Feasibility of Hospital-at-Home for Older Patients With an Acute Medical Illness

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ABSTRACT

Out-of-hospital-treatment in the form of a hospital at home has been suggested as a potential alternative to hospital admission. The objectives of the study were to address the feasibility of a hospital at home supported by telemedicine for older patients requiring admission. Of 601 patients screened, seven were eligible and willing to participate in the intervention. Poor health status and skepticism towards the technology was the main reasons for ineligibility and declining to take part. Patients admitted to the scheme at home felt safe and were positive regarding several aspects of the scheme. Health care professionals found that the intervention gave an opportunity to create a patient-centred treatment. However, the intervention was not successfully integrated because of the few cases. The economic evaluation found the cost of home admission depended on the turnover of patients. Hospital at home was not feasible in this setup and do not justify proceeding to a randomised controlled trial.

KEYWORDS

Acute Hospitalisation, Health-Care Economic, Integrated Care, Older Patients, Organisational Changes, Qualitative Research

DOI: 10.4018/IJUDH.2018010101
INTRODUCTION

The older population is increasing with an expected increase in demand of hospital services (Rechel et al., 2013; Vilpert et al., 2013). At the same time, the number of hospital beds is being reduced (European-Commission, 2016). Furthermore, hospitalization of frail older people often leads to iatrogenic illness, delirium, and functional decline (Covinsky et al., 2003; Creditor, 1993; Inouye et al., 1999). Various solutions for these challenges have been suggested, such as shorter length of stay for in-patients and increased out-patient activity including management of acute illness outside the hospital (McKee, 2003).

One such scheme that has been suggested as feasible and potentially efficacious is out of hospital treatment in the form of a hospital at home started shortly after admission to the emergency department. Treating patients in their homes has been shown to shorten the length of stay, increase patient satisfaction, and decrease the risk of delirium and functional decline (Isaia et al., 2009; Leff et al., 2009; Leff et al., 2005). However, a recent Cochrane review of admission avoidance by hospital-at-home reported data from six randomised controlled trials enrolling older patients with medical illness and found no difference in mortality or readmissions (Shepperd et al., 2016). However patient satisfaction in hospital-at-home was higher and there was evidence that hospital-at-home decreased the risk of being transferred to residential care including nursing homes. The review concluded that hospital-at-home might provide an effective alternative to in-patient care, but the evidence is limited to a few heterogeneous trials with a small number of included patients. Therefore there is a need for more hospital-at-home trials (Shepperd et al., 2016).

Performing randomised controlled trials with older patients that can produce valid and reliable results is challenging. Recruitment of participants can be difficult due to reluctance found in both patients and staff, which results in a limited number of eligible and willing patients (Sibai, Carlisle, & Tornetta, 2012). In addition, hospital-at-home randomised controlled trials are impeded by the complexity of the required inter-sectoral collaboration and interdisciplinary involvement. A comprehensive setup is needed because treatment of older patients is often challenging and time-consuming due to multi-morbidity and atypical non-specific symptoms of acute illness (Conroy et al., 2016; Olde Rikkert, Rigaud, van Hoeyweghen, & de Graaf, 2003; Rutschmann et al., 2005).

The Medical Research Council in the United Kingdom, has published guidelines on developing and evaluating randomised controlled trials of complex interventions (Craig et al., 2013) recommending feasibility-test trials to identify problems and modifications before designing a larger trial. Feasibility studies are stand-alone studies, whose objectives are to assess the extent to which an intervention could be successful in producing a possible effect (Bowen et al., 2009; Eldridge et al., 2016).
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