

Redevelopment of the MIS Standards: Respiratory Services

Part 2: The MIS Standards and Data Use

This article discusses the value of the *Standards for Management Information Systems in Canadian Health Service Organizations* (MIS Standards) in generating quality financial and statistical data that can be used by respiratory services managers and health services organizations nationally. This article is the second in a series of 4 written to provide information about the current Respiratory Services Redevelopment Project at the Canadian Institute for Health Information (CIHI). This redevelopment of MIS Standards reporting for respiratory services is intended to improve the quality of the reported data and confidence in its use. In the [first article](#), it was noted that an essential aspect of this project is hearing about needs and issues with respect to the MIS Standards reporting for respiratory services. Therefore, a key responsibility of the Respiratory Services Working Group (RSWG), made up of respiratory services experts and representatives from a cross-section of respiratory services in Canada, is to consult relevant stakeholders and bring forward their perspectives.

Why Is This Important to Respiratory Therapists?

As you have told us, many changes have occurred since the last revision in 2003 that affect the delivery of respiratory services. Some of these include technological and scientific advances, clinical practice and setting changes, staffing practice changes (e.g., staff mix, staffing requirements) and increased patient acuity. Respiratory therapists and their associations told CIHI of concerns related to the respiratory standards conceptual model and the comprehensiveness of the schedule of activities/procedures, the accuracy of the time values, the ease of collecting and reporting this data, and the applicability of the workload measurement system (WMS) across health service delivery settings. These issues will be addressed during the Respiratory Services Redevelopment Project.

A large part of the work undertaken by the RSWG will be a review of the current schedule of activities/procedures to ensure that it is accurate and up to date. The schedule needs to be comprehensive, and the definition assigned to each activity/procedure needs to reflect current practice and technology while also being easy to implement. A goal of this project is to ensure that each definition is clear and easily understood so there is no confusion about what unit-producing personnel (e.g., respiratory therapist, cardio-pulmonary technologist, anesthesia assistant) should collect and report as workload. All changes identified as a result of this work will be implemented on April 1, 2016.



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What Data Is Generated With the MIS Standards?

Most of you are very familiar with the MIS Standards; in short, for those who may be less familiar, the MIS Standards is a set of national standards that provide an integrated approach to managing financial and statistical data related to the operations of Canadian health service organizations. The national standards were developed in recognition of the need to improve the effectiveness and efficiency of health service organizations in Canada through better information. Ministries of health report detailed financial and statistical data generated with the MIS Standards to the Canadian MIS Database (CMDB) at CIHI; this data can then be used at a number of levels of aggregation, depending on the user’s information needs.

Financial and Statistical Data

For services provided by health service organizations, including respiratory services, detailed financial data (on revenues and direct expenses) and detailed statistical data are reported, as illustrated in Table 1. In combination, this data provides information about resources and their use. When this information is available across Canada, comparisons, trending, benchmarking and sharing of information to improve the efficiency of respiratory services is possible. The statistics provide information regarding volumes of services, their resource consumption and pressure points such as wait times and caseloads. Reporting these service volumes by category and type of service recipient (e.g., inpatient, client hospital, client community, client home care, referred-in) further identifies the consumers of a particular service.

Table 1: Structure of Secondary Financial and Statistical Accounts

Financial	Statistical
1—Revenues	1—Workload
2—Inactive	2—Staff Activity
3—Compensation	3—Earned Hours
4—Supplies	4—Service Activity and Caseload Status
5—Traceable Supplies and Other Expenses	5—Inactive
6—Sundry	6—Inactive
7—Equipment Expense	7—Functional Centre Operation
8—Contracted-Out Services	8—Health Service Organization Operation and Contracted-Out Services
9—Buildings and Grounds Expense	9—Inactive

More About the Workload Measurement System and Schedule of Unit Values

As the MIS Standards workload statistics are particularly valuable for accurately costing services and identifying associated resource use, you may be particularly interested in understanding more about the WMS, the schedule of unit values and the data they help provide.

A WMS is a tool for measuring the volume of activity, expressed as a standard unit of time, provided by services such as respiratory services. It is a means to evaluate the amount of human resources (expressed in workload units, where 1 workload unit is equal to 1 minute) required to perform service recipient (direct patient care) and non-service recipient (indirect) activities by unit-producing personnel within a health care service such as respiratory services. A WMS yields standardized, uniform data for external reporting, permitting national and peer group comparisons. It is a valuable management tool that provides systematic quantification of workload in specific health care services such as respiratory services to assist in staffing, planning, budgeting and operational performance management.

A main feature of any WMS is its time-recording methodology. The standard time-recording methodology prevails for respiratory services; however, when some activities feature variable timing, the actual time methodology is used as an alternative. The standard time methodology is site-specific. To remain accurate, the standard times need to be revisited at regular intervals and whenever the service profile for the health care service changes. Ultimately and importantly, the integrity of the reported data is a shared responsibility that begins with clinicians and managers in respiratory services.

Workload Measurement System Data Generation and Use

Workload data reporting serves to assess the output of functional centres, such as respiratory services, over a period of time. Workload data should be used in conjunction with other management information when evaluating functional centre performance. Since the workload data reports a quantitative measure of functional centre activities, any attempt to assess service quality and/or clinical outcomes can be accomplished only by also using an appropriate quality assessment program that may incorporate quantitative workload measures.

A WMS principle is consistently applied to the revision of the schedule of activities/procedures: each definition is representative of the work required of the unit-producing personnel to perform all of the steps needed to complete a defined respiratory services activity once for the average service recipient under average circumstances across Canadian health service organizations.

Who Uses MIS Data?

Senior administrators at various levels use MIS data at different levels of aggregation for

- Evidence-based decision-making;
- Performance management;
- Evaluation of services;
- Inter-facility benchmarking;
- Funding allocation; and
- Establishment of best practices.

CIHI uses CMDB data, generated with the MIS Standards, to undertake national comparative reporting and contribute to the analysis of national health expenditures. CIHI uses this data to produce numerous reports for our clients, stakeholders and the Canadian public. CIHI shares certain CMDB data with other organizations, including ministries of health in provinces and territories that provide data, regional health authorities, and hospital and non-hospital health service organizations. CMDB data is used by the Interprovincial Health Insurance Association Coordinating Committee (IHIACC) to establish interprovincial/-territorial billing rates for out-of-province inpatients and by Statistics Canada to calculate Canada's GDP. The Organisation for Economic Co-operation and Development (OECD) uses CMDB data to carry out international comparisons. CMDB data is also used by third parties, such as students and researchers, to increase our understanding of health care in Canada.

How Is MIS Standards Data Used?

Data aggregation and integration provide meaningful information that depends on the collection and reporting of high-quality, consistent, comparable data using the MIS Standards as the national standard for management information systems. 5 groups of MIS indicators were developed to meet varying management information needs: workload, staffing, productivity, utilization and financial indicators. Managers regularly use combinations of indicators to formulate an evidence-based decision. Some examples of the information provided to managers include the amount of time it takes to perform respiratory services activities and the number of staff and full-time equivalents necessary to provide a certain volume of services. The breakdown of expenses can provide valuable information about the costs of services and the impacts of adjustments.

Data integration yields powerful information that leads to better health services management. For example, clinical data from the Discharge Abstract Database (DAD) provides information on the output of the health care system by disease category and intervention. Financial and statistical data from the CMDB provides information on the resources that need to be in place for the clients who use these services. Linking the 2 databases—the DAD (output) with the CMDB (input)—provides powerful, comparable data that informs the planning and delivery of health care services. An example of data integration is the indicator Cost of a Standard Hospital Stay, which gives the relative cost-efficiency of a hospital's ability to provide acute inpatient care.

Data use is critical to informing these revisions and emphasizes the need for high-quality data. The MIS Standards is a national standard that generates high-quality financial and statistical data that is consistent, accurate and useful for informed, evidence-based decisions about respiratory services. Data on its own is just data. In order to manage respiratory services, health service organizations and the health care system in today's environment, high-quality data must be turned into meaningful information. Work on the Respiratory Services Redevelopment Project is well under way to improving the reliability and comparability of financial and statistical respiratory services data.

Get Involved

We greatly value the contributions you have already made to this project—we are redeveloping the MIS Standards for respiratory services based on your input. As we work through this redevelopment, we need to keep hearing from you. Your questions, comments and feedback are essential for the success of this project. We encourage you to reach out to any member of the RSWG, your [provincial/territorial MIS coordinator](#) and/or the MIS project team directly at rsmis@cihi.ca. Thank you in advance for your continued involvement in this project.

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

Technical Working Group Members	
Name	Affiliation
William (Bill) Bye	Newfoundland and Labrador Centre for Health Information
Kellie Hawes	Health PEI
Peter Crowell	Nova Scotia Department of Health
Janice MacConnell	New Brunswick Department of Health
Lynda Cyr	ministère de la Santé et des Services sociaux du Québec
Nancy Hunter	Ontario Ministry of Health and Long-Term Care
Julene Reimer	Manitoba Health
Sean Goalen	Saskatchewan Health
Nathan Klassen	Alberta Health
Fred Ackah	Alberta Health
Patrick Anglin	British Columbia Ministry of Health
Karen Girling	Yukon Hospital Corporation
Ron Delmage	Northwest Territories Department of Health and Social Services
Jim Arklay	Nunavut Department of Health

What's Coming Next?

Part 3: Improving Data Quality will be released in winter 2014.

Part 4: Implementing the Respiratory Service Revisions will be released in spring 2015.