Review: Early supported discharge reduces death or dependence after stroke


Clinical impact ratings: Hospitalists ★★★★★☆ Geriatrics ★★★★★☆ Neurology ★★★★★☆ Phys Med & Rehab ★★★★★☆

QUESTION
In patients hospitalized with stroke, does an early supported discharge (ESD) service with rehabilitation at home provide better outcomes than conventional in-hospital care?

METHODS
Data sources: The Cochrane Specialized Register of Controlled Trials (to August 2004) was searched, and trialists were asked to describe their intervention and control services and to provide individual patient data.

Study selection and assessment: Randomized controlled trials (RCTs) that compared an ESD intervention with conventional care in hospitalized patients with stroke. The aim of ESD was to accelerate discharge from hospital and provide rehabilitation and assistance in a community setting. A quality assessment of the individual trials was based on allocation concealment and blinding of outcome assessors.

Outcomes: A composite endpoint of death or dependence (Barthel index < 19/20 or Rankin score > 2). Secondary outcomes were death; death or need for long-term institutional care (Table). Groups did not differ for ADL, subjective health status, or mood scores. Patients who received ESD were more likely to report satisfaction with outpatient services (odds ratio 1.6, 95% CI 1.1 to 2.4) (5 RCTs). Caregivers’ outcomes did not differ between groups. The length of hospital stay was 7.7 days (CI 4.2 to 10.7) shorter in the ESD group (9 RCTs). Hospital readmission rates were similar between groups (27% vs 25%) (5 RCTs). Significant subgroup interaction existed with the presence or absence of coordinated, multidisciplinary ESD teams. ESD was more effective in patients with moderate than with severe stroke.

CONCLUSION
In patients hospitalized with stroke, an early supported discharge service with rehabilitation at home reduces death and disability more than conventional in-hospital care.

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For correspondence: Professor P. Langhorne, Royal Infirmary, Glasgow, Scotland, UK. E-mail P.Langhorne@clinmed.gla.ac.uk.

Early supported discharge (ESD) vs conventional in-hospital care for stroke at median 6 months*

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Number of trials (n)</th>
<th>ESD</th>
<th>Conventional care</th>
<th>RRR (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death or dependence†</td>
<td>11 (1597)</td>
<td>45%</td>
<td>50%</td>
<td>11% (1.3 to 20)</td>
<td>19 (10 to 157)</td>
</tr>
<tr>
<td>Death‡</td>
<td>11 (1597)</td>
<td>8.8%</td>
<td>9.7%</td>
<td>9.1% (--23 to 33)</td>
<td>Not significant</td>
</tr>
<tr>
<td>Death or long-term institutional care‡</td>
<td>9 (1398)</td>
<td>18%</td>
<td>23%</td>
<td>21% (2.7 to 36)</td>
<td>21 (12 to 175)</td>
</tr>
</tbody>
</table>

*Abbreviations defined in Glossary.
†RRR, NNT, and CI calculated from data in article.
‡Numbers calculated from data provided by author.

What does this mean for the management of most stroke patients? The findings suggest we can start to implement these strategies with more confidence that our patients will benefit, the results are reasonably generalizable to developed countries, and the advantages were sustained for ≥ 5 years (3). Obviously, we need more long-term data, but the pattern seems to be set: Health care providers should plan for more acute stroke units and better ESD services for those patients for whom this strategy is the best option.

John V. Ly, MD
Geoffrey A. Donnan, MD
National Stroke Research Institute
Melbourne, Victoria, Australia

References