EXTRAS: a trial to Evaluate an eXTended RehAbilitation service for Stroke patients

Randomised controlled trial: patient results

H Rodgers¹, L Shaw¹, N Bhattarai¹, R Cant², A Drummond³, GA Ford⁴, A Forster⁵, R Francis¹, K Hills¹, D Howel¹, AM Laverty⁶, C McKevitt⁷, P McMeekin⁸, C Price¹, E Stamp¹, E Stevens⁷, L Vale¹

¹Newcastle University, ²Service User, ³Nottingham University, ⁴Oxford University, ⁵Leeds University, ⁶Northumbria Healthcare NHS Foundation Trust, ⁷King’s College London, ⁸Northumbria University
Background

- Stroke Units and Early Supported Discharge (ESD) Services are the cornerstones of evidence based stroke care

- ESD services are multidisciplinary stroke teams which provide community rehabilitation following discharge from hospital for a time limited period

- Many stroke survivors feel abandoned and ignored in the longer term by health and social services and report physical, psychological and social unmet needs

- EXTRAS evaluated the clinical and cost effectiveness of an Extended Stroke Rehabilitation Service provided for 18 months following ESD

- Telephone reviews (face to face if telephone was not possible) were undertaken at 1, 3, 6, 12 and 18 months by a member of the ESD team

- Each review consisted of a semi-structured assessment of progress, current rehabilitation needs, and service provision. This was followed by joint goal setting and action planning
EXTRAS: a trial to Evaluate an eXTended RehAbilitation service for Stroke patients

**Target population**
Stroke patients and carers (where appropriate) who received early supported discharge (ESD), from 19 centres in England and Wales

**Recruitment, consent and baseline assessment**
Potentially eligible patients and carers identified prior to hospital discharge or during routine ESD care. Study discussed and information sheet given. Informed consent obtained. Recruitment and baseline assessments performed

**Central randomisation** - Newcastle University Clinical Trials Unit

**Intervention Group - Extended Stroke Rehabilitation Service**
Patients n=285; Carers n=103
Participants received Extended Stroke Rehabilitation Service following completion of ESD. Ongoing rehabilitation was coordinated by a senior ESD team member with reviews at 1, 3, 6, 12 and 18 months

**Control Group - Usual care**
Patients n=288; Carers n=91
Participants received usual care following completion of ESD

**12 month assessment**
Patient assessment (n=487) by telephone interview with blinded assessor*
Extended activities of daily living (NEADL scale), mood assessment (HAD scale), health status (OHS), quality of life (EQ-5D), experience of services, adverse events, resource utilisation

Carer assessment (n=166) by postal questionnaire
Quality of life (EQ-5D), carer stress (Caregiver Strain Index), experience of services

**24 month assessment**
Patient assessment (n=450) by telephone interview with blinded assessor*
Outcome measures as above
Qualitative interviews with sample of patients, carers and rehabilitation staff

Carer assessment (n=153) by postal questionnaire
Outcome measures as above

*If patient was unable to use a telephone, a postal questionnaire or face to face interview was arranged
## Results

Extended activities of daily living (NEADL scale); Anxiety and Depression (HAD scale)

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
<th>Mean difference (I – C) (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n Mean (SD)</td>
<td>n Mean (SD)</td>
<td>Unadjusted NEADL Adjusted for baseline OHS, centre, age and gender</td>
</tr>
<tr>
<td>NEADL scale (MCID = 6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 months</td>
<td>239 40.6 (17.7)</td>
<td>247 38.3 (17.1)</td>
<td>2.3 (-0.5  5.2) 1.5 (-0.8  3.7)</td>
</tr>
<tr>
<td>24 months</td>
<td>219 40.0 (18.1)</td>
<td>231 37.2 (18.5)</td>
<td>2.8 (-0.6  6.2) 1.8 (-0.7  4.2)</td>
</tr>
<tr>
<td>HAD scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety 24m</td>
<td>217 5.5 (4.3)</td>
<td>230 6.4 (4.6)</td>
<td>-0.9 (-1.8  0.0) -0.6 (-1.4  0.1)</td>
</tr>
<tr>
<td>Depression 24m</td>
<td>217 5.9 (4.3)</td>
<td>230 6.7 (4.6)</td>
<td>-0.8 (-1.5  -0.1) -0.7 (-1.4  0.0)</td>
</tr>
</tbody>
</table>

**Experiences of services**

<table>
<thead>
<tr>
<th></th>
<th>12 months</th>
<th>24 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patients satisfied/in agreement</td>
<td>Difference in proportion of patients satisfied (Intervention-Control) (95% CI)</td>
</tr>
<tr>
<td>Overall, how satisfied are you with the services you received?</td>
<td>228 (95.4)</td>
<td>3.1 (-1.1  7.4)</td>
</tr>
</tbody>
</table>

**Conclusion**

The Extended Stroke Rehabilitation Service did not improve stroke survivors participation in extended activities of daily living. The new service did not lead to improved mood, but differences were seen in favour of the intervention with respect to satisfaction with services at 24 months. Further analyses including health economic and process evaluations are on-going.