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# The Diabetes Clinic Satisfaction Questionnaire (DCSQ)

## USER GUIDELINES

### 1. Introduction

#### 1.1 *The Instrument*

The DCSQ [1-3] is now recommended for use in a 25-item version, which measures satisfaction with a broad range of aspects of the service provided by a diabetes clinic. These aspects include education, continuity of care, waiting times, privacy and many other aspects of patient experience. Development of the DCSQ is an ongoing process. However, where the instrument has been used, it has been shown to be a useful audit tool in identifying sources of dissatisfaction and tracking improvements in satisfaction levels following interventions.

Two versions are available with wording suitable for use in 1) hospital diabetes clinics and 2) general practice diabetes clinics.

#### 1.2 *Advantages of DCSQ*

The question sometimes asked by clinicians is: “Why do I need a questionnaire to ask patients for their views on the clinic service? – I know from talking with them how they feel” or “We measure waiting times – we don’t need to ask the patients”. Use of the DCSQ, however, offers considerable advantages:

- Objective measures of waiting time tell you how long the patients wait, but not how satisfied/dissatisfied patients are with the waiting.
- **Systematic Measurement:** Using the DCSQ is a time-efficient way of systematically measuring patients’ views about a clinic service.
- **Listening to patients:** Patients welcome the opportunity to express their satisfaction with good care as well as to point out where a service needs to be improved.
- **Facilitating frank responses:** While some patients express their satisfaction and dissatisfaction confidently, there are many who are reluctant to indicate specific sources of dissatisfaction in a face-to-face consultation.
- **Increasing clinician awareness:** Evidence from clinics where the DCSQ has been used shows that clinicians become more accurate in their perceptions of patients’ views as a result of feedback of DCSQ results[3].
- **Knowing how to intervene:** DCSQ results help to pinpoint and prioritise aspects of the service that may benefit from intervention [3].
- **Attracting resources:** Measurement of clinic satisfaction with the DCSQ can be used to build a case for additional resources to fund interventions that target specific sources of patient dissatisfaction, and then to re-assess the clinic on an ongoing basis [3].

### **1.3 Target Population**

The DCSQ is designed for use with adults (aged 18+) with Type 1 or Type 2 diabetes. It may be administered by mail or in the clinic, either as a broad cross-sectional survey instrument, or as a routine part of audit cycles.

## **2. Procedures for use of the DCSQ**

### **2.1 Choosing which items to include**

The DCSQ includes 25 items recommended for analysis item-by-item. This means that each item is designed to be analysed individually and can be considered separately from other items. As the DCSQ is developed item-by-item, those items that are not relevant to your clinic can be removed without affecting the validity of the instrument. Summing of responses into subscales or an overall scale is not recommended.

If you are considering removing any items, you need to consider carefully why you are removing the item and whether or not patients may have a view even if you do not consider it relevant. For example, if there is no psychologist in your clinic you may consider removing the item about *psychological advice and support*. However, this may not be prudent as patients may wish to indicate that they are dissatisfied with the *psychological advice and support* available. Such data may provide useful evidence to secure additional resources. Alternatively, patients may indicate that they are satisfied with the *psychological advice and support* offered by the clinic staff themselves [see Section 3.4].

### **2.2 Instructions to Patients**

Patients need to be given written or verbal instructions that explain:

- why the questionnaire is being given to them
- what will be done with the information they provide
- how the questionnaire should be returned
- what, if any, feedback they will receive

A sample patient information sheet is included, which may be adapted to suit particular circumstances [see Appendix 1].

### **2.3 Anonymity**

Whether distributed in the clinic or sent by post, the DCSQ will be most effective in eliciting sources of dissatisfaction if patients can remain anonymous. Patients can then have the confidence to express their views without fear of reprisals. If questionnaires are to be returned in the clinic, a confidential reply box is needed. This will allow respondents to return completed questionnaires so that they are not visible to onlookers. If mailed returns are to be used, a stamped addressed reply envelope needs to be provided.

### **2.4 Sampling**

A representative picture of patient views will only be achieved if there is an adequate cross-section of patients responding. A reasonably representative sample of responses might be obtained quite simply by giving the DCSQ to 100 - 150 consecutive clinic attendees, provided that the cross-sectional sample is representative of the entire clinic population in terms of

demographic and treatment characteristics. If there are different clinics, for example where evening or Saturday clinics are held for those who are working and weekday clinics are held for other patients, the different types of clinics will need to be sampled separately. Separate analysis of the different patient groups is likely to be the most informative and useful.

A sample of consecutive attendees is likely to sample more people with problems who return more frequently for appointments. For a fully representative sample it is necessary to take a random sample from the overall clinic list or to include patients attending for an annual review for which all patients are invited once a year.

### 3. DCSQ Results

As the DCSQ is best used anonymously with a sizeable sample of patients (100-150), it is not recommended for clinical use with individual patients.

#### 3.1 Data entry

Individual responses to the DCSQ items need to be combined and analysed in relation to data from other patients attending the same clinic. This can be done by:

- entering the data directly into a statistics package such as SPSS, **or**
- creating a spreadsheet, either by hand or in a computer package such as Microsoft Excel or Lotus 123. Instructions for creating a spreadsheet are included [see Appendix 2].

#### 3.2 Scoring items

The following are guidelines on scoring, recoding and computing for the DCSQ:

- If a question is answered twice: if it is not possible to interpret which of the responses is a mistake, this needs to be treated as missing data.
- Missing data: score all blanks as missing data (or if using a spreadsheet, put a '1' in the no response (NR) column) [see Appendix 2].

#### 3.3 Displaying results

It can be helpful to turn the percentage results into a chart (or series of charts), for ease of interpretation. Instructions for doing so, together with a sample chart for some items, are included [see Appendix 3].

#### 3.4 Interpretation of Results

Please bear in mind the following issues when drawing conclusions based on results of a DCSQ survey:

- Where patients have expressed dissatisfaction with an aspect of service, this may reflect different underlying reasons. One item asks about a specific service within diabetes care, chiropody. Some people may interpret items concerning dietary or psychological advice and support as referring specifically to the service provided by dieticians or psychologists although we have intended a broader view of such advice and support. We cannot assume that patients have in mind the same thing as health professionals when asked to rate these services. A clinician may here think of the service offered by a psychologist or psychotherapist associated with the clinic. In

this case, he/she may then interpret dissatisfaction to mean that the professionals concerned are not meeting expectations. Patients, on the other hand, may be thinking about the overall psychological advice and support given by doctors, nurses, and other members of the diabetes team. Alternatively, if they have been referred for psychological advice, they may feel in need of more assistance than could be given by the psychologist or counsellor in the allotted time. Finally, they may not have been given the opportunity to use psychological or psychotherapeutic services, and may feel dissatisfied as a result. Interpretation of results needs to be made bearing in mind the specifics of each clinic, particularly where the clinic offers specialist services such as psychology, chiropody and dietetics.

- Where high percentages of patients are satisfied with aspects of service, one may be beguiled into feeling that no improvement is needed in this area. However, even relatively small percentages can represent quite large numbers of dissatisfied patients. For example, in a clinic survey of 800 patients, 10% dissatisfaction indicates that 80 individuals are dissatisfied, and interventions may be well worth considering.
- Experience suggests that most patients are very appreciative of staff efforts and aware of resource shortages. Most patients do not wish to complain or be seen as ungrateful, or to risk compromising the care they receive. Thus expressions of dissatisfaction are usually heartfelt, and may well be an under-representation of the dissatisfaction they feel. The response options used in the DCSQ were selected to help overcome the usual reluctance to express dissatisfaction. There is rarely reluctance to report satisfaction. Thus the response options for dissatisfaction and satisfaction, respectively, are 'dissatisfied' or 'slightly dissatisfied', and 'satisfied' or 'very satisfied'.
- Different DCSQ items will have varying relevance to patients. One or two items may not be relevant to all patients (e.g. younger people and those with Type 2 diabetes of only a few years duration will probably not have experience of the chiropody service). For this reason, the initial instructions give respondents the option of circling 'n/a' beside an item if it does not apply to them, and noting on the second page why it does not apply.

## 4. Interventions: the way forward

### 4.1 *Prioritising interventions*

Once the major sources of dissatisfaction have been identified, consideration needs to be given to potential interventions. Two different approaches may be adopted:

1. Target those areas with the highest dissatisfaction
2. Give priority to those aspects of the clinic service which lend themselves more readily to interventions. For example, those aspects which require only limited additional resources, or those aspects which tend to be largely controllable by clinic staff (as opposed to those aspects of service which depend more on external resources, such as transport).

The most effective interventions are likely to be those that are informed by discussions among members of the diabetes care team, based on their knowledge of the specific clinic. Discussion of proposed interventions with patients will help to ensure that interventions are appropriate.

#### **4.2 Using DCSQ results as evidence of additional funding requirements**

Results from the DCSQ are likely to provide useful evidence of patient dissatisfaction that can be presented to management in support of bids for increased resources (see Figure 1). This is particularly so if one-off interventions are proposed, or where significant amounts of clinic dissatisfaction can be reduced by means of a relatively modest increase in funding.

*Figure 1: Intervention Case Study*

The DCSQ was used 3 times in a district general hospital over a period of 6 years.

Following the first data collection, interventions were designed to target 3 major sources of dissatisfaction: continuity of care, waiting times and privacy. Clinic staff took DCSQ results to hospital management as evidence of patient dissatisfaction, and requested additional funding to allow implementation of the interventions. The bid was successful. Doctor lists were modified to improve continuity, an extra session was included to reduce waiting times, and walls were built around consulting areas to replace screens and improve privacy. The first follow-up use of the DCSQ showed significant reductions in patient dissatisfaction in all three targeted areas. A recent follow-up data collection, 5 years on from the intervention, revealed that these reductions in dissatisfaction have been maintained, and improved further over time.

Barendse et al. (1999)

### **5. Note: Conditions of use of the DCSQ**

The DCSQ is made available to users by formal arrangement with the copyright holder, Professor Clare Bradley. Requests should be made to Prof. Bradley [see Section 6]. A user agreement is necessary to avoid breach of copyright and to ensure that the latest and most appropriate version of the questionnaire is used. Please note also that the DCSQ should only be modified by the removal of irrelevant items [see Section 2.1]. Items to be retained should not be modified in any way without the prior written consent of Professor Bradley.

## 6. Contact Information

For permission to use the DCSQ and to ensure that you have the most up-to-date version, please contact:

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## References

1. Bradley C (Ed) (1994) *Handbook of Psychology and Diabetes: a guide to psychological measurement in diabetes research and practice*. Chur, Switzerland: Harwood Academic Publishers, pp392-393.
2. Speight J, Barendse S and Bradley C (1999) The DiabQoL+ Programme. *Proceedings of the British Psychological Society*, **7**, suppl 1, 35.
3. Barendse S, Speight J, Valentine J D, Bishop A, Vaughan N Sönksen P and Bradley C (1999) Closing the audit loop with the Diabetes Clinic Satisfaction Questionnaire (DCSQ): Reducing sources of dissatisfaction and increasing clinician sensitivity to patients' views. *Diabetic Medicine* **16**, Suppl 1, 15. (Full paper in preparation)
4. Wilson AE, Home PD, Bishop A, Bradley C, Brown KGE, Hargreaves B, Hillson R, Hopkins AP, Kurtz AB, Murphy M, Todd C, Vaughan N and Williams DRR (1993) A Dataset to Allow Exchange of Information for Monitoring Continuing Diabetes Care. *Diabetic Medicine* **10**, 378-390. (Includes early version of the DCSQ in appendix and reports on its use in a dataset to audit diabetes care)

## Appendix 1

### Example of Patient Information Sheet

"We are looking at how we can improve the diabetes service. It is important for us to know of people's satisfaction and dissatisfaction with different aspects to the service, and we would be glad if you would give a few minutes of your time to completing this questionnaire.

Please do not write your name on the questionnaire, as it is intended to be anonymous. If you do not wish to complete it please return the questionnaire (see below), and write on it any comments you would like to make.

If you would like some help in filling out the questionnaire, perhaps because of eyesight problems .....**[insert information on how the person can obtain assistance, eg 'ask the receptionist, who will get someone to help you']**.

Please seal the completed questionnaire in the envelope provided and place it in the box ..... **[give location of collection box, e.g. 'at the reception desk']**.

Feedback of the results and any proposals for improving the service will be provided in ..... **[describe the way in which feedback will be given to patients, eg 'a poster which will be put up on the notice board in the clinic']**.

Thank you for your participation. Your responses will be put to good use in helping to improve the service we provide."

**[Name and position of principal investigator]**

**[Name(s) and position(s) of clinic consultants and / or diabetes specialist nurses sharing responsibility for and giving support to the study]**

***Note: If only one name is given, plural wording such as 'we are' will need to be changed to the singular where appropriate throughout the document.***

## Appendix 2

### Data entry by hand, or using a spreadsheet package such as Excel

The DCSQ items are scored on a scale from '-2' to '+2,' with '0' representing the 'neither satisfied nor dissatisfied' category. Probably the simplest way to handle the data is to create a spreadsheet table of responses for each category. The first column will record 'patient number' and then there will be six columns for each item. The first 12 patients of an example spreadsheet for DCSQ item 1 are given in Figure 1.

Figure 1: Sample spreadsheet

DCSQ Item 1								
	Patient no.	dissatisfied	slightly dissatisfied	neither satisfied nor dissatisfied	satisfied	very satisfied	not applicable	no response
	1				1			
	2			1				
	3		1					
	4					1		
	5					1		
	6	1						
	7		1					
	8				1			
	9				1			
	10				1			
	11						1	
	12							1
<b>Total</b>	<b>12</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>
%	100	10%	20%	10%	40%	20%		

\*N for DCSQ item 1 = (number of patients who returned questionnaires) minus (number of patients who marked 'n/a' for DCSQ1) minus (number of patients who did not respond to DCSQ1)

$$= 12 - 1 - 1$$

$$= 10$$

For each individual, look at their response to each item. If a 'dissatisfied' response (i.e. -2) has been recorded, put a '1' in the 'dissatisfied' column on the spreadsheet for that item. If the person has circled a 'slightly dissatisfied' response (i.e. -1), record a '1' in the 'slightly dissatisfied' column. Likewise, if the response was 'neither satisfied nor dissatisfied' (i.e. 0), place a '1' in the 'neither satisfied nor dissatisfied' column, or if 'satisfied' (i.e. 1), a '1' in the 'satisfied' column. If the response was 'very satisfied' (i.e. 2), put a '1' in the 'very satisfied' column for that item. If the 'n/a' response was circled, put a '1' in the 'not applicable' column. Lastly, if the item was left blank, put a '1' in the 'no response' column to signify that for this item, the response for this patient is missing. Carry out the same procedure for each item on the questionnaire for that respondent. Repeat the procedure for each patient returning a questionnaire.

When all responses have been recorded in the spreadsheet, group totals can be calculated. Write down the sum of all the '1's in each column. Then divide the total in each column by N,\* (the number of people responding to that item) and multiply by 100, to obtain a percentage. (In the example spreadsheet, N for DCSQ1 is 10, as there were 12 questionnaires returned, but 1 person responded 'not applicable' and one did not complete this item.

Note that for each item, there will be five percentage figures calculated, and that these should always add up to 100%. This excludes the 'not applicable' or 'no response' categories, which are two different forms of missing data.

The number of patients responding (N) may, of course, be different for each item.

\*To calculate the item 'N', add the number of 'not applicable' responses to the number of people who left that item blank ('no response'), and subtract that total from the overall number of patients returning questionnaires.

## Appendix 3

### Suggestions for displaying data

You may wish to present the DCSQ results in an easy-to-view format. One way of doing this is to group together the 'dissatisfied' and 'slightly dissatisfied' categories, and the 'satisfied' and 'very satisfied' categories. Do this by adding together the percentages to give two new 'global' categories of satisfaction and dissatisfaction, in addition to the 'neither satisfied nor dissatisfied' category. Enter the percentage results for 'satisfied', 'dissatisfied' and 'neither satisfied nor dissatisfied' into a new page of the spreadsheet.

Figure 1: Sample spreadsheet for displaying satisfaction and dissatisfaction

DCSQ item 1						
	Patient no.	dissatisfied	slightly dissatisfied	satisfied	very satisfied	neither satisfied nor dissatisfied
<b>Total</b>	<b>10</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>1</b>
%	100	10%	20%	40%	20%	10%
		<b><i>Dissatisfied Group</i></b>		<b><i>Satisfied Group</i></b>		<b><i>Neither satisfied nor dissatisfied</i></b>
		30%		60%		10%

These data can then be used to create a chart that shows the results in a format that is easy to follow. The bar chart [see Figure 2] may be the most convenient way of displaying complete results on one page. If results are arranged in order of dissatisfaction, it will allow one to see at a glance the priority issues for intervention. It may also be helpful to keep a record of the number marked 'not applicable' or 'no response' for each item. In the example below, patient experiences are compared with clinicians expectations (derived from questionnaires completed by the clinicians before the patient results were known to them).

Figure 2: Example of patient experience compared with clinicians' expectations [3]

