Appendix E

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Stroke Rehabilitation Intensity

February 2015

These slides were developed by the Ontario Stroke Network Rehabilitation Intensity Working Group and are meant to be customized and used to support clinical implementation of Rehabilitation Intensity data collection.

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Agenda

- Why Rehabilitation Intensity is important?
- Definition of Rehabilitation Intensity
- How will Rehabilitation Time be recorded
- Clinical examples

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Why is Rehabilitation Intensity Important?

- Patients spend 60% of their day alone and only 13% of their day on therapeutic activities *(Bernhardt et al, 2004)*
- The earlier therapy starts the better *(Kalra et al., 1994)*
- There is a positive relationship between scheduled therapy time and outcomes *(Lohse et al., 2014)*
- Higher intensity therapy is associated with better outcomes and reduced length of stay *(Jette et al., 2005)*

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Why is Rehabilitation Intensity Important?

- 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 *(Wang et al., 2013)*

- Core therapies more sensitive to intensity

  Daily therapy time by OT, PT, & S-LP was significantly correlated with gains in ADLs, cognition, mobility & overall functional improvement *(Wang et al., 2013)*

- Patient to staff ratio was not the main factor contributing to differences in therapy time provision *(De Wit et al., 2007)*

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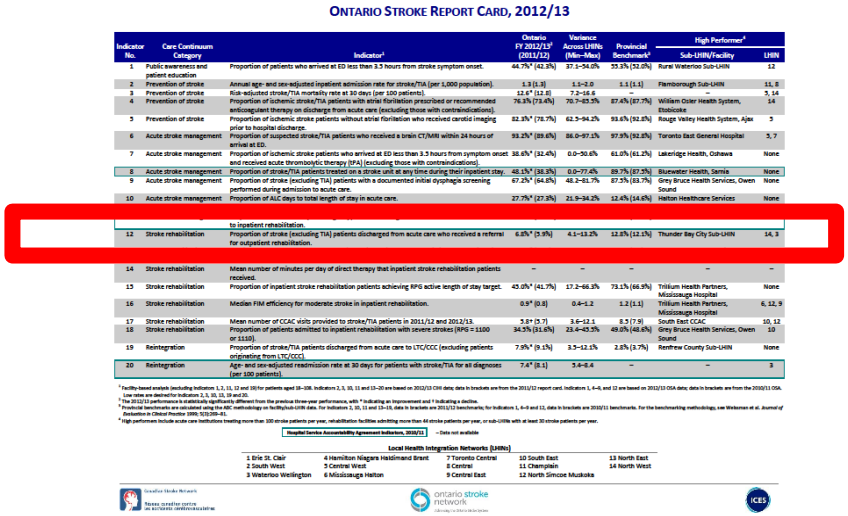
Evaluation Opportunity

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



ONTARIO STROKE REPORT CARD, 2012/13

Indicator No.	Care Continuum Category	Indicator[1]	Ontario FY 2012/13[2] (2011/12)	Variance Across LHINs (Min–Max)	Provincial Benchmark[3]	High Performer[4] Sub-LHIN/Facility	High Performer[4] LHIN
1	Public awareness and patient education	Proportion of patients who arrived at ED less than 3.5 hours from stroke symptom onset.	44.7%* (42.3%)	37.1–54.6%	55.3% (52.0%)	Rural Waterloo Sub-LHIN	12
2	Prevention of stroke	Annual age- and sex-adjusted inpatient admission rate for stroke/TIA (per 1,000 population).	1.3 (1.3)	1.1–2.0	1.1 (1.1)	Flamborough Sub-LHIN	11, 8
3	Prevention of stroke	Risk-adjusted stroke/TIA mortality rate at 30 days (per 100 patients).	12.6* (12.0)	7.2–16.6	–	–	5, 14
4	Prevention of stroke	Proportion of ischemic stroke/TIA patients with atrial fibrillation prescribed or recommended anticoagulant therapy on discharge from acute care (excluding those with contraindications).	76.3% (73.4%)	70.7–83.5%	87.4% (87.7%)	William Osler Health System, Etobicoke	14
5	Prevention of stroke	Proportion of ischemic stroke patients without atrial fibrillation who received carotid imaging prior to hospital discharge.	82.3%* (78.7%)	62.3–94.2%	93.6% (92.8%)	Rouge Valley Health System, Ajax	5
6	Acute stroke management	Proportion of suspected stroke/TIA patients who received a brain CT/MRI within 24 hours of arrival at ED.	93.2%* (89.6%)	86.0–97.1%	97.9% (92.8%)	Toronto East General Hospital	5, 7
7	Acute stroke management	Proportion of ischemic stroke patients who arrived at ED less than 3.5 hours from symptom onset and received acute thrombolytic therapy [tPA] (excluding those with contraindications).	38.6%* (32.4%)	0.0–50.6%	61.0% (61.2%)	Lakeridge Health, Oshawa	None
8	Acute stroke management	Proportion of stroke/TIA patients treated on a stroke unit at any time during their inpatient stay.	48.1%* (38.3%)	0.0–77.4%	89.7% (87.5%)	Bluewater Health, Sarnia	None
9	Acute stroke management	Proportion of stroke (excluding TIA) patients with a documented initial dysphagia screening performed during admission to acute care.	67.2%* (64.8%)	48.2–81.7%	87.5% (83.7%)	Grey Bruce Health Services, Owen Sound	None
10	Acute stroke management	Proportion of ALC days to total length of stay in acute care.	27.7%* (27.3%)	21.9–34.2%	12.4% (14.6%)	Halton Healthcare Services	None
12	Stroke rehabilitation	Proportion of stroke (excluding TIA) patients discharged from acute care who received a referral for outpatient rehabilitation.	6.8%* (5.9%)	4.1–13.2%	12.8% (12.1%)	Thunder Bay City Sub-LHIN	14, 3
14	Stroke rehabilitation	Mean number of minutes per day of direct therapy that inpatient stroke rehabilitation patients received.	–	–	–	–	–
15	Stroke rehabilitation	Proportion of inpatient stroke rehabilitation patients achieving RPG active length of stay target.	45.0%* (41.7%)	17.2–66.3%	73.1% (66.9%)	Trillium Health Partners, Mississauga Hospital	None
16	Stroke rehabilitation	Median FIM efficiency for moderate stroke in inpatient rehabilitation.	0.9* (0.8)	0.4–1.2	1.2 (1.1)	Trillium Health Partners, Mississauga Hospital	6, 12, 9
17	Stroke rehabilitation	Mean number of CCAC visits provided to stroke/TIA patients in 2011/12 and 2012/13.	5.8* (5.7)	3.6–12.1	8.5 (7.9)	South East CCAC	10, 12
18	Stroke rehabilitation	Proportion of patients admitted to inpatient rehabilitation with severe strokes (RPG = 1100 or 1110).	34.5% (31.6%)	23.4–45.5%	49.0% (48.6%)	Grey Bruce Health Services, Owen Sound	10
19	Reintegration	Proportion of stroke/TIA patients discharged from acute care to LTC/CCC (excluding patients originating from LTC/CCC).	7.9%* (9.1%)	3.5–12.1%	2.8% (3.7%)	Renfrew County Sub-LHIN	None
20	Reintegration	Age- and sex-adjusted readmission rate at 30 days for patients with stroke/TIA for all diagnoses (per 100 patients).	7.4* (8.1)	5.4–8.4	–	–	3

[1] Facility-based analysis (excluding Indicators 1, 2, 11, 12 and 19) for patients aged 18–108. Indicators 2, 3, 10, 11 and 13–20 are based on 2012/13 CIHI data; data in brackets are from the 2011/12 report card. Indicators 1, 4–9, and 12 are based on 2012/13 OSA data; data in brackets are from the 2010/11 OSA. Low rates are desired for Indicators 2, 3, 10, 11, 19 and 20.
[2] The 2012/13 performance is statistically significantly different from the previous three-year performance, with * indicating an improvement and † indicating a decline.
[3] Provincial benchmarks are calculated using the ARC methodology on facility/sub-LHIN data. For Indicators 2, 10, 11 and 13–19, data in brackets are 2011/12 benchmarks; for Indicators 1, 4–9 and 12, data in brackets are 2010/11 benchmarks. For the benchmarking methodology, see Wiebenson et al. *Journal of Evaluation in Clinical Practice* 2009; 5(3):200–01.
[4] High performers include acute care institutions treating more than 100 stroke patients per year, rehabilitation facilities admitting more than 44 stroke patients per year, or sub-LHINs with at least 30 stroke patients per year.

Hospital Service Accountability Agreement Indicators, 2010/11 – Data not available

Local Health Integration Networks (LHINs)

1 Erie St. Clair	4 Hamilton Niagara Haldimand Brant	7 Toronto Central	10 South East	13 North East
2 South West	5 Central West	8 Central	11 Champlain	14 North West
3 Waterloo Wellington	6 Mississauga Halton	9 Central East	12 North Simcoe Muskoka	

GAP: Rehabilitation Intensity

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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)

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Definition of Rehabilitation Intensity

Rehabilitation Intensity *

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

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

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Defining Rehabilitation Intensity

- An individualized treatment plan involving a **minimum 3 hours of direct task-specific therapy** per patient per day by the core therapies, for **at least 6 days a week**

- **Face-to- face treatment** provided by an occupational therapist (OT), physiotherapist (PT), speech-language pathologist (S-LP), occupational therapy assistant (OTA), physiotherapist assistant (PTA) and communicative disorders assistant (CDA)

- Documentation of time (in minutes) from the patient perspective

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Further Defining Rehabilitation Intensity

- Does not include group therapy
- Co-treatment time split between the treating therapists
- Maximum of 33% of the 3 hours/day with therapy assistants (OTA, PTA, CDA)
- If one core therapy is not required, then more time is required in the other core therapies to achieve 3 hours of intensive therapy per patient per day over the active length of stay

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"Rehabilitation Time" will be Added to the NRS

- Effective **April 1st, 2015 Ontario** facilities will be required to collect and submit "Rehabilitation Time" for **stroke patients discharged from inpatient rehabilitation or integrated stroke units**

- Rehabilitation Time data will be collected for:

  - OT
  - PT
  - S-LP
  - OTA
  - PTA
  - CDA

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Defining "Rehabilitation Time"

- For NRS data collection, "Rehabilitation Time" is the total time in minutes the patient spent in direct/active therapy with a therapist or therapy assistant over the patient's **active rehab length of stay (LOS)**

- Direct therapy refers to individual, **face-to- face treatment** that is guided or monitored by the therapist for the purposes of achieving therapy goals and maximizing recovery within an individualized treatment plan

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Defining Active Rehab LOS?

- The active rehab length of stay (LOS) is considered the number of days **between the date of admission to a rehabilitation bed and the date ready for discharge**.

- **This does not include service interruption days** or days waiting for discharge (alternative level of care days).

(adapted from Canadian Institute for Health Information, Tips for Coders: Capturing Service Interruptions in the National Rehabilitation Reporting System, pages 1-3)

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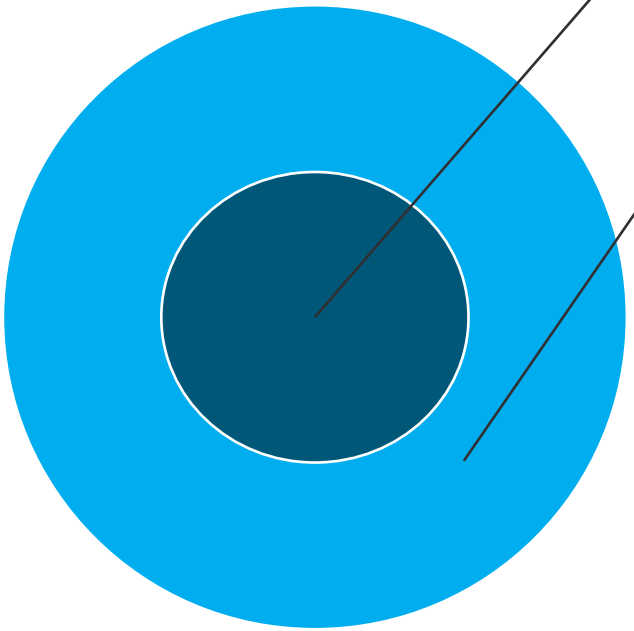
When Adding Up the Minutes…



Implementation of new NRS measures = starting point
Recognizing definitions, what is the current level of rehab intensity?

Rehab Intensity Best Practice Recommendations: *What can be achieved by setting your targets for performance?*

(Slide was adapted from the Rehabilitation Intensity CIHI webinar presentation that was presented on February 12th, 2015)

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Adjuncts to Therapy Captured in "Rehabilitation Time" Data Collection

- Stroke best practices suggest that all patients should receive rehabilitation therapy within an active and complex stimulating environment *(Dawson et al., 2013)* .
- Adjuncts to the 3 hours of core therapy 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 Time data collection and requires more research

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What is Included in "Rehabilitation Time" Data Collection?

- Any time (in minutes) that a patient engages in individualized, face-to-face treatment which is monitored and guided by a rehabilitation therapist (OT, PT, S-LP).

- If the PT, OT, or S-LP student is providing independent face-to-face, one-on-one intensive therapy, this time would be included in Rehabilitation Time data collection. Within the NRS, this time would be captured under PT, OT or S-LP categories, respectively.

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Is Assessment Included in "Rehabilitation Time" Data Collection?

- Yes, if the assessment meets the provincial definition for Rehabilitation Intensity.
- Time in assessment activities should be limited to what is necessary in order to ensure adequate time focused on therapeutic activities.
- Assessment activities should be integrated with therapeutic activities whenever possible.
- This includes initial assessments.

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Is Circuit Training Included in "Rehabilitation Time" Data Collection?

- Yes, if it provides individualized, face-to-face therapy aimed at helping the patient achieve their functional therapeutic goals.

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Is Group Therapy Included in "Rehabilitation Time" Data Collection?

- No. Time spent in group therapy is not included in the provincial definition as it is difficult to provide individualized task-specific treatment in a group setting.

- Group therapy is an important adjunct to face-to-face therapy that reinforces techniques learned in individual therapy and provides social interaction and support. As such, group therapy could be offered in addition to the 3 hours of intensive therapy per patient per day.

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Are Independent Exercises Included in "Rehabilitation Time" Data Collection?

- No, independent exercises such as Nu-Step®, arm/leg ergometry, independent ADL practice or GRASP exercises are not included in the provincial definition of Rehabilitation Intensity.

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Is Time Spent Educating Patients Included in "Rehabilitation Time" Data Collection?

- Yes, if it meets the provincial definition and the patient is actively engaged during the education session (e.g., education with the patient regarding transfer or gait training, swallowing, dysphagia management, etc.)

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What is Not Included in "Rehabilitation Time" Data Collection?

- Therapy that is not provided by the core therapies (e.g. recreational therapy, nursing activities, etc.)
- Clinical documentation time that does not actively engage the patient as per the Rehabilitation Intensity definition
- Group therapy
- Time spent in independent exercises (e.g. Nu-Step® exercises, arm ergometry, etc.)
- Education that does not relate directly to the patient's therapy goals (e.g. education about stroke in general)
- Time spent in patient and family conferences
- Other examples?

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Some Guiding Questions for Therapists and Therapy Assistants

- When determining whether your activity is included in Rehabilitation Intensity, please ask yourself the following questions:
    1) ***Was I assessing, monitoring, guiding or treating the patient face-to-face?***
    2) ***Was my activity with the patient one-on-one*?***
    3) ***Was the patient actively engaged in the activity throughout the session?***
    4) ***Were we working on things that would help the patient achieve his/her goal(s) and maximize his/her recovery?***

- If you answered **YES** to all questions: this activity would likely be included.
- If you answered **NO** to any of the questions: this activity would NOT likely be included.

* Although co-treatment or collaborative treatment sessions involve more than one therapist/therapy assistant, these sessions would be considered one-on-one if they align with the Rehabilitation Intensity definition and their time is split in half.

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Tips for Capturing the Time Spent Delivering Rehabilitation Intensity

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How will "Rehabilitation Time" be Recorded?

- Rehabilitation Time will be calculated based on the amount of face-to-face therapy time per stroke patient per day

- *[Please insert additional statements of where the Rehabilitation Time data will be collected at your facility]*

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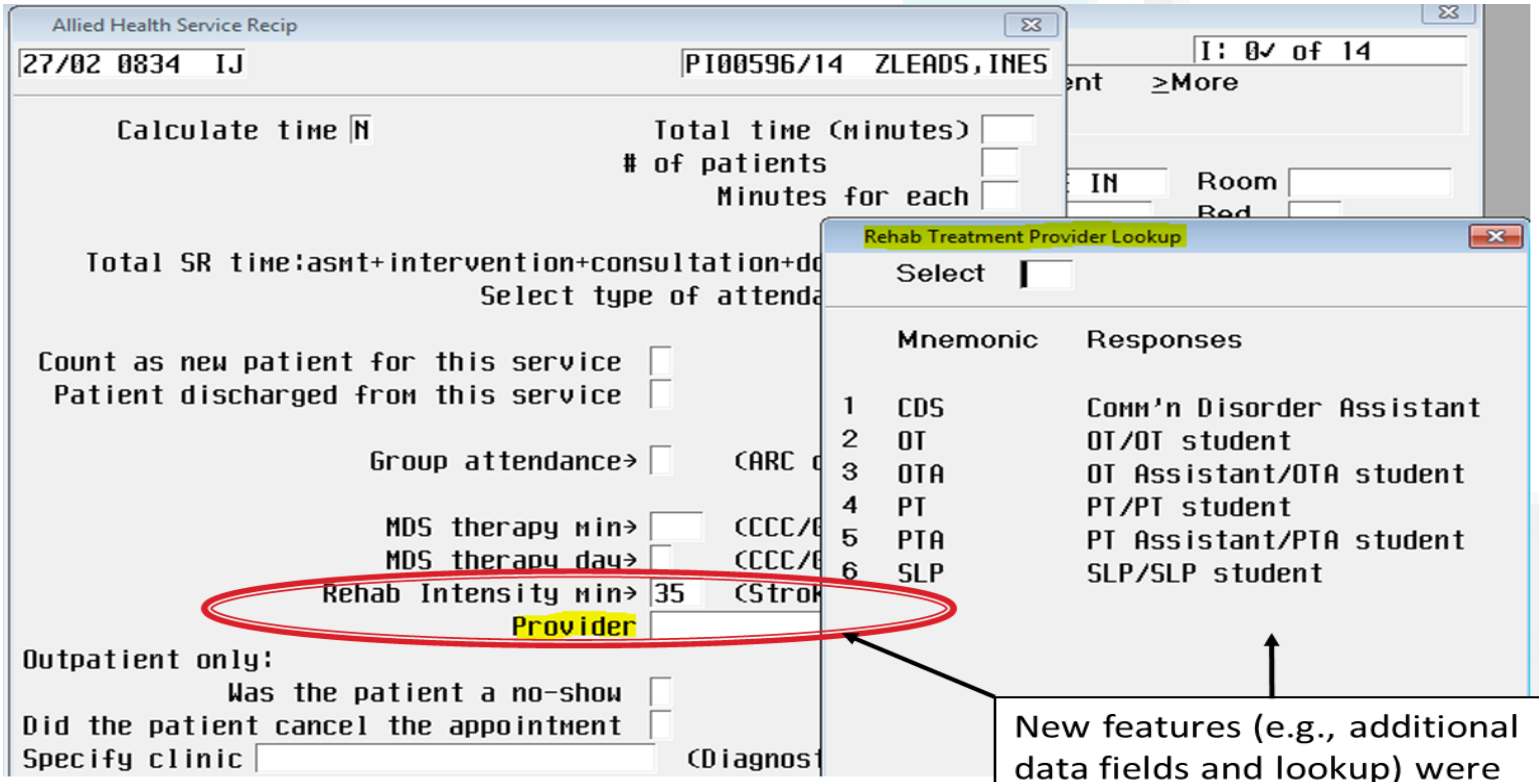
How Do I Collect the Data?

[Please insert your facility's workload measurement screen shot or a copy of your manual collection form here. Below is an example of a workload measurement screen shot from Lakeridge Health]



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How Do I Record Co-Treatment?

Co-treatment by 2 therapists:

- Time is split equally between the 2 therapists
- For example, a 60-minute session would be recorded as 30 minutes by the OT and 30 minutes by the PT

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How Do I Record Co-Treatment?

Co-treatment by 2 therapy assistants:

- Time is split equally between the 2 therapy assistants
- For example, a 60-minute session would be recorded as 30 minutes by each therapy assistant

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How Do I Record Collaborative Treatment?

Collaborative treatment with a therapist and therapy assistant:

- Time is **not** split
- The therapist records the total time the patient spent in therapy
- For example, a 60-minute collaborative therapy session by a PT and a PTA would be recorded as 60 minutes by the PT only

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How Do I Record Collaborative Treatment?

Collaborative treatment with a therapist and his/her student:

- Time is **not** split
- The therapist records the total time the patient spent in therapy
- For example, a 60-minute collaborative therapy session by a PT and a PT student would be recorded as 60 minutes by the PT only

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Clinical Examples *[This slide could include specific examples from your facility]*

Time	Activity	Rehab Intensity ?	Data Recorded
730 - 800	Nurse provides cueing for morning breakfast and grooming activities	No - nursing activities not measured as part of the metric, nursing support and practice encouraged above the goal of 3 hours of intensive therapy/day	Not applicable
830-900	OTA with patient for therapeutic dressing activities	Yes	OTA - 30 minutes
915 - 1015	Transfers and gait training with PT and OT jointly	Yes **Co-treatment example**	OT - 30 minutes PT - 30 minutes

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Clinical Examples *[This slide could include specific examples from your facility]*

Time	Activity	Rehab Intensity ?	Data Recorded
1045 - 1100	Patient practicing speech exercises in room with IPAD program	No - no therapist or therapy assistant present with patient	Not applicable
1100 - 1200	Pet Therapy with Volunteers in Lobby	No - no therapist or assistant present with patient	Not applicable
1330 - 1400	Collaborative treatment: Upper extremity /functional activity exercises with OT and OTA	Yes **Collaborative treatment example**	OT - 30 minutes

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Clinical Examples *[This slide could include specific examples from your facility]*

Time	Activity	Rehab Intensity ?	Data Recorded
1415 - 1500	Speech therapy session with S-LP	Yes	S-LP - 45 minutes
1515 - 1530	Social work meeting at bedside with patient and family	No	Not applicable
1600 - 1630	Balance activities with PT for 15 minutes followed by 15 minutes on Nu-Step® in PT gym on unit while PT is working with another patient	Yes (time in balance activities would be included) **Independent activity example : Time spent on the Nu-Step®**	PT - 15 minutes
1900 - 1930	Mobility Exercises with volunteers	No	Not applicable

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Resources

- Ontario Stroke Network (OSN) Resources:
  - "A Resource Guide to Support the Measurement of Rehabilitation Intensity in In-Patient Stroke Rehabilitation"
  - "Stroke Rehabilitation Intensity Frequently Asked Questions"
  - Resources are stored 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/

- A Rehabilitation Intensity Discussion Forum has been set up through the Toronto Stroke Network's Virtual Community of Practice (VCoP) to support clinicians and administrators (www.strokecommunity.ca)

- Canadian Institute for Health Information (CIHI) resources

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Questions?

[For this slide, you could include a hospital contact for further questions]

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Thanks for coming