

Clinical interventions for patients with type 2 diabetes according to whether their New Zealand cardiovascular risk score was given in the notes

Intervention	All patients		High risk patients (>20% five year risk)	
	No (% , 95% CI) of patients with score (n=162)	No (% , 95% CI) of control patients (n=161)	No (% , 95% CI) of patients with score (n=86)	No (% , 95% CI) of control patients (n=82)
Change in diabetes treatment	68 (42%, 34% to 50%)	58 (36%, 29% to 45%)	38 (44%, 35% to 54%)	29 (35%, 24% to 47%)
Change in antihypertensive drugs	26 (16%, 10% to 22%)	17 (10%, 5% to 16%)	20* (23%, 15% to 31%)	8 (10%, 3% to 17%)
Change in lipid lowering drugs	20 (12%, 7% to 17%)	14 (9%, 4% to 14%)	17* (20%, 12% to 27%)	7 (9%, 2% to 15%)
Referral to dietician	17 (10%, 6% to 15%)	21 (13%, 7% to 19%)	9 (10%, 5% to 16%)	6 (7%, 1% to 17%)
Other	20 (12%, 7% to 17%)	15 (9%, 5% to 15%)	10 (12%, 6% to 18%)	10 (12%, 4% to 20%)
Risk score mentioned in letter to general practitioner	10 (6%, 3% to 10%)	3 (2%, -1% to 4%)	10 (12%, 6% to 18%)	3 (4%, -1% to 8%)
Total No of interventions	161	128	104	63

\*P=0.01 compared with control group by the Mantel-Haenszel test.

significant differences between control and experimental groups in the primary outcome measures (table): change of diabetes treatment (36% *v* 42%), lipid lowering drugs (9% *v* 12%), or blood pressure drugs (10% *v* 16%) and referral to dietician (13% *v* 10%). There were no differences in other interventions between the control and experimental groups. Among high risk patients, however, those in the experimental group were more likely to be prescribed blood pressure and lipid lowering drugs than those in the control group (P<0.02, Mantel-Haenszel test). Despite this difference, the time until the next hospital outpatient appointment was the same in the two groups, with 24% in each group (39 in the experimental group and 38 in the control group) receiving an appointment in less than six months.

### Comment

We found that clear documentation of a cardiovascular risk score in the notes increased prescribing of risk modifying drugs for patients with diabetes who are at high risk of cardiovascular disease. More high risk patients in the experimental group were prescribed both blood pressure lowering and lipid lowering drugs. However, there was no increase in prescribing for patients at relatively low risk.

Although individual risk factors such as blood pressure, smoking status, and lipid concentrations are generally available in clinics, integrated cardiovascular risk scores are often not calculated because of lack of time. This leaves the clinician with complex clinical data that can be difficult to interpret and are thus often not acted on. Our results indicate that it is worth developing clinical support systems that will calculate cardiovascular risk before the consultation.

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- Haffner SM, Lehto S, Ronnema T, Pyorala K, Laako M. Mortality from coronary heart disease in subjects with type 2 diabetes and in nondiabetic subjects with and without prior myocardial infarction. *N Engl J Med* 1998;339:229-34.
  - European Action on Secondary Prevention by Intervention to Reduce Events I and II Group. Clinical reality of coronary prevention guidelines: a comparison of EUROASPIRE I and II in nine countries. *Lancet* 2001;357:995-1001.
  - United Kingdom Prospective Diabetes Study Group. Tight blood pressure control and risk of macrovascular and microvascular complications in type 2 diabetes (UKPDS 38). *BMJ* 1998;317:703-13.
  - LaRosa JC, Vupputuri S. Effect of statins on risk of coronary disease: Meta-analysis of randomised controlled trials. *JAMA* 1999;282:2340-6.
  - Jackson R. Updated New Zealand cardiovascular disease risk-benefit prediction guide. *BMJ* 2000;320:709-10.
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## Discrepancies between patients' assessments of outcome: qualitative study nested within a randomised controlled trial

Rona Campbell, Brian Quilty, Paul Dieppe

Department of Social Medicine, University of Bristol, Bristol BS8 2PR

Rona Campbell lecturer in health services research

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Assessments of therapeutic effectiveness should not rely exclusively on clinical data, but they should include patient based outcome measures. A plethora of generic and disease specific measures is now available to collect such data by questionnaire, and well developed methods for testing the precision of such measures exist.<sup>1,2</sup> Another method of collecting patient based outcome data is by in-depth interview. A randomised controlled trial to test the effectiveness of a package of physiotherapy treatment (nine treatment sessions involving patellar taping, seven different exercises, correction of posture, and advice on footwear) for patellofemoral osteoarthritis, which included a nested qualitative study of 20 participants randomised to the intervention arm, provided an opportunity to compare

the two approaches to collecting outcome data: quantitatively by questionnaire and qualitatively by means of in-depth interview.<sup>3,4</sup>

### Participants, methods, and results

The primary outcome measure was pain in the worse knee, recorded on a 10 cm visual analogue scale in the presence of BQ. We used the function subscale of the Western Ontario and McMaster Universities' osteoarthritis index (WOMAC), a validated, disease specific, patient based measure, as a secondary outcome measure.<sup>5</sup> An experienced interviewer undertook the in-depth interviews after the treatment but before the main follow up visit of the trial. Interviews were

Questionnaire and interview based patient assessments of pain and disability after package of physiotherapy treatment for osteoarthritis of the knee

Interview	Questionnaire			Total
	Better	No change	Worse	
<b>Pain scores</b>				
Better	6	1	2	9
No change	7	2	1	10
Worse	1	0	0	1
Total	14	3	3	20*
<b>Disability scores</b>				
Better	3	4	4	11
No change	3	2	3	8
Worse	1	0	0	1
Total	7	6	7	20*

\*Six men and 14 women. Six were aged 45-59; five were aged 60-69, and nine were aged 70 or older.

conducted in patients' homes, guided by a checklist of topics that ensured similar issues were explored. Interviews were taped, fully transcribed, and analysed independently by RC and PD, who were blind to the scores on the scales. For both questionnaire and interview data we recorded whether the patient reported worsening, improvement, or no change in pain and restriction of activities.

The level of concordance between the questionnaire and interview data was less than 50% (table). Questionnaire data indicated that three patients had increased pain and seven an increased restriction of activities. In contrast, data from the interviews showed that only one patient had increased pain and one increased disability. A similar trend was apparent in the number of patients reporting their symptoms as unchanged. This disparity was particularly marked in pain scores, where questionnaire data showed that pain was unchanged in three patients, whereas interview data indicated this was so for 10 patients. Some patients who showed worsening on pain and scores of the osteoarthritis index considered themselves better, and vice versa.

## Comment

The way in which responses are elicited and the context in which data are recorded can affect reported outcomes in osteoarthritis, potentially leading to erroneous decisions about what interventions benefit patients. Randomised controlled trials need reliable

and valid patient based outcome measures to determine whether an intervention is effective.

The lack of agreement in this study between standard patient based measurements and patients' narrative accounts is disquieting. The discrepancies are unlikely to be explained by differences in the timing of the quantitative assessments and interviews, and the investigators agreed completely in the interpretation of the interview data. Furthermore, topics included in the interview guide corresponded to those in the questionnaire of the osteoarthritis index. The most likely explanation comes from the context in which data were collected: the quantitative information was obtained in the trial clinic in the presence of a doctor, whereas the qualitative accounts were obtained by an independent interviewer (who was not a healthcare professional) in the patient's home.

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- 1 Bowling A. *Measuring disease: a review of disease-specific quality of life measurement scales*. Buckingham: Open University Press, 1995.
- 2 Streiner DL, Norman GR. *Health measurement scales*. Oxford: Oxford University Press, 1989.
- 3 Campbell R, Evans M, Tucker M, Quilty B, Dieppe P, Donovan J. Why don't patients do their exercises? Understanding non-compliance with physiotherapy in patients with osteoarthritis of the knee. *J Epidemiol Community Health* 2001;55:132-8.
- 4 Quilty B, Tucker M, Dieppe P. *Patello-femoral joint disease. Disability, quadriceps dysfunction and response to physiotherapy*. Leeds: NHS Executive, 2001. ((Final report to NHS National Research and Development Programme, Physical and complex disabilities, 1998.) [www.doh.gov.uk/research/swro/rd/national/pcd/funded/completed/a1123es.htm](http://www.doh.gov.uk/research/swro/rd/national/pcd/funded/completed/a1123es.htm) (accessed 13 Nov 2002).
- 5 Bellamy N, Buchanan W, Goldsmith C, Campbell J, Stitt L. Validation study of WOMAC: a health states instrument for measuring clinically important patient relevant outcomes in anti rheumatic drug therapy in patients with osteoarthritis of the knee or hip. *J Rheumatol* 1988;15:1833-40.

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## Patient or client?

It is sometimes claimed that our patients would be more empowered if we referred to them as clients. This assertion does not seem to be altogether logical if one considers the Latin roots of both these words.

Whereas *patiens* simply denotes someone who is suffering, *clients* is derived from the alteration of an earlier form, *cluens*, from *cluere* (to listen, follow, or obey). Hence, a client was always listening out for another's orders, unable to take independent action. Client denotes a person of lowly status at another's beck and call and dependent on him.

In ancient Rome clients were plebeians who were bound in a subservient relationship with their patrician patron. Clients acknowledged their dependence on the patron and received his

protection in return. Freed slaves automatically became the clients of their former owners. The patron might represent and support them in court (from which is derived the modern use, dating to the 17th century, of calling the customers of lawyers clients); in return, the clients provided services and even money to the patron. Clients were expected to show deference to their patron, especially by calling on him every morning (*salutatio*). Clients became mockingly known as *salutatores*. In later periods, client came to denote a beggar and hanger-on.

Is it better to be a sufferer or a toady?

T P S Bloch *general practitioner, Barn Close Surgery, Broadway, Worcestershire*

Department of Medicine, University of Bristol  
Brian Quilty  
*consultant in rheumatology*

MRC Health Services Research Collaboration, University of Bristol  
Paul Dieppe  
*director*

Correspondence to: R Campbell  
rona.campbell@bristol.ac.uk