



Title	A Randomized Controlled Comparison of Alternative Strategies in Stroke Care
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Aim

To compare outcomes of stroke patients managed in different settings; to derive prognostic variables to identify patients suitable for management at home and in hospital; to describe organizational aspects of stroke care strategies; to evaluate the acceptability of strategies to patients and professionals; and to perform an economic evaluation.

Conclusions and results

Of the 457 patients randomized, 152 patients were allocated to the stroke unit, 152 patients to stroke team, and 153 patients to domiciliary stroke care (average age 76 years, 48% women). The groups were well matched for baseline characteristics, stroke type and severity, level of impairment, and initial disability. Fifty-one (34%) patients in the domiciliary group were admitted to hospital after randomization. Mortality and institutionalization at 1 year were lower on the stroke unit compared with stroke team or domiciliary care. Significantly fewer patients on the stroke unit died compared with those managed by the stroke team. The proportion of patients alive without severe disability at 1 year was also significantly higher on the stroke unit compared with stroke team or domiciliary care. These differences were present at 3 and 6 months after stroke. Survivors managed on the stroke unit showed greater improvement on basic activities of daily living compared with other strategies. Care strategy did not influence achievement of higher levels of function. Quality of life at 3 months was significantly better in stroke unit and domiciliary care patients. Dissatisfaction with care was greater on general wards compared with stroke unit or domiciliary care. Poor outcome with domiciliary care and on general wards was associated with Barthel Index <5, incontinence and, on general wards, age over 75 years. Total costs of stroke per patient over the 12-month period were GBP 11 450 for stroke unit, GBP 9527 for stroke team, and GBP 6840 for home care. However, the mean costs per day alive for stroke unit patients were significantly less than those for the specialist stroke team patients, but

no different from domiciliary care patients. Costs for the domiciliary group were significantly less than for those managed by the specialist stroke team on general wards.

Recommendations

Stroke units were found to be more effective than a specialist stroke team or specialist domiciliary care in reducing mortality, institutionalization, and dependence after stroke. This study does not support specialist domiciliary services for acute stroke nor management of stroke patients on general medical wards, even with specialist team input. The stroke unit is the more cost-effective intervention.

Methods

A prospective, pragmatic RCT was undertaken in patients recruited from a community-based stroke register. The study was conducted in a suburban district in south-east England, where a co-terminus hospital trust, a community health trust, a family health services authority, and social services provided for health and social needs. The stroke unit provided 24-hour care from a specialist multidisciplinary team based on guidelines for acute care, prevention of complications, rehabilitation, and secondary prevention. The stroke team involved management on general wards with specialist team support. The team undertook stroke assessments and advised ward-based nursing and therapy staff on acute care, secondary prevention, and rehabilitation aspects. Domiciliary care managed patients at home (maximum of 3 months) under the supervision of a GP and stroke specialist with support from specialist team and community services.

Further research/reviews required

Research is needed on processes contributing to reducing mortality on stroke units, to determine the generalizability of these results, and to determine factors that will influence the implementation of findings from this study.