

# 'Doing Diabetes': an evaluation of communication skills and behaviour change training for health professionals

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## Introduction

Type 1 and type 2 diabetes require regular self-monitoring and lifetime adherence to different behaviours to maintain glucose control and promote health. Despite patients' best efforts, effective glucose control can seem difficult and unpredictable, and self-management is psychologically demanding. Diabetes is also associated with poor psychological health including stress, anxiety and depression.<sup>1</sup> Recent policy guidelines<sup>2-4</sup> suggest that promoting psychological health improves short- and long-term coping with diabetes. Ideally, psychological support would be provided by specialist psychologists in diabetes services;<sup>5</sup> however, they are an expensive and scarce resource,<sup>6</sup> focusing on one-to-one therapy for people with complex needs. Given the burgeoning numbers of people with diabetes, methods of delivering psychological support to more people with diabetes should be considered. One effective approach may be to train health professionals in basic psychological skills.

Although some health professionals (e.g. general practitioners) currently receive training in consultation skills, this is not the case for all professions. Many health professionals are uncomfortable in dealing with psychological issues, and feel frustrated by their lack of understanding of patients' apparent failure to follow health advice, particularly where this leads to potentially avoidable morbidity. This can impact on job satisfaction, increasing job stress and 'burnout' and leading to poorer quality of care.<sup>7</sup> There are several

## ABSTRACT

Good communication skills enhance consultations between health professionals and patients, leading to better patient outcomes and increased satisfaction. Health professionals working in diabetes can find it difficult to understand patients' apparent self-management 'failures', but may lack psychological skills to support efforts at behaviour change. This paper reports on the impact of three-day workshops using evidenced psychological theory as a basis for promoting communication and behaviour change skills in health professionals working in diabetes.

Workshops were delivered in seven urban or rural health service areas in Scotland by a multidisciplinary team. Each included three full-day sessions two weeks apart, and used a range of theoretically-underpinned and evidenced teaching and learning methods. Eighty-one health professionals working in diabetes care participated. Pre- and post-evaluations utilised questionnaires with closed and open questions.

Participants recorded a significant increase in 'positive' communication and behaviour change techniques and a decrease in 'negative' techniques over the three workshops. Improved communication and behaviour change skills were perceived as having a positive impact on their understanding of patients' motivations and on their own day-to-day practice.

In conclusion, communication and behaviour change skills are very important tools for health professionals working in diabetes care. They can be taught effectively in relatively few sessions using theoretically-based and evidenced approaches, and have a perceived benefit in relation to enhancing patient care and professionals' satisfaction with clinical practice. Copyright © 2011 John Wiley & Sons.

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## KEY WORDS

communication skills; behaviour change training; health professionals

potential benefits of increasing health professionals' psychological skills. Adopting a psychological approach fosters understanding of the 'whole patient', including the lifestyle challenges they face, and motivations and beliefs that drive their behaviour. Improved health professional/patient communication can improve satisfaction for both parties in medical encounters, and is associated with improved treatment and self-management adherence in patients, and greater job satisfaction in professionals.<sup>8</sup> Additionally, effective training may enable professionals to 'cascade'

skills to colleagues, offering a cost effective way of delivering psychological care to the greatest number of patients with diabetes.

Promoting communication and health behaviour change are more effective when underpinned by psychological theory.<sup>9</sup> Several theories are useful including those focusing on confidence building,<sup>10</sup> and health and illness beliefs.<sup>11</sup> Theories of motivation and action regulation<sup>12,13</sup> promote understanding of intentions and behaviours. Using evidenced theory-based techniques 'adds value' to existing knowledge-based patient education programmes aiming to

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**Table 1.** Summary of course content

	Day 1	Day 2	Day 3
<b>Content</b>	<ul style="list-style-type: none"> <li>Defining good/poor communication</li> <li>Socratic questioning/listening skills</li> <li>Gathering information</li> <li>Giving information</li> </ul>	<ul style="list-style-type: none"> <li>Review practice/homework</li> <li>Barriers to behaviour change</li> <li>ABCs (antecedents, behaviour, consequences)</li> <li>Functional analysis</li> <li>SMARTER goal setting</li> <li>Action/coping planning</li> </ul>	<ul style="list-style-type: none"> <li>Review practice/homework</li> <li>Behaviour change models</li> <li>Relapse prevention techniques</li> <li>Understanding habits</li> <li>Revision – bring it all together</li> </ul>
<b>Methods</b>	<ul style="list-style-type: none"> <li>Group discussion</li> <li>Case construction</li> <li>Socratic questions. Exemplar DVD and feedback</li> <li>Role play</li> </ul>	<ul style="list-style-type: none"> <li>Group discussion</li> <li>Patient examples (DVD)</li> <li>Teaching motivational techniques</li> <li>Goal setting practice</li> </ul>	<ul style="list-style-type: none"> <li>Group discussion</li> <li>Role play 'whole patient'</li> <li>Course review</li> </ul>
<b>Between sessions homework</b>	<ul style="list-style-type: none"> <li>Diary of homework practice of communication skills</li> </ul>	<ul style="list-style-type: none"> <li>ABCs and goal setting practice using worksheets</li> </ul>	<ul style="list-style-type: none"> <li>Review and implement course manual</li> </ul>

promote healthier lifestyles and improve psychological health in diabetic patients.

This paper describes an evaluation of theory-based intervention training of NHS public sector health professionals working in diabetes care in Scotland in psychological skills, focusing on improving communication and facilitating patient behaviour change. Evaluation included prior rating of existing and desired skills, post-intervention ratings of skill use and perceived impact of intervention on practice.

### Methods

**Design.** All 14 NHS health board areas in Scotland were offered three free, government funded one-day workshops. Entitled 'Doing Diabetes Better' they offered communication and behaviour change skills, run by three facilitators per session including psychologists, diabetologists and specialist GPs. Workshops were delivered locally, with two to three weeks between sessions, giving participants time to apply skills to clinical practice between sessions and report on their experiences.

**Recruitment and participants.** Participants were locally recruited by diabetes managed clinical network (MCN) managers. MCNs oversee the design and delivery of diabetes care in Scotland. A maximum of 15 participants attended workshops to

allow small group work, but group sizes varied according to location. Participants attended from seven NHS health boards across Scotland, including urban and remote/rural areas. Groups were deliberately multidisciplinary, including consultant diabetologists, GPs, dietitians, podiatrists, diabetes specialist nurses and primary care nurses. Eighty-one participants took part in all three workshops and provided feedback.

**Intervention.** We aimed to develop communication skills and apply these to understanding patients' motivations, facilitating behaviour change. We used cognitive-behavioural frameworks (relationship between thoughts, emotions and behaviour) and 'process' models of behaviour change, including motivational, goal setting, action planning, relapse prevention and coping planning techniques.<sup>13</sup> A summary of content and delivery methods is given in Table 1.

Sessions were delivered with standardised content according to a manual, including powerpoints and worksheets (available on request). Only a minor part of the sessions involved didactic 'teaching'; most time was spent in general or small group discussion, supported by illustrative video material (including clips from 'real' diabetes patients), worksheet tasks, role plays and case studies. Some materials were developed from

the UK 'NHS Health Trainer Handbook'.<sup>14</sup> Participants were encouraged to use their own case examples, and to practise skills such as Socratic questioning (using open questions to gather information representing the patient's own 'truth', beliefs and values), 'active listening', and goal setting with patients between sessions. To overcome possible barriers to change, motivational interviewing techniques were used.<sup>15</sup> 'Pendleton's Rules' for feedback were used, focusing firstly on what was done well, followed by what could have been done better.<sup>16</sup> Open disclosure and discussion were encouraged in an atmosphere of collaborative learning, stressing the importance of within-group confidentiality.

**Evaluation.** Two questionnaires were developed for the sessions to evaluate baseline communication and behaviour change skills, and perceived need for skill development:

- A 24-item questionnaire related to specific communication and behaviour change skills, derived from the CARE measure<sup>17</sup> of patient perception of health professionals' consultation skills, with reference to general therapeutic skills taken from the Cognitive Therapy Scale.<sup>18</sup> Relevant behaviour change skills were selected from Abraham and Michie's taxonomy.<sup>9</sup> The skills list is included in Table 2. At baseline, (a) frequency and (b) perceived need

**Table 2.** Baseline skills, need for change and mean difference in participants' skills ratings post-intervention

Item Root: 'How often do you...'*	Baseline: skill rating 0-10** Mean (SD) n=81	Baseline: need for change (-5-0-+5) <sup>†</sup> Mean (SD) n= 81	Post-intervention: change in baseline skills Mean diff. (SD) n= 59	95% CI for diff.
Make the patient feel at ease	8.06 (1.39)	2.25 (1.98)	0.76 (2.18)	0.42 to 1.09
<i>Offer your own personal opinion</i>	5.18 (0.93)	-0.96 (2.0)	-2.00 (2.17)	-2.57 to -1.42
Let the patient tell their 'story'	7.52 (1.57)	2.40 (2.07)	0.90 (1.77)	0.43 to 1.36
Understand the patient's perspective	6.72 (1.80)	3.23 (1.79)	1.52 (1.87)	1.04 to 2.01
Find out about the patient as a 'whole person'	6.66 (1.73)	2.94 (2.07)	1.47 (1.96)	0.96 to 1.98
<i>Offer a lot of information and advice</i>	6.91 (1.70)	0.93 (2.53)	-1.49 (2.30)	-2.09 to -0.89
Understand the patient's concerns	7.13 (1.20)	2.93 (1.96)	0.90 (1.48)	0.51 to 1.28
Summarise what the patient is saying	5.88 (1.98)	3.25 (1.77)	2.11 (1.83)	1.63 to 2.60
<i>Feel you need to interrupt the patient to get your point across</i>	4.71 (1.96)	-1.36 (2.18)	-1.96 (2.30)	-2.57 to -1.36
<i>Show disapproval</i>	2.47 (2.03)	-1.90 (2.23)	-1.32 (2.43)	-1.96 to -0.68
Feel you understand why patients behave in certain ways	5.72 (1.91)	3.36 (1.81)	1.78 (2.06)	1.24 to 2.31
<i>Ask 'factual' questions</i>	6.91 (1.37)	1.49 (2.24)	-0.14 (2.03) NS	-0.69 to 0.40
Encourage patients to disclose their concerns	7.08 (1.93)	2.63 (1.81)	1.00 (1.80)	0.52 to 1.47
Be positive about the patient's problems	7.10 (1.27)	2.75 (1.84)	0.93 (1.25)	0.59 to 1.26
<i>Ask questions that generate short one-word answers</i>	5.10 (1.98)	-1.51 (3.10)	-1.29 (2.83) p=0.001	-2.02 to -0.54
Deal with the patient's misunderstandings	6.98 (1.43)	2.85 (1.78)	0.56 (1.58) p=0.01	0.14 to 0.98
Feel you understand what the patient wants from the consultation	5.81 (1.61)	3.44 (1.67)	1.77 (1.72)	1.32 to 2.23
Explain things clearly and fully	7.17 (1.07)	3.07 (1.86)	0.82 (1.09)	0.54 to 1.11
<i>Make decisions on behalf of the patient</i>	4.13 (2.12)	-0.79 (2.69)	-1.23 (2.23)	-1.84 to -0.63
<i>Feel frustrated at the patient's lack of progress</i>	5.40 (2.04)	-2.78 (2.30)	-2.15 (2.33)	-2.76 to -1.54
Help the patient be in control	6.79 (1.38)	3.51 (1.58)	0.77 (1.40)	0.39 to 1.13
Set goals for the patient	6.46 (1.95)	1.97 (2.67)	-0.35 (2.75) NS	-1.07 to 0.36
Motivate the patient to change their lifestyle	6.69 (1.72)	3.85 (1.54)	0.66 (1.87) p=0.009	0.17 to 1.14
Help the patient to make a plan of action	6.64 (1.72)	3.59 (1.83)	0.76 (1.85) p=0.002	0.28 to 1.24

NOTES. \*Items in italics represent unhelpful or 'negative' communication methods.

Scoring. \*\*Baseline skill rating, score 'how often...' where 0 = 'never' and 10 = 'always'. <sup>†</sup>Baseline need for change, score 'like to do more or less' where -5 = 'would like to do a lot less', 0 = 'about right at present' and +5 = 'would like to do a lot more'.

All mean differences statistically significant to p<0.001 unless indicated. NS = not significantly different.



(wanting to do more or less) for each skill were assessed. See Table 2 for scoring information. The frequency measure was repeated approximately five weeks later after the end of the final workshop. For pre-post analysis, skills were grouped into those judged to relate to positive communication and behaviour change<sup>17</sup> (16 items; e.g. 'make the patient feel at ease') versus those related to poorer (negative) communication (eight items; e.g. make decisions on behalf of the patient), as indicated in Table 2. Reliability (Cronbach's alpha) was good for the 'positive techniques' scale ( $\alpha=0.87$ ) and adequate for the 'negative techniques' scale ( $\alpha=0.68$ ).

• The second questionnaire was administered at the end of the final session. It included questions on content, day-to-day skills use, clarity of structure, meeting learning expectations, level of understanding, enjoyment, challenge, amount of material covered, delivery methods, participation and timing, all rated using Likert scales (e.g. 1 'disagree' to 4 'strongly agree'; or 'too much', 'about right', 'not enough'). Participants were also given free text space to comment on individual sessions.

**Analysis.** End-point data were not available for participants from one set of workshops (13 participants; data were collected but unfortunately misplaced). For the remainder, repeated measures analysis (t-tests) were carried out to compare mean pre- and post-scores on each item, and on the positive/negative communication scales. Descriptive statistics and thematic analysis (for free text)<sup>19</sup> were used to summarise results of the evaluation questionnaire.

## Results

At baseline, mean score for positive communication/behaviour change techniques was 108.40 (SD 16.23) out of 160. This increased to 124.15 (SD 10.91) at the end of the sessions (paired  $t=7.17$ ,  $df=53$ ,  $p=0.0001$ ; Cohen's  $d=1.18$ ). Similarly, the mean score for 'negative' techniques reduced from 40.54 (SD 8.50) to 29.42 (SD 8.74) out of 80, between

**Table 3.** Participants' post-workshop ratings of the course

Item	Course ratings n=73
<b>Agreement (1–4); mean, SD:</b>	
Content relevant for day-to-day job	3.65 (0.56)
Used skills in day-to-day job	3.49 (0.50)
Structure of the course unclear (disagree)	3.27 (0.75)
Learned what I hoped	2.96 (0.80)
Enjoyable	3.57 (0.50)
Parts too challenging (disagree)	3.15 (0.50)
Good balance of learning/teaching methods	2.73 (0.83)
Could participate	2.81 (1.10)
Delivery over 3 days best way of learning	2.89 (0.85)
<b>Too much/about right/too little; response (%):</b>	
Overall level of difficulty	About right (99%)
Amount of material	About right (99%)

**Table 4.** Summary of participants' free text comments

<p><b>Knowledge/skill development</b></p> <ul style="list-style-type: none"> <li>• I got lots of new tips, thoughts and ideas about goal setting</li> <li>• Having time between sessions to practise and think about processes</li> <li>• [I've developed...] good insight into how the patient feels</li> <li>• ...my questioning and listening skills have improved</li> <li>• Empowering the client by preventing relapsing back to ill health and developing goals and targets</li> <li>• I feel really enabled to give patients coping skills which are realistic</li> <li>• Not having an agenda, listening to the patient, reflecting on what they're saying and putting the ball in their court – getting them to choose a realistic goal</li> <li>• ABCs made me think about why patients behave in a peculiar way</li> <li>• Now I believe I can put structure around consultations in a more focused way</li> </ul>
<p><b>Self-development</b></p> <ul style="list-style-type: none"> <li>• I feel more confident using the skills from the first two days</li> <li>• I have already implemented changes in my [own] behaviours</li> <li>• I've found it empowering and motivating</li> <li>• Skills useful for the rest of my career for different types of patient</li> <li>• It's given me food for thought not just in diabetes cases but in all my patient contacts</li> <li>• Knowing that what I'm doing at present is good practice</li> <li>• I think some of my practice will change; certainly my thought processes have</li> </ul>
<p><b>Group processes</b></p> <ul style="list-style-type: none"> <li>• I enjoyed meeting others and discussing feedback from practice</li> <li>• Role play was helped by [getting] support and understanding and explanations from tutors</li> <li>• Good atmosphere; [small] groups were good and willing to participate and friendly</li> <li>• Real cases were discussed and investigated real solutions</li> <li>• It was useful working across disciplines from primary and secondary care</li> </ul>

baseline and course completion (paired  $t=11.13$ ,  $df=55$ ,  $p=0.0001$ ; Cohen's  $d=1.29$ ). Most items showed significant positive change between baseline and course completion (Table 2).

Ratings of individual skills varied at baseline. For positive communication techniques 'feeling you understand what the patient wants from the consultation' was the lowest (5.81), and 'making the patient feel at ease' recorded the highest mean pre-workshop value (8.06). The item, 'summarise what the patient is saying', recorded the largest mean positive difference from baseline (2.11). A common 'negative' technique at baseline was 'feeling frustrated at the patient's lack of progress'. This showed the greatest change of all negative items from baseline (mean difference 2.15). For skill needs, 'motivate patients to change their lifestyle' scored highest (mean 3.85). Skills related to 'understanding patients', 'helping them to be in control', and 'make a plan of action' had mean scores over 3.

**Evaluation of workshops.** Evaluation of the workshop components was positive (Table 3). Participants found the content very relevant for their day-to-day job, and reported using their skills in patient care.

Free comments about positive and negative aspects of the three sessions and the course overall were subject to thematic analysis, summarised in Table 4. Many participants had acquired new knowledge and skills/techniques applicable to their daily practice with diabetes patients and other patients, and, for some, efforts to change their own behaviour. They appreciated opportunities for practice between sessions and discussing any problems or issues with fellow attenders, which developed self-confidence in using skills. Participation in role plays was a good example of using practice to gain mastery (confidence) in a challenging behaviour underpinned by feedback in a supportive atmosphere. Most found role plays stressful but grudgingly acknowledged their usefulness. Participants reported benefits from sharing information and networking with

### Key points

- Communication and behaviour change skills in health professionals promote better understanding of patients' motivations and behaviours around diabetes self-management
- These skills can be taught effectively in relatively few sessions using theoretically based and evidenced approaches
- It is important to maintain long-term support for health professionals to reinforce their confidence in using communication and behaviour change skills
- Although initially costly, this approach could have long-term benefits for patient care and professionals' satisfaction with clinical practice

colleagues from other disciplines. Areas for improvement included having 'too much' information and finding some techniques difficult to put into practice. Role plays could seem unrealistic and facilitation skills were important to encourage less confident participants.

### Discussion

Our approach was successful in engaging and 'up-skilling' health professionals in communication and behaviour change and developing confidence in their use of psychological skills. Pre-post assessment of change showed large effect sizes, although these effects may not have been enduring and a longer-term follow up of participants is needed. Reliance on self-report makes evaluation less reliable; people may be poor at evaluating their own level of skill, and knowledge of skills is no guarantee of their sustained use in practice. However, research suggests that skills are more likely to be retained and impact on future practice where participants have the opportunity to repeat and practise, are challenged, receive positive feedback, and find the process interesting and enjoyable,<sup>10</sup> all features of our intervention. The intervention was relatively expensive in delivery costs and participants' time and commitment, but may be cost effective in the longer term by impacting on health professionals' daily practice and patient care. Training interested health professionals may also encourage them to become trainers in their own right (with relevant support from those with high level behaviour change expertise), which could have long-term cost benefits. A health-economic evaluation of the benefits of this approach would be

useful, but desired outcomes regarding impact on diabetes self-management and illness outcomes, are almost impossible to measure.

The clear theoretical rationale of our approach was appreciated by participants and assisted effective learning. The framework based on motivation/action/relapse gave the participants a structure for working with patients over time to support behaviour change, and a 'toolbox' of psychosocial skills for the future.

Weaknesses related to relatively small participant numbers representing only half of the NHS areas in Scotland, and potential bias towards individuals with a prior interest in psychosocial aspects of diabetes care. However, this type of intervention is clearly feasible and has a very positive short-term impact on participants' knowledge and skills. Several participants commented on the need for continuing, accessible, psychological mentoring within their workplace to reinforce what they had learned, and support in dealing with more complex cases. A second pilot (PID-PAD project) in Scotland is currently addressing this, by locating applied psychologists in local MCNs or diabetes teams with a remit to mentor and support health professionals, and promote effective self-management for diabetes patients.

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### Declaration of interest

There are no conflicts of interest.

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References are available in *Practical Diabetes International* online at [www.practicaldiabetesinternational.com](http://www.practicaldiabetesinternational.com).



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