

Increasing engagement in rehabilitation and promoting increased functional practice

What is the problem?

Many studies show that people in rehabilitation units are relatively inactive and spend much of their day alone (eg. West & Bernhardt, 2012, Janssen et al 2014a, Fini et al 2017).

For instance, a study in a mixed rehabilitation unit found that the 37% of patient activity was performed at the bedside and that 47% of physical, and 54% of cognitive activity took place when the patient was alone. Overall levels of activity did not change from observations made on admission to the unit, compared with two weeks later, when the patient's physical capacity had generally improved, suggesting that *functional ability was not the only thing impacting levels of patient activity* (Janssen et al., 2014a).

People are often in rehabilitation after a life changing event or serious illness, so they may already be experiencing low mood. Isolation in a single room, an unfamiliar environment, and loss of independence/control over their activity/routine can all contribute to feelings of helplessness and low mood. Rehabilitation staff need to use individualized, person centred, approaches to help engage patients as *active participants in their rehabilitation journey*.

Much of the information about increasing engagement in rehabilitation and promoting increased functional practice comes from stroke rehabilitation, but there is nothing to suggest that the problems, and the solutions, are not transferrable to other diagnoses.

What do the Stroke Guidelines say? (Stroke Foundation of NZ, 2010; Royal College of Physicians, UK, 2012; National Stroke Foundation Guidelines 2017)

- Patients should receive at least three hours per day of therapy time (OT, PT and SP), on a minimum of five days/week, directed towards rehab goals, with at least two of those hours spent on active task specific practice in a variety of settings.
- Task specific circuit classes should be used to increase the amount of practice time.
- Rehab services should promote practice of skills gained in therapy in the patient's daily routine in a consistent manner. Patients should be enabled and encouraged to practice functional activity as much as possible, this could include strategies such as: self directed independent practice, or semi-supervised and assisted practice involving family/friends as appropriate.

How do we increase engagement?

1. Enriching the rehabilitation environment

A research group at Newcastle, NSW, undertook a small feasibility study of the benefit of providing an 'enriched environment' (EE) on social and cognitive activity in a general rehab ward (Janssen et al., 2014b). No change was made to therapy timetables and additional opportunities for physical activity were not included (apart from assisting patients to access the individual activities and shared ward spaces where necessary).

Two types of 'supports' were offered:

Communal enrichment included access to shared spaces and dining facilities, with tea/coffee making facilities, access to computers and the internet, as well as books, games (including Nintendo Wii) and group recreational activities.

Individual enrichment involved providing a ‘kit’ containing *each participant’s choice* of music, audio books, books, word and number puzzles, board games and resources for any other activity which they had previously enjoyed, and which it was still feasible for them to participate in. Families and visitors were encouraged to support engagement in these activities. Behavior mapping studies showed that participants in the EE group were *much more likely* to be engaged in social and cognitive activity, and *much less likely* to be alone or asleep during daytime hours than a historical control group (in the same rehab unit before the EE was introduced).

The researchers went on to explore perceptions of nursing staff (White et al., 2014) and patients (White et al., 2015) involved in the pilot EE trial. Feedback was overwhelmingly positive, with some unexpected benefits reported, such as patients stating that they felt ‘more at home’ with familiar enjoyable activities to do out of therapy hours, and nursing staff finding that well occupied patients were less likely to ring their call bell and to complain of pain. A range of barriers were also identified such as the extra impost on nursing staff time to set up activities or take patients to communal areas, and the impact of impairments (restricted mobility, vision etc.) on their ability to participate in some of the activities. Overall the authors noted that EE is a relatively low cost strategy that has the potential to impact positively on the individual’s social and cognitive engagement, to encourage the involvement of family and other visitors, to reduce boredom, and to improve the patient’s mood and motivation to participate fully in their rehabilitation.

These findings have been replicated in an acute stroke ward in QLD (Rosbergen et al, 2017).

2. A number of other papers have been published exploring the use of groups to increase activity. These have all involved class based activity *in addition to usual care*, and most have focussed on very functional activities, such as dressing groups (Christie et al, 2011), DIY breakfast trolley (Quick et al 2018), and group exercise classes using an individualised circuit approach (English et al, 2017; Stewart et al 2017; Treacy et al 2015). A two week balance circuit class intervention during inpatient rehabilitation has been shown to be associated with lower costs as well as being clinically effective (Treacy et al 2017).

Many resources for class set up are available, so you don’t have to re-invent the wheel – eg. Functionally based groups - RehabFunc and FizzioFunc (contact Pat O’Leary (PT) or Shae Flint (OT) at Bunbury Hospital, or look on the TRACS WA website),

The PUSH UL program, Bankstown-Lidcombe Hospital, NSW, <http://www.strokeEd.com>,

GRASP UL rehabilitation program developed in Canada <https://neurorehab.med.ubc.ca/grasp/>

Balance circuit class program (supplementary file in Treacy et al 2017)

[https://www.journalofphysiotherapy.com/article/S1836-9553\(17\)30142-X/fulltext](https://www.journalofphysiotherapy.com/article/S1836-9553(17)30142-X/fulltext)

What else do we need?

- A good understanding of why your patients are not fully engaged in their rehab (eg. maybe they haven’t been able to participate in person centred goal setting. Look at: <https://www.youtube.com/watch?v=gk8vHYPgQJo> or they don’t understand what rehab is about? <https://www.youtube.com/watch?v=upyaY-AVkLA>)
- A committed team – AHAs are often an essential support for group activity sessions
- An understanding of the evidence re. the contribution of frequent practice to recovery
- Support from management (you may need some equipment to set up group activities, or to restructure environment).

References:

- Christie L, Bedford R, McCluskey A (2011). Task-specific practice of dressing tasks in a hospital setting improved dressing performance post-stroke: a feasibility study. *Aust Occup Ther J*; 58(5):364-9
- Connell LA, McMahon NE, Redfern J, Watkins CL, Eng JJ (2015) Development of a behaviour change intervention to increase upper limb exercise in stroke rehabilitation. *Implement Sci*; 10:34. doi: 10.1186/s13012-015-0223-3.
- English C, Hillier SL, Lynch EA. (2017) Circuit class therapy for improving mobility after stroke. *Cochrane Database Syst Rev*; CD007513. doi: 10.1002/14651858.CD007513
- Fini NA, Holland AE, Keating J, Simek J, Bernhardt J. (2017) How Physically Active Are People Following Stroke? Systematic Review and Quantitative Synthesis. *Phys Ther*; 97(7):707-717. doi: 10.1093/ptj/pzx038.
- Intercollegiate Stroke working party (2012) National Clinical Guidelines for Stroke. *Royal College of Physicians UK*.
- Janssen, H., Ada, L., Bernhardt, J., McElduff, P., Pollack, M., Nilsson, M., & Spratt, N. (2014a). Physical, cognitive and social activity levels of stroke patients undergoing rehabilitation within a mixed rehabilitation unit. *Clinical Rehabilitation*, 28(1), 91-101.
- Janssen, H., Ada, L., Bernhardt, J., McElduff, P., Pollack, M., Nilsson, M., & Spratt, N. J. (2014b). An enriched environment increases activity in stroke patients undergoing rehabilitation in a mixed rehabilitation unit: a pilot non-randomized controlled trial. *Disabil Rehabil*; 36(3), 255-262.
- National stroke Foundation Guidelines (2017) InformMe
<https://informme.org.au/search?query=intensity+of+practice>
- Quick M, Joliffe L, Lannin NA, Sansonette D (2018) 'DIY' breakfast bar as a therapeutic intervention in an ABI rehabilitation unit (*under submission*)
- Rosbergen IC, Grimley RS, Hayward KS, Walker KC, Rowley D, Campbell AM, McGufficke S, Robertson ST, Trinder J, Janssen H, Brauer SG. (2017) Embedding an enriched environment in an acute stroke unit increases activity in people with stroke: a controlled before-after pilot study. *Clin Rehabil*; 31(11):1516-1528.
- Scrivener K, Tourany R, McNamara-Holmes M, Schurr K, Dorsch S, Dean C. (2017) Feasibility of a Nurse-Led Weekend Group Exercise Program for People after Stroke. *Stroke Res Treat*. 2017:4574385. doi: 10.1155/2017/4574385. Epub 2017 Jan 24.
- Stewart C, McCluskey A, Ada L, Kuys S. (2017) Structure and feasibility of extra practice during stroke rehabilitation: A systematic scoping review. *Aust Occup Ther J*.;64(3):204-217.
- Stroke Foundation of NZ, NZ Guidelines group (2010) Clinical Guidelines for Stroke management
- Treacy D, Howard K, Hayes A, Hassett L, Schurr K, Sherrington C.(2018) Two weeks of additional standing balance circuit classes during inpatient rehabilitation are cost saving and effective: an economic evaluation. *J Physiother*; 64(1):41-47.
- Treacy D, Schurr K, Lloyd B, Sherrington C. (2015) Additional standing balance circuit classes during inpatient rehabilitation improved balance outcomes: an assessor-blinded randomised controlled trial. *Age Ageing*; 44(4):580-6.
- West T, Bernhardt J. (2012) Physical activity in hospitalised stroke patients. *Stroke Res Treat*; 2012:813765. doi: 10.1155/2012/813765.
- White, J. H., Alborough, K., Janssen, H., Spratt, N., Jordan, L., & Pollack, M. (2014). Exploring staff experience of an "enriched environment" within stroke rehabilitation: a qualitative sub-study. *Disability and Rehabilitation*, 36(21), 1783-1789.
- White, J. H., Bartley, E., Janssen, H., Jordan, L.-A., & Spratt, N. (2015). Exploring stroke survivor experience of participation in an enriched environment: a qualitative study. *Disability and Rehabilitation*, 37(7), 593-600.