

D.2 Hospital at Home (Primary & Secondary Care)

Study

NIKOLAUS 1999²¹⁶

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Study type	RCT (Patient randomised; Parallel).
Number of participants	n=545.
Countries and setting	University Hospital of Heidelberg.
Duration of study	Follow up for 12 months.
Stratum	Early discharge.
Subgroup analysis within study	None.
Inclusion criteria	Elderly (>65 years) who lived at home before admission. Had multiple chronic conditions or functional deterioration after convalescence. At risk of nursing home placement.
Exclusion criteria	Terminally ill or severe dementia. Patients who lived too far away (>15km) for the home intervention team to make regular visits.
Recruitment/selection of patients	Patients over 65 years with acute disease are usually referred to the geriatric centre at the University Hospital of Heidelberg. They are either referred directly by their general practitioner or admitted from the emergency wards of the departments of internal medicine, neurology and surgery. Eligible patients gave informed consent and randomly assigned to (i) comprehensive geriatric assessment and additional in-hospital and post-discharge follow up treatment by an interdisciplinary home intervention team, (ii) comprehensive geriatric assessment with recommendations, followed by usual care at home or (iii) assessment of activities of daily living and cognition, followed by usual care in hospital and at home. The randomisation was carried out by means of sealed envelopes containing group assignments using a random number sequence. Baseline characteristics of the subjects were comparable. 30 subjects lost to follow up (and the baseline characteristics of these subjects were comparable to those of the whole study sample).
Age, gender and ethnicity	Age. Mean: 84.1 years. Gender. (% of F): 73.4%. Ethnicity: not stated.
Further population details	Not stated.
Extra comments	-

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Indirectness of population	No indirectness.
Interventions	<p>Intervention 1: Hospital at home-consisted of 3 nurses, a physiotherapist, an occupational therapist, a social worker and a secretary. The team worked closely with hospital staff and the primary care physician. While the patient was in hospital the team gave them additional treatment (such as additional training in washing, eating, dressing and/or walking). One home visit was carried out during the hospital stay to evaluate the patient's home (for example, for safety hazards) and to prescribe technical aids, when necessary. After discharge, the team provided treatment (such as physiotherapy/occupational therapy).</p> <p>The mean treatment period was 7.6 days (range 1 – 41 days). At least 1 home visit was carried out within 3 days of discharge. Three months after discharge, a follow up visit was made to check whether recommendations were being implemented, home care continued and technical aids used, and to identify any new problem.</p> <p>Intervention 2: Hospital based care/services-assessment of activities of daily living and cognition, followed by usual care in hospital and at home.</p>
Funding	Sozialministerium Baden Wurttemberg (Government Funding).
<p>RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: HOSPITAL AT HOME (PRIMARY & SECONDARY) Versus USUAL CARE.</p> <p>Protocol outcome 1: Length of stay. - Actual outcome: Length of hospital stay, days; Group 1: Mean (range): 33.5 (30.4-36.5); Group 2: Mean (range): 42.7 (39.8-45.6); Risk of bias: All domain - high, Selection - high, Blinding - low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness</p> <p>Protocol outcome 2: Quality of Life. - Actual outcome: Activities of daily living score; Group 1: Mean (range): 81.2 (77.8-84.6); Group 2: Mean (range): 80.9 (78.1-83.8); Risk of bias: All domain - high, Selection - high, Blinding - low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness</p> <p>Protocol outcome 3: Patient Satisfaction. - Actual outcome: Self-perceived score/life satisfaction score; Group 1: Self-perceived health score: Mean (range): 3.7 (3.4-4.0), Life satisfaction score: Mean (range): 3.9 (3.6-4.2); Group 2: Self-perceived health score: Mean (range): 3.0 (2.8-3.2), Life satisfaction score: Mean (range): 3.2 (2.9-3.4); Risk of bias: All domain - high, Selection - high, Blinding - high, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness</p> <p>Protocol outcome 4: Readmission. - Actual outcome: Rehospitalisation; Group 1: 43/140 (30.7%); Group 2: 45/141 (31.9%); Risk of bias: All domain - high, Selection - high, Blinding - low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness</p>	
Protocol outcomes not reported by the study	Mortality, avoidable adverse events, carer satisfaction, number of presentations to ED, number of avoidable admissions, reduced GP presentations.