

Hospital in the home: what next?

It is time to focus on issues of roll-out and quality control

“Hospital in the home” can mean different things in different countries and contexts. A Cochrane review defined it as “a service that provides active treatment . . . in the patient’s home of a condition that otherwise would require acute hospital in-patient care”.¹ This definition includes services that substitute acute care by home-based management (admission avoidance) and those that support discharge with community-based post-acute care and rehabilitation (discharge support). The review found “insufficient evidence to support expansion or contraction” of home-based alternatives to inpatient hospital care.¹ Two articles in this issue of the Journal contribute to the clinical evidence base for home care as an admission-avoidance service.

In a randomised controlled trial of an admission-avoidance hospital-in-the-home scheme in patients with mild to moderate community-acquired pneumonia, Richards et al (page 235) in New Zealand found no clinically important differences in time to discharge, duration of intravenous and oral antibiotic use or general functioning, but higher levels of satisfaction and lower costs for patients treated at home.² In a retrospective case series of patients with pulmonary embolism in an admission-avoidance hospital-in-the-home scheme conducted in New South Wales, Ong et al (page 239) found outcomes similar to those in hospital cohorts, but acknowledged these results need to be confirmed in a trial.³

There is a growing list of well-defined conditions that have been shown in adequately powered trials or meta-analyses to be manageable in home care, provided either as a complete alternative to hospital admission or to support early discharge from inpatient care. These include cellulitis,⁴ chronic obstructive pulmonary disease⁵ and deep vein thrombosis.⁶ These findings should reassure clinicians who had concerns that similar overall outcomes in trials with a varied casemix may have masked important differences in outcomes for specific conditions. There is also consistent evidence from these studies that patients and carers prefer treatment at home.

There is less consensus about whether treatment at home saves money, partly because of the difficulty of measuring costs realistically within a trial rather than a “real world” context,⁷ but also because costs are highly influenced by the health care system in which hospital in the home operates. A recent study from Victoria of 924 patients treated at home and matched hospital controls showed that home care was cheaper — especially if inpatient admission was completely avoided, in which case costs were 38% less.⁸ Costs also need to be considered as part of a whole system of health and social care provision. For example, it has been estimated that the Victorian hospital-in-the-home scheme provides the equivalent of more than 400 beds, and so has effectively provided care that would otherwise require the building and maintenance of a large metropolitan hospital.⁹ In contrast, in the United Kingdom, schemes are generally too small to have a detectable effect on hospital provision.

If the evidence does support expansion of the scheme, clinicians and policymakers will need to know which key elements need to be replicated. Nearly all the evidence cited above relates to models with specific admission criteria, which include medical assessment by a specialist, generalist or both, either at home, in an accident and emergency department, or before transfer from inpatient care. Care is also supported by ongoing medical review, provided either in primary care or as hospital outreach. These schemes explicitly provide substitute, not additional, care and require detailed cooperation between the acute and community care providers.

Interestingly, the development of hospital at home and other forms of intermediate care in the UK is going largely in the opposite direction. Since publication of the *National service framework for older people* in 2001,¹⁰ the emphasis has been on providing a wide range of schemes in response to local need, in part to prevent “avoidable admissions” (ie, those whose needs are primarily non-medical).¹¹ Many schemes adopt low technology, and are nurse- or therapist-led, with admission rights extended to commu-

nity nursing and social work teams.¹² These developments have contributed to resistance, especially from physicians involved in the care of older people, who are concerned that inadequate assessment of geriatric clinical syndromes will disadvantage frail older people and reverse advances in clinical care made in the second half of the 20th century.¹³ These concerns are accompanied by fears held by general practitioners that they are neither equipped nor available to provide medical support to intermediate care. Although Richards et al point to the opportunities for involvement in home care schemes to increase the skills and experience of GPs,² it seems only a minority of GPs in the UK will use the service if they have to assume medical responsibility. This proportion is likely to decline as most urban practices opt out of providing out-of-hours care.¹⁴ A national evaluation of intermediate care has recently been completed, but results have yet to be published.

It seems likely that recent trial evidence will influence an updated Cochrane review, but problems appraising the evidence remain. Firstly, it may not be useful to combine data from intensive outreach interventions designed to substitute for inpatient hospital care (as seen in Australia and New Zealand) with more rehabilitative approaches designed to avoid unnecessary admissions and support discharge from inpatient hospital care. Furthermore, many of the advantages of hospital in the home, such as reducing risk of hospital-acquired infection and delirium and the social and psychological consequences of a hospital stay, occur only if admission is avoided, again suggesting that pooling data including supported discharge is not helpful. Finally, the Cochrane review will not include important evidence from large observational studies, which are more able than trials to detect uncommon complications and provide realistic estimates of cost.

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EDITORIALS

The articles by Richards et al and Ong et al add to the evidence for the effectiveness of a model of hospital in the home in which Australia and New Zealand are leading the world by providing services of sufficient scale to offer a real alternative to inpatient care. The evidence needed now goes beyond the remit of a Cochrane review, and should focus on issues of roll-out and quality control.

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