Rehabilitation Intensity in Ontario: What do we know so far?

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Background

Stroke Quality-Based Procedures recommend a minimum of three hours of one-on-one, face-to-face therapy per patient day in inpatient rehabilitation.1 To measure the amount of rehabilitation intensity (RI)*, rehabilitation time has been collected in the National Rehabilitation Reporting System (NRS) for inpatient stroke patients in Ontario since April 2015.

Through collaborative efforts from CorHealth Ontario (formally known as the Ontario Stroke Network), the Canadian Institute for Health Information (CIHI) and the Ontario Ministry of Health and Long-Term Care (MoHLTC), the first year focused on improving data quality, while the second year focused on optimizing facility-level resource allocation to improve RI provision. Clinician feedback suggests that stroke-focused (SF) teams provide better coordination of therapies to enhance RI.

Purpose: To report data quality, the provision of RI, and the impact of SF teams on RI within the past two years.

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

The above definition was developed through literature review, expert consensus, and stakeholder engagement, and was approved by the Ontario Stroke Network Stroke Reference Group.

Methods

Ontario stroke (RCG=1) discharges taking place in 2015-16 and 2016-17 and submitted to the NRS by May 2017 were analyzed using descriptive statistics. Discharges with invalid values (e.g., 99999), total rehabilitation time equal to zero minutes across all provider types, active rehab length of stay (ALOS) of zero days, and/or daily RI > six hours/day were excluded.

Inpatient rehabilitation programs and integrated stroke units were categorized as either SF or Mixed teams for comparison purposes. SF teams provide better coordination of therapies to enhance RI.

Results

1) Rehabilitation Time Data Quality

• Within the past two fiscal years (2015-16 and 2016-17), ~97% (N=10427) of NRS discharge cases had valid rehabilitation time data.

• Proportion of discharge cases with invalid data has decreased over time (see Figure 1).

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2) Provision of Rehabilitation Intensity

• Median RI improved slightly from last year with 61.5 min/day for 2015/16 and 68.2 min/day for 2016/17. There was an overall increase of 11.0 min/day from Q1 2015/16 (57.3 min/day) to Q4 2016/17 (68.3 min/day) (see Figure 2).

• Despite an increase in the median RI over time, there is wide variation in the minutes of therapy provided across LHINs, from 35.8 min/day to 90.2 min/day (see Figure 3).

3) Difference in RI between Stroke-Focused and Mixed Rehabilitation Teams

• Although RI minutes increased for both SF and Mixed teams since last year, median RI was lower for SF teams than Mixed teams (see Figure 5).

Conclusion

Within the past two years, minutes of face-to-face goal directed therapy (RI) has increased in Ontario. Provincial improvements in data quality and RI provision have been the result of collaborative efforts between CorHealth Ontario, CIHI, the LHINs, and rehabilitation hospitals and integrated stroke units across Ontario.

Median RI in SF teams was less than mixed teams, which is incongruent with clinician feedback on the benefits of SF teams in improving the coordination of therapies to enhance RI.

Further efforts are needed to strive towards the stroke best practice of 180 minutes of daily face-to-face therapy. Further study is needed to better understand the impact of organizational factors on RI to enable more targeted approaches to enhance RI.

Results cont’d

FIGURE 1: Percentage of Invalid Rehabilitation Time data

FIGURE 2: Median RI per Quarter for 2015-16 and 2016-17

FIGURE 3: Variation in Median RI Across LHINs

FIGURE 4: Distribution of Average RI by Professional Group

FIGURE 5: Median RI for SF and Mixed Teams

References


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