Efficacy of information interventions in reducing transfer anxiety from a critical care setting to a general ward: a systematic review and meta-analysis

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CRD summary
The authors concluded that, compared with standard care, providing information to understand the ward environment could significantly reduce patients’ and family members’ anxiety about transfer from critical care. Potential weaknesses in the search and review process, and the uncertain quality of the five included trials, mean that the reliability of the authors’ conclusion is uncertain.

Authors’ objectives
To evaluate the effects of information interventions in reducing anxiety, in patients and family members, on transfer from a critical care setting to a general ward.

Searching
MEDLINE, EMBASE, CINAHL, Cochrane Database of Systematic Reviews, and the Internet, using Google Scholar, were searched, for English-language studies, from January 1990 to January 2011. Search terms were reported. The bibliographies of retrieved articles were scanned for further studies. There was no specific search for unpublished studies.

Study selection
Eligible for inclusion were randomised controlled trials (RCTs), quasi-RCTs, or controlled trials with systematic methods of allocation (for example, block allocation), of interventions to reduce patient and family anxiety, on transfer from intensive care to a general ward. Trials of patients who were terminally ill were excluded. The anxiety level had to be measured using the State-Trait Anxiety Inventory (STAI).

The included trials were conducted in tertiary or university hospitals, in the USA, Australia, or Turkey. They included medical, surgical, paediatric, and neuroscience intensive care units and a critical care unit. The mean hospital stay ranged from one to eight days. Where reported, the mean age of patients ranged from three to 60 years, and the mean age of family members ranged from 29 to 50 years. Where reported, most of the family members were women, and over half the patients were men. The interventions were a liaison nurse, individualised education, an individualised transfer method, a transfer letter, and a care conference (the last three interventions were for family members only).

The authors did not state how many reviewers were involved in the selection of studies.

Assessment of study quality
The authors referred to the inclusion of only high-quality RCTs, and reported the method of participant allocation, but there was no formal assessment of trial quality.

Data extraction
Means and standard deviations were extracted. Standard differences were converted to odds ratios, with 95% confidence intervals. The authors did not state how many reviewers extracted the data.

Methods of synthesis
Odds ratios were pooled in meta-analyses, using fixed-effect and random-effects models. Statistical heterogeneity was assessed using $\chi^2$ and $I^2$. An $I^2$ of more than 50% or a significant probability represented substantial heterogeneity. A probability of less than 0.5 was considered statistically significant.

Results of the review
Five RCTs, with 629 family members or patients (range 22 to 215), were included in the review. The largest trial (215 participants) was excluded from the meta-analysis, as it only reported the median and interquartile range.
Compared with standard care, family member transfer anxiety was significantly reduced with the intervention (OR 0.42, 95% CI 0.28 to 0.63; four RCTs; $I^2=87.3\%$).

Family members' transfer anxiety was significantly reduced following the pre-transfer care conference (one RCT; 22 family members); and the transfer letter (one RCT; 50 family members). A reduction was reported with the individualised transfer method (one trial; 162 family members), but this was not statistically significant.

Patient transfer anxiety was significantly reduced, and family member transfer anxiety remained stable, with the individualised education intervention (one RCT; 90 family members and 90 patients). Neither patient nor family member transfer anxiety was reduced with a liaison nurse (one RCT; 100 family members and 115 patients).

**Authors’ conclusions**

Compared with standard care, providing information to understand the ward environment could significantly reduce patients' and family members' anxiety about transfer from the critical care setting.

**CRD commentary**

The review question was clear, and this was supported by reproducible inclusion criteria. Relevant data sources were searched. The potential for bias from missed studies could not be ruled out, due to the restriction to articles in English and no search for unpublished material, as acknowledged by the authors.

The number of reviewers involved in each stage of the review process was unclear and there was no reported assessment of the quality of the included trials. These are substantial threats to the reliability of the findings. The trial details were provided, but there were only five trials and statistical heterogeneity was reported. This statistical variation, with substantial clinical differences, suggests that statistical pooling may not have been appropriate.

Given several limitations in the review, outlined above, the reliability of the authors' conclusion is uncertain.

**Implications of the review for practice and research**

**Practice:** The authors recommended that all intensive care departments should provide appropriate written and oral information, to patients and their family members, before transfer to a general ward.

**Research:** The authors stated that further RCTs should explore the impact of the time spent in the intensive care unit, the setting (tertiary, community, or academic), the relationship of the family member to the patient, and whether it was the first admission to intensive care.

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