Outcomes of elderly survivors of intensive care: a review of the literature

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CRD summary
The authors concluded that limited evidence and differences between studies prevented them from drawing any conclusions; further research was required. This was a well-conducted review and the authors’ conclusions, including the need for further research, are likely to be reliable.

Authors' objectives
To assess the health-related quality of life (HRQOL) and functional status of elderly patients discharged from critical care.

Searching
MEDLINE, EMBASE and CINAHL were searched for English language articles from 1990 to December 2003; the search terms were reported. In addition, the reference lists of the retrieved studies and reviews were screened and the Science Citation Index was searched.

Study selection
Study designs of evaluations included in the review
Evaluative studies were eligible for inclusion. The included studies were of prospective, retrospective, cross-sectional, mixed prospective and retrospective, or unknown design. The duration of follow-up post ICU ranged from one to 36 months.

Specific interventions included in the review
Studies of adult intensive care unit (ICU) admission (including cardiac ICU) were eligible for inclusion. The studies were generally set in multidisciplinary or medical/surgical ICUs. Where reported, the duration of ICU stay ranged from 3.25 to 52.5 days; one study only included patients with a length of stay greater than 30 days.

Participants included in the review
Studies that included a cohort of elderly patients were eligible for inclusion. Studies of neonatal or paediatric patients and studies of post-transplant and cancer patients were excluded. In the included studies, the definition of elderly varied from 60 years or older to 85 years or older. Where reported, the percentage of men ranged from 41 to 96% (based on 12 studies) and ICU mortality ranged from 3 to 64% (based on 14 studies). Most studies that reported baseline illness severity measured this using the APACHE II score (scores ranged from 7.77 to 21 in 12 studies).

Outcomes assessed in the review
Studies that assessed HRQOL and/or functional status were eligible for inclusion. The included studies used different methods to assess outcomes, including personal or telephone interview, mailed/self-administered surveys, nursing home records and staff interviews. The studies used sixteen HRQOL and functional status instruments. The Activities of Daily Living tool (used in 9 studies) was the most commonly used functional assessment instrument and the Perceived Quality of Life (PQOL, used in five studies) was the most commonly used HRQOL assessment instrument.

How were decisions on the relevance of primary studies made?
Two reviewers independently selected the studies and resolved any disagreements by consensus.

Assessment of study quality
Two reviewers independently assessed validity and resolved any disagreements by consensus. The studies were assessed for study design (including statement of aims, definition of the term 'elderly', description of inclusion/exclusion criteria, sampling, assessment of baseline HRQOL and/or functional status, and follow-up period), and instruments and methods used to assess HRQOL or functional status (including validity of instrument, reporting of rationale for use, psychometric properties, domains covered and person completing survey).
Data extraction
Two reviewers independently extracted the data on the main findings from each study and resolved any disagreements by consensus.

Methods of synthesis
How were the studies combined?
The studies were grouped according to the main finding (improved or unchanged HRQOL and/or functional status versus worsened HRQOL and/or functional status) and combined in a narrative.

How were differences between studies investigated?
Differences between the studies were discussed with respect to aspects of study quality, including the validity of the instruments used to measure the outcomes.

Results of the review
Sixteen studies (3,247 patients) were included. The text reports the inclusion of nine prospective studies, three cross-sectional studies, two retrospective studies, one study of mixed prospective and retrospective design and one study of unknown design.

Study quality.
Fourteen studies used a consecutive sample, one used a random sample and one a convenience sample. Ten studies used proxy respondents to complete assessments. Six studies provided an adequate rationale supporting the use of a specific HRQOL or functional status instrument. Seven studies did not discuss the psychometric properties of the chosen instrument. None of the studies reported age-standardised HRQOL or functional status scores.

Thirteen studies reported improved or unchanged HRQOL and/or functional status.

Three studies reported worsened HRQOL and/or functional status.

Authors' conclusions
Research was limited and this, and the differences between the studies, prevented the authors from drawing any conclusions. Further research was required.

CRD commentary
The review addressed a clear question that was defined in terms of the participants, intervention and outcomes; the inclusion criteria for study design were broad but this appeared appropriate given the nature of the review. Several relevant sources were searched but the lack of attempts to minimise either publication or language bias might have resulted in the omission of some relevant studies; the authors acknowledged this possibility.

The quality of the included studies was assessed and the results of the assessment were discussed. Adequate information was provided about the included studies. Two reviewers independently selected the studies, assessed validity and extracted the data, which reduced the potential for reviewer bias and errors. In view of the diversity of the studies, a narrative synthesis that highlighted the methodological limitations of the evidence was appropriate.

This was a well-conducted review and the authors' conclusions are likely to be reliable.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that there was a need for well-designed, prospective longitudinal studies using validated, reliable and responsive instruments to assess the outcomes of elderly patients after ICU discharge.

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