Creating a learning environment for people with type 1 diabetes and education facilitators

Trish Birdsall, Maria Leveridge

Article points

1. The Peterborough Dose Adjustment Course (PDAC) draws on social learning, self regulation and dual process theories.
2. Provision of course material prior to the first session reduces uncertainty and apprehension among participants by preparing them for what is expected.
3. Learning from people with diabetes participating in the education programme gives healthcare professionals a powerful insight into living with diabetes.
4. The healthcare professionals who facilitated the course gained confidence, recognition and contributed to their continuing professional development.

Key words

- Structured education
- Dose adjustment
- Learning environment

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This article describes a new structured education programme – the Peterborough Dose Adjustment Course (PDAC) – that aims to equip adults with type 1 diabetes with the necessary tools to adjust their insulin doses in relation to carbohydrate estimation. The teaching and learning sessions are a two-way process engaging both facilitators and participants to connect, interact and obtain information from each other.

In 2003 NICE stated that: 'All individuals with diabetes should be offered structured patient education at the time of initial diagnosis and ongoing patient education as required.' In response, the PDAC was developed. This article aims to highlight two elements requiring consideration in the delivery of this educational programme: the environment in which new learned behaviours are to be delivered through facilitators; and the individual's own perceptions of their illness.

Trained educators need to have an understanding both of the education theory appropriate to the age and needs of the learners and of participants' beliefs, worries, expectations and effects on life (Kurtz et al, 2005; Hall, 2006). Educational delivery approaches for groups of young people, ethnic groups and the elderly must be considered for the programme locally.

Course aims

Following the advice of Rogers (1951), the course aims to be patient-led and create a two-way learning process which involves interaction between the facilitators (a DSN and a dietitian) and participants. It will also create an opportunity for individuals to share their experiences and personal perspectives of their condition. Brookfield (1986) affirms that through educational encounters and experiences learners come to appreciate that values, beliefs, behaviours and ideologies are culturally transmitted and individuals begin questioning their own personal lives.

Planning

The authors experienced apprehension and anxiety during the preliminary planning process, particularly as this programme required collaboration with a healthcare professional from a different discipline who they had not previously worked closely with. However, they were encouraged by existing research that showed positive inter-professional collaboration can be useful in

assessing practical, teaching and facilitation skills and provides the opportunity to provide feedback (Quinn, 2000).

Integrated in the session plan was the opportunity for people with diabetes to discuss their health concerns rather than simply answer closed questions. This was to provide a positive learning environment for the course that would contribute and encourage behavioural changes in both staff and participants (Nicklin, 2000; Reece and Walker, 2003; Kurtz et al, 2005).

Delivery

Prior to the course, people with type 1 diabetes were invited to a briefing evening outlining the aims and objectives of the education programme. Several criteria had to be met for course entry: commitment and motivation, willingness to share information and completion of weekly homework assignments (involving blood-glucose monitoring, food diaries, carbohydrate estimation and insulin adjustments). The team felt that discussing the course prior to participation would reduce feelings of uncertainty and apprehension among those it was targeted at (Ramsden, 2003).

Signs of anxiety, excitement, apprehension and uncertainty from staff and participants were evident at the first group meeting. Serving refreshments and conducting an ice-breaking session normalised the situation and moved the focus away from diabetes. The authors discovered from some participants that they had never experienced a group discussion with other people with type 1 diabetes.

At the first session, each individual was given information outlining the lesson plans for the 4-day course. The course is run on one day per week (either a Monday or a Friday) from 09.30–15.00 for 4 weeks, usually in a community centre. The benefits of this location include good parking, a central location and a well-organised kitchen.

The topics shown in *Box 1* were discussed in the morning sessions while the afternoon sessions were dedicated to participants discussing blood glucose levels and carbohydrate intakes. All participants start by using 1 unit of insulin to 10 g of carbohydrate, although some may require 0.5–3 units per 10 g. It is expected that by the end of the course each individual will know their own insulin:carbohydrate ratio. Participants were also taught how to establish an individualised insulin sensitivity to correct any blood glucose levels out of range using the '100 rule' (100 divided by the total daily dose of insulin to the number of mmol/l that 1 unit of insulin will reduce) with a maximum of 1 unit to a 2mmol/l reduction (Walsh and Roberts, 2000).

Through the group discussion sharing life events – such as time of diagnosis, hospital admissions, hypoglycaemic episodes, and controlling blood glucose levels – group interaction became evident. Establishing a climate of trust allowed each individual to freely discuss past experiences within a safe environment and encouraged others to intervene with their own coping mechanism.

Challenges encountered

Learning requires us to reassess or challenge our beliefs and ideas, learn new skills and change ways of working and there may be some degree of defensiveness and conflict. One member of the group openly showed signs of reluctance to change. The issue arose when we asked participants to take 1 unit of insulin to 10 g of carbohydrate. For the concerned party, this was only a third of their usual insulin dose, which was very frightening. It was the facilitators job to convince them that this was a safe option. Another issue occurred during group discussion on managing hypoglycaemia: some individuals would have their own particular way of treating hypos, over-treating or under-treating and changing the method they are used to takes time, confidence and courage. Addressing both these issues requires enabling people to become engaged in their care decisions, as recommended by the DoH (2001).

Page points

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Box 1. Course content.

- The physiological basis of diabetes.
- Carbohydrate recognition and estimation.
- Hypo- and hyperglycaemia.
- Complications.
- Sick day advice.
- Exercise.
- Alcohol.
- Holidays and travel.

Page points

1. Even if the healthcare professional provides advice, people still might make their own 'wrong' decisions about their condition due to a lack of knowledge or experience.
2. Rather than the facilitator providing the solution, it is helpful to return to basics, allowing participants to think over their experiences and elicit their own theory.
3. The facilitators also need to acknowledge and challenge their feelings and desires to ensure patients fully understand the educational messages.
4. All participants felt their partners should attend the session on complications and hypoglycaemia.
5. Through listening and allowing the people with diabetes participating in the course to express thoughts, feelings and opinions, the healthcare professionals gained a deeper insight and understanding of individuals living with diabetes.

The challenge is to develop effective consultation styles and language, and create appropriate healthcare settings and environments while restraining our own impatience and frustration so that we do not disempower our patients (Usher, 2006). It was difficult on some occasions for the facilitators to resist intervening; however, other members of the group were able to provide reassurance by sharing their experience with similar changes. Furthermore, participants would also help each other understand changes in blood glucose levels and make suggestions for dose alteration or lifestyle changes.

Even if the healthcare professional provides advice, people still might make their own 'wrong' decisions about their condition due to a lack of knowledge or experience. This is described as the 'self-regulation theory' where the person with diabetes has a personal model of diabetes developed from strong determinations of the individual's emotional wellbeing and self-care behaviour (Skinner et al, 2003).

There may be occasions when a group fails to reach a satisfactory consensus on the correct way to solve a problem. Rather than the facilitator providing the solution it is helpful to return to basics, allowing participants to think over their experiences and develop their own theory. In the PDAC, dual-process theory (Skinner et al, 2003; which explains how something can occur through reasoning and rationality) was used, with an emphasis on systematic processing which allowed the individuals to share their knowledge and experiences with one another, but with the facilitators encapsulating and paraphrasing the final version.

The facilitators also need to acknowledge and challenge their feelings and desires to ensure participants fully understand the educational messages. For example, part of the session is to openly discuss participants' understanding of living with a chronic condition on a day-to-day basis. It can be tempting as a healthcare professional to supply all the answers to the questions from people with diabetes, but this could potentially deny them the chance to utilise their own resources and their capacity to learn about their condition (Usher, 2006). Encouraging people with type 1 diabetes to problem solve can help them provide strategies to cope and understand their illness (Fareed, 1996).

Outcomes

Pre- and post-education knowledge was not assessed, however clinical audit data collected before the course and 6 and 12 months after the course indicates a positive impact on reducing hypoglycaemia and hyperglycaemia, and improving quality of life.

Verbal feedback

During the final session lunch, informal feedback to the facilitators was positive. The participants commented that the setting away from the hospital area was acceptable and contributed to lowering anxiety levels. Working and seeing healthcare professionals in a different capacity generated interaction.

'I never knew that my liver stored glucose.'

'I've had diabetes for 22 years and was unaware that so many parts of my body help with controlling my blood sugars.'

'It's a pity these courses were not available a long time ago.'

'It's great to talk to others with the same condition as me.'

'The course has been a life-changing experience.'

All participants felt their partners should attend the session on complications and hypoglycaemia. These issues will be brought back to the PDAC steering group.

Healthcare professional development

Through listening to and allowing the course participants to express their thoughts, feelings and opinions, the healthcare

professionals gained a deeper insight and understanding of people living with diabetes.

The authors, in their roles as facilitators of the course, were given the opportunity to demonstrate and observe facilitation skills within a group setting in addition to providing positive and constructive feedback to each other following each session. Such continuing professional development and education can be perceived not only as service-enhancing but also as a method of diminishing occupation-related stress (Nicklin, 2000). Following two sessions, increased competence and confidence was apparent from the healthcare professionals.

Future development

The authors plan to utilise self-reflection and peer evaluation to further improve the course. Once the curriculum is finalised it is hoped that some external quality assurance would be available via the Type 1 Education Network.

This type of self-management education may allow 'expert patients' to run education courses for themselves and other people with diabetes (Hall, 2006).

Recommendations

The Department of Health advocate education being built into patient reviews (DoH, 2005). Group education has been highlighted as an effective measure, although one-on-one consultations will continue to be appropriate – particularly for identifying the individual needs for each person with diabetes. As there is a cost to the healthcare provider for structured education (approximately £500 per person), it should be as effective as possible. In addition, PCTs are confronted by many challenges in providing structured education for people with diabetes. People with diabetes must have accurate information to help them make informed choices to self care. Appropriately trained multidisciplinary teams using a variety of techniques to promote active learning should provide education tailored to the needs of the specific group they are working with (Hall, 2006). ■

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