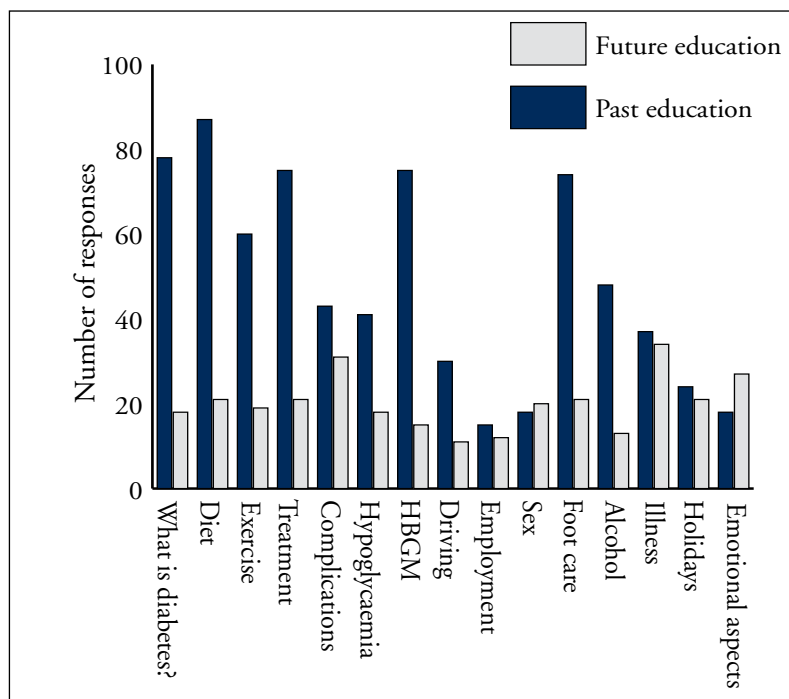
Education topics

In the responses from both the secondary and primary care settings the main areas of education received in the past were on diet, exercise, 'what is diabetes?', treatments, home blood glucose monitoring and foot care. It

is possible that the participants did receive education in the other areas but did not recall being given this information.

In secondary care the main topic areas requested for future education were illness, complications, and emotional aspects. In those respondents from primary care, requests for education in the areas of diet, complications

Figure 1 (below). The responses from section three of the questionnaire from the participants in secondary care. Figure 2 (bottom). Responses to the same section from the primary care participants. (HBGM = home blood glucose monitoring.)



Page points

1. As a result of the survey a number of changes have been made locally.
2. The number of local community venues delivering the group education programme has been increased.
3. Written information for people with type 2 diabetes has been developed to support the group education programme.
4. A local multidisciplinary working group, which includes a patient representative, has been established.

and ‘what is diabetes?’ were popular. Education on diabetes treatment was requested by both groups, perhaps reflecting that type 2 diabetes is a progressive disease where its treatment changes as the condition progresses.

Work following the survey

Following the survey it was felt that a logical next step would be to review education provision for those with type 2 diabetes taking into account national recommendations.

For example, the NICE technology appraisal on structured education in diabetes (NICE, 2003) states that education should:

- be structured and available on diagnosis
- be ongoing, based on assessment of need
- reflect established principles of adult learning
- be adaptable to a person’s individual needs, personal choices and learning style
- be delivered by skilled staff
- be delivered in a group format unless this is considered unsuitable for an individual.

Furthermore, the aim of Standard 3 of the NSF for diabetes (‘Empowering people with diabetes’) is:

‘To ensure that people with diabetes are empowered to enhance their personal control over the day-to-day management of their diabetes in a way that enables them to experience the best possible quality of life.’

One of the key interventions highlighted was the provision of structured education, as it can improve knowledge, blood glucose control, weight and dietary management, physical activity and psychological well-being.

In line with the national recommendations, we used the results from the survey to form the basis of a comprehensive structured education programme.

Group education recommendations

Prior to this study, the secondary care diabetes team already delivered group education (the ‘Diabetes and You’ programme) for people with newly diagnosed type 2 diabetes in the diabetes centre, with a similar programme running in all three primary care trusts (PCTs) across the

secondary care team’s catchment area.

As a result of the survey the following changes have been made locally.

- The number of local community venues delivering the group education programme has been increased.
- Written information for people with type 2 diabetes has been developed to support the group education programme.
- A local multidisciplinary working group, which includes a patient representative, has been established.

Individual education recommendations

The Patient Education Working Group (DoH and Diabetes UK, 2005) recognised that one-to-one support is an important part of diabetes education and identified it as a provision gap that still needed to be filled. Prior to the survey there was no provision for structured individual education in either primary or secondary care. As a result of the survey it was felt that individual education sessions needed to be provided in a structured way, over a period of time.

Care pathway

An educational care pathway has been developed that is flexible and facilitates both individual and group education sessions (Figure 3). The care pathway is delivered over 12 months following the diagnosis of type 2 diabetes and includes:

- the setting of realistic goals between the person with diabetes and the healthcare professional
- use of problem-solving methods
- education on treatment changes
- referrals to other services.

At present the pathway is being piloted in Walton Diabetes Centre and six primary care practices. Depending on the GP practice, a person newly diagnosed with type 2 diabetes will either be referred to the practice nurse or to secondary care, where the diabetes nurse educator (DNE) implements the pathway. Each person is offered group education sessions and an appointment with the dietitian.

Individual one-to-one education is provided



in a minimum of three visits, with the fourth visit being the annual review. The number of visits is flexible and depends on a person's specific needs.

All the education topics highlighted in the survey are provided in the care pathway; in particular, the emotional aspects of diabetes are covered in visit three (Figure 3). The exact content of each visit is also flexible and

dependent on individual needs. For example, diabetes complications may need to be discussed in greater detail in the first visit, rather than the third, if the person is particularly concerned about complications or has a relative who is affected.

To support the educational care pathway, a patient information book has also been developed. Included in the book is a patient-held

Figure 3. Flow chart representing the educational care pathway for people newly diagnosed with type 2 diabetes.

Page points

1. The group and individual education recommendations from the survey are now being implemented.
2. Information from the survey has been used to develop a structured education care pathway for people with newly diagnosed type 2 diabetes, which includes both individual and group education elements.
3. Although there is a strong movement towards group education, it is also important to look at how healthcare professionals involved in diabetes can ensure the provision of minimal standards in individual education.
4. Only 44% of the participants in primary care felt they had received enough education. This highlights the importance of improving education in the community.

records section to enable people with diabetes and their professional teams to keep track of how their diabetes is managed.

Conclusions

The group and individual education recommendations from the survey are now being implemented. The multidisciplinary working group is now reviewing the 'Diabetes and You' group education programme to ensure it meets the key criteria the DoH and Diabetes UK (2005) recommend for a structured education programme in order to fulfil the NICE requirements.

Written information has been developed to support the education programme. There has been an increase in the number of local venues offering education in one PCT, however, the main difficulties have arisen from standardising the group programme across the three different PCTs.

Information from the survey has been used to develop a structured education care pathway for people with newly diagnosed type 2 diabetes, which includes both individual and group education elements. This comprehensive programme is to be delivered over a 12-month period and it will be tailored to meet individual needs. The pathway takes into account the NICE and NSF recommendations, using problem-solving methods and setting of agreed, realistic goals.

The educational care pathway is now being piloted both in secondary and in primary care centres. The measurable outcomes are patient satisfaction, patient knowledge and biomedical measurements.

Although there is a strong movement towards group education, with Dose Adjustment For Normal Eating (DAFNE), Diabetes Education and Self-Management for Ongoing and Newly Diagnosed (DESMOND) and the eXpert Patient Education versus Routine Treatment (X-PERT) programme being the main contenders, it is also important to look at how healthcare professionals involved in diabetes can ensure the provision of minimal standards in individual education. Although difficult to measure, the aim should be that no matter

which GP practice or diabetes centre the person with diabetes attends, he or she receives the same high standard of care.

In comparing the secondary and primary care survey results, people with diabetes stated they wanted education locally, but only 44% of the participants in primary care felt they had received enough education. This highlights the importance of improving education in the community, especially in light of the Government's aim to move more diabetes care into the primary care setting.

A flexible care pathway for people with newly diagnosed type 2 diabetes could be the way forward. However, from the survey results, we believe that the pathway needs to be supported with written information that can be added to as individual knowledge increases. Patient-held records and a care plan for the professional and the person with diabetes to work together are also needed. ■

Department of Health (DoH; 2001a) *The expert patient: a new approach to chronic disease management for the 21st century*. DoH, London. Available at <http://www.dh.gov.uk/assetRoot/04/01/85/78/04018578.pdf> (accessed 31.07.2006)

DoH (2001b) *The National Service Framework for diabetes: Standards*. DoH, London

DoH, Diabetes UK (2005) *Structured patient education in diabetes: Report from the patient education working group*. DoH, London

Diabetes UK (2003) *Guidance for Primary Care Trusts: User Involvement & the Diabetes National Service Framework*. Diabetes UK, London. Available at <http://www.diabetes.org.uk/infocentre/guidance/pctnsfguide.doc> (accessed 31.07.2006)

Diabetes UK (2005) *State of the Nations: 2005*. Diabetes UK, London. Available at <http://www.diabetes.org.uk/stateofnation/StateOfNations.pdf> (accessed 31.07.2006)

National Institute for Clinical Excellence (2003) *Guidance on the use of patient-education models for diabetes. Technology Appraisal 60*. NICE, London

The care pathway is available from the authors on request. Please email margaret.daley@aintree.nhs.uk for more information.