Age and Ageing 2000; **29:** 97–98

EDITORIAL

Caring for older hospital-at-home patients

Hospital-at-home schemes provide nursing and medical care in the home to people who would otherwise be in hospital with the aim of either preventing admission or facilitating discharge [1, 2]. Hospital-at-home (*hospitalisation à domicile*) originated in France in 1961 [3], and has become an increasingly popular method of delivering healthcare world-wide [1, 2, 4, 5].

The complexity of schemes varies, some providing very high levels of intervention in the home (such as ventilation, nutrition, intravenous antibiotics and anticoagulant therapy) while others—particularly in the UK—focus on nursing care and rehabilitation [1, 2, 4, 5]. Some schemes cater for specific patient groups; others are generic [1, 2].

There have been many descriptive observational studies of hospital-at-home, but few controlled studies have compared hospital-at-home with standard inpatient care, and many of these have been non-randomized [6]. An ideal hospital-at-home scheme would produce outcomes as good as inpatient care, be no more expensive (ensuring costs were not merely transferred to primary care) and be acceptable to patients and carers. In particular, it should avoid any increase in the emotional, physical and financial burden on carers.

Carer satisfaction and strain

The main emphasis of comparative studies to date has been on patient outcomes and cost, with less attention being devoted to carer satisfaction and strain [1, 2, 5–19]. In this issue of *Age and Ageing* [20], the Bristol group address this question in a paper complementing earlier reports [18, 19]. In an early-discharge hospital-at-home scheme, appropriate patients from general medical, medicine for the elderly, orthopaedic and general surgical wards were randomized to either hospital-at-home or standard hospital care. Using health status measures and a modified Carer Strain Index, the researchers found no difference in self-reported burden of the principal carers of hospital-at-home patients and those treated conventionally.

This is an important result, but one which must be interpreted with caution: because few patients identified a carer, the study may not have had sufficient power to detect a small difference between the two groups. Support for these findings is provided by Shepperd *et al.* [16, 17]. They compared hospital-at-home with standard care for different groups of patients: elective hip and knee replacement, hysterectomy (for non-malignant conditions), elderly medical and chronic obstructive pulmonary disease. This was largely an early-discharge hospital-at-home scheme but some of the elderly medical patients and some of those with chronic obstructive pulmonary disease were recruited directly from home. Except for women having a hysterectomy, all patients were over 60. There were few differences in patient outcome between hospital-at-home and conventional hospital treatment. The Carer Strain Index was used to assess carer burden, and no difference was found in the level of burden between carers of hospital-at-home patients and those receiving standard care for any of the medical or surgical patient groups in their study. Carers recorded all expenditure related to the trial diagnosis for 1 month as well as any loss of earnings and days lost from work as a result of caring, and there were no differences between the two groups. Expenditure was small and few carers reported loss of earnings. As most carers were retired, time lost from work was not a factor. Donald *et al.* randomized 60 elderly medical patients to hospital-at-home or conventional discharge and support [14]. Carers were interviewed to determine their ability to care for their dependent and how well they were coping. No differences were identified between the two groups, but the number of carers in each treatment arm was small as only 20 patients had a carer.

In the USA, Hughes *et al.* randomized 171 terminally ill patients (mean age about 64 years) to a home care team or conventional care [10]. There was no difference in patient outcome, and patient satisfaction was higher in those receiving home care. Most carers (92%) were women, with a mean age of 56 years; there were no differences in carer morale at 1 month. However, this was lower in the home treatment group if the patient survived more than 30 days.

Although the Peterborough scheme has been operational in the UK since 1978 [21], the only attempt at a randomized controlled study foundered because of the scheme's success: patients, their general practitioners and carers were reluctant to be randomized to treatment in hospital as they perceived that treatment-at-home was so successful [7]. In a prospective evaluation of the scheme, 16% of carers reported that involvement in caring had presented a problem and 31% that it had caused some burden [7]. Three groups

of patients were studied: stroke, early post-operative discharge and those with malignant disease. Problems were particularly reported by the carers of stroke patients: almost 40% claiming that caring had adversely affected their health, and over half reporting lifestyle changes as a result of caring.

There is accumulating evidence that hospital-at-home is an effective complementary form of health care, although whether it is a cost-effective alternative remains uncertain [1, 2, 6, 8, 9, 11–19]. Hospital-at-home is usually acceptable to patients and carers although a few do not want it (the reasons being unclear) [22]. The study reported by Gunnell *et al.* found hospital-at-home not to be associated with increased carer strain. However, the most established UK scheme found increased burden experienced by some hospital-at-home carers [7], and the statement that the "implementation of hospital-at-home schemes should be influenced by considerations of their cost and effectiveness rather than their potential adverse effects on carers" may be premature.

Oliver J. Corrado
Centre for the Health of Older People,
Leeds General Infirmary, Leeds LS1 3EX, UK
Fax: (+ 44) 113 392 6557

References

1. Shepperd S, Iliffe S. Hospital at home. An uncertain future. Br Med J 1996; 312: 923–4.

2. Marks L. Home and Hospital Care. Redrawing the Boundaries. London: King's Fund Institute, 1991.

3. Morris DE. Santé Service Bayonne: a French approach to home care. Age Ageing 1983; 12: 323–8.

4. Leff B, Burton JR. Alternative approaches to traditional hospital care—home hospital. Clin Geriatr Med 1998; 14: 851–61.

5. Grayson M L. Hospital-in-the-home care: is it worth the hassle? Med J Aust 1998; 168: 262–3.

6. Shepperd S, Iliffe S. The effectiveness of hospital at home care compared with in-patient hospital care: a systematic review. J Publ Health Med 1998; 20: 344–50.

7. Knowelden J, Westlake L, Wright KG *et al.* Peterborough hospital at home: an evaluation. J Publ Health Med 1991; 13: 182–8.

8. Iliffe S. Hospital at home: from red to amber? Br Med J 1998; 316: 1761–2.

9. Pryor GA, Myles JW, Williams DRR *et al.* Team management of the elderly patient with hip fracture. Lancet 1988; i: 401–3.

10. Hughes SL, Cummings J, Weaver F *et al.* A randomized trial of the cost-effectiveness of VA hospital-based home care for the terminally ill. Health Serv Res 1992; 26: 801–17.

11. Hollingworth W, Todd C, Parker M *et al.* Cost analysis of early discharge after hip fracture. Br Med J 1993; 306: 903–6.

12. Martin F, Oyewole A, Moloney A. A randomised controlled trial of a high support hospital discharge team for elderly people. Age Ageing 1994; 23: 228–34.

13. O'Cathain A. Evaluation of a hospital at home scheme for the elderly discharge of patients with fractured neck of femur. J Publ Health Med 1994; 16: 205–10.

14. Donald IP, Baldwin RN, Bannerjee M. Gloucester hospital-at-home. A randomised controlled trial. Age Ageing 1995; 24: 434–9.

15. Hensher M, Fulop N, Hood S. Does hospital-at-home make economic sense? Early discharge versus standard care for orthopaedic patients. J R Soc Med 1996; 89: 548–51.

16. Shepperd S, Harwood D, Jenkinson C *et al.* Randomised controlled trial comparing hospital at home care with inpatient hospital care. I: three month follow up of health outcome. Br Med J 1998; 316: 1786–91.

17. Shepperd S, Harwood D, Gray A *et al.* Randomised controlled trial comparing hospital at home care with inpatient hospital care. II: cost minimisation analysis. Br Med J 1998; 316: 1791–6.

18. Richards SH, Coast J, Gunnell DJ *et al.* Randomised controlled trial comparing effectiveness and acceptability of an early discharge, hospital at home scheme with acute hospital care. Br Med J 1998; 316; 1796–1801.

19. Coast J, Richards SH, Peters TJ *et al.* Hospital at home or acute hospital care? A cost minimisation analysis. Br Med J 1998; 316: 1802–6.

20. Gunnell DJ, Coast J, Richards SH *et al.* How great a burden does early discharge to hospital-at-home impose on carers? A randomized controlled trial. Age Ageing 1999; 29: 137–42.

21. Mowat IG, Morgan RT. Peterborough hospital at home scheme. Br Med J 1982; 284: 641–3.

22. Fulop NJ, Hood S, Parsons S. Does the National Health Service want hospital-at-home? J R Soc Med 1997; 90: 212–5.