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Organized Inpatient (Stroke Unit) Care for Stroke

Lindsay Govan, BSc; Christopher J. Weir, PhD; Peter Langhorne, PhD;
for the Stroke Unit Trialists' Collaboration

Traditionally, the care of patients with stroke has been provided within general (internal) medicine or general neurology wards where they would be managed by nonspecialist staff alongside a range of other patient groups. Organized inpatient (stroke unit) care is a term used to describe the focusing of care for patients with stroke in the hospital under a multidisciplinary team who specialize in stroke management.

Objectives

This updated Cochrane Review tested whether improving the organization of inpatient stroke care can bring about improvements in survival and recovery of patients.

Search Strategy

We searched the Cochrane Stroke Group Trials Register (to April 2006). To identify additional trials, we scanned reference lists of relevant articles, contacted colleagues and researchers, and publicized preliminary findings at stroke conferences. Contact trialists of all eligible studies were then approached and asked to provide details of their intervention and control services.

Selection Criteria

We included all prospective trials that used strictly random or quasirandom allocation of patients with stroke to an organized system of inpatient (stroke unit) care or an alternative form of inpatient care. This was usually the contemporary conventional care in general wards but could include some other model of organized inpatient care.

Outcomes

Primary analysis examined death, dependency (requiring assistance for transfers, mobility, dressing, feeding, or toileting) and the requirement for institutional care (residential home, nursing home, or hospital) at the end of scheduled follow-up (median 1 year poststroke). Secondary outcomes included patient quality of life; patient and caregiver satisfaction; and duration of stay in the hospital, institution, or both.

Main Results

We included 31 trials (6936 participants), which compared stroke unit care with an alternative service; more organized care was consistently associated with improved outcome. Of these trials, 26 (5592 participants) compared stroke unit care with general wards. Stroke unit care showed reductions in the odds of death recorded at final (median 1 year) follow-up (OR: 0.86; 95% CI: 0.76 to 0.98; $P=0.02$), the odds of death or institutionalized care (OR: 0.82; 95% CI: 0.73 to 0.92; $P=0.0006$), and death or dependency (OR: 0.82; 95% CI: 0.73 to 0.92; $P=0.001$; see the Figure). Sensitivity analysis indicated that the observed benefits remained when analysis was restricted to trials that used formal randomization procedures with blinded outcome assessment. Outcomes were independent of patient age, sex, or stroke severity, but appeared to be better in stroke units based in a discrete ward. There was no indication that organized stroke unit care resulted in longer hospital stay.

Reviewer's Conclusion

Patients with acute stroke are more likely to survive, return home, and regain independence if they receive organized inpatient (stroke unit) care. This is typically provided by a coordinated multidisciplinary team operating within a discrete ward, which can offer a substantial period of rehabilitation if required. There are no firm grounds for restricting access according to patient age, sex, or stroke severity. The absolute benefits of organized inpatient (stroke unit) care appear to be sufficiently large to justify service reorganization.

Future trials should focus on the potentially important components of stroke unit care and direct comparisons of different models of organized stroke unit care.

The full text of this review is available in the Cochrane Library. The full article should be cited as: Organized inpatient (stroke unit) care for stroke. In: *Cochrane Database Syst Rev.* 2007;4.

KEY WORDS: acute stroke ■ clinical trials ■ organized stroke care ■ stroke units ■ meta-analysis

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From the Robertson Centre for Biostatistics (L.G., C.J.W.), University of Glasgow, UK; and the Academic Section of Geriatric Medicine (P.L.), Glasgow Royal Infirmary, UK.

Correspondence to Peter Langhorne, PhD, Academic Section of Geriatric Medicine, 3rd Floor, University Block, Glasgow Royal Infirmary, Glasgow, UK G31 2ER. E-mail pl11m@clinmed.gla.ac.uk

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Review: Organised inpatient (stroke unit) care for stroke
 Comparison: 02 Organised stroke unit care versus general medical wards
 Outcome: 03 Death or dependency by the end of scheduled follow up

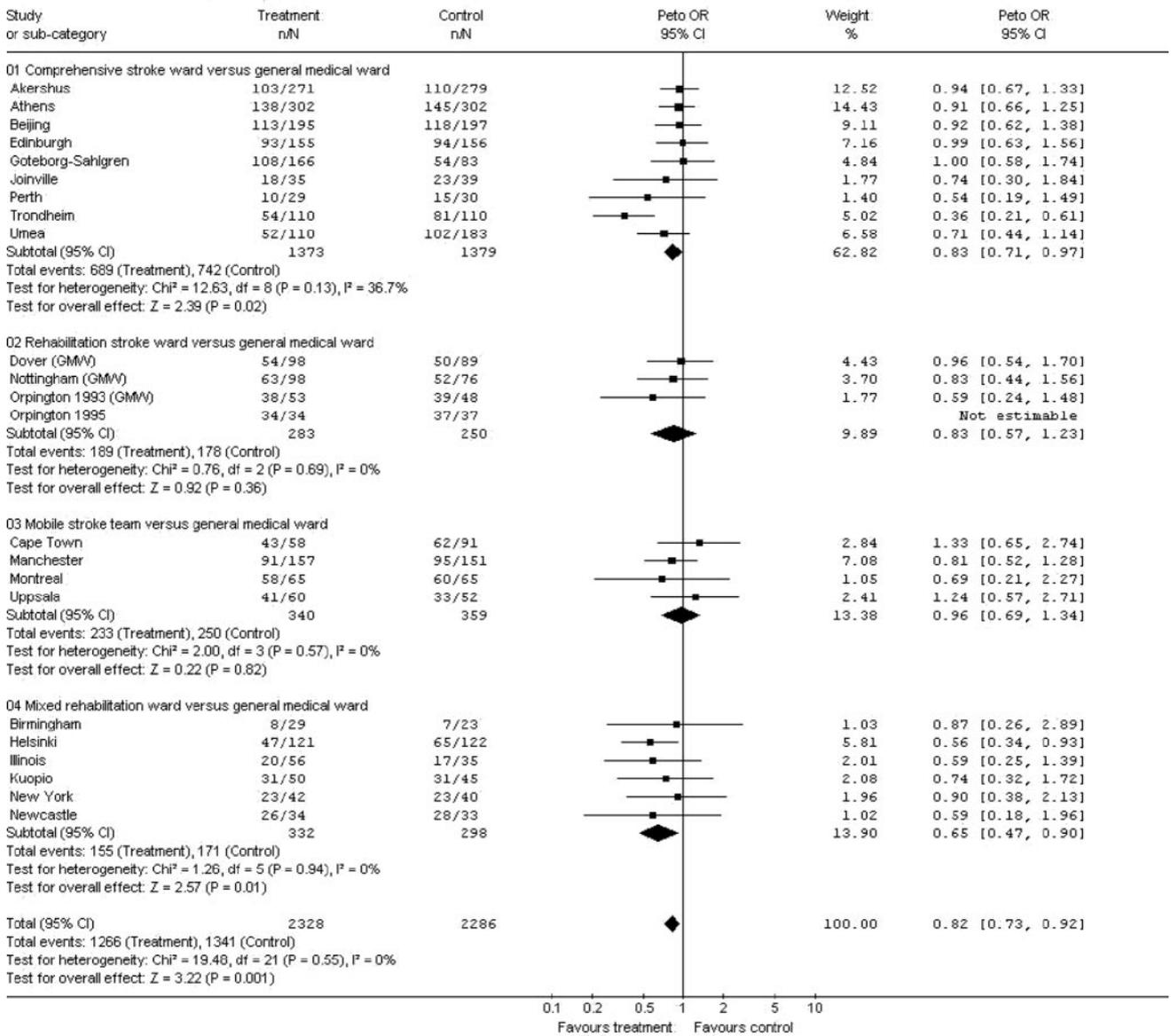


Figure. The effect of organized stroke unit care versus care on general medical ward stratified by the type of stroke unit. Results are expressed as the OR and 95% CIs for death or dependency (recorded a median of 1 year poststroke).