

Enhancing Stroke Rehabilitation Intensity: Why does it matter?

Since 2012, providing stroke rehabilitation intensity (RI) to achieve optimal patient outcomes has continued to be a best practice recommendation. In partnership with the Ministry of Health and Long-Term Care and CorHealth Ontario, the Regional Stroke Rehabilitation Coordinators have been working closely with rehabilitation programs across the province to enhance RI.

Research supports the relevance of RI for persons with stroke:

- There is a positive relationship between scheduled therapy time and outcomes (Lohse et al., 2014).
- **Increasing therapy improves activity:** Increasing the amount of usual rehabilitation aimed at reducing activity limitations improves upper limb or lower limb activity in people with stroke. In order to start achieving this beneficial effect, the amount of rehabilitation required would need to be more than tripled from what is usually provided; this recommendation was based on studies reviewed, which had an average dose of usual rehabilitation of 25 minutes (Schneider et al., 2016).
- **More therapy means better outcomes:** There was a significant relationship between therapeutic duration and functional outcomes – significantly better for those receiving 3 to 3.5 hours of therapy per day. Daily therapy time by OT, PT, & S-LP was significantly correlated with gains in ADLs, cognition, mobility & overall functional improvement (Wang et al., 2013).

Rehabilitation Intensity* has been defined as:

*The amount of time the patient spends in individual, goal-directed rehabilitation therapy, focused on physical, functional, cognitive, perceptual, communicative and social goals to maximize the patient's recovery, over a seven day/week period. It is time that a **patient** is engaged in active face-to-face treatment, which is monitored or guided by a therapist.*

* The Rehabilitation Intensity definition was developed through literature review, expert consensus, and stakeholder engagement by the Stroke Reference Group, and was approved by the Ontario Stroke Network in 2012; this definition was later revised in 2018 by the regional stroke rehabilitation coordinators group.

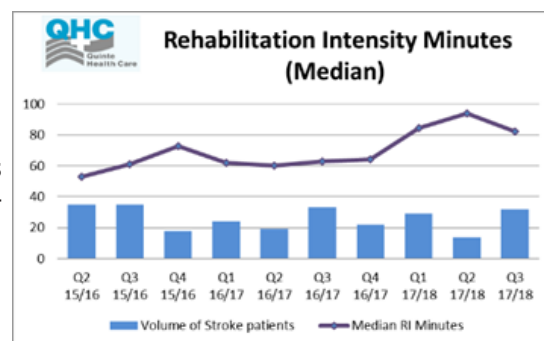
REHABILITATION INTENSITY QUALITY IMPROVEMENT SPOTLIGHT: STRATEGIES AND LESSONS LEARNED

At Quinte Health Care, the story is one of steady progress. Since the start of tracking rehabilitation intensity, steady progress has been made with small team-driven changes. Q2 (2017/18) saw the highest reported rehabilitation intensity in the region with a median of 94.1 minutes. This represented just over 50% improvement compared to median values from the previous fiscal year; for year-to-date, rehabilitation intensity median values still sit at a 36% increase.

The most recent increase within this fiscal year is the result of three key initiatives:

1. The addition of a full-day therapist assistant who is dedicated to stroke patients on Saturdays;
2. A stronger focus on ensuring neuro-rehabilitation expertise on the rehabilitation unit; and
3. Redesigned service delivery models for the 3 largest rehabilitation groups to enable more 1:1 therapy time with stroke patients while making greater use of assistants and groups on orthopedic and restorative services.

The focus has been on the delivery of intensive therapy to those who are ready to receive it. As a result, Quinte Health Care reports improved outcomes in FIM® efficiency across all rehabilitation groups, including stroke.



For more information refer to the RI literature overview and review documents on the CorHealth Ontario website:

<https://www.corhealthontario.ca/resources-for-healthcare-planners-&-providers/stroke-general/qbp/clinical-tools-&-resources/in-patient-rehabilitation>

References:

- Lohse, K.R., Lang, C.E., & Boyd, L.A. (2014). Is more better? Using metadata to explore dose-response relationships in stroke rehabilitation. *Stroke*, 45(7), 2053–2058.
- Schneider, E.J., Lannin, N.A., Ada, L., & Schmidt, J. (2016). Increasing the amount of usual rehabilitation improves activity after stroke: a systematic review. *Journal of Physiotherapy*, 62, 182–187.
- Wang, H., Camicia, M., Terdiman, J., Mannava, M.K., Sidney, S., & Sandel, E. (2013). Daily treatment time and functional gains of stroke patients during inpatient rehabilitation. *Physical Medicine and Rehabilitation* 5(2), 122-128

Do you have a RI quality improvement story to share for our upcoming issue?
Would you like more information about provincial RI resources?

Please connect with your stroke rehabilitation coordinator. If you do not know his/her contact information, please email CorHealth Ontario at service@corhealthontario.ca.