Pre-discharge Occupational Therapy Home Visits for Patients with a Stroke: Results of a feasibility randomised controlled trial (RCT)

Avril Drummond, Phillip Whitehead, Karen Fellows, Nikola Sprigg, Christopher Sampson, Claire Edwards
The Home Visit after Stroke (HOVIS) Study

- Routine practice in many stroke rehabilitation units (Drummond et al 2012)
- No evidence of clinical or cost effectiveness
- Previous feasibility study - recruitment difficulties (Lannin et al 2007)
- Aim of HOVIS – Is it feasible?
- Alternative methodology to balance clinical concerns with research rigour
Method – Two Studies

- **Cohort** - Home Visit
- **RCT** - Home Visit Vs Hospital Interview
- **Home Visit** - Structured assessment visit in the patient’s home environment
- **Interview** - Structured assessment in the hospital
Method - Eligibility and Inclusion

- All patients admitted to stroke rehabilitation unit screened for inclusion
- Exclusions:
  - End of Life Pathway
  - Not Speaking English
  - Discharge out of Derbyshire
  - Access Visit
Method - Measures and Outcomes

- Outcomes: Independence in ADL; Mood; Quality of Life; Carer Strain, Falls, Readmissions, Service Use
- Baselines before randomisation/visit
- At one week and one month post discharge by researcher masked to group allocation
Results - Recruitment

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CLAHRC NDL

Total not eligible = 81
- Discharged before decision = 36
- For access visit only = 10
- Deceased = 7
- Did not speak English = 6
- End of life care pathway = 5
- Transferred to other ward = 5
- Discharged out of area = 4
- Recruitment closed before decision = 4
- Other = 4

Assessed for eligibility (n=297)

Eligible (n=216)

Allocation to Cohort study (n=43)
- Did not consent (n=7)
  - Discharged before recruitment (n=3)
- Consented Cohort (n=39)

Allocation to RCT (n=173)
- Did not consent (n=53)
  - Discharged before recruitment (n=23)
- Consented Randomised (n=93)
Recruitment – RCT and Cohort Study

![Recruitment Graph]

- **Number of Participants**
- **Cohort**
- **RCT**
- **Total**

Date Range:
- Jul-10 to Oct-11

- Jul-10: Cohort, RCT, Total
- Aug-10: Cohort, RCT, Total
- Sep-10: Cohort, RCT, Total
- Oct-10: Cohort, RCT, Total
- Nov-10: Cohort, RCT, Total
- Dec-10: Cohort, RCT, Total
- Jan-11: Cohort, RCT, Total
- Feb-11: Cohort, RCT, Total
- Mar-11: Cohort, RCT, Total
- Apr-11: Cohort, RCT, Total
- May-11: Cohort, RCT, Total
- Jun-11: Cohort, RCT, Total
- Jul-11: Cohort, RCT, Total
- Aug-11: Cohort, RCT, Total
- Sep-11: Cohort, RCT, Total
- Oct-11: Cohort, RCT, Total

**Notes:**
- The graph shows the recruitment trend from July 2010 to October 2011.
- The total number of participants increases over time.
- The cohort and RCT lines are included for comparison.
### Results – Baseline Characteristics

<table>
<thead>
<tr>
<th></th>
<th>RCT</th>
<th>Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intervention Group (n=47)</td>
<td>Control Group (n=46)</td>
</tr>
<tr>
<td><strong>Age</strong> (sd) (Range)</td>
<td>70.64 (14.29) (34-88)</td>
<td>73.65 (15.06) (41-99)</td>
</tr>
<tr>
<td><strong>Male</strong> (%)</td>
<td>26 (55.3%)</td>
<td>24 (52.2%)</td>
</tr>
<tr>
<td><strong>White British</strong> (%)</td>
<td>43 (91.5%)</td>
<td>41 (89.1%)</td>
</tr>
<tr>
<td><strong>Living Alone</strong> (%)</td>
<td>15 (31.9%)</td>
<td>15 (32.6%)</td>
</tr>
<tr>
<td><strong>Previous Support</strong> (%)</td>
<td>2 (4.3%)</td>
<td>3 (6.5%)</td>
</tr>
<tr>
<td><strong>Consultee</strong> (%)</td>
<td>4 (8.5%)</td>
<td>2 (4.3%)</td>
</tr>
</tbody>
</table>
Results – Treatment and Follow-Up

• **RCT**
  41 (out of 47) received Visit
  43 (out of 46) received Interview

• **Cohort**
  29 (out of 33) received Visit

• **Follow-Up**
  90% followed up at one month
<table>
<thead>
<tr>
<th>Measure</th>
<th>RCT</th>
<th>Cohort</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Intervention Group (n=40)</td>
<td>Control Group (n=43)</td>
</tr>
<tr>
<td></td>
<td>Median (IQR)</td>
<td>Median (IQR)</td>
</tr>
<tr>
<td>NEADL</td>
<td>10.5 (7-23.5)</td>
<td>13 (6-24.5) [1]</td>
</tr>
<tr>
<td>Barthel Index</td>
<td>14.5 (7.25-17.75)</td>
<td>16 (10-19)</td>
</tr>
<tr>
<td>Rivermead Mobility Index</td>
<td>6.5 (4-10)</td>
<td>7 (6-12)</td>
</tr>
<tr>
<td>SADQ-H10 +</td>
<td>4 (2.25-8) [8]</td>
<td>7 (4-11) [14]</td>
</tr>
<tr>
<td>Caregiver Strain Index +</td>
<td>5 (2.25-7) [19]</td>
<td>6 (3-7) [22]</td>
</tr>
<tr>
<td></td>
<td>11 (6.75-19.75)</td>
<td>16.5 (10-18.25)</td>
</tr>
<tr>
<td></td>
<td>7 (6.75-19.75)</td>
<td>4 (10-18.25)</td>
</tr>
<tr>
<td></td>
<td>7 (10-18.25)</td>
<td>7 (10-18.25)</td>
</tr>
<tr>
<td></td>
<td>5 (3-10.75) [10]</td>
<td>5 (3-10.75) [10]</td>
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</tbody>
</table>

+ lower score indicates better outcome ; # p value from Mann Whitney U test; [] missing values
<table>
<thead>
<tr>
<th>Outcome</th>
<th>RCT Intervention Group (n=42) Median (IQR)</th>
<th>RCT Control Group (n=43) Median (IQR)</th>
<th>P Value #</th>
<th>Cohort Intervention (n=29) Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEADL</td>
<td>14.5 (3-37.25)</td>
<td>20 (9-36)</td>
<td>0.52</td>
<td>15 (7-30)</td>
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<tr>
<td>Barthel Index</td>
<td>15.5 (8-19)</td>
<td>17 (11-19)</td>
<td>0.41</td>
<td>16 (14-19)</td>
</tr>
<tr>
<td>Caregiver Strain Index +</td>
<td>5.5 (1.75-7)</td>
<td>6 (5-8)</td>
<td>0.11</td>
<td>3.5 (1.5-7)</td>
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<tr>
<td>EQ5D</td>
<td>0.53 (0.34)</td>
<td>0.50 (0.35)</td>
<td>0.74</td>
<td>0.57 (0.3)</td>
</tr>
</tbody>
</table>

+ lower score indicates better outcome; # p value from Mann Whitney U test; [] missing values
Results – Falls, Readmissions, Service Use

- **Participants with one or more falls**
  One Week - 6 (control); 2 (home visit)
  One Month - 9 (control); 13 (home visit)

- **Readmissions – One Month**
  2 (control); 8 (home visit)

- **Services Used – No differences**
  Except private cleaner!
Discussion

- Feasible – Recruitment and follow up
- Some protocol adherence issues
- Hospital interview not standard practice
- Group outcomes similar – Caution!
- Cost Implications
- Further, definitive trial is needed
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Thank you for listening

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