

## Appendix 1: Methods for search strategy (as supplied by the authors)

Two reviewers (J.M.H-L and K.M.S.) independently reviewed and selected relevant publications that met the inclusion criteria from the search results. Minimum inclusion criteria were randomized controlled trials targeting prevention or management of delirium among hospitalized adults primarily 65 years of age or older. Systematic reviews of randomized controlled trials were also reviewed, but only data from original trials are presented in this article. In the initial screen of titles and abstracts, if either reviewer identified an article as potentially meeting the inclusion criteria, the full-text article was retrieved for review. During the review of full-text articles, differences in assessment by the reviewers were resolved through discussion. There was excellent agreement between reviewers for review of full-text articles (kappa 0.86; 95%CI 0.71–1.0). The investigators also assessed study quality, but did not exclude studies based on this assessment. A specific validated quality assessment tool was not used; rather, key components of study quality were assessed and reported, such as method of randomization, allocation concealment, blinding, withdrawal rates and intention to treat analysis. Information about delirium definition used, study population, intervention and control, and outcomes was also extracted. Outcomes of interest included delirium rates, morbidity, length of hospital stay and mortality.

Relative risks and risk differences were calculated for binary outcomes and weighted mean differences were calculated for continuous outcomes. Tests of heterogeneity for each effect were also determined. A random effects model has been assumed for all analyses (DerSimonian and Laird) using the inverse variance method for pooling and weighting the data. The number needed to treat was calculated by inverting the absolute risk reduction (i.e.  $NNT = 1/ARR$ ). Statistical analysis was conducted using *R: A language and environment for statistical computing* (version 2.5.0) and the *meta contributed package* (version 0.8-2). *R* is an open-source dialect of the *S* language (*S* was developed by AT&T) that is maintained by a core team (<http://www.r-project.org>).