

# Structured patient education: Who are the X-PERTs?

Trudi Deakin

Throughout the NHS, approaches to healthcare are shifting to become more patient centred. For the management of type 2 diabetes, the X-PERT Programme has been designed to empower people with diabetes by means of a structured educational course lasting six weeks. The outcomes of implementing this programme are patients with a wide range of statistically improved health indicators compared to those who underwent routine treatment.

Effective diabetes management lies almost entirely in the hands of the person who lives with the condition (Department of Health [DoH], 2001). However, healthcare delivery is often based upon acute models of care where health professionals are the 'experts' and inform the 'patient' of correct treatment for optimal care. The patient is viewed as a recipient and performer of regimens to be accepted and obeyed (Brennan, 1996).

Diabetes education is often delivered one-to-one and in an unstructured fashion. Follow-up can be infrequent due to high demand and limited resources. Many people with diabetes find the delivery of service inadequate and have difficulty putting theory into practice (Griffin et al, 1998). Patient education within the medical model focuses on 'the problem' of patient control or non-compliance (Anderson and Funnell 2000a).

In contrast, the patient-centred approach seeks to elicit and satisfy those needs that patients express themselves, recognising that it is not always the case that people are unwilling to change but they may be unwilling to be

changed (Anderson and Funnell, 2000b).

Systematic reviews have provided evidence that self-management patient education programmes based on the patient-centred approach are effective in improving clinical and psychosocial outcomes in both the short and longer term (Deakin et al, 2005; Norris 2001; Norris et al, 2002).

The diabetes National Service Framework (NSF) and the National Institute for Health and Clinical Excellence (NICE) technology appraisal of patient-education models for diabetes make it clear that all primary care organisations need to commit to offering structured education programmes to people with diabetes from the point of diagnosis (DoH 2001; DoH 2003; NICE 2003). Key criteria for a structured education programme aimed at fulfilling the NICE requirements have been developed by a working party sponsored jointly by Diabetes UK and the Department of Health (DoH and Diabetes UK, 2005). Now that tools are in place to provide patients with learning resources, the NICE guidance on patient education was reinstated in January 2006.

## Article points

1. It has been recognised that adoption of self-management skills by the person with diabetes is necessary to enable them to manage their diabetes.
2. The Department of Health and Diabetes UK have published key criteria that structured education programmes should meet to implement the Diabetes NSF and NICE guidance.
3. The X-PERT Programme is a structured patient education programme that meets the key criteria and is currently being implemented in many organisations throughout the UK and the Republic of Ireland.

## Key words

- Type 2 diabetes
- Structured patient education
- Self management
- Empowerment

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**Table 1. X-PERT Programme Content**

<b>Week 1</b>	Exploration of carbohydrate digestion and the resulting rise in blood glucose levels. Identification of symptoms of diabetes and how these may be alleviated by lifestyle changes and if necessary medication. Demonstration of what health results such as glycated haemoglobin (HbA <sub>1c</sub> ), systolic and diastolic blood pressure, blood cholesterol levels, body mass index (BMI) and waist circumference mean.
<b>Week 2</b>	A seesaw model shows the concept of energy balance. The Balance of Good Health with 72 food models informs participants about food portions and healthy eating. A video/DVD gives key messages about the long-term solution to weight management. The benefits of physical activity include information about local exercise-on-prescription schemes.
<b>Week 3</b>	The quantity of carbohydrate consumed is the key strategy in achieving optimal glycaemic control but also that the quality (type) of carbohydrate offers additional benefits. Visual aids demonstrate the effect of carbohydrate food on blood glucose levels to dispel the myths surrounding glucose, sucrose and starch. A quiz that includes 96 photographs of food increases carbohydrate awareness amongst the participants.
<b>Week 4</b>	A 90-minute tour around a supermarket addresses some common confusion surrounding dietary fat, starchy and sugary foods, salt, fibre and food labels. This encourages a diet that is enjoyable, variable and balanced whilst dispelling the concept of 'good' and 'bad' foods. Participants become more food label aware and confident in making sensible food choices.
<b>Week 5</b>	The possible short and longer term complications of diabetes are discussed with emphasis on how to reduce the risk through lifestyle, treatment and regular monitoring. Educational models explain complex conditions such as nephropathy, retinopathy, arteriosclerosis, blood pressure and cardiovascular disease in a visual, patient-centred manner. Care provision, sick day rules, driving guidelines, holidays and working with diabetes are also addressed in this session.
<b>Week 6</b>	Are you an X-PERT? A board game designed to reinforce the main messages from the X-PERT Programme is played in a relaxed and fun manner while allowing the participants to re-cap and appreciate how much they have learnt. Participants evaluate the X-PERT Programme for enjoyment, usefulness, degree of self-management obtained, impact on health and living with diabetes.
<b>Lifestyle Experiment</b>	The final 30 minutes of each session involves people obtaining their own health results and discussing what they are and what they mean to them. These sessions also address psychosocial aspects, barriers to change and goal setting.

### The X-PERT Programme

The diabetes X-PERT Programme was designed in conjunction with patients and the local branch of Diabetes UK. This process commenced in 1998, and in 2001 a six-week group education programme was finalised for adults with type 2 diabetes. The programme was based on theories of patient empowerment and patient activation. It was evaluated by means of a randomised controlled trial involving 314 participants in ten programmes delivered at community venues within Burnley, Pendle and Rossendale, East Lancashire. Three of these programmes were specific for Urdu speaking South Asian participants. The X-PERT Programme aims to increase knowledge, skills and confidence so that individuals are able to make informed decisions regarding their diabetes self management. The X-PERT Programme is delivered by one educator. Between 15 and 18 people are invited to each programme and encouraged to attend with a friend or family member if they wish. In addition to routine treatment the control group received individual appointments from GPs, practice nurses and dietitians.

Highly significant statistical differences were found in favour of the X-PERT Programme for clinical, lifestyle and psychosocial outcomes. The participants assigned to the X-PERT programme had significant improvements in diabetes control as well as reduced requirement for diabetes medication, reduced blood pressure, body weight and waist circumference. They had improved diabetes self-management skills, increased physical activity levels and were enjoying a healthier diet. Quality of life had improved through freedom to eat, drink and enjoy food. Self-empowerment scores had significantly improved as had treatment satisfaction (Deakin 2004; Deakin et al. 2006).

There have been several unplanned outcomes from participants attending the X-PERT Programme. In addition to improvements in their own health and well

being, many have become peer educators, others have set-up local support groups and some are sitting on healthcare organisation and delivery committees.

**Content**

Each X-PERT session uses visual aids to explore health issues related to diabetes. Each participant receives a diabetes health profile and is given support in completing it with their personal results. All sessions are based on patient activation, discovery, learning and empowerment (Anderson and Funnell, 2005; Brunner, 1966; Ewles and Simnett, 2003). There are six weekly sessions, in total 14 hours of structured patient education. The educational content is shown in *Table 1*.

**Patients' perspective**

Attendance rates for the X-PERT Programme are excellent, in the randomised controlled trial 95% of participants attended the programme and 82% attended at least four sessions. These attendance statistics are still apparent throughout the implementation phase. Participant evaluation is also excellent. People find the programme enjoyable, useful and report that it will greatly benefit their diabetes self-management. See participant comments in *Table 2*.

**Recognition**

The X-PERT Programme has won several awards:

- Diabetes UK 2003 Diabetes Education Award (March 2003)
- National Obesity Forum Weight Management in Diabetes Care Award (October 2003)
- Health Service Journal Patient-Centred Care Award (November 2004)
- The Secretary of State's Excellence in Healthcare Management Award (November 2004)
- TrusTECH North-West Innovation Award (3rd Prize, July 2006).

**Key Criteria**

The X-PERT Programme meets the key

**Table 2. X-PERT participant comments**

'This is the first time in 10 years of being a diabetic that anybody has told me these things'

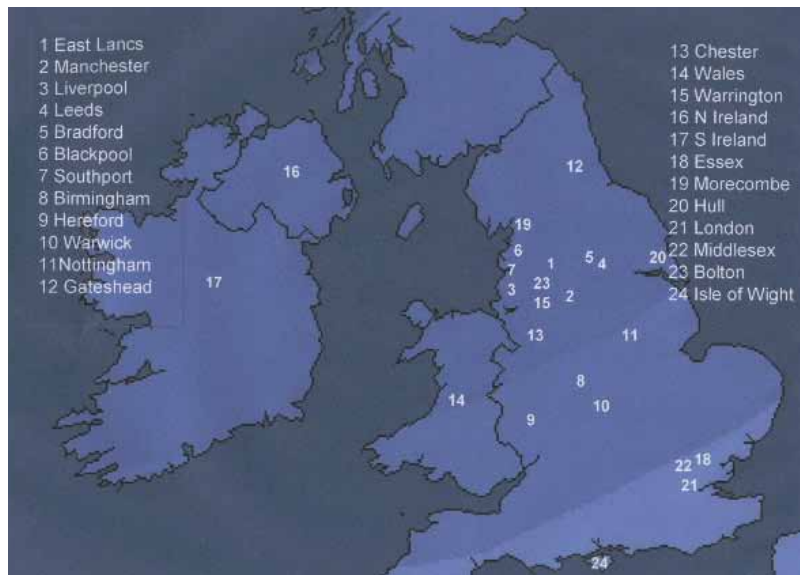
'Very glad to be offered the course, much appreciated (thank you NHS!). Feel much encouraged in dealing with myself and more understanding with latest knowledge'

'I am more at ease with diabetes from what I have learnt and able to control it better'

'I was very impressed – the sessions have been delivered in a manner that had obviously gone beyond that required to make them understandable'

'Don't feel as frightened as I did.....feel more confident in myself...things explained so that anybody and everybody can understand'

'This course was really helpful in helping me understand diabetes as all demonstrations were in laymen's language – programme should have been implemented years ago'



*Figure 1: Map showing locations in the UK and Ireland where the X-PERT Programme is currently implemented.*

criteria for structured patient education (DoH and Diabetes UK 2005).

**Philosophy**

The X-PERT Programme is evidence-based; flexible; dynamic; copes with diversity; has shared aims and learning outcomes; aims to develop the knowledge, skills and confidence

**Page points**

1. X-PERT trainers undergo an intensive 2 day course incorporating a mixture of theoretical sessions on adult education, empowerment, patient-centred care and clinical guidelines before they are qualified to hold their own sessions.
2. The X-PERT Pack has been professionally developed and is being implemented throughout the UK and Ireland
3. An update module is being developed to deliver to X-PERT patients on an annual basis. This will recap on the main learning outcomes from the X-PERT Programme, update the participants with any changes in clinical guidelines and further facilitate the self-management process.

for participants to make informed decisions regarding their diabetes self-management. One key principle of the programme is that for every piece of information shared, the educator should facilitate and enable interaction from the participants.

*Structured curriculum*

This includes a full script of the six-week programme. Educators are encouraged to become familiar with the script before programme delivery but should not read it to the participants word-for-word. The curriculum:

- is person-centred
- supports adult education principles
- is theory driven and evidence-based
- uses different teaching media and supporting materials
- is reliable, valid, relevant and comprehensive.

The curriculum also includes a detailed programme with lesson plans, participant recruitment and registration resources, audit and quality assurance programmes and participant handouts.

*Trained educators*

X-PERT educators are trained in educational theory, in the delivery of the educational theory, and in the delivery of the programme content that is based on the latest nutritional and clinical guidelines.

*Quality assured*

The programme has been developed based on the International Diabetes Federation standards (IDF, 2003). The following elements are quality assured:

- environment
- structure
- process
- content
- use of materials
- delivery of the programme
- evaluation and outcome.

To improve reliability of the quality assurance programme a guidance document has been developed to describe what

would constitute 'full' 'most' 'part' or 'no' achievement.

*Audited*

An audit template includes attendance, clinical outcomes (HbA<sub>1c</sub>, weight, waist circumference, BMI, blood pressure and lipid profile), prescribed diabetes medication, quality of life, patient experience and degree of self-management. Standards have been developed to benchmark implementation of the X-PERT Programme against the randomised controlled trial results.

*Train the Trainers*

A pragmatic approach for implementation to allow all people with type 2 diabetes to benefit from structured education is to train healthcare professionals to deliver the X-PERT Programme. 'Train the Trainer' courses are being delivered at different venues within the UK. To date more than 360 staff have been trained. The X-PERT 'Train the Trainers' course includes pre-course assignments and two intensive training days incorporating a mixture of theoretical sessions on adult education, empowerment, patient-centred care and clinical guidelines. There are hands-on interactive sessions on delivering the X-PERT Programme, evaluation and quality assurance programmes.

*Implementation*

The X-PERT Pack has been professionally developed and includes a written curriculum, audit and quality assurance programmes, a CD ROM of patient handouts, a set of educational visual aids and magnetic display board. The X-PERT Programme is now being implemented throughout UK and Republic of Ireland (*Figure 1*).

*Future developments*

An update module is being developed to deliver to X-PERT patients on an annual basis. This will recap on the main learning outcomes from the X-PERT Programme, update the participants with any changes in clinical guidelines and further facilitate

the self-management process. An optional module for participants with type 2 diabetes on basal-bolus insulin regimens is also being prepared to assist people in adapting insulin doses according to the carbohydrate content of a meal.

Research funding is being sought to adapt X-PERT for children, adolescents and adults with type 1 diabetes.

A national database has been developed for audit and quality assurance data. Organisations will be able to input data and the database will automatically generate an annual report. Each organisation will be able to monitor where they are in comparison to the national statistics for implementation of the X-PERT Programme.

### Conclusion

People with diabetes are the experts at living with the condition on a day-to day basis. Recent documentation acknowledges that structured patient education programmes are required to facilitate the development of knowledge, skills and confidence. These in turn allow people to make informed decisions regarding their diabetes self-management. The X-PERT Programme has achieved this by encouraging a shift from a medical-style consultation where the health professional is the expert and the patient obedient, to a patient-centred approach that encourages engagement and autonomy. People with diabetes who have participated in the X-PERT Programme have become the experts in diabetes self-management. ■

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### Page points

1. Research funding is being sought to adapt X-PERT for children, adolescents and adults with type 1 diabetes.
2. The X-PERT Programme has encouraged a patient-centred approach to type 2 diabetes education.

***‘People with diabetes who have participated in the X-PERT Programme have become the experts in diabetes self-management.’***