Supplementary Data

Appendix 1

Quality Criteria
We only included studies if they met certain quality criteria adapted from Evidence-Based Mental Health ‘Guidelines for evaluating prevalence studies’[179] and the American Medical Association ‘Users Guide to Evidence-based Medicine’[180, 181]:

For occurrence studies: sample representative of the target population, reliable and valid measurement tools for delirium and appropriate statistical analyses.

For prognosis studies: appropriate sample of the target population (with at least 20 subjects), blind and objective assessments, consideration of appropriate confounding factors and use of appropriate statistical analyses (e.g. multivariate or survival analysis). We calculated a quality score for outcome studies as follows:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Quality- low/ moderate/ high (1-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling bias- number in cohort</td>
<td></td>
</tr>
<tr>
<td>Selection bias- exclusions</td>
<td></td>
</tr>
<tr>
<td>Selection bias- delirium diagnosis</td>
<td></td>
</tr>
<tr>
<td>Inception cohorts- similar at baseline</td>
<td></td>
</tr>
<tr>
<td>Attrition bias</td>
<td></td>
</tr>
<tr>
<td>Measurement quality- outcomes preset, objective and blind</td>
<td></td>
</tr>
<tr>
<td>Appropriate statistical analysis of outcomes</td>
<td></td>
</tr>
</tbody>
</table>

Search strategy for identification of studies
We searched the following electronic medical databases from 1980 up to Week 1 July 2005: Medline(R), EMBASE, PsycINFO, CINAHL, Cochrane Database of Systematic Reviews (CDSR), The ACP Journal Club, and Cochrane Controlled Trials Register (CCTR). We used an extensive search strategy which incorporated both commonly used and less frequently used terms for delirium. We also examined reference lists of retrieved articles and bibliographies of relevant chapters in major texts and review articles. This was supplemented by hand searching of the Consultation-Liaison Literature Database (2003 Update), relevant journals and conference
proceedings, and contacting colleagues in the field. Titles and abstracts were screened by a single reviewer and clearly ineligible studies were discarded. A second reviewer re-examined a sample of 10% of excluded studies to confirm ineligibility. Full text articles were then obtained to determine eligibility for inclusion.
## Appendix 2

### Table 5 Mortality

<table>
<thead>
<tr>
<th>Index Study</th>
<th>No of Cases</th>
<th>Cases</th>
<th>Controls</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Death at Discharge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Villapando-Berumen J 2003</td>
<td>80</td>
<td>6.1%</td>
<td>2.3%</td>
<td>All incident cases</td>
</tr>
<tr>
<td>Francis J 1990</td>
<td>50</td>
<td>8%</td>
<td>1%</td>
<td>Difference independently NS; large number of exclusions</td>
</tr>
<tr>
<td>Inouye S 1998</td>
<td>33</td>
<td>9%</td>
<td>3%</td>
<td>Difference NS after adjustment, but small number of outcome events, insufficient power to detect difference</td>
</tr>
<tr>
<td>Lundstrom M 2005</td>
<td>62</td>
<td>14.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rockwood K 1989</td>
<td>20</td>
<td>15%</td>
<td>1.3%</td>
<td>Small number of cases and outcome events</td>
</tr>
<tr>
<td>O'Keefe ST 1997</td>
<td>94</td>
<td>16%</td>
<td>5%</td>
<td>Difference NS after adjustment</td>
</tr>
<tr>
<td>Rockwood K 1993</td>
<td>48</td>
<td>19%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>McCusker J 2001</td>
<td>220</td>
<td>19%</td>
<td></td>
<td>Independent increase in mortality</td>
</tr>
<tr>
<td>Gaudet M 1993</td>
<td>52</td>
<td>23%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zanocchi M 1998</td>
<td>130</td>
<td>25%</td>
<td>10%</td>
<td>Significant difference but not adjusted for potential confounders</td>
</tr>
<tr>
<td>Kolbeinsson H 1993</td>
<td>37</td>
<td>32%</td>
<td></td>
<td>Significantly increased compared with dementia</td>
</tr>
<tr>
<td>Jitapunkul S 1992</td>
<td>40</td>
<td>35%</td>
<td>16%</td>
<td>Significant difference but not adjusted for potential confounders</td>
</tr>
<tr>
<td>Cole MG 1994</td>
<td>46</td>
<td>37%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ramsay R 1991</td>
<td>22</td>
<td>62%</td>
<td>14%</td>
<td>Delirium had independent effect on mortality, adjusting for potential confounders; small number of cases</td>
</tr>
<tr>
<td>Thomas R 1988</td>
<td>20</td>
<td>65%</td>
<td>4.4%</td>
<td>Significant difference but not adjusted for potential confounders; small number of cases</td>
</tr>
<tr>
<td><strong>Death at 6 months</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Francis J 1990</td>
<td>50</td>
<td>14.3%</td>
<td>10%</td>
<td>Difference NS adjusting for potential confounders</td>
</tr>
<tr>
<td>O'Keefe ST 1997</td>
<td>94</td>
<td>31%</td>
<td>15%</td>
<td>Difference NS adjusting for potential confounders</td>
</tr>
<tr>
<td><strong>Death at 12 months</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>McCusker J 2001</td>
<td>220</td>
<td>42%</td>
<td>14%</td>
<td>Mortality 63%; twofold increase in mortality adjusting for confounders</td>
</tr>
<tr>
<td>Rahnoken T 2000</td>
<td>51</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ramsay R 1991</td>
<td>22</td>
<td>77%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Death at 24 months</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Francis J 1990</td>
<td>50</td>
<td>39%</td>
<td>23%</td>
<td>Delirium had no independent effect on mortality</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rockwood K 1999</td>
<td>38</td>
<td>21%</td>
<td>57%</td>
<td>Survival at 3 yrs; adjusted Hazard Ratio for death =1.71</td>
</tr>
<tr>
<td>Villapando-Berumen J 2003</td>
<td>80</td>
<td>55%</td>
<td>70%</td>
<td>Survival at 5 yrs</td>
</tr>
</tbody>
</table>
Appendix 3

References


