Review: providing information improves subjective outcomes but may not improve clinical outcomes in patients with stroke or their carers

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**QUESTION**
Can interventions that provide information improve outcomes for patients with stroke or their carers?

**REVIEW SCOPE**
Studies selected compared information interventions intended to improve patient or carer outcomes with standard care in patients with stroke or transient ischemic attack (TIA) and their carers. Trials that compared information and another treatment with the other treatment alone were also included. Trials were excluded if information was only 1 component of a more complex rehabilitation intervention. Outcomes included mood (eg, depression or anxiety), activities of daily living, quality of life, service use, and death.

**REVIEW METHODS**
Cochrane Stroke Group Trials Register (May 2007); Medline, CINAHL, EMBASE/Excerpta Medica, PsycINFO, Science Citation Index and Social Science Citation Index, Assia, Index to UK theses, Dissertation Abstracts, and J Adv Nurs (all to Mar 2007); Cochrane Central Register of Controlled Trials (Issue 1, 2007); research registers and ongoing trials (Mar 2007); and reference lists were searched for randomised controlled trials (RCTs). Authors were contacted. 17 trials (1773 patients, 1058 carers) met the selection criteria. 8 interventions were considered passive (information provided on a single occasion with no systematic follow-up) and 9 active (provided information with follow-up for clarification and consolidation or reinforcement). 9 trials reported adequate allocation concealment, 11 had blinded outcome assessors, 8 reported sample size calculations, and 11 used intention-to-treat analysis; 4 had <80% follow-up.

**MAIN RESULTS**
Meta-analysis showed that groups did not differ for patients with anxiety or depression, patient mortality, or carer stress (table). Information interventions reduced patient depression scores (7 trials, n = 720, Hospital Anxiety and Depression Scale weighted mean difference −0.92, 95% CI −0.98 to −0.86). In individual RCTs, groups did not differ for patient activities of daily living (6 RCTs) or service use (5 RCTs).

**CONCLUSION**
Providing information to patients with stroke and their carers improves depression scores in patients but may not reduce patient mortality or anxiety, or carer stress.

**ABSTRACTED FROM**

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► Clinical impact ratings: General/internal medicine 6/7; Home nursing 5/7; Neurology 5/7; Rehabilitation 5/7

| Information provision v control for patients with stroke or their carers* |
|-----------------|-----------------|-----------------|-----------------|
| Outcomes at study end | Number of trials (n) | Weighted event rates | RRR/RRI (95% CI) | NNT/NNH (CI) |
| Patient anxiety | 6 (681) | 17% v 18% | RRR 7% (−23 to 30) | Not significant |
| Patient depression | 8 (956) | 17% v 18% | RRR 6% (−18 to 24) | Not significant |
| Patient mortality | 8 (1350) | 7.3% v 9.3% | RRR 16% (−18 to 40) | Not significant |
| Carer stress | 4 (489) | 21% v 20% | RRI 6% (−18 to 37) | Not significant |

*Abbreviations defined in glossary. RRR, RRI, NNT, NNH, and CI calculated from data in article using a fixed-effects model.

Smith *et al* conducted a comprehensive review to determine whether information-provision strategies improve outcomes in patients with TIA or stroke and their carers. Although methodologically sound in its approach, firm conclusions for clinical practice are difficult to draw from these results. Studies reviewed assessed various interventions, applied at various times before and after patient discharge. Information interventions designed to improve patient or carer knowledge about illness physiology and available services were evaluated using various instruments of variable quality to measure their effects on several social-psychological and mortality outcomes. However, one approach, active provision of information, is important given the central role of information sharing and/or patient and carer health teaching to stroke care. Post-hoc subgroup analysis found that active provision of information improved patient and carer outcomes compared with passive approaches. Again, the variety of interventions used to actively provide information makes it difficult to draw firm conclusions. Some studies related to stroke and other conditions have shown that when information provision includes individualised assessment of learning readiness, supportive follow-up care, and counselling, benefits to patients and carers include improved ability to learn new strategies and develop new attitudes, improved family function, and medication adherence. Smith *et al* did not consider these specific approaches in their review.

In summary, the results of the review by Smith *et al* support the use of active approaches to information-sharing in patients with stroke and their carers.

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