Evaluation of the delivery and quality of the OTAGO exercise programme at Christchurch Day Hospital

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Introduction

• OTAGO, named after its place of origin in New Zealand, is an exercise programme consisting of a 12 week taught programme and is reliant on home-based exercises three times/week. The group is run for patients aged >65 and aims to improve balance, strength and confidence with mobility and activities of daily living.

• A collaborative project between OTAGO group facilitators at Christchurch Day Hospital and Bournemouth University examined the delivery, effectiveness, patient concordance with the OTAGO programme and how concordance could be improved through behaviour change techniques.

Aims

• To identify, implement and enhance the delivery of the taught component of the OTAGO group.

• To improve patient outcomes and experience through increased concordance with the home-based elements of the OTAGO programme.

• To maintain and promote evidence-based practice at Christchurch Day Hospital.

Methods

• Consultation with patients through short interviews obtained opinion on the OTAGO programme to identify both their perceived barriers to, and facilitators of, the home exercise regime.

• Clinical data from 118 patients, including standardised outcome measures of balance, strength, confidence and ability collected at weeks 1 & 12 of the programme were analysed using a within-subjects design approach.

• Standardised measures analysed were: 6m timed walk (secs); 6m number of steps; 180° turn number of steps; Functional reach (cm)1 and Modified Falls Efficacy Scale (MFES)2

Results

Table 1. Comparison of baseline measurements and post-exercise therapy outcomes demonstrating significant changes in functional measures following 12 weeks of intervention3.

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Mean (SD)</th>
<th>Difference</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline (Mean)</td>
<td>12-weeks post OTAGO (Mean)</td>
<td></td>
</tr>
<tr>
<td>6m number of steps</td>
<td>13.39 (3.12)</td>
<td>11.52 (2.01)</td>
<td>-1.87</td>
</tr>
<tr>
<td>6m timed walk (secs)</td>
<td>12.12 (7.22)</td>
<td>6.73 (6.73)</td>
<td>-5.39</td>
</tr>
<tr>
<td>180° turn number of steps</td>
<td>4.47 (2.52)</td>
<td>3.71 (1.19)</td>
<td>-0.76</td>
</tr>
<tr>
<td>Functional reach (cm)</td>
<td>26.00 (7.53)</td>
<td>28.66 (5.71)</td>
<td>+2.66</td>
</tr>
<tr>
<td>MFES</td>
<td>109.84 (26.75)</td>
<td>123.00 (14.67)</td>
<td>+13.16</td>
</tr>
</tbody>
</table>

P<0.05 (within group tests) MFES = Modified Falls Efficacy Scale. Range of scores from 0-140. High scores = greater self efficacy, lower scores = fear of falls

Key findings

• Weekly OTAGO attendance in conjunction with home-based completion of taught exercises can improve balance, strength, confidence and reduce the risk of falls.

• Significant (p<0.05) improvement in the five outcome measures used to quantify balance, strength and confidence at weeks 1 & 12 of the programme was evident at week 12.

• Greatest clinical significance identified in the 6m timed walk, with a mean reduction of 5.39 seconds.

• Exercise in a joint home and outpatient group setting can be motivating and improve exercise programme concordance in healthcare.

• Patients can be empowered through implementation of behaviour change techniques (namely facilitators’ monitoring of home practice habits and protected social time at the end of each taught session).

• Adherence to home practice was variable amongst the cohort and there was inconsistency in completion of a patient record sheet due to lack of accountability.

• Behaviour change techniques can enhance patient experience and outcome from attendance at the group.

Recommendations & key messages

• The availability of the OTAGO programme should be facilitated and encouraged in an NHS outpatient rehabilitation setting to reduce the risk of falls in the over 65s, by improving balance, strength, and confidence, as per NICE guideline (2013)4.

• Behaviour change techniques should, where possible, be implemented in the group setting by facilitators to improve patient outcome from group attendance and to empower patients to become active participants in their exercise programme.

Conclusions & Future Research

• OTAGO intervention improved older adults’ balance, strength, confidence and functional ability following attendance at the 12 week programme in an outpatient setting.

• The project informed changes to the delivery of the OTAGO programme to increase home practice through integration of behaviour change techniques.

• Improved collaborative working between therapists and psychologists could improve adherence to interventions

• Christchurch Day Hospital is currently participating in an extension to this research project, examining whether the OTAGO programme remains beneficial to patients and whether patient concordance has been sustained following the implementation of the behaviour change techniques.

• Personal learning opportunities have been embraced by staff including; participation in research, research methods and the value of evidence-based care.

References