EVERY MINUTE COUNTS
- Stroke Rehabilitation Intensity -

Presentation prepared by the Ontario Stroke Network
Rehabilitation Intensity Working Group
February 12, 2015
Objectives

• To provide context on why Rehabilitation Intensity is important

• To share an overview of the provincial work and definition of Rehabilitation Intensity

• To share tips for overcoming common implementation challenges
Rehabilitation Intensity: Why is this important?
Why is Rehabilitation Intensity Important?

- More therapy means better outcomes
  - Daily therapy time by occupational therapy (OT), physiotherapy (PT), and speech-language pathology (S-LP) is significantly correlated with gains in activities of daily living, cognition, mobility and overall functional improvement
  - < 3 hours/day significantly lowers total functional gain as compared to ≥ 3 hours per day
    (Wang et al., The American Academy of Physical Medicine and Rehabilitation 2013;5:122-128; Foley et al., Disability & Rehabilitation 2012;34(25):2132-2138)

- Core therapies more sensitive to intensity
  - OT, PT, S-LP have been shown to be most sensitive to intensity
    (Wang et al., The American Academy of Physical Medicine and Rehabilitation 2013;5:122-128)

- Therapy is cost-effective
  - Small proportion of total inpatient rehab hospital budget is spent on core therapies (<20%)
  - Positive impact on length of stay (LOS)
Minutes Matter…

- Actual direct therapist-patient time and time spent in activation activities is important
- CERISE Trial
  - 4 European Rehab Centres, compared motor and functional recovery
  - Gross motor and functional recovery was better in centres with more direct therapy time (166 min)
  - Differences in therapy time not attributed to differences in patient/staff ratio (similar staffing)
    *De Wit et al.,* *Stroke* 2007;38:2101-2107

- Earlier access to and greater intensity of rehab is linked with improved functional recovery and reduced LOS
  *(E-Stroke Referral System data 2009/10)*
Even though there is evidence that increased activity and environmental stimulation is important to neurological recovery ...

- Patients spend most of their day:
  - inactive (48%),
  - alone (54%) or
  - in their bedroom (57%).

(West & Bernhardt, Stroke Research and Treatment 2012; 2012: Article ID 813764: 1-13)
Evaluation Opportunity

• 4 years ago the Ontario Stroke Network Stroke Evaluation and Quality Committee
  • Identified Rehabilitation Intensity as a important indicator of system efficiency and effectiveness
  • Included on the Ontario Stroke Report Card

GAP: Rehabilitation Intensity
Quality-Based Procedures

- Quality-Based Procedures: Clinical Handbook for Stroke includes Rehabilitation Intensity
  - As a recommended best practice, and
  - As a recommended performance indicator of appropriate stroke rehabilitation

*(Quality-Based Procedures: Clinical Handbook for Stroke, Health Quality Ontario & Ministry of Health and Long-Term Care, 2013)*
Ontario Stroke Network (OSN) Development Work
Provincial Review and Stakeholder Engagement

• Stakeholders included:
  • Experts in stroke care, stroke leaders, clinicians, administrators, decision support and health records, CIHI, MOHLTC, and regional stroke network personnel

• Review encompassed:
  • Rehabilitation Intensity definition
  • Technical Feasibility

• Recommendations made – provincial working group formed
Definition of Rehabilitation Intensity

• **Rehabilitation Intensity*** is defined as:
  - The amount of time that a **patient** is engaged in active, goal-directed, face-to-face rehabilitation therapy, monitored or guided by a therapist, over a seven day/week period.
  - *Physical, functional, cognitive, perceptual and social goals to maximize the patient’s recovery*

Measuring Rehabilitation Intensity in NRS:
# minutes of Rehabilitation Intensity (defined above) for OT, PT, S-LP, OTA, PTA, CDA

*Definition established as part of the OSN Rehabilitation Intensity Project through literature review, stakeholder consultation, and expert consensus.*
Further Defining Rehabilitation Intensity

- An individualized treatment plan involving a **minimum** 3 hours of direct task-specific therapy per day per patient by the core therapies, for **at least** 6 days a week
- Includes core therapies – occupational therapy (OT), physiotherapy (PT), speech-language pathology (S-LP)
- Does not include group therapy
- Maximum of 33% of the total therapy time with therapy assistants*
- Documentation of time from the patient perspective
- Co-treatment time split between the treating therapists
- If one core therapy is not required, then more time is allocated to the other core therapies

* occupational therapy assistant (OTA), physiotherapy assistant (PTA), or communicative disorders assistant (CDA)
Co-Treatment and Collaborative Treatment

- **Co-treatment** of 2 treating therapists
  - e.g., In a 1-hour session, both the PT and OT record only 30 min each

- **Co-treatment** of 2 therapy assistants
  - e.g., In a 1-hour session, both the OTA and PTA record only 30 min each

- **Collaborative treatment** involving a therapist and therapy assistant
  - e.g., In a 1-hour session, the PT records 1 hour and the PTA does not record his/her time
Adjuncts to Rehabilitation Intensity

• Stroke best practices suggest that all patients should receive rehabilitation therapy within an active and complex stimulating environment
  
  *(Canadian Best Practice Recommendations for Stroke Care 2013)*

• Adjuncts include: nursing, recreation therapy, social work, group therapy, volunteer programs, independent practice etc.

• Other disciplines and programming play an integral role in the rehabilitation environment and can contribute significantly to patient recovery. However, this time is not included in the Rehabilitation Intensity data and requires more research
How Do We Measure Rehabilitation Intensity?

• **Technical Feasibility**
  - Workload Measurement Systems
    - Add data field(s)
  - Requires a culture shift – time PATIENT spends in therapy, not the time the THERAPISTS spend with the patient
  - Different metric than traditional workload measurement
Factors to consider when implementing Rehabilitation Intensity data collection
What is needed to support Rehabilitation Intensity data collection?

1) Adaptation of your current workload measurement system (WMS)

2) Staff education on the new data elements and local process for Rehabilitation Intensity data collection

3) Transfer of information from your WMS to the National Rehabilitation Reporting System (NRS)
Adaptation of your current WMS:
Process steps to consider

- Identify key stakeholders (e.g., clinical, decision support and information management leads)
- Input from clinical team into adaptation of WMS
- Determine if WMS can capture stroke patient time spent in therapy
- Develop plan to add or modify data field(s)
- If not using an electronic WMS, consider development of manual data collection form
- Ensure that the new data elements are linked to the 6 NRS data fields
New data fields were added to support Rehabilitation Intensity data collection.
Example of a modified WMS screen shot from St. Joseph’s Care Group (InfoMed-Promiso)

Minutes of Rehabilitation Intensity time will be entered here.
Staff education on the new data elements and local process for data collection

- Local education sessions to increase the clinical team’s awareness of the changes
- Data quality checks / audits in place to ensure accuracy and consistency in data collection amongst front line staff
- Provision of feedback / data to front line staff to ensure data accuracy and consistency of data collection
- Utilization of CIHI and OSN resources
  - Resource Guide
  - FAQs for clinicians
  - Standardized education template (MS PowerPoint)
    - Including clinical examples
Key areas to include for staff education

- Context on the importance of Rehabilitation Intensity
- Rehabilitation Intensity definition
- Local process for data collection (clinical input and abstraction to NRS)
- Clinical examples to support staff learning
## Clinical Examples

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Rehab Intensity ?</th>
<th>Data recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>730 - 800</td>
<td>Nurse provides cueing for morning breakfast and grooming activities</td>
<td>No – nursing activities not measured as part of the metric, nursing support and practice encouraged above the goal of 3 hours of therapy/day</td>
<td>NA</td>
</tr>
<tr>
<td>830 - 900</td>
<td>OTA with patient for therapeutic dressing activities</td>
<td>Yes</td>
<td>OTA – 30 minutes</td>
</tr>
<tr>
<td>915 - 1015</td>
<td>Transfers and gait training with PT and OT jointly</td>
<td>Yes</td>
<td>OT - 30 minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Co-treatment example</strong></td>
<td>PT - 30 minutes</td>
</tr>
</tbody>
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<td>1045 - 1100</td>
<td>Patient practicing speech exercises in room with IPAD program</td>
<td>No – no therapist or therapy assistant present with patient</td>
<td>NA</td>
</tr>
<tr>
<td>1100 - 1200</td>
<td>Pet Therapy with Volunteers in Lobby</td>
<td>No – no therapist or assistant present with patient</td>
<td>NA</td>
</tr>
<tr>
<td>1330 - 1400</td>
<td>Collaborative treatment: Upper extremity /functional activity exercises with OT and OTA</td>
<td>Yes</td>
<td>Collaborative treatment example</td>
</tr>
</tbody>
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<tr>
<td>1415 – 1500</td>
<td>Speech therapy session with S-LP</td>
<td>Yes</td>
<td>S-LP – 45 min</td>
</tr>
<tr>
<td>1515 - 1530</td>
<td>Social Work meeting at bedside with patient and family</td>
<td>No</td>
<td>NA</td>
</tr>
<tr>
<td>1600 - 1630</td>
<td>Balance activities with PT for 15 min followed by 15 min on Nu-Step® in PT gym on unit while PT is working with another patient</td>
<td>Yes (time in balance activities would be included)</td>
<td>PT – 15 min</td>
</tr>
<tr>
<td>1900 - 1930</td>
<td>Mobility Exercises with Volunteers</td>
<td>No</td>
<td>NA</td>
</tr>
</tbody>
</table>
Transfer of Information from Your WMS to the NRS: What is Required?

- Understanding the new data elements (see CIHI information)
- Rehabilitation intensity data collected in WMS
  - Manual extraction from WMS
  - Input into NRS software platform
    - May be possible to work with vendors or local experts to bridge the data from WMS to NRS
- Creation and running of reports
- Data quality checks / audits (to avoid translation errors, etc.)
- Adequate time for training staff and data quality checks
As Rehabilitation Intensity is a recommended QBP indicator and an indicator on the Ontario Stroke Report Card, the MOHLTC and OSN will review these data to monitor the current state of Rehabilitation Intensity provided within Ontario. At this time, these data elements are not linked to funding.

Organizations should strive to provide a minimum of 3 hours of Rehabilitation Intensity time per day, but only the reporting of Rehabilitation Intensity data to the NRS will be mandatory as of April 1st 2015.

Collection of the 6 data elements should commence as soon as possible after hospital staff have been trained and process for collecting rehab intensity has been put in place.
For any inquiries related to rehab intensity, please contact your OSS Regional Rehabilitation Coordinator.

For your OSS region, please view this map.

Next slide will provide a listing of all Regional Rehabilitation Coordinators for each OSS region.
# Listing of all OSS Regional Rehabilitation Coordinators

<table>
<thead>
<tr>
<th>NAME</th>
<th>EMAIL</th>
<th>PHONE</th>
<th>FACILITY/SITE/REGION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beth Nugent</td>
<td><a href="mailto:bnugent@toh.on.ca">bnugent@toh.on.ca</a></td>
<td>613-798-5555 x14430</td>
<td>Champlain Regional Stroke Network</td>
</tr>
<tr>
<td>Janine Theben</td>
<td><a href="mailto:janine.theben@trilliumhealthpartners.ca">janine.theben@trilliumhealthpartners.ca</a></td>
<td>905- 848-7580 x 5683</td>
<td>West GTA Stroke Network</td>
</tr>
<tr>
<td>Shelley Huffman</td>
<td><a href="mailto:huffmas1@kgh.kari.net">huffmas1@kgh.kari.net</a></td>
<td>613-549-6666 x 6841</td>
<td>Stroke Network of Southeastern Ontario</td>
</tr>
<tr>
<td>Deb Willems</td>
<td><a href="mailto:deb.willems@lhsc.on.ca">deb.willems@lhsc.on.ca</a></td>
<td>519- 685-4292 x 42681</td>
<td>Southwestern Ontario Stroke Network</td>
</tr>
<tr>
<td>Donelda Sooley</td>
<td><a href="mailto:SooleyD@rvh.on.ca">SooleyD@rvh.on.ca</a></td>
<td>705- 728-9090 x 46312</td>
<td>Central East Stroke Network</td>
</tr>
<tr>
<td>Donna Cheung</td>
<td><a href="mailto:cheungd@smh.ca">cheungd@smh.ca</a></td>
<td>416- 864-6060 x 3832</td>
<td>South East Toronto Stroke Network</td>
</tr>
<tr>
<td>Esmé French</td>
<td><a href="mailto:frenche@tbh.net">frenche@tbh.net</a></td>
<td>807- 684-6498</td>
<td>Northwestern Ontario Regional Stroke Network</td>
</tr>
<tr>
<td>Jenn Fearn</td>
<td><a href="mailto:jfearn@hsnsudbury.ca">jfearn@hsnsudbury.ca</a></td>
<td>705- 523-7100 x 1718</td>
<td>Northeastern Ontario Stroke Network</td>
</tr>
<tr>
<td>Jocelyne McKellar</td>
<td><a href="mailto:jocelyne.mckellar@uhn.ca">jocelyne.mckellar@uhn.ca</a></td>
<td>416- 603-5800 x 3693</td>
<td>Toronto West Stroke Network</td>
</tr>
<tr>
<td>Nicola Tahair</td>
<td><a href="mailto:nicola.tahair@uhn.on.ca">nicola.tahair@uhn.on.ca</a></td>
<td>416- 690-3660</td>
<td>Toronto Stroke Networks</td>
</tr>
<tr>
<td>Sylvia Quant</td>
<td><a href="mailto:sylvia.quant@sunnybrook.ca">sylvia.quant@sunnybrook.ca</a></td>
<td>416-480-6100 x 7424</td>
<td>North &amp; East GTA Stroke Network</td>
</tr>
<tr>
<td>Stefan Pagliuso</td>
<td><a href="mailto:pagliuso@hhsc.ca">pagliuso@hhsc.ca</a></td>
<td>905-527-4322 x 44127</td>
<td>Central South Regional Stroke Network</td>
</tr>
</tbody>
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Thank You!

Questions?

- Members of OSN Rehabilitation Intensity Working Group:
  - Beth Linkewich (Chair), Sylvia Quant, Donelda Sooley, Janine Theben, Deb Willems, Shelley Huffman, Amy Maebrae-Waller, Judy Murray, Jennifer White, Jennifer Fearn, and Ruth Hall