Outcome measures for adult critical care: a systematic review


Record Status
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Citation

Authors' objectives
1. To identify generic and disease specific measures of impairment, functional status and health-related quality of life that have been used in adult critical care (intensive and high-dependency care) survivors.

2. To review the validity, reliability and responsiveness of the measures in adult critical care survivors.

3. To consider the implications for future policy and to make recommendations for further methodological research.

4. To review what is currently known of the outcome of adult critical care.

Authors' conclusions
The poor current state of knowledge of appropriate outcome measures for adult critical care survivors means that it is impossible to make clear recommendations as to which particular measures should be used. This partly reflects the large number of measures used in critical care research in the past. The evidence indicates that if the research community could agree on a limited list of measures from which to select for any given project, this would at least enable a considerable body of experience and knowledge to be built up around a few measures. In addition, it would allow investigators to make comparisons between studies and facilitate overviews based on secondary research of published results. To aid this, future researchers could confine their selection to the measures below until such time as clearer scientific evidence can distinguish between their relative merits.

Measures of impairment appear to have limited value except, perhaps, in patients with respiratory disease. Their use in general adult critical care survivors is not recommended.

Two generic measures of physical functional status appear the most relevant: Katz's ADL and the Karnofsky Index. Two disease-specific measures might also be considered in relevant subgroups: the NYHA functional class in cardiac patients and the ATS respiratory disease questionnaire in respiratory patients.

Mental functional status is probably best assessed using Profile of Moods States or the Hospital Anxiety and Depression scales, as these cover anxiety in addition to depressive symptoms. In patients who are recovering from trauma, the Impact of Events Scale might also be considered.

Neuropsychological function needs to be considered in post head-injury patients. There are no clear contenders but, on balance, the Trailmaking Tests and the WCST might be investigated initially.

Measures of recovery offer few options. The Glasgow Outcome Score is the only multi-item scale available. In addition, standardisation of two single-item measures return to work and residency or return to own home would help to establish their usefulness.

Health-related quality of life offers a wider range of possibilities. The three principal contenders (i.e. those most frequently used in critical care research) are the SIP/FLP, PQOL and NHP. It is suggested that the SF-36 is added to these, as it is being used increasingly often and widely in healthcare research and its measurement properties in other...
areas have been demonstrated.

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