AN INPATIENT REHABILITATION ENRICHED ENVIRONMENT FOR STROKE PATIENTS

This project is funded by the Victorian Stroke Clinical Network
An Inpatient Rehabilitation Enriched Environment for Stroke patients

Aim:
To determine whether an Inpatient Rehabilitation Enriched Environment increases stroke patients activity levels by delivering an Enriched Environment in communal areas and at the bedside within the Inpatient Rehabilitation Unit at Bendigo Health.

Methods:
1. Develop and deliver education to Inpatient Neurological Rehabilitation staff.
2. Obtain qualitative consumer feedback regarding activity levels within the Inpatient Rehabilitation Neurological Unit.
3. Obtain qualitative feedback regarding staff experience of an Enriched Environment Model.
4. Conduct pre and post implementation observations of stroke patient activity levels through Behavioural Mapping.
Background Information

Why?
- Intensity of therapy post stroke has been associated with better functional outcomes (Kwakkel, Van Peppen, Wagenaar, 2004).

However
- Evidence suggests that inpatients in rehabilitation wards, apart from their scheduled therapy sessions, spend most of their waking hours physically inactive and relatively isolated impacting on patients activity levels (Berges, Seale, Ostir, 2012).

Answer
- **Environmental enrichment** provides patients with opportunity to engage in physical, cognitive and social activities outside scheduled therapy sessions optimising patient activity levels (Janssen, Ada, Karayanidid, Drysdale, McElduff, Pollack, White, Nilsson, Bernhardt & Spratt, 2012).
- Stimulating environments are thought to enhance post stroke brain recovery by triggering structural changes within the brain which are instrumental in the process of neuroplasticity (Janssen, Ada, Bernhardt, McElduff, Pollack & Nilsson, 2014).
Pre-implementation data – Behavioural mapping

Inpatient Rehabilitation Stroke Patient Activity Levels

<table>
<thead>
<tr>
<th>Date</th>
<th>People Present</th>
<th>Physical</th>
<th>Cognitive</th>
<th>Social</th>
<th>Any Activity</th>
<th>Sleeping</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/12/2016</td>
<td>29%</td>
<td>17%</td>
<td>9%</td>
<td>14%</td>
<td>37%</td>
<td>21%</td>
</tr>
<tr>
<td>5/12/2016</td>
<td>46%</td>
<td>31%</td>
<td>6%</td>
<td>21%</td>
<td>51%</td>
<td>16%</td>
</tr>
<tr>
<td>11/12/2016</td>
<td>41%</td>
<td>21%</td>
<td>8%</td>
<td>15%</td>
<td>39%</td>
<td>21%</td>
</tr>
<tr>
<td>12/12/2016</td>
<td>44%</td>
<td>25%</td>
<td>4%</td>
<td>35%</td>
<td>52%</td>
<td>19%</td>
</tr>
<tr>
<td>Average</td>
<td>40%</td>
<td>24%</td>
<td>7%</td>
<td>21%</td>
<td>45%</td>
<td>19%</td>
</tr>
</tbody>
</table>
Pre-implementation data – Behavioural mapping

Stroke Patient Activity Trends

- 4/12/2016
- 5/12/2016
- 11/12/2016
- 12/12/2016

Time: 8.00am to 6.00pm
Pre-implementation Consumer Survey

Do you get bored?

- Never
- Sometimes
- Half the time
- Frequently
- All the time
Pre-implementation Consumer Survey

Have you been offered activities outside of self-care and therapy times?

- No
- Yes
Pre-implementation Consumer Survey

Do you have enough to do outside of self-care and timetabled therapy sessions?

- No
- Yes
Pre-implementation Consumer Survey

What makes it easier for you to access activities?

Themes:
- Activities that interest patients
- Activities that match abilities
- Knowing where activities are or what time available
- Being able to get there
- Assistance with setting up what you need

Describe the challenges with accessing activities:

Themes:
- Activities not of interest
- Not of close proximity to patient rooms
- Staff not being available to assist
- Not being able to get to/do activities
- Health concerns/Vision impaired
Have you heard of an Enriched Environment (EE) Model?

- Yes: Pre-Implementation survey (80), Middle survey (70)
- No: Pre-Implementation survey (10), Middle survey (20)
Pre-Implementation and Middle Staff Survey

Describe the Enriched Environment Model

Themes

- Providing a stimulating environment
- Increasing activity levels
Should patients be active (cognitively, socially and physically) outside of self-care and therapy sessions?
Are patients active outside of self-care and timetabled therapy sessions?

- All the time
- Frequently
- Half the time
- Sometimes
- Never
How often do patients get bored?

- All the time
- Frequently
- Half the time
- Sometimes
- Never

Pre-Implementation survey vs. Middle survey
Do you have the time to support patients to do activities outside of self-care and timetabled therapy session?
Pre-Implementation and Middle Staff Survey

What are the challenges and barriers to supporting these activities?

- Time
- Staffing levels
- Patients fatigue/ motivation
- Increased acuity of patients
- Access to resources

- Lack of appropriate spaces
- Workload/patient turnover
- Staff not seeing value or benefit
Pre-Implementation and Middle Staff Survey

Describe how we can overcome these barriers?

Themes

• Communal spaces
• Staffing
• Volunteers
• Education
Where to from here?

• Post-implementation data
• Volunteers
• Education
• Sustainability
• Occupational Therapy student project placement
Enriched Environment - Lounge
Enriched Environment - Lookout
Independent Therapy Boxes & Satchels
References

Berges IM, Seale GS, Ostir GV. The role of positive affect on social participation following stroke. Disability Rehabilitation 2012; 34:2119-2123.


Nithianantharajah J, Hannan AJ. Enriched environments, experience-dependent plasticity and disorders of the nervous system. 2006; 7:697-709.
