

Patients' Perspectives about Blood Glucose Self-Monitoring: A qualitative evaluation of glucose monitoring advice leaflets

Elizabeth Peel, Psychology, School of Life & Health Sciences, Aston University; Urmilla Griffiths & Sharon Jones*, Good Hope Hospital.

*Member of the Diabetes Monitoring Forum

Introduction:

Self-monitoring of blood glucose (SMBG) can be viewed ambivalently by patients (Peel et al., 2004); and although insulin-treated patients tend to adjust their insulin on the basis of their readings, those taking oral agents tend not to take any action (Stewart et al., 2004). Diabetes management requires high levels of input from patients, and SMBG forms part of this. Moreover, information/education plays a vital role in ensuring patients can effectively self-manage their diabetes. It is acknowledged that 'patients want the education to be a continuous process' (Thakurdesai et al., 2004: 309); this is where written information can form part of ongoing diabetes education. Evaluating educational materials from patients' perspectives is essential if we are to acknowledge, and respond seriously to, the health information consumer. Thus, the aim of this study was to undertake a patients' evaluation of SMBG information leaflets developed by the Diabetes Monitoring Forum (DMF): www.dmforum.org.uk

Methods:

Following COREC ethical approval 10 patients were recruited to the study via a hospital in the West Midlands. Participants took part in two semi-structured in-depth interviews conducted by EP. Round 1 interviews focused on exploring participants' views about their self-care and SMBG and introduced the appropriate information leaflet. Round 2 interviews, conducted 5-8 months later, concentrated on participants' perspectives about the leaflet. On average the participants had been living with diabetes for 16 years. Their mean age was 69 years. Seven participants were solely insulin treated (of whom one had type 1 diabetes) and 3 were treated with once daily insulin and oral agents (metformin and gliclazide). Therefore, 7 participants received the twice daily insulin leaflet and 3 received the once daily insulin leaflet. Data were transcribed verbatim and analysed using thematic analysis, which involves repeated readings of the transcripts and ordering of data into super-ordinate themes.

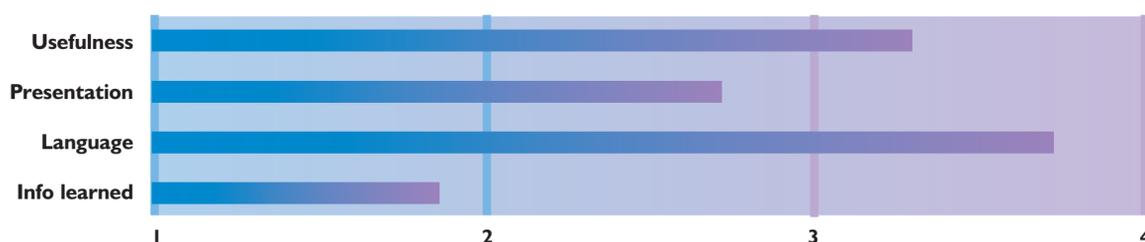
Results:

All of the participants carried out varying amounts of self-monitoring at both Round 1 and Round 2 interviews except Josephine who had been ill between the two interviews and had discontinued monitoring. The participants used a range of blood glucose meters including those produced by Medisense, Optimum Plus, Glucotrend and Glucomen. Five participants kept a written note of their blood glucose readings, one would make a note of her readings if asked and four participants did not keep a record of their readings. The length of time participants had carried out SMBG ranged from 1 to 15 years (mean time self-monitoring was 6 years 3 months). Before outlining the key findings from the interviews the results of four quantitative questions are reported below. These questions were rated on a scale from 1-4.

- 1) **Would you say that you'd learned from the leaflet?**
A lot of new information (4), Some new information (3), A little new information (2), No new information (1)
- 2) **What do you think about the way the leaflet is written?**
Would you say the language used is easy to understand? Very easy (4), Easy (3), Not very easy (2), Difficult (1)
- 3) **What do you think about the overall presentation of the leaflet?**
Would you say the leaflet is 'patient-friendly'? Very friendly (4), Friendly (3), Somewhat friendly (2), Very unfriendly (1)
- 4) **Do you think the information in the leaflet is:**
Very useful (4), Useful (3), Somewhat useful (2), Not useful (1)

On average participants' felt that the language used within the leaflet was 'very easy' to understand' (mean 3.71), they reported that the overall presentation of the leaflet was patient 'friendly' (mean 2.71) and generally they had found the information within the leaflet 'useful' (mean 3.29). Typically, however, participants felt that they had only learned 'a little new information' (mean 1.86) which may, in part, be explained by the fact that many of the participants had been living with diabetes for a considerable period of time.

Figure 1: Rating Scale Information (1 is negative, 4 is positive)



There was a slight decrease in average HbA1c between Round 1 (8.71) and Round 2 (8.56) interviews. Most participants felt that how to use their meter had been explained in enough depth by health professionals. SMBG information had been purely verbal except for 'the leaflet inside the meter' (Raman 2), prior to being given the DMF leaflet. Generally participants felt that the language in the leaflet was very easy to understand and it was patient-friendly and well structured (Box 1a). They did not feel they had learned much new information, but some participants found the information 'reassuring' and felt it served a 'reminding' function, especially about ideal blood glucose levels/ranges. Some problematic aspects of the leaflet were raised with respect to information that either did not resonate with participants' experiences, or they did not understand (Box 1b). There was little evidence that the leaflets had any direct impact on monitoring behaviour. Participants were positive about the role of written information in diabetes management (Box 1c), reporting that there was more scope to digest written information than verbal information. However, participants did not think the leaflet should be a stand-alone resource and, especially those close to diagnosis, should have the leaflet contextualised within a consultation with health professionals. Suggestions for improving the leaflet included covering: information about travelling, insulin use, diet, and different types of meters and pens.



Data Extracts

Box 1a

a) Positive aspects of the leaflet

'I think it's written quite well. What I like about it is it's straight forward... it's not being complicated by a load of medical terminology.' (John 2)

'The way it's set out is very good in as much as you know you can read a bit at a time rather than it all be one great big page of reading... I think that's good.' (Pat 2)

b) Problematic aspects of the leaflet

'Well it says here, when first starting insulin, four times a day generally before meals and at bedtimes, but testing four times a day, that's alright if you're taking insulin all the time before every meal, but if you're like me, you're just having insulin once a day, then to test four times a day is probably not worthwhile, that's my opinion.' (Jim 2)

'It just says "refer to your sick day rules". I haven't got no sick day rules.' (Joan 1)

c) Role of written information in diabetes management

'You can always refer back to it if there is something you don't understand.' (Maureen 2)

'If you didn't get written information you wouldn't know a lot would you really. I mean how would you find out? How would we find out? Erm apart - erm no disrespect but doctors haven't got the time really have they. Professionals really haven't got the time have they, even nurses, they've only got so much time they can give to you so really er yes I do think written information is important.' (Pat 2)

Conclusions:

Our findings suggest that written information about SMBG can be a useful additional resource for insulin-treated patients with diabetes. Whilst not a substitute for interaction with health care professionals, the leaflets may be particularly useful for patients new to SMBG and for those who have been self-monitoring for some time, but who have not received continuous education about blood glucose self-monitoring.

References:

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