

Improving the diabetes knowledge of nurses and unregistered practitioners

Robert Priharjo, Trish Birdsall

This article describes the authors' experiences of delivering a 3-day introductory diabetes workshop for healthcare professionals and unregistered practitioners (such as healthcare assistants), aimed at helping them develop diabetes knowledge and confidence in working with people with diabetes. The training can also be accessed as individual study days, or as part of the Certificate in Diabetes Care pathway at Anglia Ruskin University, which also validated the programme. A variety of techniques are used to facilitate participants in their learning. Feedback from the participants offers some information about how the training has increased their knowledge, skills and confidence in helping people with diabetes to manage their condition.

To provide high-quality diabetes care, healthcare professionals, including nurses, need to have up-to-date knowledge and skills. However, in many cases, it has been reported that the level of diabetes knowledge of nurses and people living with diabetes is insufficient (Speight and Bradley, 2001; Khamis et al, 2004; Lee and Shiu, 2004; Chan and Zang, 2007).

Many initiatives to resolve this shortfall in knowledge have been launched over the years. In 2001, the National Service Framework (NSF) for diabetes (DH, 2001) was implemented; this has been followed by national clinical guidelines for type 1 diabetes and type 2 diabetes (NICE, 2004; NICE, 2008), and more recently with the publication of the updated NICE (2009) guideline on newer therapies in type 2 diabetes.

However, since the publication of the NSF for diabetes, many areas still need improvement, such as care planning the way patient education is delivered (DH, 2006).

To support healthcare professionals in developing and implementing their knowledge and skills, as well as meeting the NSF outcomes, Skills for Health (2008) has published competences targeting a wider range of healthcare professionals. These profound changes in health care, and the demand for educational needs by healthcare professionals, have put higher education institutions and their partnered NHS Trusts in a strategic and collaborative position to design and develop educational programmes that guarantee equity and quality of education and clinical skills for pre- and post-registration healthcare professionals working with people

Article points

1. To provide high-quality diabetes care, healthcare professionals, including nurses, need to have up-to-date knowledge and skills.
2. The curriculum structure of the 3-day diabetes workshop was validated by Anglia Ruskin University in April 2006.
3. This workshop has shown the importance of creating a climate for learning that can enable the learner to move from a state of dependency to a position of interdependency and autonomy.

Key words

- Professional education
- Training
- Workshops

Robert Priharjo is Senior Lecturer in Adult Nursing, Anglia Ruskin University, Peterborough; Trish Birdsall is a Senior DSN and Associate Lecturer, Peterborough PCT, Peterborough.

Page points

1. The curriculum structure of the 3-day diabetes workshop was validated by Anglia Ruskin University in April 2006.
2. The certificate pathway was originally designed only for those who need educational preparation for diabetes care technician roles.
3. Each workshop attracts between 15 and 35 participants each time it is run. Of these about 60% are registered healthcare professionals, 30% are unregistered, and the final 10% is made up of people with diabetes.

with diabetes. It was with this background that the authors designed a programme aimed at improving the diabetes knowledge and skills of healthcare professionals.

Preparation

The curriculum structure of the 3-day diabetes workshop was validated by Anglia Ruskin University in April 2006. This workshop can be accessed as part of the university Certificate in Diabetes Care pathway, or as single study days. The Certificate in Diabetes Care was produced as a result of a collaboration relationship between Homerton School of Health Studies, the Open University and the University of Luton following a pilot project on the new role of the diabetes care technician (DCT).

The certificate pathway was originally designed only for those who need educational preparation for DCT roles. However, the workshop, which is delivered twice per year, can also be accessed by registered and unregistered practitioners, and people with diabetes. This mixture of participants aims to improve collaboration and partnership, and has recently been implemented in a variety of interprofessional education programmes (Anderson et al, 2009).

Each workshop attracts between 15 and 35 participants. Of these, approximately 60% are registered healthcare professionals, 30% are unregistered, and the final 10% is made up of people with diabetes.

During the development stage, the facilitators planned to deliver student-centred learning by shifting from the proposition that “teachers are supposed to transmit prescribed content, control the way students receive it, and test if they have received it” (Knowles, 1973) to “teachers act as facilitators of learning”. This type of teaching delivery mirrors current clinical practice that places people with diabetes at the core of service (patient-centred collaborative practice). Therefore, it is important to keep the participants aware of considering the views or perspectives of people with diabetes.

Two further people with diabetes (one with type 1 diabetes and one with type 2 diabetes) are invited to attend the workshop to give a personal perspectives and share experiences of their diagnosis and difficulties surrounding the condition. These individuals are selected from local GP surgeries.

A variety of teaching and learning techniques are selected (Brown and Atkins, 1988) to allow each participant the opportunity to increase their knowledge, skills and confidence when caring for people with diabetes. The workshop aimed to move from a didactic, pedagogical approach towards andragogy – a concept that was initially defined as “the art and science of helping adults learn” (Knowles, 1973). *Box 1* outlines both formal and informal teaching and learning strategies to enhance flexibility and participants’ interaction.

Workshop delivery

An introduction and welcome is given on each day of the course by one of the facilitators. This gives an opportunity for the facilitators and participants to clarify the learning objectives and the programme delivery.

Day 1

The aim of the first day is to discuss common myths surrounding diabetes and to understand what diabetes is. After introducing themselves,

Box 1. Formal and informal teaching and learning techniques.

Formal	Informal
<p>Lecture or presentation</p> <ul style="list-style-type: none"> ● Medical staff working in the field of diabetes have the opportunity to deliver relevant and up-to-date information. ● Sports development officer from the City Council discussed the benefits of exercise and the various classes that are available to people who have diabetes within the local area. ● Eastern Regional representative of Diabetes UK participated and informed the group of recent studies, research, new equipment and new developments in diabetes. 	<ul style="list-style-type: none"> ● Group work/interaction. ● Role-play and observation (drama enactment). ● Case studies. ● Quizzes. ● Mini workshops (20 minutes in length). ● Interactive sessions, such as plastic food models and meal carbohydrate counting. ● Talks by people living with diabetes (patients’ perspectives).

the participants pair up and write down their learning needs and what they want to achieve over the 3 days. This strategy was selected to maximise students' participation from the start of the workshop – a technique known as “Roger’s student-centeredness” (Burnard, 1999). Everyone participated and had the opportunity to go through all issues that had been suggested. An ice-breaker was initiated to further encourage group participation (*Box 2*).

This exercise was related to diabetes and how every individual is different and that one may interpret their needs differently. Following the interaction among the group, the first two lectures, *What is Diabetes?* and *Epidemiology of Diabetes*, were delivered to provide participants with a framework as well as to build an interest in the topic. To enhance participation and concentration, it was necessary to include different activities, such as asking questions to the participants, giving them tasks to work on in pairs and asking them to give examples from practice (Biggs, 2003).

The afternoon session aimed to cover lifestyle intervention and understanding diabetes from the perspective of people with the condition. In this session, the two people with diabetes described their experiences of living with the condition. They incorporated the good and bad aspects of their coping strategies. This type of teaching, which involves patients in classroom teaching, has been considered as an effective teaching strategy for improving the learning experiences of nurses, as well as having positive effects on participating individuals (Costello and Horne, 2001).

The dietitian then showed how different foods affect blood glucose levels, and the use of plastic foods enabled the workshop participants to calculate the proteins, fats and carbohydrates in each food group. Before closing the first day, there was sufficient time to give feedback on personal learning objectives and evaluation of the day. In addition, participants were asked to consider the impact that a diagnosis of diabetes would have on themselves, their families and their lives. Each individual would go home and try to incorporate living with diabetes, and discuss their experiences the following day.

Day 2

The second day started with a welcome and introduction followed by sharing the challenges of living with diabetes, e.g. collecting children from school, taking children to after school activities, planning meals with members of the family, and maintaining physical activity. This exercise triggered a question: how could a person possibly fit in and manage all life aspects affected by diabetes? The participants also raised some common questions in relation to self-monitoring of blood glucose, giving injections and remembering to take their medication. Employment and emotional issues were also included in the discussion.

Following this session, a talk on lifestyle interventions from the perspectives of healthcare professionals was incorporated. In this presentation, stages of change and some basic techniques of assessing peoples' readiness and motivation to change were introduced. The participants were given an opportunity to assess their own lifestyle using an easy assessment tool prepared by the speaker. It was very interesting to know that by doing these tasks, the majority of participants managed to incorporate elements of self-evaluation in relation to the advantages and disadvantages of changing their selected unhealthy life styles (O'Neill, 2002).

Case studies were used to follow a session on diabetes treatment, which included discussion of oral antidiabetes medications (OADs) and insulin. This session was affected by time constraints, therefore only relevant information was included in the case studies. The intention was to help the participants to familiarise themselves with real-world issues in relation to diabetes management. Non-insulin and insulin wall charts from *Diabetes Update* were discussed and given to the participants to take home. These were given because the majority of the participants did not have the charts available in their clinical areas, and some people were not familiar with some insulins and OADs that are available in the UK.

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Box 2. Ice-breaker session.

- Take an A4-sized piece of paper.
- Close your eyes.
- Fold the paper three times.
- Tear of the corners.
- Open your eyes.
- Compare what you have done with each other.

Page points

1. The afternoon session covered the three acute emergencies: hypoglycaemia, diabetic ketoacidosis and hyperosmolar non-ketotic syndrome.
2. The morning of the third day was allocated to discussion of the long-term complications of diabetes, including the annual review and foot care.
3. After lunch, the effects and benefits of physical activity were explored, which was followed by an exercise quiz that incorporated some light physical activity.

ketotic syndrome (HONK). The first hour comprises a drama to highlight what can happen during an episode of hypoglycaemia (*Box 3*). The aim of the session is to create conversation, communication and interaction among participants (Riseborouyh, 1993), and to stimulate critical thinking. Other interactive sessions during the afternoon encouraged participants to highlight the differences between the signs and symptoms of DKA, HONK, hyperglycaemia and hypoglycaemia. During lunch there was a quiz related to diabetes and its management.

In the afternoon, following a lively discussion looking at treatments available for diabetes, participants were divided into three groups, allowing 20 minutes for demonstration of blood testing, ketone testing and injection technique. The second day ended with quiz results and evaluation.

Day 3

The morning of the third day was allocated to discussion of the long-term complications of diabetes, including the annual review and foot care. Small group work and group presentations were used to cover macro- and microvascular complications. As suggested by Cobb and Bauersfeld (1995), the use of a small group can facilitate engagement and collaboration. Within the foot-care session, each individual had the opportunity to take off their shoes and socks or stockings for assessment and examination, and had the chance to use monofilaments and Doppler ultrasound. A presentation on diabetic foot problems was also given.

Box 3. Drama setting: hypoglycaemic attack.

The two facilitators, one representing a person with diabetes and the other the person's carer, demonstrate a typical scenario portraying the person with diabetes experiencing a hypoglycaemic attack. The drama involved both people rushing around in a supermarket carrying bags of shopping. The carer, unfortunately, is unaware that her partner is behaving in a strange manner, until he shows signs of sweating, disorientation and confusion. Then the carer panics, recognising that something is not right. This exercise sets out to deliberately dramatise the situation and treat the hypoglycaemia episode incorrectly, and for the participants to observe, acknowledge and discuss issues around hypoglycaemia.

After lunch, the effects and benefits of physical activity were explored, which was followed by an exercise quiz that incorporated some light physical activity. The last speaker, a regional representative from Diabetes UK, gave a presentation on the current developments in diabetes, incorporating new research findings, ongoing studies, contact numbers for support groups and other available facilities. Finally, attendance certificates were distributed and evaluation forms collected. There was no formal assessment, but everyone was given an opportunity to check the quiz answers and to complete evaluation sheets.

Evaluation

The 3-day workshop covered most aspects of diabetes, and the facilitators enjoyed delivering the course. Evaluation tools that were specially designed to assess the course delivery were used. Within the evaluation, participants were asked to identify aspects of the workshop which they found most worthwhile, those aspects they found least worthwhile and how useful the workshop is for practice. They were also requested to indicate areas of diabetes care that need changing as well as to rate the change on the level of their diabetes knowledge after attending the course. Overall, the feedback from the participants has been very positive (*Box 4*).

Conclusion

This workshop has shown the importance of creating a climate for learning that can enable the learner to move from a state of dependency to a position of inter-dependency and autonomy (Reece and Walker, 2003). As suggested by these authors when delivering training, it is important to demonstrate openness care, and commitment, freedom of expression and acceptance of differences to enhance learning. Finally, networking across areas is essential to encourage a multidisciplinary course to be delivered again. ■

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“It is important to demonstrate openness, care, and commitment, freedom of expression and acceptance of differences to enhance learning.”

Box 4. Evaluation of the 3-day workshop from 35 participants.

Aspects found most worthwhile	Aspects found least worthwhile	Usefulness to practice	Improvement in understanding of diabetes
<ul style="list-style-type: none"> ● Diabetes complications, hypoglycaemia, diabetic ketoacidosis. ● Monitoring diabetes: hands-on experience with different pens. ● Dietary advice. ● Patient experiences. ● Quiz. ● Effects of exercise on diabetes. ● Annual review. ● Lifestyle modification. 	<ul style="list-style-type: none"> ● Assumption of prior knowledge of participants in some talks. ● Repetitions of pens demonstration. ● Some talks were too long. 	<ul style="list-style-type: none"> ● “All sessions were very informative”. ● “My knowledge has greatly improved since attending this workshop”. ● “Very worthwhile course, aimed at the right audience, so could understand diabetes”. ● “Need in depth knowledge of type 1 diabetes” 	<ul style="list-style-type: none"> ● Not sure: 0% ● Did not improve: 0% ● Slightly improved: 5 % ● Improved: 35% ● Much improved: 60%