

Patient and carer satisfaction with 'Hospital at Home': quantitative and qualitative results from a randomised controlled trial

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SUMMARY

Background: 'Hospital At Home' schemes are set to increase in the United Kingdom (UK) in response to the NHS Plan. To date, little detailed work has been done on the acceptability of these schemes to patients and their carers.

Aim: To compare Hospital at Home patient and carer satisfaction with hospital care.

Design of study: Pragmatic randomised controlled trial.

Setting: Consecutive patients assessed as suitable for the Leicester Hospital at Home scheme were randomised to Hospital at Home or one of three acute hospitals in the city.

Method: Patient satisfaction was assessed two weeks after randomisation, or at discharge if later, using a six-item questionnaire. Patients' and carers' views of the services were assessed by semi-structured interviews.

Results: One hundred and two patients were randomised to Hospital at Home and 97 to hospital. Forty-eight (47%) patients in the Hospital at Home arm and 35 (36%) in the hospital arm completed the satisfaction questionnaire, representing 96% and 85% of those eligible, respectively. Total scores were significantly higher in the Hospital at Home (median = 15) than in the hospital group (median = 12). ($P < 0.001$, Mann-Whitney U-test.) Responses to all six questions favoured Hospital at Home, with all but one of these differences being statistically significant. In the Hospital at Home group, 24 patients and 18 of their carers were interviewed; in the hospital group 18 patients and seven of their carers were interviewed. Themes emerging from these interviews were that patients appreciated the more personal care and better communication offered by Hospital at Home and placed great value on staying at home, which was seen to be therapeutic. Patients largely felt safe in Hospital at Home, although some would have felt safer in hospital. Some patients and carers felt that better medical care would have been provided in hospital. Carers felt that the workload imposed by Hospital at Home was no greater than by hospital admission and that the relief from care duties at home would be counterbalanced by the added strain of hospital visiting.

Conclusions: Patient satisfaction was greater with Hospital at Home than with hospital. Reasons included a more personal style of care and a feeling that staying at home was therapeutic. Carers did not feel that Hospital at Home imposed an extra workload.

Keywords: intermediate care; hospital care; patient satisfaction; carers.

Introduction

'HOSPITAL at Home' schemes, providing either admission avoidance or early discharge, are one response to rising admission rates, as well as increasing consumer demand and desire for choice.¹ In the United Kingdom these schemes have usually been small scale and often short-lived.² Consulting patients on their views of services, especially when introducing innovations, is increasingly viewed as an essential component of evaluation.³ The NHS Plan⁴ includes a commitment to more intermediate care beds, but their acceptability to users is likely to be a critical factor in how far they enter mainstream provision.

There is evidence from observational work that Hospital at Home can deliver high levels of patient and carer satisfaction.⁵ A recent Cochrane review of the effectiveness of Hospital at Home, compared with hospital care, found some evidence of higher patient satisfaction with Hospital at Home, but that it was perhaps less popular than hospital from the carers' point of view.⁶ Subsequent trials have examined several aspects of satisfaction. In the only trial of an admission avoidance scheme to assess patient and carer satisfaction, both were higher than the hospital group.⁷ A later trial of admission avoidance in chronic obstructive pulmonary disease did not include patient satisfaction.⁸ Two trials of early discharge schemes have been reported. In the first trial only one element of satisfaction (communication with staff) was significantly different, favouring Hospital at Home care.⁹ No extra burden on carer strain or quality of life was found.¹⁰ In the second trial, Hospital at Home was preferred to hospital in three out of the five patient groups examined (the other two had no preference) although carers' preferences were less consistent.¹¹ However, none of these studies used qualitative methods or an instrument specifically to assess this type of provision, and so key aspects of satisfaction and dissatisfaction may have been missed.

This paper presents data on patient and carer satisfaction from a randomised trial of the Leicester Hospital at Home admission avoidance scheme, the design and main results of which have already been reported.¹² The scheme is nurse-led, with inputs from physiotherapists, occupational therapists, and generic health workers, and at the time of the study had a maximum capacity of five patients. Referrals have to be made by the general practitioner (GP), who retains medical responsibility. The Hospital at Home team replaced other primary care team inputs during the stay. The maximum length of stay is 14 days and the hours of care provided each day ranged from four to 24 hours.

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Submitted: 11 January 2001; Editor's response: 27 April 2001; final acceptance: 26 June 2001.

©British Journal of General Practice, 2002, 52, 9-13.

HOW THIS FITS IN*What do we know?*

Hospital at home is an increasingly available alternative to inpatient admission; however, little detailed work has been done on its acceptability to patients and their carers.

What does this paper add?

In a randomised trial of patients suitable for hospital at home, satisfaction scores were higher in those allocated to hospital at home than hospital. Semi-structured interviews with patients and carers found the reasons for this included higher levels of personal care and communication, and the perception that being at home was itself therapeutic.

**Method**

Patients eligible for admission to Hospital at Home for acute care were randomised in equal proportions to hospital or Hospital at Home. The trial, which took place between 1995 and 1997, included patient interviews at three days, two weeks, and three months after admission. The two-week interview included a satisfaction questionnaire. If the patient was still in hospital then an interview was arranged after discharge if this was within the three-month follow-up period. We interviewed after, rather than during, the episode of care so we could capture views on the whole episode, including discharge. No patients stayed in Hospital at Home for more than two weeks; however, some hospital patients remained in hospital for more than three months and so were not eligible for inclusion.

The patient satisfaction questionnaire we used was developed for stroke patients and has been used in previous evaluation of Hospital at Home.¹³ It contains six core questions which are not specific to stroke and apply to any care provision. Scoring is on a 0 to 3 scale (0 = 'strongly disagree', 1 = 'disagree', 2 = 'agree', 3 = 'strongly agree') with a maximum score of 18. Scores were compared using the Mann-Whitney U-test.

Patients who transferred from Hospital at Home to hospital were not asked to complete the questionnaire as it did not allow differentiation between the two providers of care. Patients refusing their allocated place of care were not included.

Additionally, semi-structured interviews were undertaken with patients and carers in both arms of the trial. The aim of these was to explore in more detail which aspects of the two care options were particularly valued or caused concern. Initially, it was planned to randomly sample for these; however, as so many patients were too ill or frail, we tried instead to interview all those who were capable and gave consent. Carers and patients were usually interviewed together because it was often impractical to ask either to leave. When this was attempted, interviewers detected resistance from both parties. Interviews were semi-structured and focused on their views about admission, process of care, discharge arrangements, and implications for carers. Responders were also asked to expand on their responses to the satisfaction questionnaire as well as to identify the best and worst

aspects of care. This approach was used to uncover all areas of satisfaction and dissatisfaction rather than provide an analytical framework for results.

Interviews were conducted by two of the authors. All were tape-recorded, then transcribed and analysed by identifying categories that were then grouped into themes. No prior assumptions were made about what themes might emerge and interviewers were non-directive. The interviewers analysed all transcripts independently and emerging themes were identified, in collaboration with the remaining author. Responder validation was not attempted. Comparability between interviewers was achieved by reviewing transcripts during data collection.

Results

Of the 199 patients entering the trial, 71% were female, the median age was 84 years (interquartile range [IQR] = 77–89), and 49% lived alone. The most common diagnostic groups were cardiovascular and respiratory diseases. Of the 102 patients allocated to Hospital at Home, 96 (94%) accepted the service, whereas only 74 (76%) of the 97 patients allocated to the hospital arm agreed to admission.

Satisfaction questionnaire

Of the 96 patients receiving Hospital at Home, 50 were eligible to complete the satisfaction questionnaire. Reasons for exclusion were as follows: 17 had died before discharge, 11 were transferred from Hospital at Home to hospital, and 18 were too ill or confused. Of those eligible, 48 (96%) completed the questionnaire. The median age was 82 years (IQR = 75–87), and 33 (69%) patients were female.

Of the 74 patients accepting hospital allocation, 41 were eligible to complete the satisfaction questionnaire. Reasons for exclusion were as follows: 14 had died before discharge, two were still in hospital at the end of the trial, three were transferred to another source of care, and 14 were too ill or confused. Of those eligible, 35 (85%) completed the questionnaire. The median age was 81 years (IQR = 77–86) and 25 (71%) patients were female. The proportion of eligible patients completing the questionnaire did not differ significantly between the two groups ($P = 0.16$, Yates corrected χ^2).

Responses to individual questions and total satisfaction scores are shown in Table 1. All but one component of the questionnaire scores were significantly higher in the Hospital at Home group, with the biggest differences in aspects of communication with staff and the care they provided. Satisfaction scores did not differ significantly between males and females; in both cases they were significantly higher for Hospital at Home ($P < 0.05$).

Patient and carer interviews

Interviews were conducted with 24 patients and 18 of their carers who experienced Hospital at Home, and with 18 patients who were admitted to hospital and seven of their carers. The following emerged as key themes describing patient and carer views from both the Hospital at Home and hospital groups.

Table 1. Patients' responses to the six-item satisfaction questionnaire.

Question	Hospital at Home (n = 48) n (%)					Hospital (n = 35) n (%)					P-value (Mann-Whitney U-test)
	Strongly agree (3)	Agree (2)	Disagree (1)	Strongly disagree (0)	Median score	Strongly agree (3)	Agree (2)	Disagree (1)	Strongly disagree (0)	Median score	
I have been treated with kindness and respect by staff	34 (71)	13 (27)	1 (2)	0	3	15 (43)	18 (51)	1 (3)	1 (3)	2	0.01
The staff attended well to my personal needs	30 (63)	17 (35)	1 (2)	0	3	8 (23)	25 (71)	1 (3)	1 (3)	2	0.001
I was able to talk to the staff about any problems I might have had	24 (50)	23 (48)	1 (2)	0	2.5	5 (16)	22 (69)	3 (9)	2 (6)	2	0.001
I received all the information I wanted about the cause and nature of my illness	13 (27)	24 (50)	10 (21)	1 (2)	2	3 (9)	18 (51)	9 (26)	5 (14)	2	0.01
The doctors and nurses have done everything they can to make me well again	23 (48)	23 (48)	1 (2)	1 (2)	2	11 (31)	21 (60)	3 (9)	0	2	0.12
I am happy with the amount of recovery I have made	16 (36)	24 (53)	4 (9)	1 (2)	2	6 (17)	21 (60)	7 (20)	1 (3)	2	0.04
Total score (median)				15					12		0.001

Personal care/communication. The personal relationship with nursing staff was frequently highlighted as the best aspect of care provided by Hospital at Home. Staff were frequently referred to as 'very nice', or 'marvellous', although many interviewees were not able to elaborate on these statements:

'I think you got more attention [from Hospital at Home] ... it seems as if you are the only one, but you're not ... they've got a lot of patients to see but I'm more than satisfied with all of them ...' (Hospital at Home patient 1-043.)

'They were marvellous ... it was like having friends coming in.' (Hospital at Home carer 1-008.)

'They were like family members. I often think about them and wish I'd meet them when I go out.' (Hospital at Home carer 1-098.)

In contrast, nursing care in hospital was often described as being rushed and impersonal. Nursing staff were perceived to be very busy and it was common for patients to have to wait for attention:

'I didn't like it in hospital because I was alone in the room and had nobody to talk to. They would come into my room, go to the locker, take out the tablets and plonk them down. They never said anything, not even "Good morning" ...' (Hospital patient 2-096.)

'If only they [the hospital staff] could talk like we're talking now. They're talking "hospital language", you know what I mean? They're talking words that we won't understand. They're just that little bit higher. And then when they come on a ward round, you're laying there like a fish on a plate ... They should make the patient feel relaxed.' (Carer [2-036] of hospital patient.)

Several patients reported problems in communicating with hospital doctors:

'They took three X-rays, but they didn't tell me what it was. My friend rang in and they told her it wasn't sciatica ... It does annoy me, not being told, because people ask you what it was — and you don't know. I didn't ask the doctor what it was, there was mostly someone with him, and I'm not one to probe a lot.' (Hospital patient 2-023.)

'I went into an admission ward for 24 hours, then to another ward. I didn't see the specialist until three days after I was admitted. I heard him say to the registrar, "She's got this and I think she'll be in for a couple of days". He didn't come round again until three days later and I was warned that he was coming and that I was likely to be discharged, and I was.' (Hospital patient 2-091.)

Safety. Generally, patients reported feeling safe in Hospital at Home. They felt that the team would be available and would refer to hospital if necessary. Having a telephone number and the nurses' encouragement to phone if they were concerned about anything appeared to reassure them, as did knowing when the staff would next be coming:

'I'd got the knowledge that if I did need any help I could get it. They left me a telephone number, they really stressed that when they left, if you want any help don't forget to ring us ... [I was] confident they would know if I was very ill and that they would move me to hospital, that they would get the doctor.' (Hospital at Home patient 1-089.)

'You felt calm, you knew somebody was coming, at ease. You're not waiting for a nurse to come and help you to do things like you are in hospital.' (Hospital at Home patient 1-056.)

However, some patients did feel vulnerable when Hospital at Home nurses were not present, especially at night:

'The only thing I would fault was the night, if you were really needing it. Not to be there all the time but to pop in.' (Hospital at Home patient 1-102.)

'Every time they went I was upset, because I was so alone. I was rigid with nerves.' (Hospital at Home patient 1-001.)

Similar problems were reported in hospital where patients reported difficulties gaining attention even though they were receiving 24-hour care:

'I couldn't get taken to the toilet when I wanted. You just have to rely on the nurses, there's nothing else you can do. I once had to call three times, and by the third time, I had wet my bed.' (Hospital patient 2-058.)

Medical care. One patient and two carers were not satisfied with their GP's treatment during Hospital at Home and felt hospital would have been more appropriate because of the availability of specialist medical care:

'I needed a brain scan really, and he [the GP] couldn't have one done in here on his own and if he got the results he'd probably not know what to look for ...' (Hospital at Home patient 1-068.)

'I wanted a second opinion because I was getting really worried about this ... In hospital at least she would have seen a doctor, and a doctor would have examined her and put her on medication.' (Hospital at Home carer 1-083.)

'If there was something wrong with his heart he should be in hospital, where all the necessary equipment is.' (Hospital at Home carer 1-003.)

The importance of home. The best thing about being in Hospital at Home was frequently described in broad terms as 'being in your own home'. Couples emphasised the importance of not being separated from their partners:

'See how many years we've been married and done everything together ... we don't want parting till the end now, do we? ... I mean I pray every night that we'll both die together.' (Hospital at Home carer 1-036.)

One woman first thought that her husband's hospitalisation would allow her a welcome break. However, once she noticed how distraught he was in hospital without her, she

changed her view. Another partner described how he felt about his wife being in hospital:

'I felt lonely. The first time you're ever so lonely, duck, is when you get married and your first child comes along and they rush the wife to hospital and you're on your own, that's when it's like on the telly. "Home Alone" ... That is how I felt when she went in to hospital.' (Carer [2-036] of hospital patient.)

Several patients referred to home as being part of the therapy:

'I would always prefer to stay at home because I've got my own ways and my own ideas. Probably being at home works better than a drug ...' (Hospital at Home patient 1-058.)

'You're in your own surroundings which helps you get better quicker.' (Hospital at Home patient 1-063.)

Several of the criticisms of hospital were owing to the fact that it was not like home. A common theme was that being in a hospital ward with other people was disruptive to sleep and at times upsetting when other patients' demands were prevalent:

'The lady opposite had to go on the nebulisers and it made a noise you know ... my sleep was quite disturbed ... it was always a very long night.' (Hospital patient 2-091.)

Carer workload. Carers either did not perceive Hospital at Home as extra work for them, or compared it with the extra workload of their relative being hospitalised. Carers felt that although hospital would potentially relieve them from all their caring tasks, the upheaval of visiting in hospital, of being separated and not knowing what was happening to their relative while in hospital, was a less satisfactory option. Several frail carers valued the attention they themselves received from Hospital at Home:

'I look at it this way; had my wife been in hospital, I'd still be doing the jobs at home and looking after the house and I'd still have to go to the hospital to visit her and the time I've spent in the hospital visiting her, I could rest at home.' (Hospital at Home carer 1-089.)

'It's hard work for someone such as me to traipse up to hospital and I would need someone to take me.' (Hospital at Home carer 1-079.)

'They were marvellous, the home care nurses, they couldn't have done more for him ... and they looked after me.' (Hospital at Home carer 1-008.)

Patients themselves also reported that staying at home put less strain on their carers:

'If I'd been in hospital I would have been worrying about my husband because of his condition. Is he all right? How can he come and see me?... You can balance the two, of him doing it or having the trauma of going back and forth to hospital.' (Hospital at Home patient 1-089.)

Discussion

Results from the questionnaire demonstrate that patients were more satisfied with Hospital at Home than hospital. This is consistent with previous work,^{6,7,9,11,14} and some of the underlying reasons are revealed by the interview data. Both sources of data show that more personal care and better communication contribute to higher satisfaction with Hospital at Home. This group of patients placed great importance on staying at home and saw hospital as undesirable but necessary if their medical condition demanded it. This could be one explanation of why we have found greater differences in satisfaction than when early discharge schemes have been compared to hospital. Although the questionnaire showed no difference in response to the question, 'The doctors and nurses have done everything they can to make me well', the interviews did reveal some concerns about the quality of medical care of Hospital at Home.

Our interview data suggests that although carers too may have some concerns about safety, it was not felt that Hospital at Home produced a larger burden of care on them than hospital admission, and the scheme may have conferred some advantage to them. Although interviewing carers separately might have revealed more issues, this was impractical given most patients' home circumstances. Even when it was physically possible, the researcher perceived a reluctance from both parties to be interviewed separately.

Potential sources of bias include differential response rates between groups and interview bias in administration of the questionnaire. However, response rates of those eligible were high in both groups and it is unlikely that refusal or loss to follow-up could explain the large differences we found. We accept that we have not included the views of those who were too ill or confused, and that we could have attempted to solicit carers' views in these cases. Although we could have excluded the possibility of interviewer bias by administering the questionnaire by post, or by trying to blind the interviewers, this would have been at the expense of the qualitative element of our work. It should also be noted that we did not assess satisfaction in patients who were transferred from Hospital at Home to hospital. Although the interview data suggest that patients and carers appreciated the ability of Hospital at Home staff to arrange hospital admission if this was medically necessary and trusted them to do so, it is possible that transfer to hospital would be a source of dissatisfaction with the Hospital at Home service.

In extrapolating these findings it is important to remember the characteristics of the study population. Only those who were prepared to accept Hospital at Home were eligible for entry and so may represent a group particularly averse to hospital, a suggestion supported by the high proportion of patients randomised to hospital who refused admission.

Our results illustrate as much about why older patients dislike hospital as they do about those elements of Hospital at Home that they appreciate. Although some elements of dissatisfaction, such as separation from spouse, are inevitable, others, such as impersonal care from nurses and poor communication with doctors, could be addressed by improving hospital procedures and structural problems, such as understaffing.^{15,16}

This paper highlights the complexities of measuring satisfaction in a group of frail elderly patients and their carers.

The approach we used demonstrates the contribution of quantitative and qualitative methods in the evaluation of service innovations and how they can be complementary.¹⁷ Patients and carers were more likely to rate care positively when answering the questionnaire rather than during an interview. This could be because the questionnaire failed to ask about key elements of care, or that probing techniques are necessary to elicit criticism, particularly perhaps in older people who are reluctant to question the *status quo*.

The next phase of our work is to use these and other qualitative data to develop a questionnaire targeted at assessing patient and carer satisfaction with Hospital at Home and other methods of intermediate care.

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Acknowledgements

We thank the Hospital at Home team, the project steering group, the acute hospitals, patients and their carers, for their help with this study, and Catherine Exley for comments on an earlier draft. Funding was provided through the National Research and Development Programme, Primary Secondary Care Interface, NHS Executive, North Thames.