

## Backgrounder

### Provision of Greater Intensity Therapy in Inpatient Rehabilitation: Three Hours of Therapy per Day

#### Current State:

Research shows that people with stroke hospitalized in inpatient rehabilitation units spend most of their day inactive (48%), alone (54%) and in their bedroom (57%).<sup>1</sup> This is contrary to the evidence that increased activity and environmental stimulation is important to neurological recovery.

Canadian Best Practice Recommendations for Stroke Care recommend a minimum of three hours of therapy per day.<sup>2</sup> The Ontario Stroke Network Stroke Reference Group recommends that inpatient rehabilitation facilities provide three hours of therapy per day, seven days a week.<sup>3</sup> In the United States, a minimum of 3 hours of direct patient-therapist time per day is required to receive funding.<sup>4</sup>

*Stroke patients should receive, through an individualized treatment plan, a **minimum of three hours of direct task-specific therapy** by the interprofessional stroke team for a minimum of five days per week (Evidence Level A).  
CBPR (2010) 5.3.ii*

#### Evidence:

- Patients who received total therapy time less than 3 hours per day had significantly lower total functional gain than those treated for greater than 3 hours per day.<sup>5</sup>
- Daily average and total amount of therapy time provided by OTs, PTs, and SLPs are significantly correlated with gains in ADL, cognition and mobility as well as overall functional improvement on the Functional Independence Measure (FIM<sup>®</sup>).<sup>5,6</sup>
- Core therapies of Physiotherapy (PT), Occupational Therapy (OT) and Speech Language Pathology (SLP) have been shown to be most sensitive to intensity.<sup>5</sup>

#### Challenge of Intensity:

*In Canada, the average rehabilitation patient gets approximately 1.5 to 2 hours of direct patient-therapist time per day.<sup>6</sup> However therapy is cheap compared to length of stay, and less than 20% of the total hospital budget in subacute rehabilitation is spent on core therapies.<sup>7</sup> Increasing therapy intensity could shorten length of stay, increasing cost efficiencies.*

## Impact:

- Meeting the Best Practice Recommendations of a minimum of three hours of direct therapy will result in:
  - better patient outcomes
  - shorter lengths of stay
  - improved flow through the system
  - potential for reduced Alternative Level of Care (ALC) days in hospital
  - achievement of recommended best practice stroke care.<sup>3</sup>

**For more information on strategies for increasing therapy intensity within your organization contact the:** Regional Director, Stroke Network of SEO at 613-549-6666 x3562 or [martinc@kgh.kari.net](mailto:martinc@kgh.kari.net) or the Ontario Stroke Network at 416-489-7111, [www.ontariostrokenetwork.ca](http://www.ontariostrokenetwork.ca) or [info@ontariostrokenetwork.ca](mailto:info@ontariostrokenetwork.ca)

## References:

- 1 West, T. & Bernhardt, J. (2012). Physical activity in hospitalised stroke patients. *Stroke Research and Treatment Volume*. Article ID 813765.
- 2 Lindsay, M.P., Gubitz, G., Bayley, M., Hill, M.D., Davies-Schinkel, C., Singh, S., and Phillips S. (2010). *Canadian Best Practice Recommendations for Stroke Care (Update 2010)*. On behalf of the Canadian Stroke Strategy Best Practices and Standards Writing Group. Ottawa, ON, Canadian Stroke Network. Retrieved from: [www.strokebestpractices.ca](http://www.strokebestpractices.ca).
- 3 Meyer, M., O'Callaghan C., Kelloway L., Hall, R., Teasell R., Meyer, S., Allen L., Leci, E. (2012). *The Impact of Moving to Stroke Rehabilitation Best Practices in Ontario. Final Report*. Retrieved from: [http://www.ontariostrokenetwork.ca/pdf/The\\_impact\\_of\\_moving\\_to\\_stroke\\_rehabilitation\\_best\\_practices\\_in\\_Ontario\\_OSN\\_Final\\_Report\\_Sept\\_14\\_2012.pdf](http://www.ontariostrokenetwork.ca/pdf/The_impact_of_moving_to_stroke_rehabilitation_best_practices_in_Ontario_OSN_Final_Report_Sept_14_2012.pdf)
- 4 Centers for Medicare and Medicaid Services (2010). Medicare Benefit Policy Manual. Pub. 100-02, Chapter 1, Section 110.2.2. Retrieved from <http://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/bp102c01.pdf>
- 5 Wang, H., Camicia, M., Terdiman, J., Mannava, M., Sidney, S., Sandel, M. (2012). Therapeutic Intensity and Functional Gains of Stroke Patients during Inpatient Rehabilitation. *Stroke* 43 (Suppl 1):A2303
- 6 Foley, N., McClure, A., Meyer, M., Salter, K., Bureau, Y., Teasell, R. (2012). Inpatient rehabilitation following stroke: amount of therapy received and associations with functional recovery. *Disability & Rehabilitation* 34(25): 2132–2138
- 7 Teasell, R. (2012). Intensity of Stroke Rehabilitation. Presented at the Southwestern Ontario Stroke Rehabilitation Forum "Time is Function: Making It Real"