Implementing a Coordinated Approach to Collecting Stroke Rehabilitation Intensity Data across Ontario

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Background

- Quality-Based Procedures for Stroke[1] recommend that persons with stroke receive a minimum of 3 hours of individualized inpatient rehabilitation intensity (RI) per day.
- As current databases do not capture patient therapy time, the Ontario Stroke Network (OSN) collaborated with the Ministry of Health and Long-Term Care and Canadian Institute for Health Information (CIHI) to capture RI within the National Rehabilitation Reporting System (NRS).
- Mandatory collection of stroke RI data in Ontario began April 1, 2015.
- The objective of this work was to develop a standard approach to support provincial implementation of stroke RI data collection.

Provincial Definition of Stroke Rehabilitation Intensity

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 time that a **patient** is engaged in active face-to-face treatment, which is monitored or guided by a therapist.

Rehabilitation Intensity entails:
- 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 six days per week
- Does not include groups
- Maximum of 33 percent of therapy time with therapy assistants
- Documentation of time from the patient perspective with co-treatment time split between the treating therapists

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

Methods

- In 2014, a provincial working group was struck to develop and implement a province-wide strategy to support RI data collection.
- A review of existing data gathered on workload measurement systems (WMSs) was conducted.
- Site interviews occurred at four hospitals.
- Pilot data was collected at one site.
- Based on the information gathered, resources were developed and disseminated by OSN Regional Rehabilitation Coordinators to all organizations** that report stroke RI data to the NRS.
- These OSN members also gathered feedback from their respective sites to identify emerging issues and inform implementation.
- An electronic survey was then administered to 48 sites that submit to the NRS three weeks post implementation to evaluate the clinicians' experiences in the uptake of RI data collection.

** Organizations that submit RI data to the NRS include freestanding or non-freestanding inpatient rehabilitation hospitals/programs/services and integrated stroke units.

Results

Based on site interviews, a process map (Figure 2) was developed to support modification of the 3 most commonly used WMSs. This process map included factors for clinical managers and decision support leads to consider when preparing their sites for RI collection and reporting.

**FIGURE 2: A process map to support RI data collection implementation.**
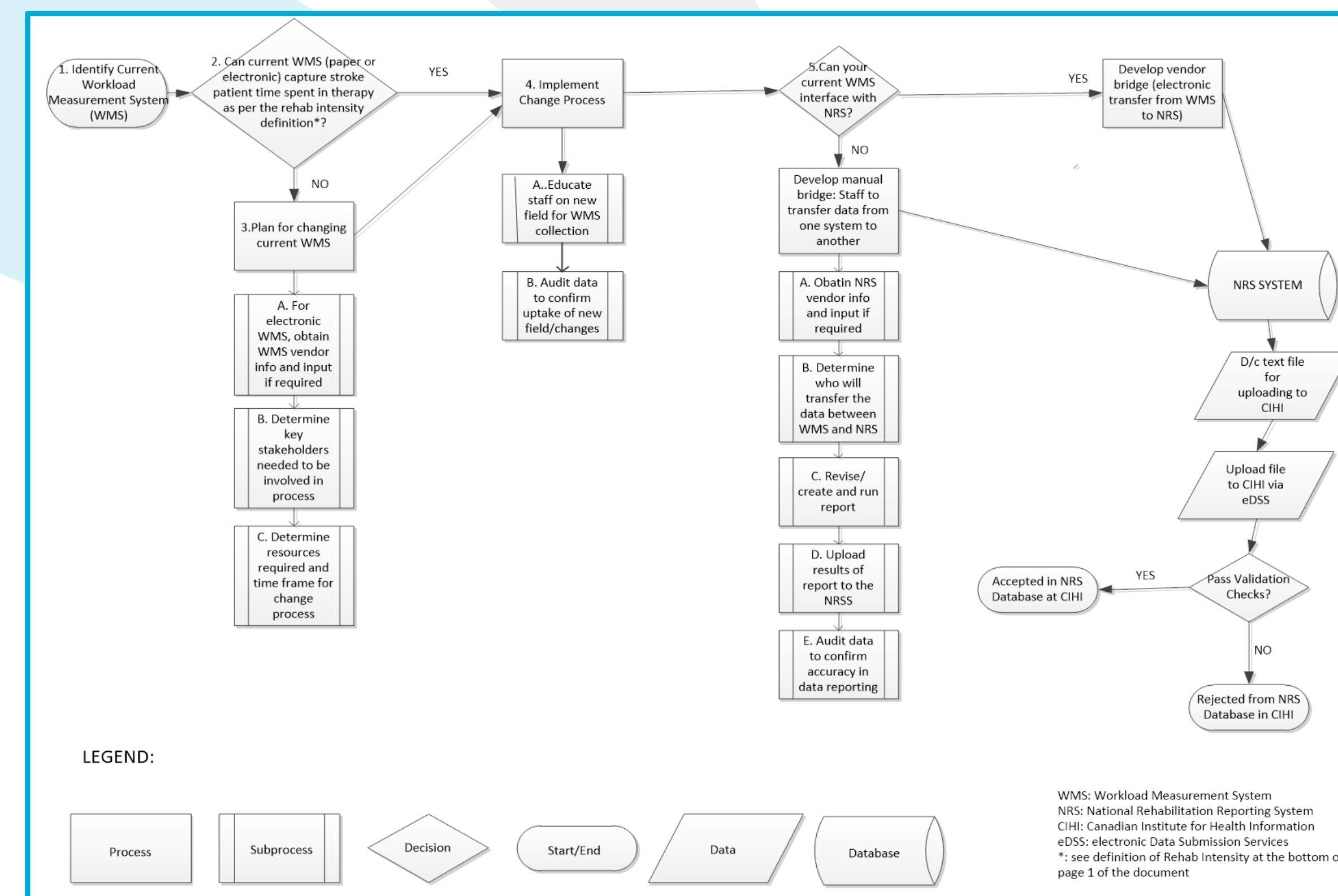
Site interview results also included a focus on sustainability, with the following suggestions:
1) Inclusion of staff, managers and senior leadership in the design and implementation of the WMS tool;
2) Data quality checks or audits in place to ensure:
   - Accuracy of data collection in the data being collected by front line staff;
   - Consistency in collection amongst front line staff; and
   - Confirmation that each step of the change process is not unintentionally impacting or skewing the data (i.e., not leading to translation errors or error in written code/formula);
3) Provision of feedback/data to front line staff to ensure data accuracy and consistency of data collection; and
4) Utilization of OSN or regional stroke network resources.

To further support emerging clinical needs in collecting RI data, guiding questions (Figure 3) and other resources were also developed by the group.

FIGURE 3: A Stroke Rehab Intensity Pocket Card was developed to support clinical implementation of RI data collection.
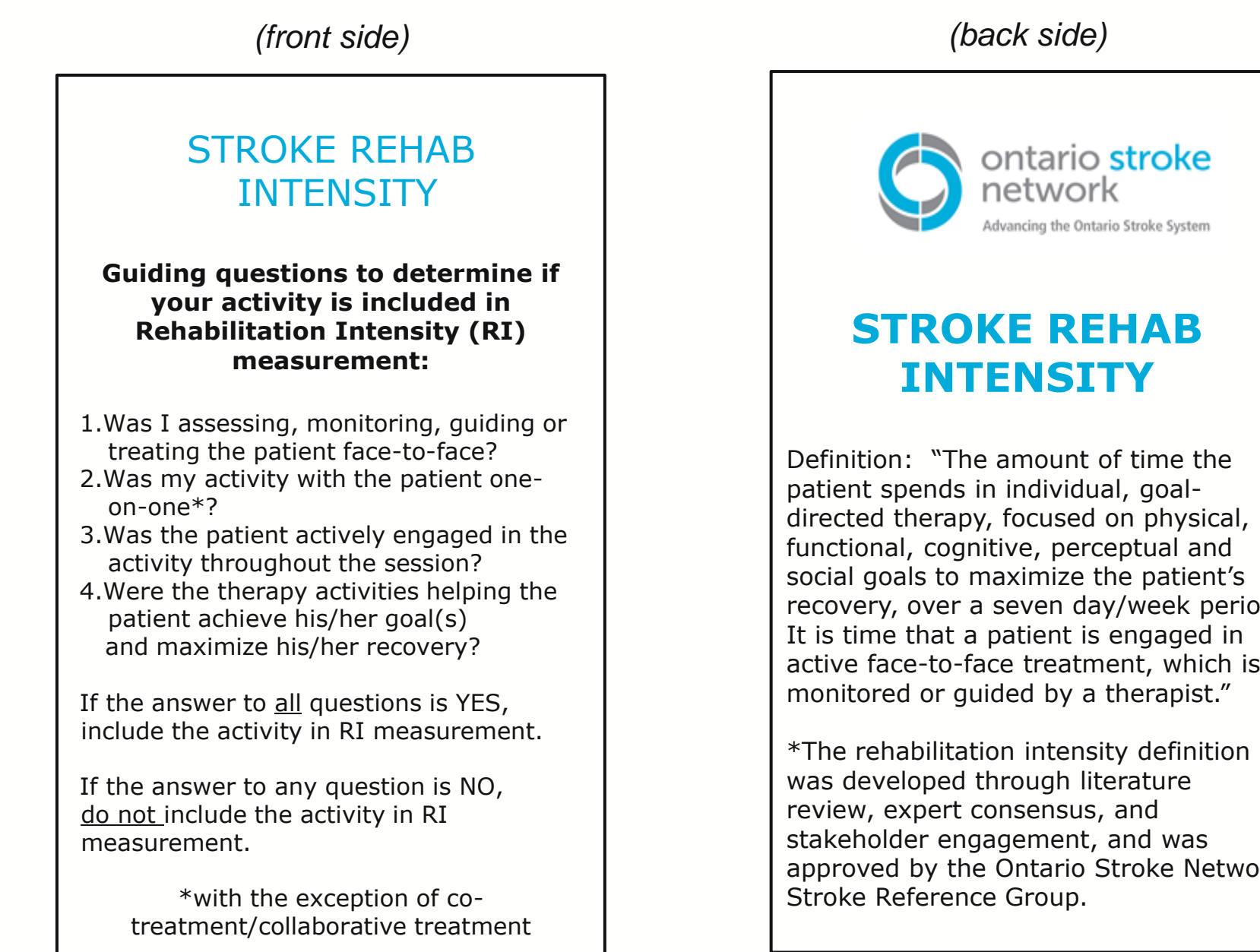
Current Mechanisms for Collecting RI Data

Of the 47 hospitals that responded to the survey, all but 2 sites were able to collect RI data for April 1, 2015, with 64% of sites collecting RI data using their WMS (Figure 4).
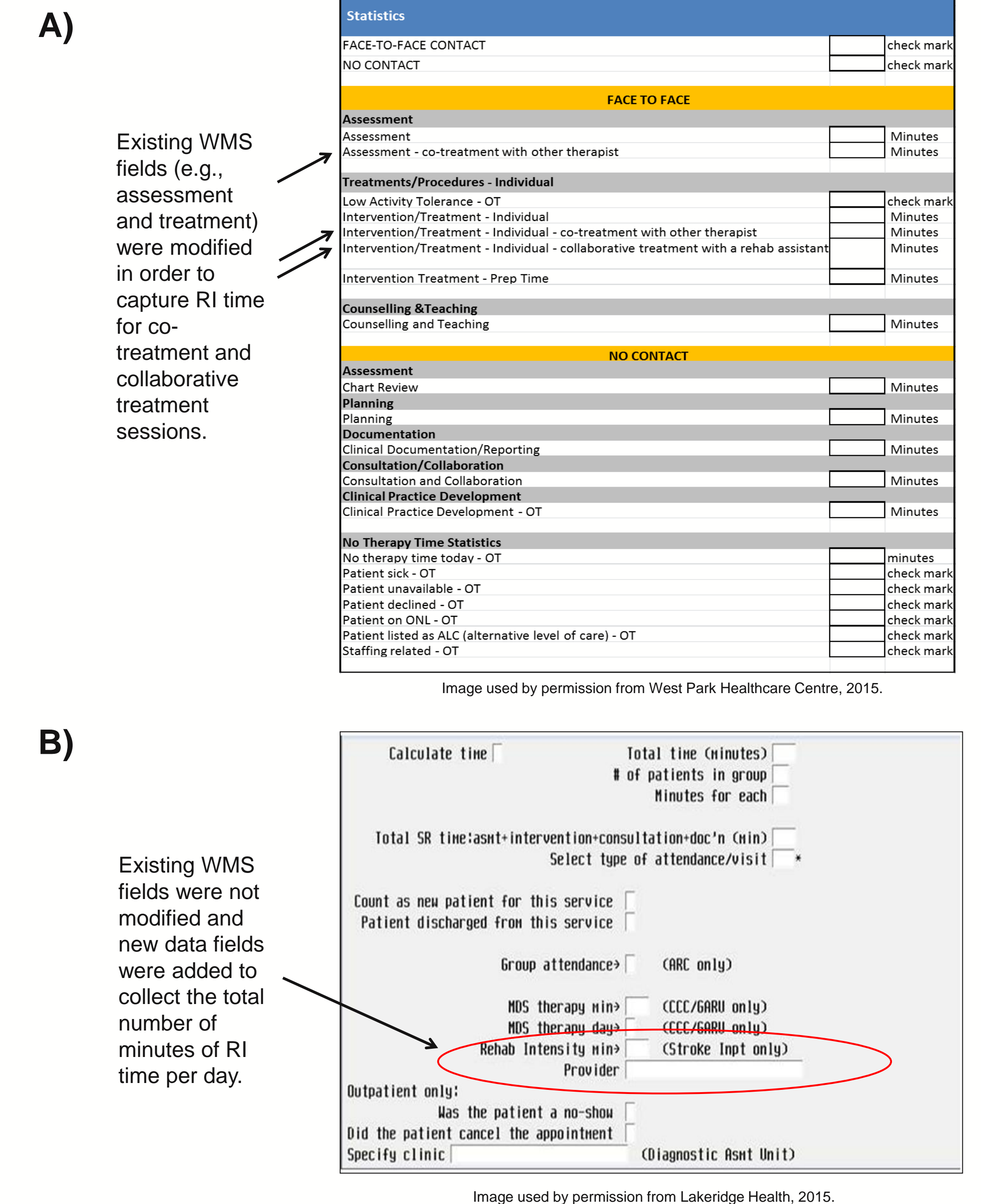
FIGURE 4: Common methods for collecting RI data across Ontario.

N= 47 sites

- Workload Measurement System
- Paper
- Other
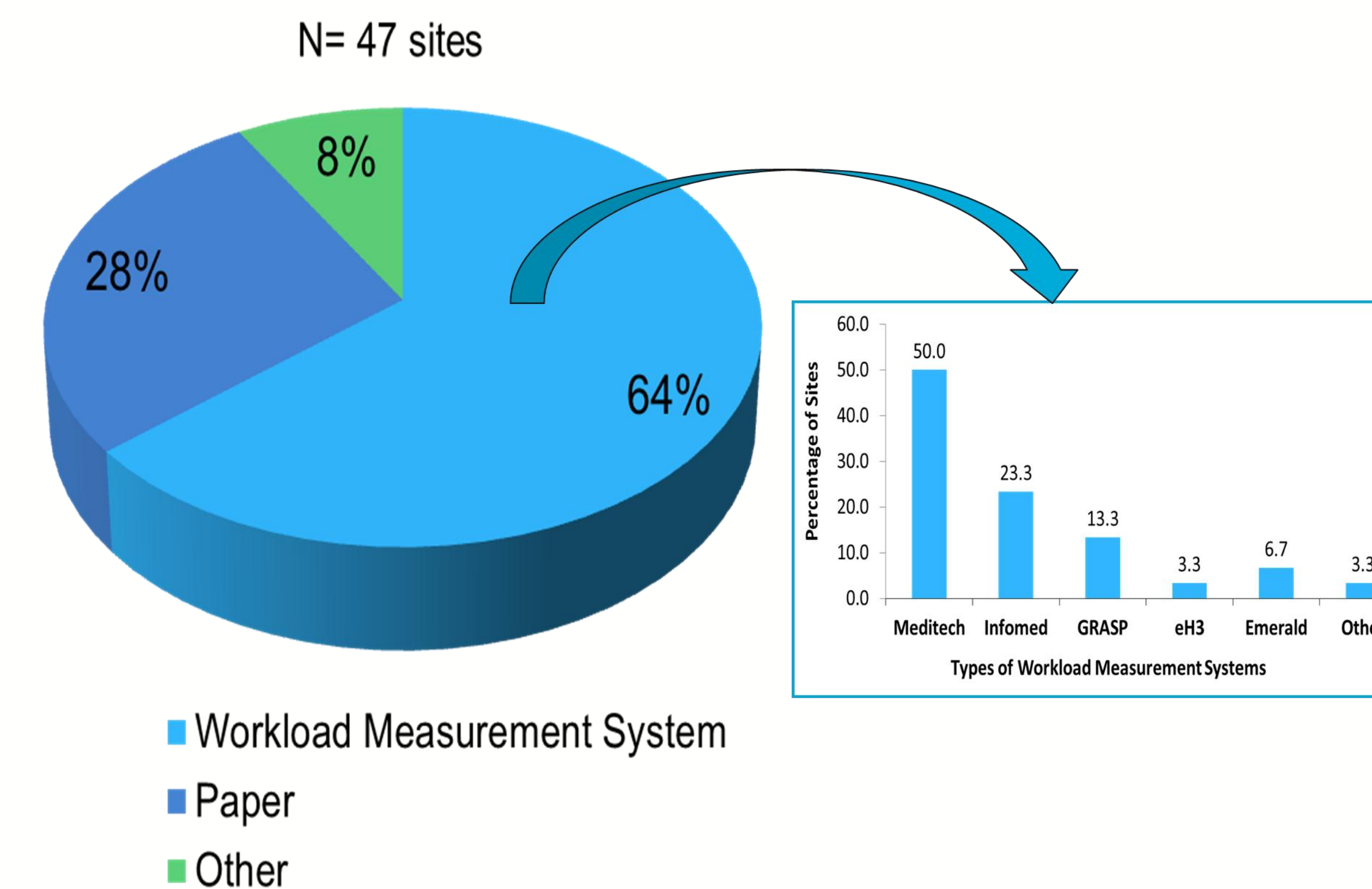
Three methods for capturing RI data included:
1) Modifying existing WMS fields and adding new data fields to collect granular information per day (e.g., collecting RI time that is specific for co-treatment and collaborative treatment sessions) - Figure 5A;
2) Not modifying existing WMS fields and adding new data field(s) to collect the total time of RI per day - Figure 5B; and
3) Recording RI data on paper or other methods.

FIGURE 5: Two common approaches for modifying WMS screens.

A)

Existing WMS fields (e.g., assessment and treatment) were modified in order to capture RI time for co-treatment and collaborative treatment sessions.

Image used by permission from West Park Healthcare Centre, 2015.

B)

Existing WMS fields were not modified and new data fields were added to collect the total number of minutes of RI time per day.

Image used by permission from Lakeridge Health, 2015.

Conclusions

- The OSN leveraged regional structures and relationships to effectively implement RI data collection across the province.
- Regional stakeholder engagement allowed for tailored development and creation of resources to meet emerging needs.
- Future work will include the development of educational resources to address issues related to quality assurance and supports needed for clinical implementation of RI.

REFERENCES

1. Health Quality Ontario; Ministry of Health and Long-Term Care. Quality-based procedures: clinical handbook for stroke (acute and postacute). Toronto: Health Quality Ontario; 2015 February. 148 p. Available from: http://www.hqontario.ca/evidence/evidence-process/episodes-of-care#community-stroke.

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ontario stroke network
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