

Ontario Stroke Network Provincial Integrated Working Group: Rehabilitation Intensity- FINAL REPORT

Introduction

Quality-Based Procedures (QBP) for Stroke recommends that persons with stroke receive a minimum of 3 hours of individualized inpatient rehabilitation intensity (RI) per day. The Ontario Stroke Network's Stroke Evaluation and Quality Committee (SEQC) has identified RI as a key indicator for evaluating system efficiency and effectiveness and has included it on their Stroke Report Card.

As therapy time, from the patient perspective, was not being captured in current databases, the Ontario Stroke Network (OSN) collaborated with the Ministry of Health and Long-Term Care (MOHLTC) and Canadian Institute for Health Information (CIHI) to initiate the reporting of RI as a mandatory element within the National Rehabilitation Reporting System (NRS).

Organizations across the province will be striving to achieve the QBP recommendations for RI. By creating a tool kit to support the implementation of these recommendations, the OSN would be providing organizations the means to achieving best practice stroke care.

Purpose

The Rehabilitation Intensity Provincial Integrated Working Group (RI PIWG) was formed to support rehabilitation programs and integrated stroke units in Ontario to provide greater therapy intensity and to develop a standard approach to provincial implementation of stroke RI data collection. For a list of its members, please refer to Appendix A.

The focus of the group was to develop a provincial strategy that supports clinicians/teams and facilities to:

- 1) Better understand the provincial definition of rehabilitation intensity and what it entails;
- 2) Strategize on ways to optimize rehabilitation intensity in order to meet the target of a minimum of 3 hours of intensive face-to-face one-on-one therapy per patient per day.

- 3) Develop or adapt their workload measurement system (WMS) to capture therapy time spent by the patient as opposed to therapy time spent by the therapist.

Work Plan

The objectives, deliverables and timelines for the RI PIWG were outlined in the group's work plan (see Appendix B). The work plan included 3 key priority initiatives:

1. Support the collection and reporting of Rehabilitation Time to the NRS
2. Support the clinical implementation (of increasing RI to the best practice target)
3. Facilitate data quality and continuous improvement

Deliverables

Each priority item had 6-7 deliverables, which are described below. For a summary of the group's deliverables and timelines, please refer to Appendix C. Most of these deliverables were housed on the OSN website. For more information on how to access these deliverables, please refer to Appendix D.

Priority 1, Deliverable a): Development of a resource guide to support the measurement of rehabilitation intensity in in-patient stroke rehabilitation

This resource guide was developed to support the measurement of stroke RI data. This guide provides the specific steps required to support organizational readiness for submission of RI data to the NRS database and includes a process map, questions to consider, comments/suggestions from stakeholders, factors to consider for sustainability and frequently asked questions. Content within the process map and table were generated based on site interviews conducted with key stakeholders within the province.

Copy of resource: <http://ontariostrokenetwork.ca/stroke-rehabilitation-resource-centre/wp-content/uploads/sites/2/2014/01/OSN-Rehab-Intensity-Resource-Guide-February-6-2015.pdf>

Priority 1, Deliverable b): Development of a stroke rehabilitation intensity Frequently Asked Questions resource

As questions have emerged over the years regarding RI, in February 2015 the RI PIWG developed a Frequently Asked Questions (FAQs) resource to support RI data collection and clinical implementation. As questions have emerged since last year, this resource will be revised in the summer of 2016 to include additional FAQs.

Copy of resource: http://ontariostrokenetwork.ca/stroke-rehabilitation-resource-centre/wp-content/uploads/sites/2/2014/01/OSN-Rehab-Intensity-FAQs-for-Clinicians_final-version_February-9-2015.pdf

Priority 1, Deliverable c): Development of a template to illustrate clinical examples of achieving 3 hours/day of intensive therapy

As an adjunct tool to describe what 180 minutes of RI might look like from the patient's perspective, sample scenarios were created and shared as a resource to support stroke RI education.

Copy of resource: <http://ontariostrokenetwork.ca/stroke-rehabilitation-resource-centre/wp-content/uploads/sites/2/2014/01/Examples-of-Rehabilitation-Intensity.pdf>

Priority 1, Deliverable d): Provision of support for CIHI education sessions and feedback process

CIHI launched "Rehabilitation Time" metrics as mandatory elements for April 2015 for Ontario. In February 2015, they provided a webinar for NRS coordinators to share context and details about the new data elements. To support this education, the RI PIWG participated in the webinar to deliver a presentation on stroke RI, to support the discussion period and to address questions that were submitted to CIHI.

Copy of resource: http://ontariostrokenetwork.ca/stroke-qbp-resource-centre/wp-content/uploads/sites/2/2014/01/CIHI-Presentation-Rehab-Intensity-Feb-12-2015_revised-March-2016.pdf

Priority 1, Deliverable e): Development of a provincial slide deck to support rehabilitation intensity data collection by front line staff

A PowerPoint presentation was developed and disseminated to the OSN Regional Rehabilitation Coordinators in order to support local conversations and questions within their regions. For a copy of the educational slide deck, see Appendix E.

Priority 1, Deliverable f): Development of an OSN Rehabilitation Intensity Communiqué

A communication document was developed to provide further clarification to stakeholders regarding the intentions of RI data collection and reporting in Ontario.

This resource was disseminated to stakeholders in March 2015.

Copy of resource: <http://ontariostrokenetwork.ca/stroke-rehabilitation-resource-centre/wp-content/uploads/sites/2/2014/01/OSN-Rehabilitation-Intensity-Communique-March-2015.pdf>

Priority 2, Deliverable a): Development and implementation of 3 OTN videoconference/webcast education sessions

Three OTN videoconference/webcast education sessions were planned to support the implementation of stroke RI best practice:

1) Towards 180 Minutes a Day: One Step at a Time

Presented by Janine Theben, Mike Gardner, Andrea Guth, Joan Ruston Berge, and Jennifer Shaffer on January 13, 2016 (Event #: 50924748) - **Handout**

Objectives:

- Share key messages from a stroke survivor's perspective on rehabilitation intensity
- Share ideas and strategies used by three organizations within Ontario to support Rehabilitation Intensity implementation
- Identify where to access current rehabilitation intensity resources

2) Stroke Rehabilitation Intensity Education Session

Presented by Beth Linkewich on November 18, 2015 (Event #: 47527787) - **Handout**

Objectives:

- Define rehabilitation intensity
- Discuss the rationale for collecting data (NRS Rehabilitation Time)
- Apply rehabilitation intensity from the patient perspective into practice
- Review the rehabilitation intensity provincial survey results
- Give examples of what activities are included in rehabilitation intensity and which are not
- Identify where to access current rehabilitation intensity resources

3) Every Minute Counts – Stroke Rehabilitation Intensity

Presented by Beth Linkewich on October 20, 2014 (Event #: 37425077) - **Handout**

Objectives:

- Provide context about why rehabilitation intensity is important
- Share an overview of the provincial work and resulting definition of rehabilitation intensity
- Briefly highlight how we will be measuring rehabilitation intensity
- Discuss opportunities to increase rehabilitation intensity to align with best practices

These presentations are also available via archived webcast and can be viewed through the Ontario Telemedicine Network website.

Rehabilitation intensity resources (handouts, frequently asked questions, etc.) associated with each of these presentations were posted on the OSN website under Clinical Tools and Resources for Implementation: Inpatient Rehabilitation.

Priority 2, Deliverable b): Development of rehabilitation intensity newsletters

Two newsletters were produced over the course of 2015. The first newsletter was released in July and the second newsletter was released in December. These were disseminated by the OSN Regional Rehabilitation Coordinators to all stakeholders within their regions who were collecting RI data or had implemented initiatives to improve RI provision.

Each newsletter's first page contained a 'Myth Busting' section, "Things to remember when collecting and reporting RI data" section, and a highlighted box that indicated the date and time for the next RI videoconference. The July newsletter also included initial results from the Provincial Rehabilitation Intensity Survey, "Common Challenges and Change Ideas" and "Key Enablers". Under the Next Steps section, the Toronto Stroke Networks' Virtual Community of Practice (VCoP) was highlighted as a useful tool for clinicians to problem solve and brainstorm. The December RI Newsletter also included common questions from clinicians on what to include or what not to include in the collection of RI data.

Copy of resources:

<http://ontariostrokenetwork.ca/stroke-gbp-resource-centre/stroke-rehabilitation-resource-centre/clinical-tools-and-resources-for-implementation/clinical-tools-resources-implementation-patient-rehabilitation/>

Priority 2, Deliverable c): Development of stroke rehabilitation intensity pocket cards

A pocket card highlighting the definition of RI and the four guiding questions was developed to assist frontline therapists and therapy assistants in determining which activity to include in the collecting of RI.

The pocket card template was provided to OSN members to distribute within their regions and was posted on the OSN website under the Stroke Quality Based Procedures Resource Centre. The pocket card was also disseminated to stakeholders at the 2015 Canadian Stroke Congress OSN booth.

Copy of resource:

<http://ontariostrokenetwork.ca/stroke-qbp-resource-centre/wp-content/uploads/sites/2/2014/01/OSN-Stroke-Rehab-Intensity-Pocket-Card-2015.pdf>

Priority 2, Deliverable d): Development of an engagement strategy for the Virtual Community of Practice (VCoP)

A RI discussion forum was started on the Toronto Stroke Networks' VCoP. This forum was monitored weekly by a member of the RI PIWG for follow up to any questions posted. In addition, a one-page information sheet was created to provide OSN Regional Rehabilitation Coordinators and clinicians with information on the top features of the VCoP, how to use it and how to access it. OSN Regional Rehabilitation Coordinators were encouraged to ask clinicians who had questions regarding RI data collection or implementation to become a member of the VCoP and post their questions within the forum. The VCoP was also highlighted under the Next Steps section of the July RI Newsletter in order to promote the VCoP further. During the 2015 Canadian Stroke Congress, a laptop was set up to demonstrate the features of the VCoP and visitors were encouraged to sign up.

Copy of resource: <http://ontariostrokenetwork.ca/stroke-qbp-resource-centre/wp-content/uploads/sites/2/2014/01/Virtual-Community-of-Practice-VCoP-Information-Sheet.pdf>

Priority 2, Deliverable e): Development of a tool that summarizes literature of best available evidence that supports rehabilitation intensity

A Rehabilitation Intensity Literature Review resource was created to provide a summary of peer-reviewed literature or best available evidence that supports RI. This resource was created through a comprehensive process which included developing a primary list of 350 citations using key terms, using inclusion/exclusion criteria to filter by reading of titles, abstracts, and full articles. The remaining articles were then critically appraised based on level of evidence. This literature review resource will be available on the OSN website within the summer of 2016.

Priority 2, Deliverable f): Dissemination of resources using a multi-pronged approach

It was identified that a multi-pronged approach would be useful to have the furthest reach to administration, decision support teams, NRS coordinators, and frontline clinicians. After consultation with the Communications Manager for the OSN, the following methods were used at various times during the year to share messaging: 1) Direct email via OSN Regional Rehabilitation Coordinators; 2) Posting on the OSN website; 3) OSN videoconference and webcast sessions including archived webcasts; 4) Promotion of materials and events through the OSN e-Bulletin; 5) Posting on the TSNs' VCoP; and 6) Materials and representatives available at the OSN booth at the

2015 Canadian Stroke Congress (including Twitter promotion) . The primary resource where all materials can be found will be the public OSN website.

Priority 2, Deliverable g): Development of a whiteboard video on rehabilitation intensity

The RI PIWG decided that a quick, informative message regarding rehabilitation intensity would be a useful tool to promote the concept in various media and settings. A small subgroup set out to create a short “Whiteboard Video” for this purpose with the content aligning with the previously mentioned Pocket Cards. A draft outline was approved by the group and was turned into a full script to be paired with visual images representing the elements of rehabilitation intensity. Patrick Moore, Communications Manager for the OSN, produced the video using specific software that synchronized the script, images, voice-over and music into a catchy 2-minute video that is available on the OSN website: <http://ontariostrokenetwork.ca/stroke-qbp-resource-centre/stroke-rehabilitation-resource-centre/clinical-tools-and-resources-for-implementation/clinical-tools-resources-implementation-patient-rehabilitation/>

On YouTube, the location for the video is:
<https://www.youtube.com/watch?v=5wF3KIYdttl>

Priority 3, Deliverable a): Development of an implementation survey to evaluate resource needs to support implementation of rehabilitation intensity data collection

In 2015, a 12-item electronic survey was developed by the RI PIWP group to evaluate the experience of clinicians three weeks post implementation and inform ongoing education and development. The survey was administered at one pilot site, revised based on pilot data, and distributed via OSN Regional Rehabilitation Coordinators to 48 organizations that submit RI data to the NRS in Ontario. Site-specific data were analyzed using descriptive statistics as well as thematic analysis. Poster featured a current state of how RI is being collected (through the workload measurement system or by manual tracking), clinicians’ experiences in collecting RI (challenges and enablers to RI implementation), and resource needs to support RI data collection.

Overall, results were used to inform ongoing implementation and resource development, and were shared at the 2015 Canadian Stroke Congress, 2015 Health Quality Transformations Conference, and the 2016 International Stroke Conference. For a listing of presentations, please refer to Appendix F.

Priority 3, Deliverable b): Information and development of analysis plan

- FY 2015/16 NRS data is expected in Fall 2016 for provincial analysis.
- Data will be assessed for completeness and analysed overall for RCG1 and by RPG groups.
- RI intensity will be calculated in two ways:

1. **Actual average RI** = Sum of all professional and assistant time divided by total active LOS days
2. **Adjusted average RI** = Actual assistant minutes **or** max assistant minutes** + professional minutes/ active LOS days

**max assistant minutes = total RI for each patient * .33

Priority 3, Deliverable c): Responding to emerging data collection and analysis needs

- MOHLTC's data quality reports on data completeness have been shared with all OSN Regional Rehabilitation Coordinators.
- OSN Regional Rehabilitation Coordinators connected with their respective sites with low or 0% of records to explore reasons for low quality and strategies needed to improve data collection.
- If any Rehabilitation Time field is left blank, the entire record is dropped and will not be included in CIHI or OSN's analyses. OSN Regional Rehabilitation Coordinators have been sharing or will be sharing this information with their respective sites to encourage quality assurance.

Priority 3, Deliverable d): Establishment of data quality targets

At least 80% data completeness across sites and 98% data completeness provincially.

Priority 3, Deliverable e): Reviewing the quality of the data that has been submitted

- MOHLTC's data quality reports have been shared with all OSN Regional Rehabilitation Coordinators to provide site specific support as required.
- A quality assurance framework was developed by Toronto Stroke Networks' stakeholders and shared via OSN Regional Rehabilitation Coordinators to support ongoing monitoring of data quality.

Priority 3, Deliverable f): Identification of opportunities for reporting and sharing data in a meaningful way

- See above.
- Site specific RI will be calculated once Institute for Clinical Evaluative Sciences has NRS database in-house.
- Variance will be reported provincially and regionally.
- Findings will be shared with the RI PIWP group, SEQC and SEQC-Knowledge Translation and Implementation Sub-Committee.
- Results of year one data will be reviewed and utilized to inform inclusion in Stroke Report Cards.
- In collaboration with CIHI, opportunities to share initial results will be identified.

Summary of Accomplishments

The RI PIWG was successful in achieving most of the deliverables set out in the group's work plan. One of the key factors to success was the creation of multiple resources (detailed above) that were disseminated through a multi-pronged approach. Another key factor was the group's approach in providing opportunities for stakeholders to inform the development of these resources, which led to engagement of stakeholders within the change process and the adaptation of these resources to meet the needs of each region. As a result, the group was able to achieve their purpose of supporting rehabilitation programs and integrated stroke units in Ontario to provide greater therapy intensity and to develop a standard approach to provincial implementation of stroke RI data collection.

Limitations

Limitations of this work include the one-year implementation and evaluation timeframe and the resulting inability to monitor and assess the long term impact on: clinical practice changes, novel service delivery models, and organizational reallocation of resources. Resources will be required to ensure the ongoing accuracy, collection and reporting of RI data over time. The focus on collecting RI data makes the space/time for clinical best practice but does not directly include building capacity for best practice stroke interventions within that time.

Future Considerations

Stroke RI is a key component of delivering best practice stroke care for patients in a rehabilitation setting. The measurement of RI and submission of Rehabilitation Time data through the NRS are new processes and will require ongoing support and monitoring to ensure good data quality. The work of the RI PIWG has set the stage for measuring RI and has increased the awareness of the goal to provide 180 minutes of stroke rehabilitation per day for each patient.

Additional considerations for ongoing work include:

- An evaluation plan to determine if the tools and resources created were used by regions to support implementation of stroke RI and to assess the degree of value.
- Financial impact of RI on organizations
- Data collection and quality assurance – ongoing communication with decision support
- Impact on patient experience

To maintain some provincial focus and monitoring, the transition will be for the OSN Regional Rehabilitation Coordinators group to sustain dialogue and provide support and follow-up as needed within their respective regions. It is recommended that RI remain a

standing item on the agenda to enable collaboration, problem solving and further resource development for the next 6 months to 1 year or until the data has been stabilized and has progressed towards the QBP target.

List of Appendices

A	Members List
B	Provincial Integrated Work Plan – Rehabilitation Intensity
C	OSN Rehabilitation Intensity Provincial Integrated Work Plan Timeline
D	Location for Resources
E	OSN Stroke Rehabilitation Intensity Data Collection Educational Slide Deck
F	List of Oral and Poster Presentations