

## New scoring system for the Oxford hip score\*

When the Oxford hip score was originally devised, the scoring system was designed to be as simple as possible, in order to encourage its use. Thus, in the original publication (Dawson J., Fitzpatrick R., Carr A., Murray D. Questionnaire on the perceptions of patients about total hip replacement surgery. *J. Bone Joint Surg (Br)* 1996; 78:185-90) each question was scored from 1 to 5, with 1 representing best outcome/least symptoms. Scores from each question were added so the overall score was from 12 to 60 with 12 being the best outcome.

Since then, many surgeons have found this scoring unintuitive and have adapted the scoring - leading to considerable confusion.

**We therefore now recommend the following method of scoring be used by everyone:**

Score each question from 0 to 4 with 4 being the best outcome. This method, when summed, produces overall scores running from 0 to 48 with 48 being the best outcome (to convert from the 'old' 60–12 system to this new 0-48 system and vice versa subtract the score from 60).

**To further avoid confusion, always state clearly the method that has been used (including in abstracts).**

### New system of scoring (more detail)

Each of the 12 questions on the Oxford hip score is scored in the same way with the score decreasing as the reported symptoms increase (ie. become worse). All questions are laid out similarly with response categories denoting least (or no) symptoms being to the left of the page (scoring 4) and those representing greatest severity lying on the right hand side (scoring 0). eg. question 1:

<b>1.</b>	<b><i>During the past 4 weeks.....</i></b>				
	How would you describe the pain you <u>usually</u> had from your hip?				
	None	Very mild	Mild	Moderate	Severe
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>

**The overall score** is reached by simply summing the scores received for individual questions. This results in a continuous score ranging from 0 (most severe symptoms) to 48 (least symptoms).

### **Missing values/notes for analysis.**

We propose that, if, after repeated attempts to obtain complete data from an individual, only one or two questions have been left unanswered, it is reasonable to enter the mean value representing all of their other responses, to fill the gaps. An alternative computerised method of imputing values has been reported by Jenkinson et al (2006). If more than two questions are unanswered we recommend that an overall score should not be calculated. If patients indicate two answers for one question we recommend that the convention of using the worst (most severe) response is adopted.

\* more detail is described in: Murray, D. W., Fitzpatrick, R., Rogers, K., Pandit, H., Beard, D. J., Carr, A. J., and Dawson, J. The use of the Oxford Hip and Knee Scores. *J Bone Joint Surg [Br]* August 2007. (In press)

Jenkinson C, Heffernan C, Doll H, Fitzpatrick R. The Parkinson's Disease Questionnaire (PDQ-39): evidence for a method of imputing missing data. *Age Ageing* 2006;35-5:497-502.

*Other publications using the Oxford Hip Score (but generally using the old system of scoring):*

Dawson J., Fitzpatrick R., Murray D., Carr A. Comparison of measures to assess outcomes in total hip replacement surgery. *Qual Hlth Care* 1996;5:81-88

Dawson J., Fitzpatrick R., Murray D., Carr A. The problem of 'noise' in monitoring patient-based outcomes: generic, disease-specific and site-specific instruments for total hip replacement. *J Health Serv Res Policy* 1996 1(4) 224-231

Dawson J., Jameson-Shortall, Emerton M., Flynn J., Smith P., Gundle R., Murray D. Issues relating to long-term follow-up in hip arthroplasty surgery – a review of 598 cases at 7 years comparing 2 prostheses using revision rates, survival analyses and patient-based measures. *J.Arthroplasty*. 2000;15(6):710-717.

Dawson J., Fitzpatrick R., Frost S., Gundle R., McLardy-Smith P., Murray D. Evidence for the validity of a patient-based instrument for assessment of outcome after revision hip replacement. *JBJS (Br)* 2001;83-B:1125-9.

Fitzpatrick R., Norquist, J.M., Dawson J., Jenkinson, C. Comparing alternative Rasch-based methods vs raw scores in measuring change in health. *Med Care* 2004;42(1) I-25-I-36.

Briggs A., Sculpher M., Dawson J., Fitzpatrick R., Murray D., Malchau H. The use of probabilistic decision models in technology assessment. The case of total hip replacement. *Appl Health Econ Health Policy* 2004;3(2):79-89.

Pynsent PB, Adams DJ, Disney SP. The Oxford hip and knee outcome questionnaires for arthroplasty - outcomes and standards for clinical audit. *J Bone Joint Surg [Br]* 2005;87:241-8.