Evaluation of a hospital at home scheme for the early discharge of patients with fractured neck of femur

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Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

Health technology
Early discharge to a hospital at home (HAH) scheme.

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis

Study population
Patients admitted to the acute hospital with fractured neck of femur. 86% female, mean age 76.4-77.6 years.

Setting
Community (primary care) and hospital. The economic study was carried out in Southern Derbyshire, UK

Dates to which data relate
Effectiveness and resource data related to 1990.1992 prices were used.

Source of effectiveness data
Single study

Link between effectiveness and cost data
Costs were based on the same patient sample as the effectiveness analysis. If was not clearly stated whether the costing was undertaken retrospectively or prospectively.

Study sample
In the first year of HAH there were 432 admissions for fractured neck of femur. 322 (74.5%) were not considered for HAH because they were medically unfit, had unsuitable accommodation, died or the reason was not recorded. Of the remaining 110 patients suitable for HAH, 76 people (69%) made up the study group (HAH), and 34 patients (31%) acted as controls in hospital. The latter were suitable for HAH but they were not admitted to HAH: the controls' GP, hospital consultant, District Nurse, family or the patients themselves had not consented to admission to HAH or the accommodation was assessed as unsuitable. No power calculations were given. Of 110 patients in the initial sample, 92 consented: 64 consented in the intervention group (16% refused) and 28 consented in the control group (18% refused).
Study design
Non-randomised trial with concurrent controls. Single hospital centre, many homes. There was a three month mortality and readmission rate follow up. Subject allocation method was non-random and based on clinical and sociological suitability for HAH. Loss to follow up was 5 patients (5/64 = 8%) in the study group and 2 (2/28 = 7%) patients in the control group for outcomes questionnaires.

Analysis of effectiveness
The analysis of treatment completers was performed. Primary clinical outcomes were patient satisfaction, general health status at discharge as measured by the Nottingham Health Profile and three-month mortality and readmission rates. Groups were not randomly assigned and were not comparable in terms of mean mental test score, which was significantly lower for the hospital control group. It is not clear if there was adjustment for confounding variables.

Effectiveness results
Patients in both groups were satisfied with the care they received. The general health status of the two groups at discharge was similar with the exception that HAH patients had better emotional health. The three month mortality rate was similar in both groups (5%). The readmission rate for HAH patients appeared higher than for hospital patients but this difference was not statistically significant (15.8% vs 8.8% Fisher's exact test p =0.187).

Clinical conclusions
HAH for the early discharge of fractured neck of femur patients was a feasible and acceptable form of care. Patients appeared to suffer no ill effects and may regain their 'emotional health' faster.

Measure of benefits used in the economic analysis
Since the clinical study showed no difference in clinical benefit between HAH and hospital patients, the economic analysis was based on difference in costs only.

Direct costs
Costs and quantities were reported separately. Only health service costs were considered. Resource data were derived from actual data (units of analysis). Costs were calculated based on prices charged by providers of the services, rather than actual costs.

Currency
UK pounds sterling

Sensitivity analysis
No sensitivity analysis was carried out.

Estimated benefits used in the economic analysis
Not applicable.

Cost results
HAH patients were discharged from hospital an average of 7 days earlier. The Community Health Services charged 400-450 per patient compared with acute hospital charges of 770 for seven days in a hospital orthopaedic bed.

Synthesis of costs and benefits
Authors' conclusions
To determine the cost-effectiveness of HAH for fractured neck of femur a detailed costing exercise should be undertaken and the issue of readmission rates clarified.

CRD Commentary
This was not a randomised trial and so the study was not properly controlled. This affects the validity of the clinical effectiveness results. Also admission rates to HAH were only 18% of all cases, which was only half that of the Peterborough HAH scheme. Both internal and external validity were questionable.

The costs were not real costs, but provider charges, which may not be appropriate for the problem considered. Estimation methods were not generalisable to the whole health service.

The issue of opportunity costs is important if hospital beds are freed by a hospital at home scheme. The author addressed this issue reporting that the scheme was funded with 200,000 of waiting list initiatives money for 100 HAH beds to release hospital beds for 166 extra operations. The author stated that 532 bed days were released in the year due to the intervention.

Implications of the study
HAH for fractured neck of femur is acceptable, but the issues of readmission rates and cost-effectiveness need further study.

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Trent Regional Health Authority, Southern Derbyshire Community Health Services and Southern Derbyshire Department of Public Health.

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Other publications of related interest


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