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Update on the Redevelopment of the MIS Standards for Respiratory Services

Part 3—Improving Data Quality

This article focuses on the Respiratory Services Redevelopment Project for MIS, the importance of data quality and the ways to improve statistical and financial data quality. A list of available educational resources for CIHI's stakeholders is provided in this article to help improve data collection processes, and data reliability and consistency. The article concludes with an update on the progress of the Respiratory Services Redevelopment Project, including a summary of revisions made to date.

The importance of MIS data collection

In Part 2, we learned that high-quality data is especially important for health service organizations in today's environment, as it is used to provide meaningful information for evidence-based decision-making. Many staff who collect the data, including those in finance and information systems, are involved in the internal and external reporting of data. However, it is primarily the responsibility of the functional centre manager/director to ensure the proper collection and reporting of high-quality data.

Evidence-based information is derived data that is collected based on standards. Research and analysis is often developed from 1 of 5 kinds of indicators that provide valuable information: financial, staffing, productivity, utilization and workload indicators. Data quality in this context is a comparison of a functional centre's data against the current MIS Standards.

Causes of data quality problems

A simple but pivotal question for managers to answer is this: "Is my organization using the most current iteration of the MIS Standards?" If the answer is no, data quality issues will arise. The basic elements and minimum Canadian MIS Database reporting of the MIS Standards financial and/or statistical data should be explained to staff who are collecting the data.

There are a variety of MIS-compliant IT systems available that meet the data collection and reporting requirements for the MIS Standards. Data collection systems can range from highly automated at point-of-care to pen and paper manual data collection. CIHI does not endorse one system or method over another other than to require the technical infrastructure system to be MIS Standards–compliant.

The Respiratory Services Working Group (RSWG) learned that some managers believe that 100% or greater worked productivity is desirable; however, this indicator value would be considered to be a data quality issue. Worked productivity very rarely surpasses 80–85% for any functional centre and is expected to vary from one functional centre to another. There are common data quality causes for an inflated worked productivity statistic, including subnormal worked hours due to incorrect reporting, inaccurate standard times, prospective rather than retrospective reporting, reporting applicable student workload without reporting the corresponding worked hours/contributed services data, and staff counting workload while working through their breaks that are not included in the reported hours. The opposite conditions contribute to lower worked productivity than expected. Additionally, when Unit Producing Personnel (UPP) do not report their non-service recipient workload units, subnormal total productivity

indicator values are reported. Other contributing conditions include a change in service provision where less service can be associated possibly with higher amounts of downtime, waiting time or travel time.

We learned that regular review of standard times is not consistently carried out by organizations. Managers can easily rectify this data quality issue so that the consistency and quality of the MIS data can be improved. As you will learn later in this article, a suite of MIS education products and support is available to address education needs at the root of data quality issues. Further, this project team has prioritized the identification of strategies relevant to education product implementation. You will learn more about this in Part 4.

Strategies to improve data quality

To improve the quality of MIS data reported both internally and externally, decision-makers should consider various factors such as the current quality status of the data and whether it accurately informs on organizational performance. The manager must understand the flow of data to optimize timeliness. Importantly, the manager needs to determine how the data is used within the organization by recognizing links between operational needs and the broader requirements of stakeholders external to the organization.

Formal internal financial and statistical data audits are necessary at regular intervals. To improve the quality of data collection, managers need to review expenses and statistics submitted to the statistical general ledger and correlate them with those presented on the functional centre's direct cost report. Managers need to know the normal range for key performance indicators, monitor these regularly and investigate any inconsistent data. If the data correlates and is considered to be of high quality, it can be reassessed within 6 months. However, if the data is of poor quality, corrective measures should be implemented and the data quality should be reassessed within a shorter time frame.

It is important to ensure that the UPP data collectors are aware of the key indicators related to this reporting and informed of their use, since this communication is directly related to good data collection practices by front-line staff. Training should be made available to staff to support their understanding of why data is collected and what the uses are for the downstream information. Ongoing staff education, feedback to staff on data results and data quality monitoring will lead to data quality improvement.

CIHI and the MIS coordinators for each jurisdiction regularly receive queries related to the MIS Standards workload measurement systems and other aspects of MIS Standards reporting. Based on these queries, we are able to identify opportunities to improve the MIS Standards and augment our education offerings. We encourage you to continue sending your questions on MIS financial and statistical reporting to the MIS coordinator in your province or territory, and to CIHI.

Examples of CIHI's relevant MIS-Standards learning offerings include the following:

- **Improving the Quality of Reported Financial and Statistical Data** (workshop)
- **Statistical Data Collection and Reporting including WMS** (course)
- **Compensation and Earned Hours** (eLearning series of courses)
- **Auditing MIS Data Quality** (eLearning course)
- **Workload Measurement Systems eLearning,** several eLearning courses, including
  - **Introduction to the MIS Standards** (newly revised)
  - **Workload Measurement Systems FAQ**

You can find more information on these and other MIS Standards learning offerings on CIHI's website.

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Managers are encouraged to seek MIS Standards–related advice and guidance from within their organizations, regions, province/territory (via their MIS coordinator) or from CIHI (by emailing the MIS team at mis@cihi.ca).

Update on the Redevelopment of the MIS Standards for Respiratory Services

By the time this article is published, the MIS chart of accounts and related definitions for functional centres, secondary financial and secondary statistical accounts will have been finalized. Based on feedback about the reporting of financial and statistical data for the 71 4 25 40 Polysomnography functional centre, it was determined that there was no tangible benefit to resituate it in the Respiratory Services functional centre. Therefore, Polysomnography will remain as a functional centre under 71 4 25 Electrodiagnostic Laboratories.

UPP are those personnel whose primary function is to carry out activities that directly contribute to the fulfillment of the functional centre's service mandate. The Perfusion functional centre, currently reported in the 71 4 35 Respiratory Services functional centre, has been removed from Respiratory Services and is now a stand-alone functional centre with its own workload measurement system. Perfusionists will no longer be reporting their financial and statistical data as UPP in 71 4 35 Respiratory Therapy, as their primary functions and services no longer fulfill the Respiratory Services functional centre mandate.

The Respiratory Services Workload Measurement System was thoroughly reviewed, starting with the conceptual model. Based on feedback, the RSWG decided to create a conceptual model that is less granular in detail while still providing relevant workload data. This was intended to reduce the arduous data collection tasks for front-line UPP staff, for the regular timing validations that are required in the standard time methodology, and for the updating of the various information systems used to report the WMS statistics.

The RSWG reviewed the current service activity "procedure" and noted that it emphasized tasks, whereas the scope of practice has widened to a more holistic model where client education, population health, rehabilitation and community support are now part of the norm for Respiratory Services. As such, the RSWG is looking at other ways to measure the volume of services provided in the Respiratory Services functional centre, so that the most current clinical practice picture can be measured more accurately and also more easily.

Currently, 2 time recording methodologies are in use in Respiratory Services. These methods establish the amount of time associated with each task on the procedure/activity list, which equates to the number of workload units required to complete the various tasks. Based on feedback, the RSWG is reconsidering the methodology for timing of the services provided by UPP in Respiratory Services functional centres since collecting this data with ease and accuracy remains a prime goal.

This project will be completed by June 2015. The revisions will be incorporated into the MIS Standards for implementation beginning April 1, 2016.

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Getting involved

Your contribution to the success of this project is greatly valued. If you have any questions, comments or feedback about the project, please communicate with any member of the Respiratory Services Working Group.

Respiratory Services Working Group Members			
Name	**Affiliation**	**Location**	**Email Address**
Patricia Beckham	Royal Alexandria Hospital	Edmonton, Alberta	patricia.beckham@albertahealthservices.ca
Neil Johnston	Winnipeg Regional Health Authority/ Health Sciences Centre Winnipeg	Winnipeg, Manitoba	njohnston@wrha.mb.ca
Laura Watling	West Park Healthcare Centre	Toronto, Ontario	laura.watling@westpark.org
Elizabeth Lalingo	Markham Stouffville Hospital	Markham, Ontario	elalingo@msh.on.ca
Kathy Kowalski	Horizon Health Network	Miramichi, New Brunswick	kathy.kowalski@horizonnb.ca
Jessie Cox	Canadian Society of Respiratory Therapists	St. John's, Newfoundland and Labrador	jessie.cox@easternhealth.ca
Laura Seed	Canadian Association of Cardio-Pulmonary Technologists	Toronto, Ontario	laura.seed@sickkids.ca

You can also contact your provincial/territorial MIS coordinator and/or the MIS project team directly at rsmis@cihi.ca.

The next article on the MIS Respiratory Services Redevelopment Project covers important information about the project wrap-up and next steps, including implementation strategies (e.g., education products) and WMS maintenance plans.