

Early discharge following hip arthroplasty: patients' acceptance masks doubts and concerns

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Abstract

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Objective To describe patients' experience of accelerated discharge after hip arthroplasty in order to test the acceptability to patients of economically driven shortening of post-operative stay.

Methods Patients ($n = 35$) who had received primary total hip replacement up to 12 weeks previously were recruited from two UK orthopaedic units, one of which has pioneered short post-operative stay (3–4 days), and another one of which retains a traditional regimen of discharge after 6–7 days. Patients were interviewed about their experience of care, focusing particularly on their views related to length of stay and with particular attention to patients' well-known tendency to mask critical views of their care. Transcripts were analysed thematically to identify the ways that patients evaluated their care and whether these differed between sites.

Results Patients were primarily concerned with how attentive and informative hospital staff had been and did not refer to length of stay spontaneously. When prompted about this, they did not question their discharge time, although those in the more traditional unit could not countenance more rapid discharge. Patients in the unit with accelerated discharge described concerns about the consequences of early discharge for them or their family, particularly managing pain and mobility problems at home and needing more support.

Conclusions Patients' traditional beliefs about the necessity of prolonged convalescence are not a barrier to early discharge after hip arthroplasty. Nevertheless, some patients' acceptance of early discharge masks doubts and concerns. More intensive post-operative management may be needed if clinical care is not to suffer.

Introduction

Hip arthroplasty dramatically improves quality of life, with minimal mortality.^{1,2} Over 60 000 UK NHS patients underwent the procedure annually in England in 2005–06 and 368 000 in the United States in 2004 and numbers continue to grow.^{3,4} Mean duration of post-operative stay after this procedure has decreased in the United Kingdom to 11 days during 1998–99 and further to 8 days in 2002.^{5,6} In 2003, the UK National Audit Office urged NHS units to shorten stay further, largely on economic grounds.⁶ In the United States, mean stay of 5 days was reported for 2005.³ An orthopaedic unit in the UK NHS has reported mean post-operative stay of 3.7 days.^{7,8}

Whether short stay influences recovery is not yet clear.^{9,10} However, short stay certainly reduces the time available to clinical staff for management of aspects of short-term physiological and subjective recovery that are likely to be important to patients. These include pain relief, prevention and treatment of nausea and vomiting, management of continence, rehabilitation and physiotherapy. Furthermore, the inflammatory response to hip arthroplasty, which impairs subjective and functional recovery in hospital,^{11,12} peaks 48 h post-operatively, then declines slowly but is still elevated at 7 days.¹³ Therefore, patients discharged early are likely still to have severe physiological disturbance.

Traditional methods of post-operative care therefore need to be re-examined in light of accelerated discharge. Because patients' comfort is the defining goal of good post-operative care, patients' observations and views are critical in judging its effectiveness. Questionnaire surveys of satisfaction have significant limitations.¹⁴ In particular, patients' scores are typically biased to extremely positive responses,¹⁵ and resulting ceiling effects probably reflect adoption of the culturally defined 'patient role' rather than objective evaluation of services received.^{14,16} Patients therefore emphasize the positive aspects of whatever care regimen they receive.¹⁷ Wider-ranging quantitative evaluation is possible, but

the topics on which patients can give their views are then constrained to the areas that the researchers consider sufficiently important to include in the questionnaire. In the absence of previous relevant research, the aspects of post-discharge and hospital experience that concern patients in relation to accelerated discharge after hip arthroplasty are not yet clear. Therefore, we used a qualitative method, whereby patients could be prompted to talk in their own way about their experience of care¹⁸ and analysis could take account of the guarded ways in which criticisms are commonly expressed.

We interviewed patients in two settings. One has pioneered short duration of stay. The other is a traditional orthopaedic unit. We asked patients to evaluate their care after surgery, and specifically to comment on issues related to length of stay. We thereby aimed to identify evaluations and concerns common to both regimens, and those which were specific to short post-operative stay.

Method

Participants

Patients who had undergone primary total hip replacement up to 12 weeks previously were recruited from two hospitals, one in Liverpool (traditional unit) and one in Belfast (short duration of stay), each taking routine referrals from relatively deprived parts of the United Kingdom. Liverpool patients were under the care of two consultant surgeons who used similar surgical techniques. Patients were operated on in the supine position using a lateral approach and a trochanteric osteotomy was undertaken. A cemented Charnley prosthesis was used in nearly all patients. A standardized general anaesthetic was given and post-operative pain relief was provided by patient-controlled analgesia using morphine. Belfast patients were under the care of one consultant surgeon. Patients were operated on in the lateral position using a posterior approach, a trochanteric osteotomy was not undertaken, and cementless Corail/Pinnacle prostheses were inserted. Spinal

analgesia with sedation was used for anaesthesia and patient-controlled analgesia was not provided. Belfast and Liverpool patients received physiotherapy in hospital post-operatively. Patients were discharged when able to walk 10 m and use stairs if necessary with no medical complications. On admission, patients at Belfast were told that they could expect to be discharged after around 3 days; those at Liverpool were generally told to expect discharge after about a week. Liverpool, but not Belfast, patients were visited by an occupational therapist at home before admission. In both sites, patients were routinely reviewed 6 weeks post-operatively. Belfast patients had access to a telephone help-line, with earlier review if necessary. Full details of clinical management are available from the authors.

Procedure

By recruiting patients after discharge, we could ask them to reflect on the whole of their hospital stay and on their preparation for, and support after, discharge. As a check on whether the retrospective nature of these evaluations led to patients forgetting important issues during their hospital stay, we interviewed additional patients before discharge. Consecutive patients attending 6-week post-operative review clinics ($n = 12$ and 13 in Liverpool and Belfast, respectively) were approached by the female researcher who first explained her independence from the clinical team before requesting written consent to participate in a study of 'the experiences of patients receiving hip replacements'. In practice, because of postponements by hospitals and non-attendance by patients, these reviews occurred 6–12 weeks post-operatively. Patients were interviewed (see below) in a private area of the clinic or at home as they preferred. Interviews lasted 20–90 min and were audiorecorded and anonymously transcribed. Additional patients (eight in Liverpool, two in Belfast) were recruited and interviewed 2–5 days post-operatively before discharge. These interviews lasted 10–20 min, and patients' speech was recorded by the interviewer in detailed contemporaneous

notes. No patient refused to participate. As is conventional in qualitative work, recruitment ended when additional interviews no longer changed the analysis.

Interviews and analysis

Interviews were semi-structured according to an interview guide. Patients were prompted to describe their experience of surgery and recovery and to evaluate their care in the hospital, readiness for discharge and care after discharge. Interviews were conversational, avoiding closed questions and using prompts and open questions where possible. The interviewer began by asking patients to describe the experience as a whole, before prompting them about specific domains of recovery including physical comfort, mobility, emotional feelings and clinical and personal care. To elicit evaluations, she prompted patients for comparison with their expectations or previous experiences or for comparison between different parts of their experience, particularly recovering at hospital and at home. If they did not mention length of stay spontaneously, they were prompted at the end of the interview to discuss this. To facilitate this part of the discussion, they were told of the contrasting length of stay routinely used in the alternate study hospital.

We used established procedures of qualitative analysis to ensure findings that reflected recurrent components of patients' views rather than researchers' preconceptions.^{19,20} Analysis was inductive, in that we did not decide how to categorize patients' accounts in advance, but developed categories on the basis of what patients said. Analysis continued in parallel with recruitment so that the developing categories could be tested by reference to new data until new interviews did not change the main features of the analysis. Interviews before discharge revealed no ways of evaluating care that did not also emerge in those conducted post-discharge, so the two sets of interviews were analysed together. Analysis was led by GRH and PS on the basis of close reading and re-reading of complete transcripts, and periodically referred to

the full team together with exemplar data to assess the coherence, completeness and clinical validity of the developing analysis. In selecting text for analysis, we disregarded purely descriptive statements, but all expressions in which patients offered or implied any evaluation (positive or negative) of their experiences were considered. It is well-known that patients rarely criticize their care explicitly when asked overtly. In scrutinizing the data for evaluative comments, we therefore allowed for the guarded ways in which criticisms could arise, particularly where critical comments were preceded by a positive statement or accompanied by a justification (e.g. *'sometimes you know, you get er neglected at times when they're doing other things'*). Representative examples of patients' accounts are provided to illustrate the range and commonality of observations grouped under each category, the ellipsis indicating omitted speech. Patients are identified by location (L for Liverpool, and B for Belfast) and ID number. Counting instances of findings of qualitative analysis can help to assess the completeness of the analysis.²¹ Therefore, for each main type of evaluation, we counted the number of interviews in which we noted it.

Results

Sample characteristics

Thirty-five patients participated: 11 female and nine male in Liverpool and seven female and eight male in Belfast. Age ranged from 48–88 (mean 71) at Liverpool, 57–82 (mean 70) at Belfast; all were white European. Mean and median post-operative stay were 8.3 and 6 days, respectively, in Liverpool (range 4–22) and 3.4 and 3 days in Belfast (range 2 to 7).

Interviews

Only two patients (in Belfast) mentioned length of stay spontaneously. In both sites, patients were primarily concerned with other aspects of the care that they received in hospital and after discharge.

Complaints

Nearly all patients ($n = 32$) explicitly stated that they were happy with their care, for example commenting that *'everyone was helpful and supportive'* (B5). However, all also indicated one or more areas of criticism, although typically masking their criticism with an attempt to justify why the problem had arisen, for example by commenting that staff were busy. The main areas of criticism in hospital were feeling overlooked by nurses and physiotherapists, or uninformed about aspects of their care (Box 1).

Box 1 Patients' complaints about care

Most complaints were in two categories:

Feeling overlooked

Patients described several instances of feeling neglected

One day she came and she said 'ooh I'll give you some exercises to do, get on the bed'. So I got on the bed and she said 'now do this and do that, now I'll just go and do some paperwork and leave you to do that'. Now whether she forgot me or not I don't know but I was there a long time (L1)

Typically, they masked their complaints with

'justifications'

I suppose really the nurses have their own lives to lead and then they often, you think they're neglecting me you know, I wish they'd come and do something (L1)

I suppose, though really they've not got time and there aren't enough physio's probably, you know, for this. But er, that's what I feel. I think your physio is very, very important, proper physio (B5)

Feeling 'in the dark'

Patients felt uninformed and anxious about several aspects of their surgery and perioperative management

If they'd have told me I'm going onto morphine and you get all kinds of visions and all that, I'd have understood everything then. I wouldn't have been as naive as I am now (L3)

The urinary problem [after removal of catheter], sort of felt to myself I wonder if that wasn't in the blurb somewhere you know. It would have been useful if that was in the write up [pre-operative information], but it wasn't (B11)

In Liverpool, some patients were uncertain about length of stay, also

I had no idea how long I was going to stay in for because em, I've never had any experience of it and I didn't know anybody that had an experience of it (L2)

Length of stay and post-discharge experience

No patient explicitly criticized their length of stay. Instead, most offered justifications for the regimen at their hospital, although patients in Liverpool and Belfast cited different reasons for doing so. While overtly expressing acceptance, some Belfast patients indicated concerns obliquely.

Liverpool

Only one complained of feeling ill, or of needing more help than was received, after discharge. Most justified the need for their hospital stay, drawing on their own experience in explaining the need to be cared for while feeling in pain or discomfort or while having limited mobility (Box 2). They were therefore consistently surprised about the short stay in Belfast, saying

Box 2 Liverpool patients' views on early discharge

Liverpool patients cited their own experience in describing short post-operative stay as inconceivable. *How are you going to cope after two days? You're still feeling the after-effects from the operation. You're sore and not feeling great. How are you going to manage without nurses and other people around? (L32)*

Specifically they linked the necessity of being in hospital to still being in pain

I don't think I could do that [go home after two days] as you could still be in pain... What are you going to do if you're still in pain when you get home? (L27)

having insufficient mobility to cope with the journey home

How do you cope getting home? I can't manipulate my leg at the moment. So how am I going to get in and out of a car? How would you get home when you're like this? You might feel ok in yourself, but you might not be up to walking around and getting in cars and that's something you've got to deal with when you get out of here (L28)

or with challenges at home

I'm going home tomorrow probably, but I think I could do with a bit longer in, just so I'm not in as much pain when I get back. I tried stairs today and it's the thought of having to climb loads of stairs when I get home as well (L30).

Several felt that longer stay was necessary so that clinical procedures could be carried out safely

But because in my mind I was working towards Saturday and getting these things [sutures] taken out ... If they'd have said well you can go home and we'll send a district nurse to do them, I would have thought I'd much rather be here (L18)

that this would give insufficient time to have recovered from the operation:

I'm not calling you a liar but I can't believe that it's possible to go home after just two days. Are you sure that's right? It seems cruel to be sending people home after two days. You're really not up to it, in terms of how you're feeling and your walking (L32).

In principle, if they had felt well enough, some patients envisaged that they would have appreciated earlier discharge because, as one explained,

It's really boring... There's no TV and no books or magazines to read. I'll be really glad to get home for that reason (L31).

Belfast

About half the patients ($n = 7$) were explicitly positive about early discharge, saying that they valued being able to 'get back into normality again' (B10), or that they might 'be more comfortable in your own home' (B12). However, most ($n = 12$), including some of those who had been positive, indicated concerns. Two of these questioned the short stay although, as with criticisms generally, they masked these with justifications; for example:

I felt the last time, of course I was eighteen years younger, but I felt I was much better able to cope when I'd had a longer stay (B6).

A third explicitly qualified her support

I'll probably be in for three days. It's fine as long as you're over it and you can get on your feet (B35).

The others ($n = 9$) disclosed concerns which they did not explicitly link to short stay, but which appeared to be consequences of it, including still feeling ill when discharged, or needing more support or guidance than they received (Box 3).

Discussion

In evaluating their care, patients in both units were primarily concerned with how attentive and informative hospital staff had been, which is consistent with previous evidence about factors

Box 3 Belfast patients' concerns about early discharge

Nine patients disclosed concerns which they did not explicitly link to early discharge, but which were consequences of it, including:

Still feeling ill or wanting more clinical care when discharged

I was discharged the second day after the operation, the second morning, really a day and a half. I was glad to get out but I wasn't feeling great at the time (B7)

This time I thought, should I apply for sleeping tablets or something. You know but I never got em. I just carried on. It wasn't so much pain, just uncomfortable, you're tossing and turning all night (B13)

Needing support or information about how they should look after themselves

I'd always the option of phoning the hospital you know but I thought they'd be better... if I'd a had maybe you know a physio call me once a month or every couple of weeks or something. You know just to advise you on what's best to be putting on or what exercises you're doing on it. I thought it'd have made your recovery a lot quicker and better (B7)

I rang the ward and ... the sister ... just said 'well why didn't he look at the information before he went home', you know, this sort of thing, but I knew she was busy. I know it's a very busy, but she didn't have time to really, you're a person on the other end of the phone and you're a wee bit concerned (B10)

Needing information about how carers should look after them

Maybe that would be a help. If you could spend a half day with us and this is what we're going to show you what you'll be able to, you know, what you'll have to do after. I mean that would – at least the carer would know exactly what's going to happen (B10).

influencing satisfaction with health care.²² Very few patients spontaneously described concerns about length of stay. Moreover, when explicitly prompted, patients in both units accepted the appropriateness of the length of stay regimen in their hospital.

However, patients' overtly positive accounts of their care cannot necessarily be taken at face value. Patients are notoriously reluctant to criticize care staff, reflecting the culturally defined 'patient' role.^{14,16,23} Therefore, transparent questioning can indicate high satisfaction even when sources of dissatisfaction are present or care is poor.^{24–26} In Liverpool, more detailed analysis of patients' concerns and oblique criticisms nevertheless identified only one patient

who intimated that help was insufficient after discharge, and none who provided any indication that discharge was too rapid. In contrast, most of those in Belfast obliquely indicated concerns with speed of discharge or complained of feeling unwell or in pain after they returned home or of needing more professional guidance over their mobilization at home, particularly from physiotherapists.

These concerns bear out the warning three decades ago that early discharge from hospital might compromise welfare of patients and their families.²⁷ Although many of these concerns could, in principle, be addressed satisfactorily by enhanced clinical practice, including drug treatment targeted at specific symptoms, this may require daily contact with appropriate nursing or medical staff. Intensive post-discharge care in the context of 'hospital-at-home' has been previously reported as a way of enabling early discharge.^{28–30} Clearly, such intensive input is unnecessary to achieve this outcome, because patients at Belfast are discharged earlier than was achieved in those studies, and without intensive post-discharge care. Instead, the major benefit of post-discharge care may be the daily provision of symptom control, support and advice to patients and carers.

There is no evidence that the use of regional anaesthesia in Belfast would have influenced patients' physical state at discharge.³¹ It is not surprising, however, that patients report feeling unwell after early discharge in Belfast as there is a continuing inflammatory response for at least 7 days after surgery¹³ and this is associated with feelings of malaise¹² and functional impairment.¹¹ Because of the longer stay in Liverpool, the response would be lower in these patients at discharge. Professional and patient beliefs about whether it is necessary to be in hospital during this period vary. We have argued that the traditional belief that convalescence is essential after major surgery was a social construction reflecting cultural expectations and professional interests and grounded in historical practice rather than evidence.³² In their astonishment and scepticism about the regimen in Belfast, Liverpool patients reveal beliefs that reflect this traditional view.

However, the overt acceptance of the regimen of short stay by Belfast patients shows how responsive these beliefs are to changes in practice. That is, individual patients' expectations about length of stay respond to local clinical practice rather than being fixed by traditional views and are not a barrier to changing practice.

Patients' own preferences about length of stay after hip arthroplasty therefore remain unknown. In an upper abdominal surgical model in which patients chose their day of discharge, their preferences diverged from accepted surgical practice.³³ When blinded to the type of surgery undertaken, patients who received minimally invasive surgery (usually associated with rapid discharge) chose to stay in hospital longer than expected. Conversely, those who received a traditional surgical approach stayed less than expected. When invited to participate in a randomized trial of early discharge after surgery for breast cancer most patients declined, and cited feeling unable to cope or the need to avoid domestic responsibilities or burden on carers in explaining preference for extended stay.¹⁷ In future outcome research into recovery from hip arthroplasty, the patients' own choice of length of stay should be compared with local discharge practice.

As a qualitative study of small samples of patients at two sites, our findings cannot automatically be generalized. Moreover, although the consecutive sample allowed us to identify the general features of patients' evaluation, it may not be representative, and further work would be necessary to explore how patients' views are related to individuals' personal or domestic characteristics. Those preferring more extended stay after breast cancer surgery were older, more unhappy and more likely to live alone,¹⁷ and these factors are likely to be particularly important in the relatively elderly population receiving hip arthroplasty. Instead, the importance of our findings is to identify the danger that economic pressures for reducing hospital stay combine with patients' tendency to acquiesce with changes in clinical practice, and even to express positive views about it, such that some patients' care is impaired. That is, patients may

simply accept an increased burden of post-discharge morbidity because they regard it as normal and inevitable.

It is sometimes stated, in justification of economic pressure for shortening stay after hip arthroplasty, that patients prefer to be discharged more quickly.^{5,6} Our findings therefore indicate the need for much more detailed evaluations of patients' experience post-discharge than have yet been provided, which focus on details of pain, discomfort and support needs rather than satisfaction. That is, our evidence can inform the choice of measurement instruments in quantitative evaluation of this kind. Such evaluations would show whether any cost-savings gained by shortening length of stay are at the expense of increased patient morbidity and whether early discharge remains cost-effective if sufficient post-discharge care is in place to address this morbidity.

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References

- 1 Salmon P, Hall GM, Peerbhoy D, Shenkin A, Parker C. Recovery from hip and knee arthroplasty: patients' perspective on pain, function, quality of life, and well-being up to 6 months postoperatively. *Archives of Physical Medicine and Rehabilitation*, 2001; **82**: 360–366.
- 2 Learmonth ID, Young C, Rorabeck C. The operation of the century: total hip replacement. *Lancet*, 2007; **370**: 1508–1519.
- 3 Healthcare Cost and Utilization Project (HCUP). *Statistical Brief #34*. Rockville, MD: Agency for Healthcare Research and Quality, 2007.
- 4 The Information Centre for Health and Social Care. London: Information Centre for Health and Social Care, 2008. Available at: <http://www.hesonline.nhs.uk>, accessed on 31 January 2008.
- 5 National Audit Office. *Hip Replacements: Getting it Right First Time*. London: The Stationery Office, 2000.

- 6 National Audit Office. *Hip Replacements: An Update*. London: The Stationery Office, 2003.
- 7 Lawlor M, Humphreys P, Morrow E *et al.* Comparison of early postoperative functional levels following total hip replacement using minimally invasive versus standard incisions: a prospective randomized blinded trial. *Clinical Rehabilitation*, 2005; **19**: 465–474.
- 8 Ogonda L, Wilson R, Archbold P *et al.* A minimal-incision technique in total hip arthroplasty does not improve early postoperative outcomes: a prospective, randomized, controlled trial. *Journal of Bone and Joint Surgery (American)*, 2005; **87**: 701–710.
- 9 Mauerhan DR, Lonergan RP, Mokris JG, Kiebzak GM. Relationship between length of stay and dislocation rate after total hip arthroplasty. *Journal of Arthroplasty*, 2003; **18**: 963–967.
- 10 O'Brien S, Ogonda L, Dennison J *et al.* Day two postoperative 'fast-track' discharge following primary total hip replacement. *Journal of Orthopaedic Nursing*, 2005; **9**: 140–145.
- 11 Hall GM, Peerbhoy D, Shenkin A, Parker CJR, Salmon P. Relationship of the functional recovery after hip arthroplasty to the neuroendocrine and inflammatory responses. *British Journal of Anaesthesia*, 2001; **87**: 537–542.
- 12 Hall GM, Salmon P. Physiological and psychological influences on postoperative fatigue. *Anesthesia and Analgesia*, 2002; **95**: 1446–1450.
- 13 Hall GM, Peerbhoy D, Shenkin A, Parker CJR, Salmon P. Hip and knee arthroplasty: a comparison and the endocrine, metabolic and inflammatory responses. *Clinical Science*, 2000; **98**: 71–79.
- 14 Williams B. Patient satisfaction: a valid concept? *Social Science and Medicine*, 1994; **38**: 509–516.
- 15 Collins K, O'Cathain A. The continuum of patient satisfaction – from satisfied to very satisfied. *Social Science and Medicine*, 2003; **57**: 2465–2470.
- 16 Staniszewska S, Henderson L. Patients evaluations of their health care: the expression of negative evaluation and the role of adaptive strategies. *Patient Education and Counseling*, 2004; **55**: 185–192.
- 17 Wells M, Harrow A, Donnan P *et al.* Patient, carer and health service outcomes of nurse-led early discharge after breast cancer surgery: a randomised controlled trial. *British Journal of Cancer*, 2004; **91**: 651–658.
- 18 Weaver M, Patrick DL, Markson LE, Martin D, Frederic I, Berger M. Patient satisfaction. Issues in the measurement of satisfaction with treatment. *American Journal of Managed Care*, 1997; **3**: 579–594.
- 19 Elliott R, Fischer CT, Rennie DL. Evolving guidelines for publication of qualitative research studies in psychology and related fields. *British Journal of Clinical Psychology*, 1999; **38**: 215–229.
- 20 Stiles WB. Quality control in qualitative research. *Clinical Psychology Review*, 1993; **13**: 593–618.
- 21 Silverman D. *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction*. London: Sage, 1993.
- 22 Anderson R, Barbara A, Feldman S. What patients want: A content analysis of key qualities that influence patient satisfaction. *Journal of Medical Practice Management*, 2007; **22**: 255–261.
- 23 Edwards C, Staniszewska S, Crichton N. Investigation of the ways in which patients' reports of their satisfaction with healthcare are constructed. *Sociology of Health and Illness*, 2004; **26**: 159–183.
- 24 Williams B, Coyle J, Healy D. The meaning of patient satisfaction: an explanation of high reported levels. *Social Science and Medicine*, 1998; **47**: 1351–1359.
- 25 Staniszewska SH, Henderson L. Patients' evaluations of the quality of care: influencing factors and the importance of engagement. *Journal of Advanced Nursing*, 2005; **49**: 530–537.
- 26 Dougall A, Russell A, Rubin G, Ling J. Rethinking patient satisfaction: patient experiences of an open access flexible sigmoidoscopy service. *Social Science and Medicine*, 2000; **50**: 53–62.
- 27 Jönsson B, Lindgren B. Five common fallacies in estimating the economic gains of early discharge. *Social Science and Medicine Part C: Medical Economics*, 1980; **14**: 27–33.
- 28 Hensher M, Fulop N, Hood S, Ujah S. Does hospital-at-home make economic sense? Early discharge versus standard care for orthopaedic patients. *Journal of the Royal Society of Medicine*, 1996; **89**: 548–551.
- 29 Jester R, Hicks C. Using cost-effectiveness analysis to compare Hospital at Home and in-patient interventions: Part 1. *Journal of Clinical Nursing*, 2003; **12**: 13–19.
- 30 Shepperd S, Harwood D, Jenkinson C, Gray A, Vessey M, Morgan P. Randomised controlled trial comparing hospital at home care with inpatient hospital care I: three month follow up of health outcomes. *British Medical Journal*, 1998; **316**: 1786–1791.
- 31 Rigg JR, Jamrozik K, Myles PS *et al.* Epidural anaesthesia and analgesia and outcome of major surgery: a randomised trial. *Lancet*, 2002; **359**: 1276–1282.
- 32 Salmon P, Hall GM. A theory of postoperative fatigue: An interaction of biological, psychological, and social processes. *Pharmacology Biochemistry and Behavior*, 1997; **56**: 623–628.
- 33 Majeed AW, Troy G, Nicholl JP *et al.* Randomised, prospective, single-blind comparison of laparoscopic versus small-incision cholecystectomy. *Lancet*, 1996; **347**: 989–994.