

Self-management in diabetes: training implications for professional carers

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ABSTRACT – A workshop was convened to examine factors determining patient self-management and implications for those providing care. It was attended by 15 doctors and 15 nurses with considerable expertise in education for those with diabetes. Discussion included:

- the experience of training programmes to date
- factors determining effective patient self-management
- the implications for training of professionals, skills required, their current availability and proposals for their development.

The conclusions were that training and experience of these skills are both inadequate. Programmes of training, which are equally applicable to the management of other chronic diseases, should be embedded in the system of care and delivered at local level. Regional or national programmes are required to develop trainers in all districts able to deliver and maintain local programmes. This critical element of care in diabetes must be adequately funded if self-care standards are to be improved and expensive complications prevented.

KEY WORDS: behavioural modification, diabetes, patient education, professional skills, training

Pioneering work in the 1980s^{1,2} promoted patient education to enable successful outcomes in diabetes self-management. Despite significant advances in the technology of diabetes care, most patients still do not achieve optimal control of their blood glucose, blood

pressure or weight.^{3,4} Frustrated clinicians search for technological solutions, despite evidence that the difficulty is as much psychological as pharmacological, and many remain untrained in the educational process and communication skills that could improve their patients' self-management. Several years ago the education section of the British Diabetes Association (now Diabetes UK) produced a consensus document emphasising the need for such training but the response has been muted and slow.

A workshop was convened in November 2001 in Barford under the auspices of the Diabetes Education Study Group (UK) to test the opinions of 30 experienced specialists in diabetes education to examine the:

- factors responsible for the deficiencies in self-care
- knowledge, attitudes and skills required of professionals who provide care
- training requirements to achieve the highest standards of these attributes.

The workshops' experience

Diabetes Education Study Group workshops began in Ipswich in 1981 and still continue once or twice a year. In the first few years participants were, in the main, senior doctors and nurses. The workshops were widely acclaimed, many participants acknowledging the important contribution new insights made in changing their attitudes to and delivery of care. Over time, participants have been arriving with less experience, often still in training, but few from primary care. The terminology used has changed considerably, suggesting a greater acceptance of the need for a patient or learner centred approach. However, observing participants during patient consultation exercises shows that this approach is not always sustained in practice. Enthusiasm, positive attitudes and a desire to implement new practice were evident during the workshops, but making change in the hurly-burly of everyday care is not easy.

The general experience of those responsible for the annual Northampton counselling course and the more recent nurse empowerment courses was broadly similar. However, access to learning opportunities of this kind has been limited to a small proportion of the people delivering diabetes care.

Key Points

Clinical success is impossible without effective education of patients

Factors responsible for effective self-care in diabetes can be identified by professionals with appropriate skills

All professionals who provide care require training in education and behaviour modification

Local programmes of training supported by nationally or regionally trained trainers should be provided and adequately funded

Factors determining effective patient self-management

Three meta-analyses confirm the contribution of education to improvement in patient self-care.⁵⁻⁷ Considerable doubts remain about the most effective learning processes, mainly due to poor descriptions of methodology. Didactic approaches are less effective than interactive methods, and local initiatives are preferable to global solutions. Patients need to be fully 'self-empowered' to make day-to-day decisions about modification of lifestyle, medication and response to self-testing etc.

The relationship between what we know and what we do is complex, and relationships between knowledge acquisition and behaviour are weak.⁸ Effective performance is largely unrelated to educational status or social class, but many patients never acquire enough understanding of the factors controlling blood sugar to make appropriate changes to improve glycaemic control. There is, in general, a tendency to overestimate the level of patients' understanding of how their body works, even with long-standing diabetes or among those 'well educated' patients whose education excluded biological sciences.

Members of the workshop agreed that:

- provision of information must be comprehensive
- understanding must be systematically checked
- regular updating is required throughout life.

The application of behavioural change models to the development and maintenance of new and appropriate behaviours is influenced by a wide range of psychosocial variables, including:⁸⁻¹¹

- health beliefs about potential benefits from and barriers to desired behaviours
- perception of the 'locus of control': is the outcome dependent on oneself (internal), control provided by others or by chance (external)
- emotional status
- quality of life
- satisfaction with treatment
- role of important others
- intention to change.

The variables have been modelled by Prochaska and DiClemente¹² and by Ajzen and Fishbein¹¹ whose work has been tested in a large study of subjects with diabetes.¹³ Recommendations for their clinical application were provided by Rollnick *et al*¹⁴ using a simplification of these models.

Application of these models in a diabetic context using comprehensive and well validated questionnaires for both type 1 and 2 diabetes confirmed the significance of these factors, but in addition noted the importance of targets set by the patients and their self-management skills. Not only are there significant relationships between individual factor scores and glycaemic control but modification by an educational intervention has also been demonstrated (Table 1).^{15,17}

At diagnosis, major behaviour changes are required of the patients to adopt the measures of self-care such as new medica-

tion, self-testing, dietary change etc. The patient's intention to change and to maintain those changes will depend on having the 'tools' to do so, as well as believing that the changes are achievable and worthwhile. Patient education programmes need to address and facilitate the processes of understanding, encourage belief in their success and facilitate the necessary confidence. This also requires a major behaviour change on the part of the professionals, whose education has made them expert at solving other people's problems rather than helping them solve their own.

These principles are not disease-specific and are equally applicable to other chronic disorders, for example asthma or hypertension.

Have we the skills to empower patients and improve self-management?

Formal education programmes are limited in their ability to change what health professionals actually do in their practice.¹⁶

There are major barriers to successful empowering of patients. Belief in self-sufficiency is the first essential, but diabetes is imposed on a psychologically normal but heterogeneous population. A third or more of adults still expect their health to be the responsibility of the medical team rather than within their own control. Denial is a coping mechanism used by perhaps one in five. Adolescents are likely to respond only to immediate perceived benefits or barriers and are disinterested in long-term gains. People with other clinical conditions and those with mental illness are further compromised.

Attitudes and behaviours of healthcare professionals may also be inappropriate. Most of them are trained in the acute medical model of care, with prescription and treatment provided by the medical team and relatively little contribution to the outcome expected from the patient. Such attitudes are constantly reinforced by media presentation. There is, however, ample evidence that if the professionals remain in control the outcomes are worse.^{13,18} Doctors and nurses alike, whilst using appropriate terminology, often demonstrate reluctance to let go control of the management, and cite inherent beliefs that it may be unsafe. In a parallel chronic condition, asthma, similar inappropriate attitudes have been observed.¹⁹

The contract between patient and carers in chronic disease management programmes needs to be fundamentally different

Table 1. Factors responsible for self-management.

| | |
|---------------------------|--------------------------|
| • lifestyle | • other people |
| • self-efficacy* | • diet barriers |
| • weight concerns | • emotional adjustment* |
| • targets* | • perception of control* |
| • cost benefits* | • symptoms |
| • self-management skills* | |

*These factors have been shown to be significantly related to glycosylated haemoglobin.¹⁴

from that assumed in acute situations. It needs to be explicit, negotiated and modified in response to various life and disease events.

Professional attitudes are set in a similar way to the Ajzen and Fishbein model described above for patients. They too are influenced by their environment, their peers and by beliefs about the potential outcomes as well as by personal and family experiences. Fortunately, these attitudes, whether held by patients or professionals, are capable of change. The direction of change, however, may not always be the optimal one and actions by doctors and nurses may undermine the principle of empowerment. Admission to hospital, for example, or excessive demands to review test results may erode patients' feelings of self-control.

The predominant role of the professional is to meet the medical agenda to improve health outcome (eg glycaemic control, blood pressure and lipid levels). The technical targets must not be ignored, but are unlikely to be satisfied unless the psychosocial aspects are also addressed. However, studies reveal that a small degree of 'realistic' anxiety is essential if the medical outcomes are to be achieved. Too high a degree of 'satisfaction' may lead to self-neglect. The solution lies in dealing first with the patient's wants and needs in order to identify factors which facilitate or inhibit achievement of technical objectives which can, in turn, be dealt with through negotiation.

To enable patients to undertake effective self-care, it is essential to ensure that:

- the patient is well informed
- opportunities are created for them to express their own agenda of needs and wants
- individual factors operating to favour or inhibit self-care are accurately identified
- adoption of behavioural modification techniques within the consultation process includes negotiation and target setting
- routine evaluation of clinical outcomes includes psychological status measures.

What skills do the professionals require?

Understanding of the pathophysiology and pharmacology of diabetes and its complications is essential, but different sets of skills are required to achieve the critical empowerment/ self-management element. Better information and understanding are required about psychological models and how they can be applied in diabetes practice. There is a need for a 'paradigm shift'

Table 2. Steps for behaviour change.

| | |
|-----------------------------------|-------------------------------------|
| • Involve the patient | • Identify ways to achieve the goal |
| • Specify the problem | • Contracting |
| • Identify successes and failures | • Tracking |
| • Negotiate a specific goal | |

*These factors have been shown to be significantly related to glycosylated haemoglobin.¹⁴

from the acute to the chronic care model. Professional carers need to develop awareness of their own attitudes and approach. Judgement is required to replace judgmental approaches.

Communication skills have generally been acquired by observing and copying other practitioners. There is seldom sufficient dedicated time to reflect on one's own practice. More pro-active teaching methods are needed. Behavioural modification (Table 2) and motivational interviewing techniques are now well developed and some workshop participants use them regularly. The maintenance phase, which is lifelong for those with diabetes, is the most difficult and yet tends to be the Cinderella of the educational process.

Every clinical contact has a learning component for the patient. All those involved in delivering care require education in the processes, which may make those contacts positive rather than negative and inhibiting for the patient

It was agreed that:

- greater understanding of psychological factors responsible for self-care behaviour is needed
- listening and negotiating skills need considerable development
- these skills are necessary for all involved in diabetes care and should not be confined to diabetes educators
- time and support for self-reflection on practice (eg use of video or audio recordings) should be encouraged
- regular review and development of all educational processes within each clinical team are essential.

Although many of the skills, in particular those relating to behavioural change and motivational interviews, are well developed or developing amongst the participants of the workshop, it was acknowledged that this was a highly selected and experienced group. Even so, a number of individuals expressed misgivings about their ability to pass on these skills to others. A large number of trainees in both primary and secondary care require additional skills. It is impossible to reach such an audience with the limited potential of workshops such as those in Ipswich and Northampton.

Conclusions

The following conclusions were reached:

- 1 Training in educational and psychological aspects of self-care is essential if the standards of self-care in diabetes are to be improved and the burden of the disease from both a medical and social point of view to be reduced. It is strongly recommended that this should be embedded in programmes of postgraduate training approved by both the Royal College of Physicians and Diabetes UK.
- 2 Training of professionals needs to take place locally, and educational programmes for all those participating in diabetes care need to encompass psychosocial and behavioural skills.
- 3 The required expertise amongst trainers is currently confined to too few people.

- 4 People willing to undergo further skill development with a view to leading improvement in their local area need to be identified. Combining the experience of the Ipswich and Northampton workshops, supported by others with enthusiasm and expertise, might enable this development.
- 5 The programme of team training might be based on a model similar to that used for the development of programmes of education in several European countries.
- 6 This educational process needs to be applied both in primary and secondary care; patients dealt with predominantly in primary care require equal, if not greater, attention than that given in secondary care. The Warwick courses provide potentially enormous opportunities for using the network they have developed which enable the two sectors to work closely together.²⁰
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