NL Health Services

MIS Standards, Workload Measurement and Statistical Data Collection

Reference Guide

for

Health Information Services

April 2023

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Introduction

Purpose

This reference guide provides users with information regarding the Management Information Systems (MIS) Standards and their application to the discipline specific area of service within Newfoundland and Labrador Health Services (hereafter referred to as NLHS).

MIS Standards

The Standards for Management Information Systems in Canadian Health Service Organizations (MIS Standards) are published by the Canadian Institute for Health Information (CIHI). The MIS Standards are a set of national standards for collecting, processing, and reporting of financial and statistical information on the day-to-day operations of a health service organization. Originally developed for hospitals, the MIS Standards have expanded over the years to include all types and sizes of health organizations. The MIS Standards specify:

- what data to collect
- how to group and process data
- how to analyze and use the data to support management functions such as evaluation, control, budgeting, planning and quality initiatives (turning data into information)

Core components of the MIS Standards are:

- chart of accounts
- accounting principles and procedures
- workload measurement systems
- indicators
- management applications
- glossary of terms

The primary goal of the MIS Standards is to provide standardized, basic operational management information to front line managers as well as administrators throughout the health system. Implementation of the MIS Standards enables organizations to have comparable financial information and related statistics (such as workload and patient activity) for the many clinical services they provide. This data can then be used to report the calculation of key indicators, providing a useful tool to measure and monitor performance. Some examples are:

- accountability reporting by managers for resource use
- development of budgets based on meaningful workload and activity projections
- more precise resource allocation
- more informed management decisions

The MIS Standards were adopted by the Newfoundland and Labrador Department of Health and Community Services (DHCS) in 1992.Provincial reporting requirements were developed based on the national reporting requirements with provincial customization as required to meet local information needs.

A national MIS Technical Working Group provides CIHI with expert technical advice on the development, maintenance, and effective implementation of the MIS Standards across the continuum of health service delivery. The working group is composed of provincial and territorial MIS Coordinators, with additional members from the field added at CIHI's discretion.

PROVINCIAL MIS COMMITTEES

Historically, there were 18 provincial MIS committees (listed below). Currently, there are 2 standing committees: Data Quality and Reporting, and Health Information Services Committee. The other discipline specific committees were dissolved once their mandate was completed. When necessary, discipline specific committees can reconvene (standing or ad hoc) to address revisions to the Standards, issues, or a new mandate.

- Data Quality and Reporting *(Financial & Statistical Reporting)*
- Audiology
- Clinical Laboratory
- Electrodiagnostic, Cardiac and Vascular Laboratories
- Food Services Administration
- **Health Information Services**
- Medical Imaging
- Nursing
- Nutrition Services
- Occupational Therapy
- Pastoral/Spiritual Care
- Pharmacy
- Physiotherapy
- Psychology
- Respiratory Therapy
- Social Work
- Speech-Language Pathology
- Therapeutic Recreation

The Provincial Data Quality and Reporting MIS Committee includes a finance representative from each zone within NLHS, Manager of Financial Analysis at the DHCS, the provincial MIS Standards Consultants, and a CIHI representative. Part of the committee's mandate is to review the provincial reporting requirements of the DHCS, issues related to data quality, discipline specific User Guide updates and changes, and any inconsistencies in application of the data standard (MIS Standards).

MIS Standards and the Role of the Newfoundland and Labrador Centre for Health Information (NLCHI)

NLCHI was established to provide quality information to health professionals, the public and health system decision makers. In April 2023, NLCHI and the 4 Regional Health Authorities merged to a single Health Authority, NL Health Services (NLHS). NLCHI is now represented as the Digital Health branch within NL Health Services. Through collaboration with the health system, Digital Health supports: the development of standards, maintains key provincial health databases, prepares, and distributes health reports, and supports and conducts applied health research and evaluations. Digital Health's mandate also includes the development of a confidential and secure Electronic Health Record (EHR) for the province.

The MIS Standards are the responsibility of the Centre's Health Information Standards and Quality Division. This division is responsible for developing and promoting the use of data standards for financial, statistical, social, demographic, and clinical data collection in the health sector. It is responsible for ensuring that this data is uniform in definition, measurement, collection, and interpretation. Many of these standards are developed with, or mirror, national standards which ensures comparability and consistency of data across the health system.

Key Concepts

Code Structure and Matching Principle

The MIS Chart of Accounts general coding structure consists of several various code blocks (see Figure 1).

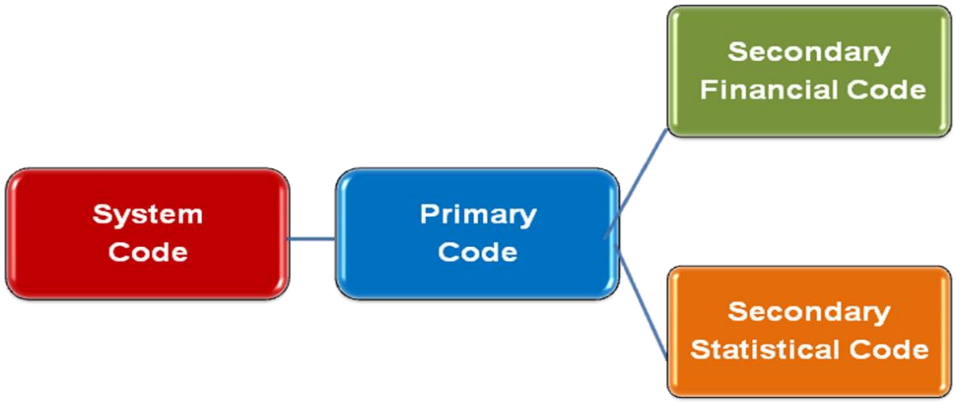

Figure 1

Using these code blocks, data can be recorded in a health service organization's financial and statistical general ledger in a structured manner. The number of blocks used depends on the account being defined.

The first code in all account numbers is the **system code** block. It is assigned by the information systems or finance department when the Chart of Accounts is established for the health service/reporting organization and represents the highest level of data aggregation. Organizations use this code block to numerically identify a facility, site, or program within the zone.

The **primary code** refers to a numerical name for a functional centre (functional centre) or accounting centre. Functional centre s in the diagnostic and therapeutic functional centre framework section are discipline specific. See section 3 for further detail.

The secondary codes provide for the recording of either financial or statistical information and identify specific types of information about the functional centre. See sections 4 and 5 for further detail.

The creation of primary and secondary accounts should be discussed with the individual responsible for MIS reporting within an organization to ensure that accounts correctly reflect the activity that occurs and that the secondary accounts are correctly linked with the primary account or functional centre. The person responsible for coordinating MIS activities in an organization can provide additional information on the accounts used for a particular service.

The **matching principle** in accounting associates both revenues and expenses to a defined period. The MIS Standards expand this matching principle to the reporting of statistics within the same period as the associated revenues and expenses to enable the calculation of accurate cost indicators. Within the MIS framework there are three levels of data collection and reporting:

- The **functional centre direct cost reporting** level builds on the functional centre framework, linking revenues, expenses, statistics, and indicators to provide a comprehensive picture of a functional centre's resource utilization, activity, and productivity. Functional centres in the diagnostic and therapeutic functional centre framework section are discipline specific.

- The **functional centre full cost reporting** level builds upon the functional centre direct cost reporting level by including the indirect costs associated with each functional centre.

- The **service recipient reporting** level changes the focus from the functional centre to the service recipient and is often referred to as a "case costing." All financial and statistical data are linked to a specific person who receives services. This provides a comprehensive picture of how medical, nursing, therapeutic and support services are utilized in the treatment of various patient, client, or groups. It can demonstrate the impact of practice patterns, programs, services and case mix groups on functional centres, service outcomes and the health service organization.

Functional centre direct cost reporting is the required level for reporting information to the DHCS. This means that all financial and statistical data are linked to defined functional centres and are reported in the functional centre in which the activity took place. While organizations may choose to collect information at the levels of the full cost or service recipient reporting, they will still be required to report to the Department of Health and Community Services at the functional centre level to ensure comparative data is available; however, they will have the advantage of enhanced information for internal decision making.

Broad Occupational Groups

The MIS Standards require all staff be assigned to one (or more) of three broad occupational groups. By doing so, the accuracy of productivity analysis is improved, and the degree of overhead support associated with the service is identified.

Management and Operational Support Personnel (MOS)

Management and operational support are the personnel, including purchased consultant services, whose primary function is the management or support of the operation of the functional centre, although at times they may carry out unit-producing activities. This group includes:

- directors

- managers
- supervisors
- administrative support staff
- clerical support staff
- medical service aids
- PAC Administrators

If the manager generates workload statistics, the worked hours related to this activity must be recorded as unit-producing, not management and operational support. Failure to link workload with unit-producing worked hours will skew performance indicators.

Unit-Producing Personnel (UPP)

Unit-producing personnel are those personnel whose primary function is to carry out activities that directly contribute to the fulfilment of the service mandate.

Examples include:

- registered nurses
- registration clerk
- transcriptionist
- accounts payable clerks
- pharmacists
- Therapeutic professionals (e.g., recreation specialists, physiotherapists, psychologists, etc.)
- Therapeutic assistants (e.g., social work assistants, occupational therapy support workers, etc.)

These personnel generate workload units. It is recognized that UPP staff may, at times, perform activities that are not unit-producing.

Medical Personnel (MP)

Medical personnel are physicians who are compensated for their professional services either on a fee-for-service or salary basis, including interns and residents.

Examples include:

- pathologists
- psychiatrists
- cardiologists
- medical interns
- medical students
- medical residents

Note: The designation of a broad group category is based on function; job category and union category should not be considered. Job category is not appropriate because one job category in an institution can be management and operational support in one functional centre, yet the same job category can be unit-producing in another functional centre (e.g. clerical staff in most clinical departments are MOS but in

admitting departments they are UPP). Union category does not apply as staff performing the same job are union in some organizations and non-union in others.

Categorization of Earned Hours

Earned hours statistics measure the use of labor in fulfilling the mandate of the service. These hours should be recorded in the broad categories of workers as outlined in the previous section. The cost of a worked hour may vary from one period to another and from one shift to another. Overtime and standby compensation expenses are attached to the actual hours that are worked (e.g., an hour of overtime is recorded as only one earned hour, but the compensation may be at time and half).

Earned Hours = Worked Hours + Benefit Hours + Purchased Service Hours

Figure 2

Worked Hours

Worked hours are those hours that are spent carrying out the mandate of the service. Staff members are physically present and available to provide service. Worked hours include:

- regular worked hours, including paid coffee breaks
- worked statutory holidays
- relief staff hours, such as vacation relief and sick relief
- overtime
- call back hours paid and banked[1]
- attendance at on-site committee meetings and in-service education[2] (non-service recipient workload)

[1] Call back hours are a component of worked hours, recorded as the actual hours worked, rather than the minimum number of hours paid. Standby hours are not included in the count of worked hours, but the associated expenses (compensation) are a component of worked salaries.

[2] Includes education sessions of less than ½ day; sessions greater than ½ day are considered benefit hours.

Costs are intended to link with activities and workload and therefore banked hours should be recorded in the payroll system during the period they are earned and not when they are taken.

Benefit Hours

Benefit hours are those hours when staff members are not present but receive pay.

Benefit hours include:

- statutory holidays and vacation

- sick and bereavement leave
- workers compensation leave
- attendance at facility orientation, formal education, and training sessions (educational leave)
- union leave with pay
- other paid leave of absence

Purchased Service Hours

Purchased service hours are the hours spent carrying out the mandate of the service by personnel hired from an external agency. They have no benefit hour component. Purchased service hours are treated as worked hours. When contracting for external services, the costs related to management and support compensation, unit-producing compensation and supply costs should be differentiated within the contract.

Notables

Education Hours – Staff time spent in education can fall into both worked and benefit categories. The MIS Standards describe education recorded as benefit hours as formal planned events for self-development and education recorded as worked hours as informal, short duration in-service sessions. When education occurs during worked hours, non-service recipient workload is reported.

Hours spent in education sessions of greater than ½ day duration are benefit hours (education leave); time spent in sessions of less than ½ day are worked hours (non-service recipient workload). This will provide comparable information for performance indicators provincially.

Unpaid Worked Hours – Only paid hours can be recorded as worked hours. If staff work additional hours and record workload for that time, the comparison of worked hours to workload could demonstrate productivity greater than 100%. Submission of unpaid worked time as worked hours will have a negative effect, as performance indicators will not provide an accurate picture of the real situation. Staff working unpaid hours should record this information for internal purposes. Worked hours should be generated from the payroll system to ensure accuracy.

Volunteers – Work performed by volunteers cannot be recorded as part of the functional center s UPP workload. Sometimes this is work that would not be performed by the facility if staff had to be paid and sometimes this is necessary for the provision of services. The number of volunteer hours should be recorded and reported internally to gain an understanding of the contribution of volunteers to the organization. Details of the type of work will be helpful in determining the role of the volunteer in reducing costs or enhancing the quality of the service provided.

Categories of Service Recipient

A ***service recipient*** is the consumer of service activities of one or more functional centre s of the health service organization. Service recipients include individuals (e.g., inpatients, residents, clients), their significant others and others as defined by the health service organization.

Workload, service activity and caseload status statistics must be recorded separately for each category of service recipient. This separation supports more detailed analysis of the data, providing an understanding of different resource needs, as well as supporting external reporting requirements.

Significant others are individuals who are acting on behalf or in the interest of, the service recipient such as parent, spouse/partner, child, legal guardian, or substitute decision-maker. Excluded from this definition are professionals such as teachers, lawyers, or other health care professionals.

The MIS Standards recognize and define eight categories of service recipients. They are detailed below:

Inpatient

An individual who has been officially accepted by a hospital for the purpose of receiving one or more health services; who has been assigned a bed, bassinet, or incubator; and whose personal identifiable data is recorded in the registration or information system of the organization and to whom a unique identifier is assigned to record and track services. This category includes individuals receiving acute, physical rehabilitation, mental health, and addiction services in a hospital setting, and those *admitted* to emergency while awaiting a bed on a nursing inpatient unit.

Note: Also includes services provided by a contracted out third-party provider that provides inpatient services typically provided by a hospital.

This category ***excludes*** hospital clients receiving services of a specialty day/night care or specialty clinic nature on a nursing inpatient unit, as well as residents receiving services on a residential care unit, community hospice unit, mental health residential care unit, addiction services residential care unit and stillbirths.

Client Hospital

An individual who has been officially accepted by a hospital and receives one or more health services without being admitted as an inpatient; whose person identifiable data is recorded in the registration or information system of NLHS and to whom a unique identifier is assigned to record and track services. Examples include individuals who receive hospital-based emergency day surgery, specialty day/night care, specialty clinic, outreach, mental health, rehabilitation and independent diagnostic and therapeutic services (provincially defined).

Client Community

An individual who has been officially accepted by NLHS to receive one or more health services (other than home care), without being admitted as a resident or inpatient; and whose personal identifiable data is recorded in the registration or information system of NLHS and to whom a unique identifier is assigned to record and track services. Examples include individuals receiving community-based mental health and/or addictions counselling, public health nursing, health promotion and wellness services, etc. (provincially defined).

Client Home Care

An individual who has been officially accepted by NLHS to receive one or more home health or home support services in his/her place of residence (e.g. private residence, assisted living residence), at an alternative health delivery location (e.g. community health office) or at a location that meets the client's needs (e.g. school, public place); and whose personal identifiable data is recorded in the registration or information system of NLHS and to whom a unique identifier is assigned to record and track services. Examples include individuals receiving home health services such as the treatment of acute conditions, maintenance of chronic health conditions, rehabilitation to improve functional abilities, etc. and/or home support services such as homemaking, home maintenance, and personal care and respite services (provincially defined).

This category ***excludes*** outreach services provided by hospital or community-services-based health professionals (e.g., home dialysis services provided by hospital staff, mental health services provided by the staff of a mental health outreach program).

Referred-In

A hospital client or specimen: that has been referred for hospital services from another health service organization; and whose personal identifiable data is recorded in the registration or information system of the organization and to whom a unique identifier is assigned to record and track services. Examples include individuals referred from a health service organization for an MRI exam; respiratory services such as hyperbaric chamber and specimens to be tested by the clinical laboratory.

Note: This category is not used in the Newfoundland and Labrador master chart of statistical accounts.

Resident

An individual who has been officially accepted into a designated long-term care bed (LTC) for the purpose of receiving one or more health services; and whose personal identifiable data is recorded in the registration or information system of the organization and to whom a unique identifier is assigned to record and track services. This category includes individuals admitted to residential facilities providing mental health or addiction services in a community setting (provincially defined).

This category ***excludes*** inpatients receiving services from hospital acute, rehabilitation, mental health and addiction services and palliative nursing units.

Facility/Organization/Citizen Partnership

A facility or organization that has been officially accepted by a health service organization to receive one or more health services; and whose encounter is recorded in the registration or information system of the organization and to whom a unique identifier is assigned to record and track services; or whose encounter is recorded within a uniquely-identifiable, hard-copy file or record (rather than in the organization's registration or information system) that is used to record and track services. Examples include restaurants; swimming pools and day care centres to which environmental health and licensing services are provided; and schools, businesses, or community organizations to which consultative services are provided regarding concerns such as policy development, food safety or healthy living.

A citizen partnership that has been established to address an identified health issue and whose membership consists of citizens or citizen groups and other key stakeholders (e.g., health care providers,

community agencies) that have knowledge of the concern and/or could influence change; and, whose encounter may be recorded within a uniquely-identifiable hard copy file or record rather than in the registration or information system of the organization. Examples include: a "farm safety coalition" that was formed to discuss ways to prevent tractor accidents amongst teenagers; a "food security coalition" organized to advance the concept of a food charter to support local agriculture products; and a "playground partnership" established to discuss ways to build a safe new play area that will meet the needs of the children in a low-income community.

Service Recipients Not Uniquely identified

An individual who receives one or more services from a health service organization when not currently registered as an inpatient, resident, client hospital, client community, client home care, facility/organization/citizen partnership; and whose encounter is not recorded in the registration or information system of the organization and who has no unique identifier assigned to record and track services. Examples include individuals calling hotlines for counselling services; individuals attending drop-in centres; and participants attending a general forum on smoking cessation that is aimed at educating the community.

Primary Accounts – Functional Centres

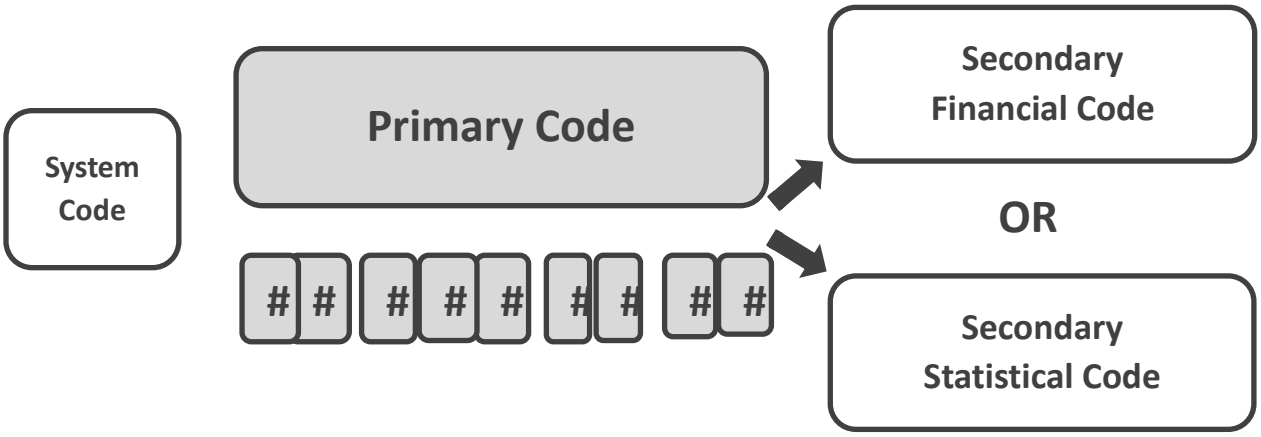

Figure 3

A key component of the MIS Standards is the functional centre framework. Functional centre's is a type of primary account that forms the foundation of much of the reporting of the financial and statistical data within a health care organization. The functional centre framework is a five-level hierarchical arrangement of departments or functional centre s that recognizes the diversity in size and specialization of health service organizations. It provides a method for organizing information for both internal and external reporting purposes. The hierarchical arrangement allows varying sizes of health service organizations to use the structure and permits information to be "rolled-up" or consolidated for external comparative reporting.

Each department or service that is a cost centre (has a designated budget) is assigned a primary account code. These primary account codes are typically used in conjunction with a secondary account code, to further label and define an account. This is required by a health service organization to track revenues, expenses and statistics associated with each department or service.

Primary account codes are made up of five segments; with a total of nine coding positions, which are structured in a specific manner (see Figure 4 below).

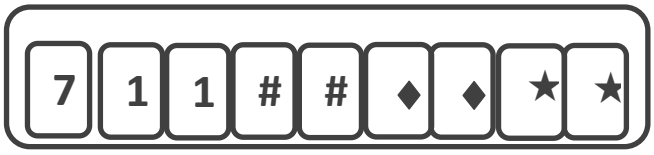

Figure 4

The following details the five segments of the primary account code:

Account Type

7 — The 1st digit is the account type. The account number will always start with a 7 to indicate that this account represents a functional centre.

Fund Type

71 — The 2nd digit indicates the primary source of funding for this activity. The finance department will designate this digit. In most cases this will be a 1 to indicate global/operating funding.

Framework

71 1 — the 3rd digit indicates where the service was provided. This is the Administrative and Support Services framework for Health Information Services. Reporting at this level is referred to as level two reporting

Functional centre (level 3)

71 1 ## — the 4th & 5th digits indicate the type of service provided. This is referred to as level three reporting.

Functional centre (level 4)

71 1 ## ♦♦ — The 6th & 7th digits indicate further breakdown of services for some functional centres. These accounts are sub-categories of level three accounts. This is referred to as level four reporting.

Functional centre (level 5)

71 1 ## ♦♦ ★★ the last two digits of the primary account code are used to provide additional detail and may be reserved for board use in some situations. This is referred to as level five reporting.

Functional centres are used to aggregate and integrate information concerning specific activities. The account assigned to a functional centre provides the reader of the information with insight into the activity that has generated the data reported. For example, the primary account number **71 1 90 ♦♦**

★★ tells the reader that the data is related to Health Records service of the Health Services Department (See Figure 5)

Example 1: Medical transcription is represented by account number **71 1 90 20 10** (as illustrated in Figure 5):

7	1	1	90	20	10
Account Type	**Fund Type**	**Framework Section**	**Functional Centre Level 3**	**Functional Centre Level 4**	**Functional Centre Level 5**
1. To 6. Balance Sheet accounts **7. Functional Centres for Revenue, Expense and Statistics** 8. Accounting centres	1. **Operating Fund** 2. Other DHCS funding 3. Other funding 4. Board Designated 5. Capital 6. Special Purpose 7. Inactive 8. Endowment (Unrestricted) 9. Endowment	**1. Administration and Support Services** 2. Nursing Inpatient/ Resident Services 3. Ambulatory Care Services 4. Diagnostic and Therapeutic Services 5. Community and Social Services 7. Research 8. Education	30 Communications 45 Housekeeping 50 Laundry/Linen 53 Plant Administration (c) 55 Plant Operations 75 Biomedical Eng. 79 Interpretation/ Translation Services 80 Registration 82 Admission/ Discharge Coordination 85 Pt. Transport **90 Health Records** 95 Food Services	There may be level four accounts which are components of a level three account. e.g. **20 Transcription**	There may be level five accounts related to specific level three accounts e.g. **10 Medical Transcription**

Figure 5

Prior to reporting workload, all functional centre account assignments should be reviewed to ensure that workload data can be correctly linked to functional centres. In most organizations there will only be one functional centre for each health information service but some larger organizations may elect to create lower-level functional centres if the activities are provided by a distinct set of staff. This should only be done when the compensation, recoveries, expenses, and activities can be clearly isolated. If this is not possible, one functional centre is appropriate, and the workload statistics can be used to identify more specific details.

Purchased/Referred-Out Services

If the facility does not have a specific department and purchases or refers-out all its services, a specific functional centre is still required. All costs will be linked to this functional centre and all costs will show as a purchased service. Purchased service is recorded when non-facility staff provide service to patients/residents within the facility. Referred-out service occurs when people are sent to another

facility for service and the service is paid for by the sending facility. However, if there is no cost to the facility a functional centre is not created, and no financial or statistical information is recorded.

Program Management/Multifunctional Centres

In cases where staff report to another discipline, workload, service activity and caseload status statistics and resources associated with these activities should still be reported in the discipline specific functional centre. Both statistics and expenses related to an activity must be reported in the same functional centre. The portion of workload and expenses related to various programs should still be identifiable for program-based reporting.

Greater Levels of Detail

Some organizations will elect to capture an even greater level of detail than requested for external reporting submissions. More detailed functional centre s should only be established when it is reasonable and material to separate staffing, revenues, expenses, and statistics. If functional centre s has been created to meet internal needs but are not valid accounts (i.e., not included in the provincial account code listing), these functional centre s must be rolled up and reported under the appropriate MIS account.

Health Information Management and Registration Services Functional Centres

The following primary accounts are available for use by Health Information Management and Registration services. Each organization should use only those applicable to the size and specialization of their service. The decision to set up separate functional center s for various services should be made in consultation with your finance department staff.

71 1 Administrative and Support Services Framework Section

71 1 80 Registration (CMDB)

71 1 80 20 ** Service Recipient Registration
71 1 80 40 ** Client Registration
71 1 80 60 ** Emergency Registration
711 80 77 ** Wait List Management
71 1 80 80 ** Centralized Booking
- 71 1 80 80 20 Operating Room Booking
- 71 1 80 80 40 Outpatient/Client Booking

71 1 90 Health Records (CMDB)

(If no dedicated resources exist and the facility is designated as a ‘small facility’, may include

Registration functions in this functional center.)
71 1 90 05 Health Records Administration
71 1 90 20 Transcription
- 71 1 90 20 10 Medical Transcription
- 71 1 90 20 20 Non-Medical Transcription

71 1 90 40 Health Record Processing

71 1 90 40 10 Clerical Health Record Processing
71 1 90 40 20 Health Record Data Collection
71 1 90 40 30 Release of Patient Information
71 1 90 60 Health Data and Information Services
711 90 70 Provincial Registries
711 90 70 10 Provincial Cancer Registry
711 90 70 20 Provincial Cervical Cytology Registry
711 90 70 30 Cancer Registry-Special Projects
711 90 70 40 Provincial Cardiac Registry
711 90 97 Health Records Residual

Each of the above functional centres is defined in the paragraphs below.

71 1 80 Registration (CMDB)

The functional center pertaining to the receiving, collecting, and documenting of registration information, and the assignment of inpatients, residents, and clients to health services in accordance with the bylaws, regulations, and policies of the health service organization. Excludes service recipient transport services and decentralized registration.

71 1 80 20 Service Recipient Registration

The functional center pertaining to the provision of the service that schedules the admission of service recipients; receives, collects, and documents service recipient information and assigns service recipient to the appropriate service. Includes preparation of daily census summary and recording of inpatient/resident/client movement statistics. Excludes service recipient transport services and decentralized registration (ambulatory care services) when registration is carried out by ambulatory care services personnel.

71 1 80 40 Client Registration

The functional center pertaining to the provision of the service which schedules the registration of clients attending any of the health organization services; receives, collects, and documents client information, and assigns clients to appropriate services. Excludes service recipient transport services and decentralized client registration.

71 1 80 60 Emergency Registration

The functional center pertaining to the provision of the service which completes the registration of emergency clients; receives, collects, and documents emergency client information; and assigns clients to appropriate emergency services. Excludes service recipient transport service.

711 80 77 Wait List Management

The functional center pertaining to the development and provision of wait list management initiatives.

71 1 80 80 Centralized Booking

The functional center pertaining to the provision of the service which schedules and coordinates the booking of service recipients for health services.

71 1 80 80 20 Operating Room Booking

The functional center pertaining to the provision of the service which schedules and co-ordinates the booking of patients for surgical procedures.

71 1 80 80 40 Client Booking

The functional center pertaining to the provision of the service which schedules and co-ordinates the booking of clients for health services.

71 1 90 Health Records (CMDB)

The functional center pertaining to the accurate and complete collection, transcription, preservation, and dissemination of health-related data. Excludes admitting, registration or library functions. Sites designated as small facilities may include Registration if there are no dedicated resources as per designated small facility rule.

71 1 90 05 Health Records Administration

The functional center pertaining to the provision of the overall management and operational support of the entire health record department.

71 1 90 20 Transcription

The functional center pertaining to the transcription of dictated reports designated for the health record as well as all non-medical transcription and transcription-related duties.

71 1 90 20 10 Medical Transcription

The functional center pertaining to the transcription of dictated reports designated for the health record. Includes associated transcription-related duties.

71 1 90 20 20 Non-Medical Transcription

The functional center pertaining to all non-medical transcription and associated transcription-related duties.

71 1 90 40 Health Record Processing

The functional center pertaining to the accurate and complete collection and preservation of all patient health information. Includes all clerical record processing and data collection duties.

71 1 90 40 10 Clerical Health Record Processing

The functional center pertaining to the provision of record processing for inpatients/clients/residents/clients; assembly record documentation review; clerical functions (e.g., record and report filing, retrieving, and imaging); and the maintenance of the health record and record systems.

71 1 90 40 20 Health Record Data Collection

The functional center pertaining to the assigning of codes to the diagnosis and procedures according to a recognized nomenclature or classification methodology, and the abstraction of demographic and clinical data from the health record.

71 1 90 40 30 Release of Patient Information

The functional center pertaining to the answering of telephone/in-person requests and written requests (including court orders) for the release of patient/resident/client information.

71 1 90 60 Health Data and Information Services

The functional center pertaining to the health data extraction, compilation, analysis, and interpretation; and information preparation, presentation, distribution, and dissemination.

711 90 70 Provincial Registries

The functional center pertaining to the management of the provincial registries. Activities include data, compilation, extraction, analysis, and interpretation as well as information preparation, presentation, distribution, and dissemination.

711 90 70 10 Provincial Cancer Registry

The functional center pertaining to the management of the Provincial Cancer Registry. Activities include data, compilation, extraction, analysis, and interpretation as well as information preparation, presentation, distribution, and dissemination.

711 90 70 20 Provincial Cervical Cytology Registry

The functional center pertaining to the management of the Provincial Cervical Cytology Registry. Activities include data, compilation, extraction, analysis, and interpretation as well as information preparation, presentation, distribution, and dissemination.

711 90 70 30 Cancer Registry-Special Projects

The functional center pertaining to special projects of cancer care data extraction, compilation, analysis, and interpretation; and information preparation, presentation, distribution, and dissemination.

711 90 70 40 Provincial Cardiac Registry

The functional center pertaining to the management of the Provincial Cardiac Registry. Activities include data, compilation, extraction, analysis, and interpretation as well as information preparation,

presentation, distribution, and dissemination.

711 90 97 Health Records Residual

The functional center pertaining to the provision of other Health Records services required by the health service organization not reported separately at level 4.

Secondary Financial Accounts

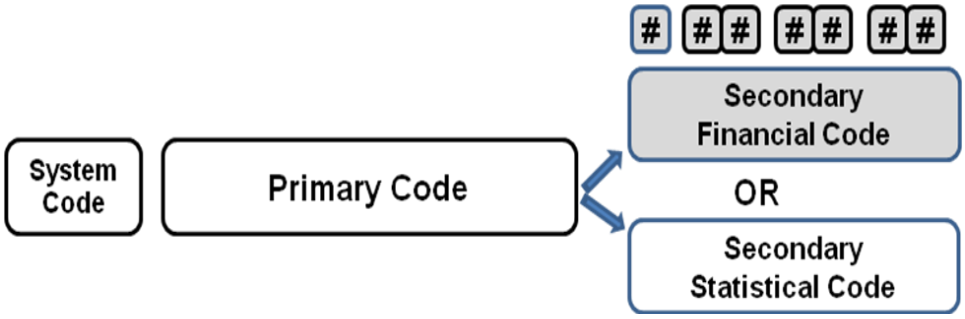

Figure 6

Secondary financial accounts are designed to provide additional information on the nature of revenues and expenses in an organization. Each secondary code is associated with an appropriate primary code. Financial accounts can then be linked to the secondary statistical accounts within the same functional centre to produce performance indicators for the functional centre. Secondary financial accounts establish the direct costs that are attributed to functional centre s.

The secondary financial account code is made up of four distinct segments totaling seven coding positions. Secondary account codes are three, five or seven digits in length which are structured in a specific manner (see Figure 8).

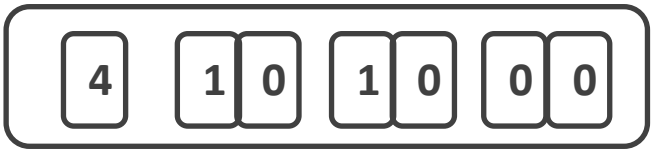

Figure 7

Broad Group

4 The first block is a single character which identifies the secondary financial broad group. Broad group 4 is supplies. (See Figure 9 for further broad groups)

Nature of Secondary Revenue or Expense

10 The second block is two characters long and defines the nature of the revenue or expense. In this example it is supplies – printing, stationery, and office supplies.

Capture of Further Detail of Secondary Revenue or Expense

10 The third block is used to capture further detail and is specific to previous code block. In this example it is supplies printing, stationery, and office supplies – general supplies.

Further breakdown of Secondary Revenue or Expense

00 In certain cases, the Newfoundland and Labrador Chart of Accounts, uses two more digits for further breakdown (provincially defined).

Example: Secondary financial account **4 10 10 00** is used to represent supply expenses (illustrated in Figure 8).

4	10	10	00
Broad Group	**Nature of Revenue and Expense**	**Capture of further detail**	**Capture of further detail**
1 Revenues 2 Inactive 3 Compensation **4 Supplies** 5 Traceable Supplies & Other Expenses 6 Sundry 7 Equipment Expense 8 Contracted-Out Services 9 Buildings and Grounds Expense	**10 Print/Stationary/Office** 15 Supplies-Housekeeping 20 Supplies-Laundry 60 Medical Surgical 65 Drugs 66 Medical Gases 70 Supplies-Lab	**10 Printed Forms** 20 Paper Stocks 30 Printing Supplies 40 Duplicating Supplies 50 Photocopying Supplies 60 Microfilm 70 Computer Supplies 90 General Office Supplies	Accounts specific to previous level and provide further breakdown.

Figure 8

The broad groups of secondary financial accounts are:

Revenue

Revenue is defined as proceeds earned by the health service organization from all sources including payment for services provided to service recipients, recoveries, contributed services, donations, grants, and investment revenue. When revenue is generated in relation to clinical services for facility patients/residents/clients, this revenue is recorded as a recovery in the functional centre incurring the expense. This reduces the cost of providing service to these patients.

Compensation

Compensation is defined as the sum of gross salaries plus benefit contribution expenses. Compensation costs are linked to the functional centre.

To capturing and reporting compensation expenses, the MIS Standards require all staff of a functional centre be assigned to one (or more) of three broad occupational groups; then further categorized by type of earned salaries. By doing so, the accuracy of analysis is improved, and the degree of overhead support associated with the service is identified. The following is a list of broad occupational groups:

- management and operational support personnel (MOS)
- unit-producing personnel (UPP)
- medical personnel (MP)

For each broad occupational group, the types of earned salaries should be further categorized as:

- worked salaries
- benefit salaries
- purchased service salaries

Benefit contributions are an integral part of compensation expense. These costs must also be distributed to functional centres. The benefit contributions include salaries paid to casual and temporary staff in lieu of vacation, statutory holidays, and termination. No hours are attached to these payments and therefore they are not included in benefit hours.

Supplies

Supplies are consumable products used by a functional centre. Accounts exist for items ranging from paper, computer supplies, test manuals and forms, medications, and other clinical products. To make supply transaction coding more efficient, finance and materials management departments should coordinate the stores catalogue to link individual stock item codes to supply expense codes. All expense accounts should be reviewed to ensure that the items included in these accounts are appropriate and to ensure that the expenses for all functional centre s are recorded accurately. Only those items used by the discipline specific departments should be charged to their functional centre.

Traceable Supplies and Other Expenses

These are consumable supplies or other expenses that:

- can be directly associated with a particular service such as an operative, procedure or drug intervention
- can be traced to a particular service recipient
- vary according to the clinical needs of the service recipient
- usually do not behave linearly with workload

Sundry

Sundry costs are those that do not fit into other categories. It includes items such as long-distance telephone charges, courier charges, travel expenses, etc. Most sundry expenses and some supply expenses are intended for administrative and support functional centre s and are overhead costs for the organization. Some organizations have elected to distribute these costs to functional centres. The primary purpose for distribution is better accountability for expenses. An example of an overhead supply cost is laundry. An example of an overhead sundry expense cost is postage.

Equipment Expenses

Equipment expenses are the operating expenses of equipment, including maintenance, repairs, depreciation, gain or loss on disposal, interest on equipment loans and rental or lease expenses incurred, or any other operating expense incurred in the provision of equipment for use by functional centre s in the facility. Depreciation costs for all equipment as well as preventative and repair costs for all clinical equipment are to be expensed to functional centres. This will improve the comparability of costs across organizations. When comparing costs across organizations it is important to understand that there could be variations in the allocation methodology and reporting of these costs.

Contracted-Out Services

The contracted-out services expenses are those related to one of a group of services performed for the health service organization by a contracted-out third-party provider using their personnel and often their supplies, equipment, and premises. The fee charged may include a cost for these items as well as a mark-up for employee benefits and administrative and support expenses**.**

Buildings and Grounds Expense

Those expenses that are associated with the building, its service equipment and the grounds are usually charged to an accounting centre because it is not reasonable or practical to distribute to all functional centre s in the organization.

Select Secondary Financial Accounts Applicable to Health Information Management/Registration Services

For a full listing of the Secondary Financial Accounts, accompanying definitions, and the required provincial reporting level and detail, please refer to the current version of *the Provincial Reporting Requirements User Guide*, or contact the financial department within the applicable zone.

Broad Group No. 1: Revenues

1 10	Revenue- Patient/Resident Services
1 20	Recoveries from External Sources
1 30	Contributed Services
1 40	Donations
1 50	Grants
1 60	Investment Revenue
1 70	Revenue from Other Funds
1 90	Other Revenue

Broad Group No. 3: Compensation

3 11	MOS Worked Hours
3 13	MOS Benefit Hours
3 14	MOS Benefit Contributions – Third Party
3 15	MOS Benefit Contribution Expenses
3 19	MOS Purchased Service Salaries

3 51	UPP Worked Hours
3 53	UPP Benefit Hours
3 54	UPP Benefit Contributions – Third Party
3 55	UPP Benefit Contribution Expenses - Individual
3 59	UPP Purchased Service Salaries
3 91	MP Worked Salaries
3 93	MP Benefit Salaries
3 94	MP Benefit Contributions – Third Party
3 95	MP Benefit Contribution Expenses - Individual
3 99	MP Purchased Service Salaries

Broad Group No. 4: Supplies

4 10	Supplies - Printing, Stationery and Office Supplies
4 10 10	Printed Forms
4 10 20	Paper Stock
4 10 25	Printing Supplies
4 10 60	Microfilm
4 10 70	Information Technology Supplies
4 10 90	General Office Supplies
4 95	Supplies - General
4 95 10	Department Supplies – General

Secondary Statistical Accounts

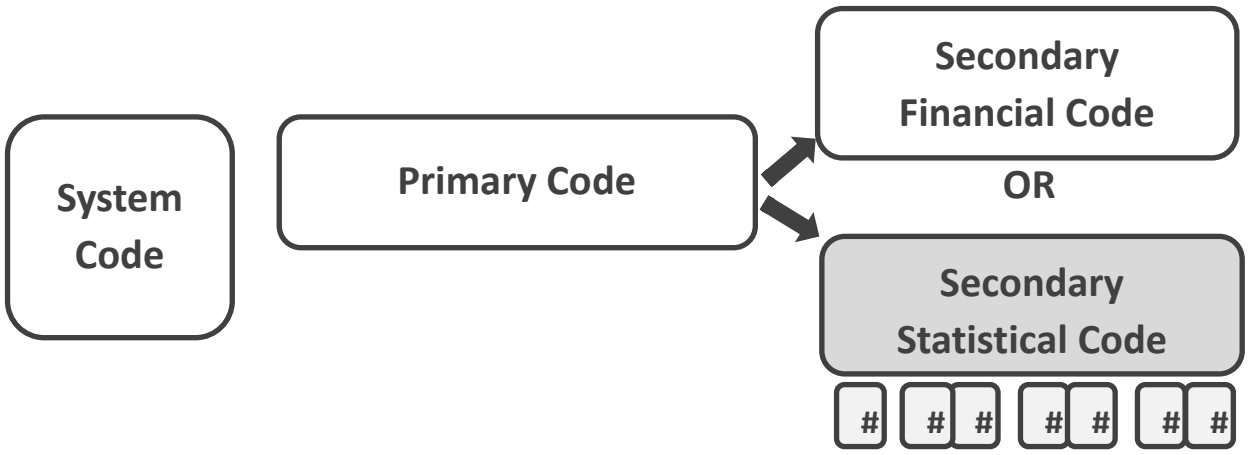

Figure 9

Secondary statistical accounts are designed to provide additional information on the nature of activities that occur within an organization. Each secondary code is associated with an appropriate primary code. Statistical accounts can then be linked to the secondary financial accounts within the same functional centre to produce performance indicators for the functional centre.

The secondary statistical account code is made up of four distinct segments totaling seven coding positions. Secondary account codes are three, five or seven digits in length. As with financial secondary accounts the first digit identifies the broad group. The remaining blocks provide additional detail with the meaning of each segment being dependent on the code used in the preceding segment.

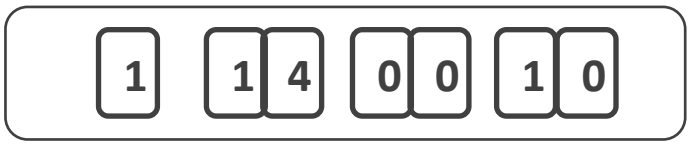

Figure 10

Secondary Statistical Accounts

1 The first block is a single character that identifies the secondary statistical broad group. In this example broad group 1, workload is used (see Figure 12 for further broad groups).

Nature of Statistic

14 The second block consists of two characters and identifies the statistic itself and is specific to the previous code block (example – workload units, health records, etc.).

Capture of further detail of the Statistic

00 The third block is used to capture further detail and is related the nature of the statistic and is specific to the previous code block (example – category of No applicable category).

Further breakdown of the Nature of Statistic

10 The fourth block is used to provide even greater detail on the nature of the statistic.

Example: Secondary statistical account 1 14 00 10 is used to represent workload units- Health Records-Total Record Processing.

1	14	00	10
Broad Group	**Nature of Statistic**	**Capture of Further Detail**	**Additional Breakdown**
1 Workload 2 Staff Activity 3 Earned Hours 4 Service Activity and Caseload Status 7 Functional Centre Operation 8. Health Service Organization Operation & Contracted-Out Services	Workload Units -Service Recipient Activities 02 Workload Units Service Recipient Activities 03 Drug Distribution 07 Diagnostic Therapeutic 08 Respiratory Services 13 Food Services **14 Health Records** 16 In-House Therapeutic 18 In-House Clinical Lab	Category of Service Recipient **00 No Applicable Category** 10 Inpatient 20 Client Hospital 40 Resident 80 Client Community	**10 Record Processing** 20 Transcription 30 Record Imaging 40 Release of Info. 50 Health Data/Info 60 Records Maintenance 70 Functional Centre Support

Figure 11

Example 2: The following example shows the account code used to report Account 2 55 20 ** Staff Activity-Service Recipient Registrations Completed-Client-Hospital-Other.

2	55	20	**
Broad Group	**Nature of Statistic**	**Capture of Further Detail**	**Additional Breakdown**
1 Workload **2 Staff Activity** 3 Earned Hours 4 Service Activity and Caseload Status 7 Functional Centre Operation 8. Health Service Organization Operation & Contracted-Out Services	Workload Units **55 Service Recipient Registrations Completed**	Activity Category 00 No Applicable Category 10 Inpatient **20 Client Hospital** 40 Resident 80 Client Community	

Figure 12

The MIS Standards organizes all statistical data into six broad groups that identify the nature of the statistic. These broad groups are further explained below.

Secondary statistical accounts can only be reported at the level defined by the Department of Health and Community Services in the Provincial Chart of Statistical Accounts. If lower-level accounts have been created for internal use, these must be “rolled-up” to the provincial account prior to data submission.

All statistics must be reported in the same functional centre as the activity took place. This includes earned hours, service activity and caseload status statistics. Workload, staff activity, functional center and health service organizations and contracted out services.

The broad groups of secondary statistical accounts are:

Workload

Workload statistics are those applicable to functional centre s that have a workload measurement system (WMS) in the MIS Standards such as nursing, nutrition services, speech-language pathology, medical imaging, and pharmacy. This workload data is important to functional centre s as it provides information for the analysis of service volumes, productivity, and costs.

Workload, service activity and caseload status statistics must be recorded separately for each category of service recipient. This separation supports more detailed analysis of the data, providing an understanding of different resource needs, as well as supporting external reporting requirements.

Staff Activity

Staff activity statistics pertain to select activities performed by staff when fulfilling the service mandate of the functional centre. In some cases, these statistics may be used as a surrogate workload measure for functional centre s that do not have a workload measurement system in the MIS Standards. For example, laundry can track the number of kilograms of clean linen issued, human resources can track the number of grievances resolved and payroll can track the number of pay cheques/stubs issue.

Earned Hours

Earned hours statistics are those that categorize earned hours by broad occupational group and type of hour. This data is collected by the organizations' compensation systems (payroll).

Service Activity and Caseload Status

Service activity and caseload status statistics pertain to the service activities provided by the nursing in-patient services and ambulatory care, diagnostic and therapeutic services, and community health services functional centres. Examples of service activity statistics include visits – in person, visits - virtual, in-house exams and inpatient days. These statistics supplement workload information by defining the complexity of service activities provided and are used to determine costs for these activities. Caseload status statistics describe the status of service recipients of current, past, and future caseloads (i.e., admissions, discharges, transfers, and new referrals).

Workload, service activity and caseload status statistics must be recorded separately for each category of service recipient. This separation supports more detailed analysis of the data, providing an understanding of different resource needs, as well as supporting external reporting requirements.

Functional Centre Operation

Functional centre operation statistics are specific to the operation of a functional centre. They include those that describe its characteristics (e.g., physical size or capacity), catchment population and personnel complement.

Health Service Organization Operation and Contracted-Out Services

Health service organization operations and contracted-out services statistics pertain to the operation of the health service organization. They include the number of cardiac arrests, medication errors, different types of revenue days, clients receiving home health/home support services and changes in employee status. They also include data related to the physical facility, such as energy consumption, heating days and cooling days and to those services that are provided by a contracted-out third-party provider.

Health Information Management and Registration Statistics

The following statistics should be collected and reported by Health Information Management and Registration functional centres.

Workload

1 14 Workload Units Health Information Management

The standardized units of time used to express the workload of a service as measured by the appropriate workload measurement system. In Health Information Management, one workload unit is equivalent to one minute of unit -producing personnel time spent performing the primary service mandate of the functional center.

1 14 ** XX - Health Information Management Workload Units

By Category of Service Recipient

** 00 No applicable Category

By Activity Category

XX 10 Record Processing
20 Transcription
30 Record Imaging
40 Release of Information
50 Health Data Reporting
60 Records Maintenance
70 Support Activities (Provincial account)

1 70 Registration/Appointments Workload Units (Provincial Account)

By Service Recipient

The standardized units of time used to express the workload of a service as measured by the appropriate workload measurement system. In Registration functional center s, one workload unit is equivalent to one minute of unit-producing personnel time spent performing the primary service mandate of the functional center.

1 70 ** XX Registration/Appointments Workload Units

By Category of Service Recipient

** 00 No applicable Category

By Activity Category

XX 05 Admissions
10 Registration
20 Appointments and Scheduling
30 Support Activities

Staff Activity

Staff Activity Statistics measure the **volume of activities** that staff are engaged in. Staff Activity Statistics are surrogate measures for workload statistics. They are intended to be used alone or with other workload statistics to measure functional center productivity and the resource consumption of specific activities.

The same categories of service recipients can be applied, where applicable, to staff activity statistics as are used with workload statistics to identify the resource consumption of specific service recipient types, i.e., inpatient, resident, client, etc.

These statistics should then be reported for both internal and external use.

2 55 Service Recipient Registrations Completed by HIM or Registration functional centers

To be reported by Health Information Management and Registration functional centers

By Category of Service Recipient

The service recipients officially accepted by the health service organization either through the capture of person identifiable data and/or the assignment of a unique identifier, the confirmation of an existing unique identifier, or the opening of a unique file or record for the service recipient; includes registrations done by Registration/Health Information Management functional center s for ambulatory services such as clinics, DI, lab, etc. Excludes registrations done by staff of other departments.

2 55 10 Inpatient
2 55 20 Client - Other
2 55 30 Client - Surgical Day/Night Care
2 55 40 Resident

2 56 Service Recipient Appointments Scheduled

To be reported by Health Information Management and Registration functional center s

The appointments booked in advance for service recipients to undergo diagnostic testing, and/or receive health services from a functional center.

2 56 10 Operating Room
2 56 20 Client

2 59 Health Records Abstracted (national account-provincially defined)

To be reported by Health Information Management functional centres
The service recipient health record abstracts completed in the reporting period for the Purpose of data submission to national health databases. A sub-category of Staff Activity, Broad Group 2. The statistic will be collected for abstracts completed by health Information management staff for the Discharge Abstract Database (DAD) inpatient Acute and day surgery, National Rehabilitation System (NRS), National Ambulatory Care Reporting System (NACRS) and Ontario Mental Health Reporting System (OMHRS) Abstracts. NOTE: This is NOT intended to reflect the number of abstracts submitted. Rather it counts the number of abstracts completed for submission.

2 59 ** XX Health Records Abstracted
By Category of Service Recipient
** 10 Inpatient
20 Client Hospital

40 Resident
By Abstract Type
XX 10 DAD (Provincial account)
20 NRS (Provincial account)
30 OMHRS (Provincial account)
40 NACRS (Provincial account)

2 60 Requests for Release of Information Processed

To be reported by Health Information Management functional centers

The occasions where there is controlled access to and/or release of service recipient-specific health information at the request of a third party.

2 60 10 Routine (Provincial account)
2 60 20 Complex (Provincial account)

2 61 Transcription Lines Typed/Produced

To be reported by Health Information Management or specific Transcription

Functional centres

The lines typed/produced to transcribe dictated medical and/or diagnostic test results into the service recipient's health record or for other dictated/written reports; comprised of 55 (ITS) - 60 (Fusion) characters per line. Zones must convert the number of characters from own transcription system to lines as defined above. Headers and footers are excluded. Canned text is measured by strokes.

By Type of Transcription (optional)

2 61 10 Medical Transcription
2 61 20 Non-medical Transcription

2 62 Images Processed

To be reported by Health Information Management or specific Clerical Health Record Processing Functional centres
The sheets of paper imaged. Double sided papers are counted as two images.

Earned Hours

3 10 Earned Hours - Management and Operational Support Personnel

The earned hours for which the management and operational support personnel of the functional center have received or will receive salaries.

3 11 MOS Worked Hours
3 13 MOS Benefit Hours
3 19 MOS Purchased Hours

3 50 Earned Hours - Unit-Producing Personnel

The earned hours for which the unit-producing personnel of the functional center have received or will receive salaries.

3 51 UPP Worked Hours
3 53 UPP Benefit Hours
3 59 UPP Purchased Hours

Workload Measurement System

Workload Measurement System

A workload measurement system (WMS) is defined as a tool for measuring the volume of services provided in terms of a standardized UPP time and serves as a:

- department management tool to provide systematic quantification of workload to assist in staffing, planning, budgeting, and performance monitoring.

- Standardized method for recording workload that will yield uniform data for internal and external reporting, permitting historical trending and selective national and peer group comparisons.

The Generic Workload Measurement and Reporting Framework provides a model for data collection and reporting for many clinical disciplines while enabling users to customize the level of detail for their discipline or service.

Workload is collected for all activities that are undertaken on behalf of a service recipient. A service recipient is defined as the consumer of primary service activities of one or more functional centre s of the health service organization. Service recipients include individuals (e.g., inpatient, residents, clients) and their significant others. Significant others are individuals who are acting on behalf or in the interest of the service recipient, such as parent, spouse/partner, child, legal guardian, or substitute decision-maker.

Note: There are other individuals who act on behalf of or in the interest of service recipients but are not considered to be a "significant other." Examples include ministers, teachers, lawyers, or other health care professionals. The time spent with these individuals is recorded as the service recipient workload, consultation/ collaboration. No service activity statistic is recorded.

Due to the shared nature of health information management, registration and switchboard responsibilities in some facilities, the conceptual models for Health Information Management and Registration services reflect and capture the time spent in support of the other services.

The provincial standard times provided in this document were derived through time studies conducted by staff within the zones, at a variety of sites throughout the province. ***They are intended to be used as guidelines only.*** *Given the varied business processes, technology available, staffing profiles, etc. it is not reasonable to assume the one standard time is an accurate reflection of the time it takes to complete a specified task at all sites. Therefore, to improve the accuracy of the WMS, use of facility specific standard times is encouraged. This approach is consistent with recent WMS redevelopment projects undertaken on the national level by CIHI. However, such values* ***must*** *be derived using standardized timing protocols, as outlined in the following section of this reference guide or through expert consensus. When facility specific unit values are determined, it is recommended that all supporting documentation be retained for future reference. Such studies should be repeated at regular intervals to ensure the unit value remains reflective of the average time to complete the given task over time.*

See Appendix B for a summary listing of the provincial standard time unit values and WMS activity and time recording methodology summary developed to support implementation of the HIM and Registration WMSs.

Recording Workload

Workload is recorded by unit producing personnel (UPP). UPP perform activities that directly contribute to the fulfillment of the service mandate of the functional centre. Management and operational support personnel do not record workload.

The allocation of individual staff members to broad occupational groups should be reviewed to determine the appropriate identification of unit-producing staff to ensure that worked hours and workload are matched. Management staff routinely participating in unit-producing activities should have their compensation divided between management and operational support and unit-producing personnel.

Managers who perform unit-producing activities should collect workload for this activity if it consumes more than 20% of their time. In some situations, it may even be advisable to collect workload for individuals who spend smaller percentages of their time providing clinical service. This would depend on the size of the service and the impact on productivity indicators.

In today's environment, traditional management duties are often delegated to UPP staff, although this may not be greater than 20% for any individual staff member. These staff members are designated as UPP with UPP worked hours and non-service recipient activity workload is used to record time for management work. Clinical leaders are not unit producers if their primary role is management. When comparing performance indicators across organizations, knowledge of the service delivery model is essential. Although these models may reduce overhead costs in traditional administrative functional centres and reduce reported management hours in diagnostic and therapeutic functional centres, there may be an offsetting increase in the cost per workload unit as UPP non-service recipient activity workload may increase.

If a UPP staff member is responsible for management activities on an occasional basis, this time is recorded as non-service recipient activity (functional centre activities) within UPP worked hours. If an individual is responsible for management activity for greater than 20% of their time, the worked hours of these staff should be divided between MOS and UPP categories. No workload is recorded for the management portion of their time.

Health Information Management WMS

Health Information Management WMS Conceptual Model

(Adapted from the Health Records WMS conceptual model published by the Canadian Institute for Health Information, 2021 MIS Standards)

Definitions, timing protocols and recommended time methodologies for each WMS activity are provided below.

HEALTH INFORMATION MANAGEMENT

Record Processing	Transcription	Record Imaging	Release Of Information	Health Data Reporting	Records Maintenance	Support Activities
Assembly & Analysis Coding/ Abstracting Incomplete Record Management Record Retrieval/ Filing External Collection and Distribution Related Record Processing Procedures	Transcription Transcription Related Procedures	Scanning De/Re-Indexing Scanning Related Procedures	Routine Complex	Internal Reporting External Reporting Research	Record Purging Record Destruction Maintenance of Records Information Systems Support	Functional Centre Activities Organizational/ Professional Teaching/ In-service Support to Registration Support Switchboard

Figure 13

RECORD PROCESSING	
ASSEMBLY AND ANALYSIS	
ASSEMBLY	
Definition	The process of arranging documents in a pre-established order in the health record. The unit value includes: START TIME: Initiation of securing separated record. -secure separated records -combine with previous records -verify identification on each record document -sort and retain permanent record documents -verify the prescribed arrangement of documents in the record -general record repair and preparation NOTE: This time does not include going to the inpatient/resident to retrieve the separated records. Refer to External Collection and Distribution under Record Processing. STOP TIME: Completion of assembling record
Time Recording Methodology	Inpatient - Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client-SDC/MDC – Not applicable Client ER/Clinics – Not applicable Resident- Not applicable
Item for Count	Number of records assembled, by inpatient, client (SDC/MDC), Emergency/Clinic) and Resident (*NOTE: This count may not equal the number of discharges per month.)*

ANALYSIS	
Definition	The process of reviewing the paper or electronic documents in the health record for completeness, adequacy, and accuracy. The unit value includes time to: START TIME: Initiation of chart review. -analyze the records for completeness, adequacy, and accuracy -check and secure for missing documents -complete deficiency slips (manually or electronically) -search and identify data elements requested for special programs or studies and, search dictation system for missing report(s) STOP TIME: Completion of review of a chart.
Time Recording Methodology	Inpatient – Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client-SDC/MDC – Not applicable Client ER/Clinics – Not applicable Resident- Not applicable
Item for Count	Number of records analyzed, for inpatient and client
ASSEMBLY AND ANALYSIS Combined	
Definition	The process of arranging documents in a pre-established order in the health record and reviewing the paper or electronic documents in the health record for completeness, adequacy, and accuracy. This process can be considered two separate processes if desired for the purpose of data collection and analysis, as described below.
Time Recording Methodology	Inpatient – Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client-SDC/MDC - Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained.

	Client ER/Clinics - Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Resident-Actual time
Item for Count	Number of records assembled and analyzed, by inpatient, client (SDC/MDC), Emergency/Clinic) and Resident

CODING AND ABSTRACTING	
CODING AND ABSTRACTING	
Definition	Definition of Coding and Abstracting: The process of assigning codes to diagnoses and procedures, according to a recognized classification and extracting demographic and clinical data from the health record to provide information for internal and external reporting, research, and statistical purposes. START TIME: Health record accessed, and coding/abstracting initiated. STOP TIME: Completion of abstract, including generation of coding sheets
Time Recording Methodology	Inpatient – Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client (Surgical Day Care) – Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client ER/Clinics – Not applicable Resident- Not applicable
Item for Count	Number of records coded and abstracted, by inpatient and client. Productivity targets have been set at three inpatient charts per coder worked hour or seven SDC charts per coder worked hour.

CODING AND ABSTRACTING RELATED PROCEDURES	
Definition	The processes used to support coding and abstracting services such as month end procedures such as edits, reports, batching and submission management, ADT/abstracting reconciliation, maintenance of system integrity, data quality issue identification and management, etc.
Time Recording Methodology	Actual Time
Item for Count	N/A

INCOMPLETE RECORD MANAGEMENT	
INCOMPLETE RECORD PROCESSING	
Definition	The processing of incomplete records. The unit value may include: -retrieve files for completion. -final check on completion, removal of deficiency slip, and physical/electronic reassignment as necessary. -Generation of a patient care profile/master summary. (This is an additional step done by some facilities.)
Time Recording Methodology	Actual Time
Item for Count	N/A
INCOMPLETE RECORD NOTIFICATION	
Definition	The process of determining those providers with incomplete service recipient charts past the cut-off date and preparing the necessary notices and reports. Included is the time to retrieve the chart, determine status, re-file and prepare the notices and reports. START TIME: Initiation of determining health care personnel with incomplete service recipient charts past cut-off date. STOP TIME: Completion of preparing reports and notices.
Time Recording Methodology	Actual Time
Item for Count	N/A

RECORD RETRIEVAL AND FILING	
ROUTINE RECORD RETRIEVAL	
Definition	The process of extracting a health record or portion thereof from a specific order in an allocated area. Includes all types of records, i.e., incomplete, deceased, inactive, volumes, etc. START TIME: Initiation of numerically listing records to be retrieved, e.g., sorting clinic lists. -make and insert out guide, or sign out in computer tracking system -remove record STOP TIME: Completion of retrieving last record on list.
Time Recording Methodology	Inpatient – Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client-SDC/MDC - Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client ER/Clinics - Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Resident-Not applicable *(NOTE: Charts requiring more than 30 minutes to retrieve will be counted as Non-Routine 'MIA' Record Retrieval)*
Item for Count	Number of Records Retrieved by inpatient, client-MDC/SDC, and client-ER/clinics.
NON-ROUTINE 'MIA' RECORD RETRIEVAL	
Definition	The process of locating and extracting a health record that is missing (i.e., has not been in the usual places and within the 30-minute timeframe).
Time Recording Methodology	Actual Time for Non-Routine Records Retrieved, by Inpatient, client-MDC/SDC, and client-ER/clinics, and Resident

Item for Count	N/A
RECORD FILING	
Definition	The process of inserting a health record into a specific order in an allocated area. The unit value includes time to: START TIME: Initiation of grouping of records to be filed. -sort into numerical order -insert record -remove out guide if necessary -update on computer if necessary STOP TIME: Completion of inserting last record to be filed.
Time Recording Methodology	Inpatient – Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client-SDC/MDC - Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client ER/Clinics - Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained.
Item for Count	Number of Records filed, by Inpatient, client-MDC/SDC, and client-ER/clinics, *NOTE: Time is counted at the point of final filing.*

LOOSE REPORT FILING	
Definition	The process of filing loose reports that are received independent of the actual health record, e.g., client reports, ECG reports, radiology reports. Includes time to verify identification information on the report, determine location of the health record and insert the document(s) in the appropriate order. START TIME: Initiation of grouping loose reports. STOP TIME: Completion of inserting last loose report into the record either in front or in order; includes sorting and filing; and records set aside.
Time Recording Methodology	Inpatient – Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client-SDC/MDC - Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client ER/Clinics - Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Resident-Not applicable
Item for Count	Number of reports of loose filing filed by Inpatient, client-MDC/SDC, and client-ER/clinics, *Note: One report may be comprised of several sheets.*

EXTERNAL COLLECTION AND DISTRIBUTION	
EXTERNAL COLLECTION AND DISTRIBUTION	
Definition	The process of distributing records and/or reports upon request to various functional center s within the health service organization. E.g. This includes time for distributing and collecting charts from wards, clinics, Emergency Department, Surgical & Medical Day Cares, etc. START TIME: Departure time from Health Records department. STOP TIME: Arrival time upon return to the Health Records department.
Time Recording Methodology	Actual time
Item for Count	N/A
RELATED RECORD PROCESSING PROCEDURES	
RELATED RECORD PROCESSING PROCEDURES	
Definition	All other activities undertaken in support of or related to the above noted Records Processing functions. START TIME: Initiation of activity. STOP TIME: Completion of activity.
Time Recording Methodology	Actual time
Item for Count	N/A

TRANSCRIPTION	
TRANSCRIPTION	
Definition	The process of transcribing and assuring the quality and completeness of dictated/written reports that are designated for the health record (e.g., separation summaries, histories, physicals). Also includes transcription of documentation unrelated to the health record, such as administrative correspondence, research reports, etc. where this is required of transcription staff. To measure the output of transcription completed in the FUSION system, a standardized 60-character line with three section/line formats will be used as the basic of measure for output. In the case of voice recognition, a minimum accuracy rate of 75% should be achieved before moving users from TEST to LIVE environments. Back-end weighting setting should be 35% (meaning the transcriptionist is credited with 65% of the character line count). Auto-text routines will be credited with 50% of the character line count. To measure the output of transcription completed in the IT'S module of Ameritech, a standardized 55-character line with three section/line formats will be used as the basic of measure for output. Zones using both systems must add the ITS lines and FUSION lines together for a total line count. START TIME: Initiation of processing a report including dictating and word processor machines switched on, headphones on, printer set up and patient selected. STOP TIME: Completion of report and sending output to the printer.
Time Recording Methodology	Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained.
Item for Count	# of lines transcribed/produced Productivity target has been set at 125 lines per transcriptionist hour typed. For zonal use, may measure non-medical and medical transcription separately.

TRANSCRIPTION RELATED PROCEDURES	
Definition	The procedures associated directly or indirectly with transcription. They include preparing equipment and work area, printing reports, prioritizing, and proofreading dictation, distributing material and/or photocopying, separating, and distributing reports, creating new user accounts, and orienting new users to the dictation/transcription system, etc. START TIME: Initiation of the activity. STOP TIME: Completion of the activity.
Time Recording Methodology	Actual time
Item for Count	N/A

RECORD IMAGING	
SCANNING	
Definition	The process of reproducing health records into an electronic format which includes preparation of document, scanning and verification for legibility, completeness, quality, etc. START TIME: Initiation of obtaining records for scanning from permanent file. -obtain health record for scanning -ensure patient is positively identified -prepare each record -scan each record -index record documents -check digitized record -verify legibility and completeness -electronically file record STOP TIME: Records are set aside.
Time Recording Methodology	Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained.

Item for Count	Number of sheets scanned; double sided sheets count as 2.
DE/RE INDEXING	
Definition	The process of correcting the association of an electronic document with a specific patient record. This involves removing documents inappropriately assigned and reassigning them to the correct patient record, removing duplicate/unnecessary documents as well as replacing incomplete documents with complete documents on the same patient record.
Time Recording Methodology	Actual time
Item for Count	N/A
SCANNING RELATED PROCEDURES	
Definition	Any procedure performed prior to or after the actual indexing and scanning of information. This activity would include verification of patient identification, removal of non-legal documentation and staples, taping of prescriptions and blood bank cards, imprinting of documents, sorting like information into groups, confirmation of documents via highlighting from lists, preparation, and boxing of information for storage, or other tasks as required.
Time Recording Methodology	Actual time
Item for Count	N/A

RELEASE OF INFORMATION	
ROUTINE REQUESTS FOR RELEASE OF INFORMATION	
Definition	The process of responding to requests for release of service recipient information which take on average 20 minutes or less to complete. Information requested may include demographic, admission or visit history or other information available through computer system or paper records. Included is the time to verify authorization for release of service recipient information and fully answer request (e.g., obtain record, log request). START TIME: Read and verify request received (by phone, fax, e-mail, letter, etc.) -request logged -request actioned STOP TIME: Request completed.
Time Recording Methodology	Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained.
Item for Count	Number of Routine Requests processed
COMPLEX REQUESTS FOR RELEASE OF INFORMATION	
Definition	The process of responding to requests for release of service recipient information which take on average greater than 20 minutes to complete. Information requested may include demographic, admission or visit history or other information available through computer system or paper records. Included is the time to verify authorization for release of service recipient information and fully answer request (e.g., obtain record, log request). START TIME: Read and verify request received (by phone, fax, e-mail, letter, etc.) -determine valid authorization -determine service recipient identification -retrieve the record -extract desired information -photocopy/or transmit by facsimile -record re-assembly -re-file record -complete the necessary documentation for financial services -log the request -prepare accompanying letter -notify health practitioner of release, if applicable

	-letter inserted into record STOP TIME: Completion of the above noted process. Excludes transport time of record between sites.
Time Recording Methodology	Facility Specific Standard Time or Actual time
Item for Count	N/A

HEALTH DATA REPORTING	
Health Data and Information Services encompasses the time required for the extracting, compiling, analyzing, and interpreting, preparing, presenting, and distributing or disseminating of health data and information for study, review, and reporting. Includes time spent on: - quality management program reports (e.g., quality, utilization and risk indicators and reports) - health information statistics - research and committee studies - Clinical/financial information reports Health Data and Information Services are comprised of three categories of activities:	
INTERNAL REPORTING	
Definition	The process of extracting, compiling, analyzing, interpreting, preparing, presenting, and disseminating clinical and/or financial information. Examples include medical audits, morbidity reports, internal audits, quality management reports, wait list reports, etc. START TIME: Determine nature of report to be generated - Initiation of data extraction - Compile desired report - Complete required analysis - Distribute/present report as required STOP TIME: Report presentation/dissemination is completed
Time	Actual Time

Recording Methodology	
Item for Count	N/A
EXTERNAL REPORTING	
Definition	The process of extracting, compiling, analyzing, interpreting, preparing, presenting, and disseminating clinical and/or financial information to meet external reporting requirements/requests. Examples include reports prepared for the Canadian Institute for Health Information, Department of Health and Community Services, Statistics Canada, School Boards, etc. START TIME: Determine nature of report to be generated and validation of approval source -Initiation of data extraction -Compile desired report -Complete required analysis -Distribute/present report as required STOP TIME: Report presentation/dissemination is completed
Time Recording Methodology	Actual Time
Item for Count	N/A
RESEARCH	
Definition	The process of extracting, compiling, and reporting information in support of formalized research projects. Such research is formally designed and approved clinical investigations directed towards advancing knowledge in the field of health, and the delivery of health services, using recognized methodologies and procedures. START TIME: Determine nature of data to be reported and validate approval source/consents -Initiation of data extraction -Compile desired report -Distribute/present report as required STOP TIME: Report presentation/dissemination is completed

Time Recording Methodology	Actual Time
Item for Count	N/A

RECORDS MAINTENANCE	
RECORD PURGING	
Definition	The designated and planned process of identifying and removing records or portions of records for the purpose of storage or destruction after the required retention period from permanent filing. START TIME: Determine records to be purged -Retrieve records -Remove desired records or portions thereof for storage or destruction -Complete storage or destruction STOP TIME: Complete required documentation
Time Recording Methodology	Actual Time
Item for Count	N/A
RECORD DESTRUCTION	
Definition	The process of preparing documents/electronic records for destruction including retrieval, logging of data (electronically or manually), boxing/bagging documents, transporting and witnessing the destruction of records where applicable. START TIME: Determine records to be destroyed -Retrieve records -Prepare records for destruction -Destroy the records/witness the destruction of the records STOP TIME: Complete required documentation

Time Recording Methodology	Actual Time
Item for Count	N/A
MAINTENANCE OF RECORDS	
Definition	The process of maintaining an active and inactive filing system(s), as well as the process of maintaining information systems (databases, etc.) including: -Creation of volumes -Permanent file -Incomplete records -Merging/Overlay management -Client Registry data quality report reconciliation
Time Recording Methodology	Actual Time
Item for Count	N/A
INFORMATION SYSTEMS SUPPORT	
Definition	Activities undertaken to maintain the integrity of data within the electronic records systems and ongoing maintenance of that system. Examples include: -Maintain system dictionaries -Maintenance of system integrity with updates (e.g., software, Ameritech updates, etc.) -Testing of system updates
Time Recording Methodology	Actual Time
Item for Count	N/A

SUPPORT ACTIVITIES	
FUNCTIONAL CENTRE ACTIVITIES	
Definition	Activities required for the operation/maintenance of the functional center and for the benefit of staff. This category includes, but is not limited to: -Functional Center Management -Clerical Activities -Orienting staff and students -Recording and calculating workload and other statistical data -Preparing documentation for meetings -Collecting and compiling departmental statistics -Administrative activities for Health Information Management/Registration services -Employee meetings (both formal and informal) -Assigning of work, organizing employees, updating procedures, etc. -Maintaining a safe and tidy work environment, equipment maintenance, ordering supplies, inventory control -Participating in functional center quality improvement activities -Travel (internal and external) related to any of the above activities and patient pottering.
Time Recording Methodology	Actual Time
Item for Count	N/A
ORGANIZATIONAL/PROFESSIONAL	
Definition	Activities that are performed for the general functioning and direct benefit of the organization, community, or profession. Includes, but is not limited to: -Board/committee functions -Activities performed during worked hours related to preparation, attendance, and follow-up of health service organization board/committee functions. E.g., Accreditation teams, Occupational Health and Safety Committees, etc. -Public relations -Activities directly associated with the public relations function of the health service organization. E.g., planning, meetings, and participation in the event, e.g., media events, information programs, preparing articles for publications,

	etc. -Court Appearances and Discoveries -Professional activities such as services provided to the professional, scientific, and local communities, agencies, and service groups during worked hours. E.g., participation in professional association committees -Advocacy on behalf of one's profession -Travel (internal and external) related to the above activities.
Time Recording Methodology	Actual Time
Item for Count	N/A
TEACHING/IN-SERVICE	
Definition	Activities devoted to the dissemination of knowledge by staff, through lectures, presentations, observations, or direct participation as well as in-service education received by staff. It includes, but is not limited to placements of HIS students, information sessions for other staff, and formal lectures to university/college students. -Students: Activities associated with the preparation, orientation, instruction, supervision, and/or evaluation of students prior to, during, or immediately following their placements. -Professionals: Activities associated with the preparation, orientation, presentation, and/or instruction of other professional staff such as nurses, physicians, medical students, etc. -Academic: Activities involved in the preparation and presentation of course/lecture material to students and evaluation of students as part of the academic curriculum. -In-service Education: Activities such as brief, in-house education sessions presented by other staff, orientation to new procedures or equipment, grand rounds, reading of professional journals, etc. -Travel (internal and external) related to the above activities NOTE: Professional Development requiring Education Leave is excluded from this category as the time is considered 'benefit hours', not part of 'worked hours. Professional development activities are longer, more formal, discipline-specific and are usually greater than ½ day in duration. Professional association annual conferences, courses, symposiums, seminars, and workshops are examples of typical professional development activities.
Time Recording	Actual Time

Methodology	
Item for Count	N/A
SUPPORT TO REGISTRATION	
Definition	Time spent in support of the Registration functional center, registering inpatients, resident or clients as required, usually during evenings or nights when registration staff are not on duty. Includes travel (internal and external) related to this activity.
Time Recording Methodology	Actual Time
Item for Count	N/A
SUPPORT TO SWITCHBOARD	
Definition	Time spent manning facility switchboard, answering, and directing telephone calls, paging, and responding to emergencies as required. Includes travel (internal and external) related to this activity.
Time Recording Methodology	Actual Time
Item for Count	N/A

REGISTRATION WMS

REGISTRATION WMS CONCEPTUAL MODEL

REGISTRATION/APPOINTMENTS			
Admissions	**Registrations**	**Appointments and Scheduling**	**Support Activities**
Inpatient/Resident Admissions	Client Registrations	Individual Appointment Bookings	Functional centre Activities
Transfer/Separation Procedures	Other Registration Related Procedures	Block Bookings	Organizational/ Professional
Bed Management		External Bookings/Referrals	Teaching/In-Service
Other Admission Related Procedures		Other Appointment Related Procedures	Support to Health Information Management
			Support to Switchboard

Figure 14

ADMISSIONS	
INPATIENT ADMISSIONS	
Definition	Admission Procedure - Inpatients/Newborns The official acceptance into the health service organization of an adult/child/newborn/postnatal newborn that requires medical and/or health services on a time limited basis. The admission procedure involves the assignment of a bed, bassinet or incubator and a unique identifier to record and track services. Admission of a newborn is deemed to occur at the time of birth, or in the case of postnatal newborns, at the time of admission of the mother to the health service organization. START TIME: Notification of admission - time spent checking bed availability and off services as appropriate - input/update patient information - completion of applicable forms - request/retrieve record or create record as necessary - initiate arrangements for patient transport, if required - transport admission documents to patient location, if required STOP TIME: Completed records ready to be distributed (face sheet completed) when no further distribution required. When additional time is needed to distribute the admission chart to the patient location, additional time should be added.
Time Recording Methodology	Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Additional time for delivery of patient chart and/or patient to the inpatient location.
Item for Count	Number of Inpatient Admissions
RESIDENT ADMISSIONS	
Definition	Admission Procedure -Residents The official acceptance into a health service organization of an individual who requires medical, health and/or residential services on a longer-term basis. The

	admission process involves the assignment of a bed and a unique identifier to record and track services. START TIME: Notification of admission - time spent checking bed availability and off services as appropriate - input/update resident information - completion of applicable forms - request/retrieve record or create record as necessary - initiate arrangements for resident transport if required - transport record to patient location, if required STOP TIME: Completed records ready to be distributed (face sheet completed) when no further distribution required. When additional time is needed to distribute the admission chart to the patient location, additional time should be added.
Time Recording Methodology	Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained.
Item for Count	Number of Resident Admissions
TRANSFER/SEPARATION PROCEDURES	
Definition	The process of recording a transfer/separation of a patient/resident within a health service organization into the information system. (e.g., transfers of doctor to doctor, service to service, bed to bed, discharges, and deaths). Excludes time to arrange an external transfer. START TIME: Notification of patient separation or transfer -confirm bed availability as required -update service recipient information in MPI STOP TIME: Completion of transfer/separation transaction.
Time Recording Methodology	Inpatient – Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Client ER - Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Resident-- Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained.

Item for Count	Number of transfer/separation transactions completed
BED MANAGEMENT	
Definition	Activities undertaken to ensure facility bed use is optimized for maximum efficiency and the determining of overall bed availability, e.g., ward rounds, bed coordination/reassignment, etc. Excludes time spent assigning an available bed for a specific patient (included in the admission process). START TIME: Initiation of activity STOP TIME: Completion of activity
Time Recording Methodology	Actual Time
Item for Count	N/A
OTHER ADMISSION RELATED PROCEDURES	
Definition	Activities undertaken related to admissions such as generation of census statistics and reports, completing hostel bookings, OR bookings, pre-admission processes, time to arrange an external transfer, etc. START TIME: Initiation of activity STOP TIME: Completion of activity
Time Recording Methodology	Actual time or Facility Specific Standard Time could be developed over time if consistency is demonstrated.
Item for Count	N/A

REGISTRATIONS	
CLIENT REGISTRATIONS	
Definition	The procedures necessary for the acceptance into a health service organization of a client who requires medical and other health services. The client is not assigned to a bed, bassinet or incubator since the services are provided in one day (usually within hours). Included is the registration of individuals seen through ambulatory services such as emergency, surgical day care, medical day care, cardiac Cath lab, ambulatory clinics, etc. The unit value includes time to: START TIME: Presentation of Client for Registration -Validate client's appointment -Search MPI and Client Registry for patient match -create / update client information -print ID card if applicable -print and apply armband if applicable -request/retrieve records or create new record -generate/complete all necessary forms -direct client to appropriate area -distribute record to client location, if required STOP TIME: Registration completed and records ready to be distributed (face sheet completed) when no further distribution required. When additional time is needed to distribute the chart to the client location, additional time should be added.
Time Recording Methodology	Client SDC/MDC-Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained. Separate Client ER and Clinic-Provincial standard times if applicable; otherwise, a facility specific standard time must be developed and maintained.
Item for	Number of Client registrations processed

Count	
OTHER REGISTRATION RELATED PROCEDURES	
Definition	Activities undertaken related to registration such as generation of ER departure statistics reports, OR bookings, etc. START TIME: Initiation of activity STOP TIME: Completion of activity
Time Recording Methodology	Actual time / Facility Specific Standard Time could be developed if consistency is demonstrated over time.
Item for Count	N/A

APPOINTMENTS & SCHEDULING	
INDIVIDUAL APPOINTMENT BOOKINGS	
Definition	The process of booking and/or rebooking individual appointments for various ambulatory services within the facility/program. Includes OR bookings when performed by Health Information Management/Registration staff. START TIME: Point in time when the staff start to action the notification or request (person presents, telephone, referral received) -identify patient -set time slot/ schedule or reschedule STOP TIME: Completion of the **initial** attempt to notify the patient or referral source by phone, letter, or in-person.
Time Recording Methodology	Provincial standard time if applicable; otherwise, a facility specific standard time must be developed and maintained.
Item for Count	N/A
BLOCK BOOKINGS	
Definition	The process of booking and/or rebooking a block of appointments for various ambulatory services within the facility/program, e.g., cancelled clinics rebooked. START TIME: Point in time when the staff initiate the booking/rebooking process STOP TIME: Completion of the initial attempt to notify the patient or referral source by phone, letter, or in-person. NOTE: This could include the Ameritech booking process and notification. If notification is done as a separate activity, record time for the notification process in *Other Appointment Related Procedures.*

Time Recording Methodology	Actual Time
Item for Count	N/A
EXTERNAL BOOKINGS/REFERRALS	
Definition	The process of booking and/or rebooking appointments with external agencies/service providers external to the facility/program on behalf of clients of the health service organization. START TIME: Request for appointment received -identify client -determine client documentation -arrange the needed appointment via telephone, fax, or in-person -send documentation via mail or fax STOP TIME: notify client or referral source.
Time Recording Methodology	Actual Time
Item for Count	N/A
OTHER APPOINTMENT RELATED PROCEDURES	
Definition	Activities undertaken related to appointment scheduling such as travel arrangements and clinic room bookings for traveling clinics, maintenance of dictionaries within the Community Wide Scheduling module, etc. **Includes time to attempt additional recall notifications to patients regarding appointments.** START TIME: Initiation of activity STOP TIME: Completion of activity

Time Recording Methodology	Actual Time
Item for Count	N/A

SUPPORT ACTIVITIES	
FUNCTIONAL CENTRE ACTIVITIES	
Definition	Activities required for the operation/maintenance of the functional center and for the benefit of staff. This category includes, but is not limited to: -Functional Centre Management -Clerical Activities -Orienting staff and students -Recording and calculating workload and other statistical data -Preparing documentation for meetings -Collecting and compiling departmental statistics -Administrative activities for Health Information Management/Registration services -Employee meetings (both formal and informal) -Assigning of work, organizing employees, updating procedures, etc. -Maintaining a safe and tidy work environment, equipment maintenance, ordering supplies, inventory control -Participating in functional center quality improvement activities -Travel (internal and external) related to any of the above activities and patient pottering.
Time Recording Methodology	Actual Time
Item for Count	N/A

ORGANIZATIONAL/PROFESSIONAL	
Definition	Activities that are performed for the general functioning and direct benefit of the organization, community, or profession. Includes, but is not limited to: -Board/committee functions -Activities performed during worked hours related to preparation, attendance, and follow-up of health service organization board/committee functions. E.g., Accreditation teams, Occupational Health and Safety Committees, etc. -Public relations -Activities directly associated with the public relations function of the health service organization. E.g., planning, meetings, and participation in the event, e.g., media events, information programs, preparing articles for publications, etc. -Court Appearances and Discoveries -Professional activities such as services provided to the professional, scientific, and local communities, agencies, and service groups during worked hours. E.g., participation in professional association committees -Advocacy on behalf of one's profession -Travel (internal and external) related to the above activities.
Time Recording Methodology	Actual Time
Item for Count	N/A
TEACHING/INSERVICE	
Definition	Activities devoted to the dissemination of knowledge by staff, through lectures, presentations, observations, or direct participation as well as in-service education received by staff. It includes, but is not limited to placements for students, information sessions for other staff, and formal lectures to university/college students. -Students: Activities associated with the preparation, orientation, instruction, supervision, and/or evaluation of students prior to, during, or immediately following their placements.

	-Professionals: Activities associated with the preparation, orientation, presentation, and/or instruction of other professional staff such as nurses, physicians, medical students, etc. -Academic: Activities involved in the preparation and presentation of course/lecture material to students and evaluation of students as part of the academic curriculum. -In-service Education: Activities such as brief, in-house education sessions presented by other staff, orientation to new procedures or equipment, grand rounds, reading of professional journals, etc. -Travel related to the above activities NOTE: Professional Development requiring Education Leave is excluded from this category as the time is considered 'benefit hours', not part of 'worked hours. Professional development activities are longer, more formal, discipline-specific and are usually greater than ½ day in duration. Professional association annual conferences, courses, symposiums, seminars, and workshops are examples of typical professional development activities.
Time Recording Methodology	Actual Time
Item for Count	N/A
SUPPORT TO HEALTH INFORMATION MANAGEMENT	
Definition	Time spent in support of the Health Information Management functional center, retrieving health records, filing, and other duties as required, usually during evenings or nights when Health Information Management staff are not on duty. Includes travel (internal and external) related to this activity.
Time Recording Methodology	Actual Time
Item for Count	N/A

SUPPORT TO SWITCHBOARD	
Definition	Time spent manning facility switchboard, answering, and directing telephone calls, paging, and responding to emergencies as required. Includes travel (internal and external) related to this activity.
Time Recording Methodology	Actual Time
Item for Count	N/A

Recording Methodology

The purpose of a workload measurement system is to track the hands-on time, in minutes, that unit-producing personnel spend performing the activities/tasks that fulfill the mandate of the functional centre. The time being tracked should be reflective of all service recipient and non-service recipient activities performed by the unit-producing personnel of the specific functional centre and be collected in a consistent manner. If the time is not reflective of the work, performance indicators will not be accurate and comparative reporting will be compromised.

The following describes the two different time recording methodologies utilized by Health Information Services: standard, average, and actual time recording. The method employed will vary from functional centre to functional centre, from organization to organization, and from one type of workload being collected to another.

One workload unit is equal to one minute of UPP time spent performing service recipient and non-service recipient activities of a functional centre.

Figure 15

For activities that are repetitive and consistent in time requirements, the Standard Time-Recording Methodology is recommended. This methodology requires the organization to determine a site-specific unit value for each of the activities that are performed by the health record functional centre. Each unit value represents the standard, or site-specific time, required to perform an activity. To calculate workload, unit-producing personnel record the number of times that a defined activity is performed and multiply this frequency by the assigned unit value. This determines the total workload units for that activity. Where possible, the Provincial Health Information Management /Registration MIS Committee has identified provincial standard times. Only when the provincial standard is deemed inappropriate should a facility develop its own facility-specific standard time.

Health Service Organizations can develop standard times using a variety of methods. They include predetermined engineering standards, published standards, activity time studies, work sampling, consensus approach, or a combination of several methods. Each standard time should represent a desirable and achievable goal for personnel and should not merely reflect actual practices.

For activities that take an unpredictable amount of time to complete, the Actual Time-Recording Methodology is recommended. This methodology requires that the actual time required to perform an activity be recorded retrospectively (preferably daily) by staff of the functional centre.

Each of the standard workload categories in the CIHI Health Information Management WMS and the Registration WMS were reviewed, identifying additional activities within each category if needed and a standard or actual time recording was assigned to each activity. This is summarized below.

Actual Time Recording

The most accurate way to record the exact time spent providing service recipient and non-service recipient activities is using a watch. Each UPP would do this retrospectively throughout each calendar day. This method may be appropriate for recording times for activities that are not performed often or those in which the time varies from occasion to occasion. It may not be advantageous however to record workload data in this way for all activities. It would be an onerous task for the staff to do on a day-to-day, hour-by-hour basis and may take valuable time away from fulfilling the mandate of the functional centre.

The use of time blocks may be one way to ease the workload data collection burden. Time blocks should be no more than 10 minutes to minimize variances due to rounding. Depending on the length of time it takes to perform most activities, time blocks of five minutes or less may be more appropriate to use. Although some error may be introduced, this is generally insignificant since the variances due to overestimating and underestimating the actual time spent tends to be offset when summed. Time should be captured as precisely as possible to ensure accurate data. All blocks should be converted to minutes at the end of the reporting period (see Figure 16)

The following steps are integral to this methodology:

Step 1: Prepare a time block schedule as follows:

Minutes Spent Performing Workload Activity	Time Blocks
1-4	0
5-14	1
15-24	2
25-34	3
35-44	4
45-54	5
55-64	6
etc.	

Figure 18

Step 2: Develop a time block recording system whereby all unit-producing personnel would refer to their watch when they have completed an activity. The appropriate number of time blocks would be recorded to reflect this. For example, if Mary Smith attended a functional centre meeting for 50 minutes, she would record five-time blocks under the non-service recipient functional centre activity category.

Step 3: At the end of the reporting period, all time blocks are converted to minutes by multiplying the sum of the time blocks in a particular workload activity category by ten to determine the workload units. For example, if 10 activities with a time block of 6 were collected and 20 activities with a time block of 5, then the total workload in minutes is (10 activities x 6-time blocks x 10 minutes = 600) + (20 activities x 5-time blocks x 10 minutes = 1000) = 1600 minutes or 1600 workload units.

Average Time Recording

The average time-recording methodology uses specific unit values that have been assigned to activities, based on time studies undertaken at a national level across a sample of Canadian health care organizations of varying size and type. The average times applicable are included in the Schedule of Unit Values in MIS Standards and found as a reference document on the Centre's website. The published unit values represent the average number of minutes of unit-producing personnel hands-on time that it takes to complete a defined activity once. At the end of the reporting period, the unit values are multiplied by the number of times this activity was performed to arrive at the 'total workload units per activity'. The sum of all activity totals yields the total number of minutes of unit-producing personnel time spent in the performance of service recipient activities where the average time methodology is used.

Average time values developed through time studies should be considered as "points of reference" rather than absolute measures of the time required to perform an activity. The responsibility for the relevancy and accuracy of the timings rests with the organization that is collecting WMS data.

Though the list of activities and the published unit values are reviewed regularly, there may be situations whereby the published average time may not be reflective of the work performed by the unit-producing personnel. In these circumstances, organizations are encouraged to conduct a time study and submit the results to the Provincial MIS Consultant for review. The MIS Consultant will forward any provincial changes to CIHI for consideration and inclusion in the schedule of unit values.

Standard Time-Recording

If average times are not reflective of the work performed by the unit-producing personnel in a specific functional centre, medical imaging may choose to use standard time for collecting workload data as an alternative to using the average time recording methodology. Standard times are assigned to activities performed by the staff of the functional centre, where each standard time represents the functional centre's average time to perform the activity for the average service recipient by the average service provider under average circumstances. Standard times are site-specific averages and therefore reflect the style of practice and the environment in which the service is provided. A health service organization may wish to conduct a concurrent evaluation to determine the appropriateness of the standard times if there is any concern that the standard times may be inaccurate or if an operational or technological change has occurred. Organizations should review/revise their standard times at least annually to ensure ongoing reliability and validity of the data collected.

Standard times can be developed using a variety of methods including but not limited to:

- **Work sampling:** In work sampling, random observations are made of service providers to determine the ratio or percentage of time an activity occurs within a given time.
- **Activity time studies:** Time studies measure the time required by a service provider to perform a given task/procedure following a specified method under typical working conditions. The steps

used in conducting a time study to determine a standard time are the same as those used to conduct a time study for the development of an average time.

- **Consensus approach:** Expert opinion within the health service organization is used to determine standard times by consensus.
- **Published standards:** Published time values can be used by health service organizations to develop their standard times.
- **Combination of several methods**: Standard times can be developed using a combination of methodologies such as those described above.

When developing standard times for activities the following steps should be used:

1. develop a functional centre master activity profile:
    - identify all exams/activities performed by the unit-producing personnel of the functional centre
    - describe the tasks included in each of the defined exams/activities
    - group each exam/activity into the appropriate workload category - service recipient activities and non-service recipient activities
2. develop standard times:
    - include initial handling/set-up, service recipient preparation/instructions, diagnostic/therapeutic activities, service recipient assistance, clean-up, and clinical documentation time in the standard time for exams
    - develop a standard time for each defined exam/activity and determine the method that will be used to determine the standard time
3. develop a workload recording system:
    - list the exams/activities identified in Step 1 and their corresponding standard times
    - develop a recording system (manual or computerized) which allows for a tally of exams/activities, categorized by workload or activity category, and by category and type of service recipient (e.g., inpatient, client hospital, resident)

Conducting a Time Study

One of the ways to develop average times nationally, or standard times locally, is to conduct a time study within a particular functional centre. The goal is to determine the average time it takes the average service provider to perform a particular activity for the average service recipient under average circumstances.

Time studies should be conducted when activities that are being performed in the functional centre do not currently exist in the schedule of unit values or when an assigned value or the tasks within the activity differ from that in the schedule of unit values. A standardized timing protocol has been developed to promote flexibility and adaptability of unit values to a variety of settings and accurately reflect resource requirements. The time study protocol is also intended to provide a consistent approach to performing time studies.

Whenever a time study is performed for new activities, or when published values are significantly different; departments are encouraged to submit the results of the time studies to the MIS Committee for evaluation and discussion. The MIS Committee will forward any provincial changes to CIHI for review and possible inclusion in the maintenance of the MIS Standards WMS schedule of unit values.

In the workload measurement system service recipient activities are typically assigned a unit value. Non-service recipient activities, on the other hand, are usually recorded using actual time methodology. The unit value for an activity is equivalent to the number of minutes of unit-producing personnel time required to complete the activity once. Therefore, to determine the unit value for an activity, time studies must be conducted in a routine setting to measure the amount of time required to perform all tasks that are part of that activity. It is preferable to time different personnel, at different times to obtain a representative average.

Note: Activities, which are typically performed by clerical/secretarial staff, darkroom technicians, film librarians or physicians, are excluded from time studies. Examples include appointment booking and service recipient registration and order entry. Waiting time and non-service recipient activities such as teaching, in-service education, administrative duties (e.g., scheduling, purchasing), research and development, etc. are also not included in time studies.

Fields of Observation

When performing time studies, the following fields of observation are typically measured where applicable:

- initial handling/set-up
- service recipient preparation/instructions
- diagnostic/therapeutic activities
- service recipient assistance
- clean up
- clinical documentation

The accuracy of the unit value for an activity will depend on identifying and measuring all the elements that occur as part of the activity. Further, the assignment of the unit value must reflect the average time it takes the average service provider to perform the activity for the average service recipient under average circumstances.

Steps in Conducting a Time Study

A single individual (surveyor) who is knowledgeable about the activity would conduct the time study as follows:

1. Observe the activity to be studied. Identify and note each step to be timed including initial handling/set-up, service recipient preparation/instructions, related activity, service recipient assistance, clean up and clinical documentation time prior to performing the actual timings.
2. Prepare the necessary forms to record the times for each activity.
3. Measure the time spent by unit-producing personnel to perform the activity using a stopwatch or other suitable timer.
4. Time different personnel performing all tasks within the activity on different days of the week and at different times. Include productive time only—exclude waiting time or other unproductive time.

5. Time all steps as many times as required (the number of timings will depend on the time variability of each step). If the times vary markedly, perform additional timings. If an activity is rarely performed, it is acceptable to complete and document a timing only once.
6. Group activities consistently when conducting timings where activities are being grouped.
7. Average the time values by dividing the total time by the number of timings to determine the time to perform that activity once.
8. Record the average value in all systems that rely on this information to assign the workload units for a particular activity.
9. File all documentation related to the time study for future reference.
10. Re-conduct a time study on a regular basis to maintain the validity of the time value. These should be done when there is a consensus among the staff that the time does not reflect current practice, when the functional centre begins providing service to different types of individuals/organizations, when new workload data collection processes are implemented, or when the workload measurement systems in the MIS Standards are revised.
11. Submit the completed time study to the Provincial MIS Committee who will forward to CIHI for activities not currently in the schedule of unit values or activities where time requires revision. The time study will be considered for inclusion in the next revision of the WMS.

Validity and Reliability

The validity of a WMS is defined as its ability to measure what it is supposed to measure. WMS should be reviewed annually to ensure that:

- the system reflects the activities of the service
- the times reflect current reality when a standard or average time methodology is used
- data collection is consistent by routine reliability audits

The reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to be measuring consistently. Inter-rater reliability refers to the extent to which data is reproducible by various staff members. It is important that different staff using the same measurement tool, measuring the same individual, at the same time, will derive a consistent result. A reliable system provides consistent data.

Factors that may influence the reliability of workload information include:

- Characteristics of the tool or system (Is it user friendly or difficult to use?)
- terminology and definitions used
- time required to enter information
- person entering data (best if the person providing the care enters data)
- time of completion (close to time of intervention)
- motivation of the person recording (reduced if information not shared, not relevant, not valued, not used)
- staffing levels (often left undone if understaffed)

Factors to consider when selecting a workload measurement system reliability process:

- when reliability data does not meet standards, the number of checks should be increased until the problem is identified, strategies for improvement implemented and reliability scores have improved
- audits should be random
- when more than one category of service recipient is treated in one functional centre, audits should be completed on each category
- efforts should be made to review the workload recorded by several people

The MIS Standards recommend at least an 85% inter-rater reliability rate. Inter-rater results that fall below the target indicate a need for re-education, redesign of the tool/system or the instructions on how to enter data. The frequency and number of checks should be related to the use of the data and the importance of the resulting decisions.

Workload data must be considered valid and reliable before it can be used for decision- making or for external comparisons. In some provinces, workload is used in the current funding formula as the base for cost allocation between funding groups. Service recipient workload is used inpatient/resident/client specific costing which is consequently used in the development of weights for case mix groupings.

Who Should Collect Workload Data?

The Health Information Management/Registration WMS is intended, primarily, for use by the Unit-Producing Personnel of the functional center. Examples of unit-producing personnel include transcriptionists, file clerks, registration clerks, health records technicians, health record analysts, etc.

As previously mentioned, students do not function independently, and therefore do not record workload themselves. Rather, the staff member who signs off on the work done would be credited with the workload units. The staff members providing instruction, orientation, evaluations, etc. will record functional center Support Workload for these activities.

Managers involved with the provision of Health Information Management/Registration services should also record workload for the time they are involved in this activity.

Recommendations for WMS Implementation and Data Collection

The Provincial Health Information Services MIS Committee has reviewed recent MIS Guideline revisions and implementation progress to date. While significant progress has been made, not all zones have achieved the same level of implementation. The Committee wishes to promote more use of the data for comparative indicator analysis. Therefore, complete, and standardized implementation is required. To assist zonal Health Information Management/Registration services in achieving this, the following recommendations are provided, summarizing key expectations.

1. The workload measurement system customized for application to Health Information Management/Registration services in NL was initiated in 2016-17; implementation remains ongoing.

2. Workload data should be recorded to ensure all activities of staff are included in the workload measurement system (WMS). Each zone will collect this data on either a sampling or continuous basis, using a manual or automatic data collection process that is practical for that organization.

3. Workload data should be collected and reported based on the following Categories of Service Recipients: Inpatients, Clients, and Residents, where applicable.

4. Accepted provincial unit values have been derived from timings or consensus exercises for many workload activities and are contained in this report. These unit values are to be used by Health Information Management and Registration services as the basis for workload data collection and procedure counts. Organizations are encouraged to develop facility specific unit values when the provincial value is NOT consistently representative of the time it takes to complete the specified task (using an approved CIHI methodology). For all other workload activities, actual time recording is recommended.

5. The recommended level of detail for reporting data at the zonal level, on a facility specific basis, is:

    - Total Workload Units – Accounts 1 14 Health Information Management Workload Units, and 1 70 Registration Workload Units, and where applicable, at the **component** activity level, e.g., for HIM WMS this refers to the activity component level of Coding/abstract, assembly/analysis, incomplete record management, etc. This data is further broken down by Category of Service Recipient for selected activities.
    - Earned Hours – Management and Operational Support Personnel (Account 3 10), by hours type and bargaining unit
    - Earned Hours – Unit-Producing Personnel (Account 3 50), by hours type and bargaining unit
    - Staff Activity Statistics-
        2 55 Service Recipient Registrations Completed by HIM/Registration Staff, by Category of Service Recipient
        2 56 Service Recipient Appointments Scheduled, by Source
        2 60 Requests for Release of Information Processed, by Request Type
        2 61 Transcription Lines Typed
        2 62 Images Processed
        2 59 Health Records Abstracted, by Category of Service Recipient and Abstract Type.

6. The recommended level of detail for reporting facility specific data at the provincial level is:

    - Total Workload Units – Accounts 1 14 Health Information Management Workload Units, and 1

70 Registration Workload Units, at the **workload** activity level, e.g., for HIM WMS this refers to the activity level of Record Processing, Transcription, Record Imaging, etc. No further breakdown is reported for categories of service recipients as these categories apply to a small number of activities and are of value only in the collection of the data.

- Earned Hours – Management and Operational Support Personnel (Account 3 10), by hours type and bargaining unit.
- Earned Hours – Unit-Producing Personnel (Account 3 50), by hours type and bargaining unit
- Staff Activity Statistics-
  - 2 55 Service Recipient Registrations Completed by HIM/Registration Staff, by Category of Service Recipient
  - 2 56 Service Recipient Appointments Scheduled, by Source
  - 2 60 Requests for Release of Information Processed, by Request Type
  - 2 61 Transcription Lines Typed
  - 2 62 Images Processed
  - 2 59 Health Records Abstracted, by Category of Service Recipient and Abstract Type

7. WMS and Activity statistics should be reported internally each month for zonal use and included in monthly electronic submissions to the Provincial MIS Database at the DHCS*.*

8. Given the complexity of the WMS systems, efforts should be made to collect as much data as possible by electronic means, as a byproduct of daily work processes. This is particularly relevant for transcription functions.

9. All data reported to the Statistical General Ledger of the boards should be reviewed and verified for accuracy prior to use at the zone and provincial levels. Once verified, the data contained in the general ledger should be considered the 'first and only source' for such information, not systems such as the registration system. By doing so, all users are assured assess to the same data, reported in accordance with accepted data definitions. Only in extenuating circumstances such as electronic information loss or significant information retrieval problems should other sources of the data be used, with the source and reason for alternate use documented.

10. Managers of HIM and Registration services should calculate key performance indicators from the data collected to support management functions such as planning, budgeting, evaluating, monitoring, tracking performance over time, as well as peer comparison.

How to Collect and Report This Data through Meditech and Transcription Systems

Some statistics will be captured directly through the ADT and Health Records modules of Ameritech. However, much of the workload data must be captured using other electronic or manual systems such as the 3M Health Data Management System. Control documents have been developed in Excel spreadsheets to assist zones with data capture and tallying at month end. These are available from Committee members.

Transcriptionist's output and workload (time) can be captured through the Lanier Fusion transcription system if the workload related dictionaries have been set up within local systems appropriately to do so. A provincial standard listing of activities used within Fusion to identify reasons for pause can be mapped as indicated below to the Fusion Work Types (Transcription, Non-Work Activity-Transcription and Other Work Non-Transcription activities), Fusion Activity Type Choices (Yes/No) and the WMS component activities. To use Fusion in this manner, staff must log into the Fusion system at the start of the work shift and log off at the end of each shift, recording reasons for pausing throughout the workday.

FUSION Pause Reason	FUSION Work Type	FUSION Activity Choice Type (Yes/No)	HIM WMS Activity Category	HIM WMS Component Activity
Break	Non-Work	Yes		
Data Quality Activities- includes activities to find missing information for incomplete records	Transcription	Yes	Transcription	Transcription Related Procedures
Help to Co-worker	Transcription	Yes	Transcription	Transcription
Help to Physician re Transcription Report	Transcription	Yes	Transcription	Transcription
Lunch	Non-Work	No		
Organizational/Professional activities (e.g., committee work)	Other	Yes	Support Activities	Organizational/ Professional Activities
Other (e.g., computer issues, personal time, etc.)	Other	Yes		
Preparation of Clinic Charts (for use by Labrador-Grenfell Health only)	Other	Yes	Support Activities	Functional Centre Activities
Process EKG (for use by Labrador-Grenfell Health only)	Other	Yes	Support Activities	Functional Centre Activities
Radiology Clerical Duties (for use by Western Health only)	Other	Yes	Support Activities	Functional Centre Activities
Staff Meetings	Other	Yes	Support Activities	Functional Centre Activities
Staff/Physician	Transcription	Yes	Transcription	Transcription

orientation/training,				Related Procedures
Support to Health Records Functions-includes clerical support to physicians (non-medical transcription, travel/insurance papers, address patient inquiries)	Other	Yes	Support Activities	Functional Centre Activities
Support to Registration Functions	Other	Yes	Support Activities	Support to Registration
Support to Switchboard Functions	Other	Yes	Support Activities	Support to Switchboard
Teaching/In-service	Other	Yes	Support Activities	Teaching/In-service
Transcribed report distribution (sorting, faxing, mailing, photocopying)	Transcription	Yes	Transcription	Transcription Related Procedures

Figure 19

Special Recording Situation

Students

When calculating service recipient costs and resource requirements it is important to include all resource requirements. Therefore, all service recipient workload is recorded even if provided by unpaid students instead of staff. The contribution of students to service recipient workload will vary depending on their stage in the learning process. Identification of resource use is one of the goals of the MIS Standards. The MIS Standards suggest service recipient workload, service activity and caseload status statistics generated by students, who are functioning independently, be recorded. The Provincial MIS Committees recommend that senior level students, as identified by each committee for their own discipline, record service recipient and non-service recipient workload, in addition to their worked hours, service activity and caseload status statistics.

Organizations are advised to measure the contribution/cost of students by separately identifying service recipient and non-service recipient workload of students and non-service recipient student time of employees on their workload tool. If documentation of student supervision time is required for professional organizations this should be captured through other mechanisms.

Waiting Time

Waiting time refers to time waiting for clients, other health care professionals or physicians. This is non-productive time and should not be recorded as workload. Although wait time consumes resources there is no output. Some clinicians have included this time as workload as it is perceived to be uncontrollable, but this is not appropriate; instead, strategies should be considered to reduce this non-productive time.

If waiting time appears to be excessive it is recommended that staff record wait time (by sampling preferably) to provide a measure of time wasted. This time should be reported on internal management reports but must not be included in external workload reporting. This can be a valuable piece of information that can facilitate the identification of strategies to reduce wait time. Sometimes, just the measurement and communication of the magnitude and cost of this time will have beneficial effects. In other situations, policy changes may be needed.

Time spent waiting for clients, other health care professionals or physicians is non-productive time and should not be recorded as workload, unless another activity is undertaken to fill that time, e.g., charting.

Educational Activities of Unit-Producing Staff

The dissemination of knowledge by functional centre unit-producing staff through lectures, presentations, observations, or direct participation to individuals other than registered service recipients is included in the non-service recipient workload (under teaching/in-service). Unit-producing time in this activity should not be charged to the education framework unless the time spent by an individual in this activity is greater than 20% of that individual's time. In that case, the individual is considered multi-functional and earned hours are divided between the two functional centres.

Additional Points Related to Non-Service Recipient Workload

Non-service recipient workload is usually only recorded during worked hours. In addition, non-service recipient activities can only be recorded if required by the organization. If staff members are required to attend a meeting, either facility or community, outside work hours or the staff member is expected to spend a percentage of time in research or education and this expectation is defined in the job description, then non-service recipient workload can be recorded. Many non-service recipient activities may not be required by the organization and therefore workload cannot be recorded for this time. Examples include attendance at professional meetings, participation in academic and research activities, participation in community activities, etc.

Non-service recipient workload is important as it demonstrates the extent of activities that are not related to specific patient/resident/client volumes but are still an integral part of the professional's contribution to the health system. These activities can be for the benefit of the community, staff, students, or the organization. If there are specific activities that should be highlighted, internal reports should be created to provide further insight into the activities that consume clinician's time. This may include:

- staff travel related to the provision of patient care.
- activities which are not under the control of the manager such as:
  - legislated activities - Occupational Health and Safety Committee involvement,
  - facility required activities - reengineering, restructuring, accreditation.
- activities that support the organization's employees such as:
  - critical incident stress debriefing,
  - counselling, and
  - spiritual care.
- activities that support the community such as:
  - development of infrastructures that will support service recipients after discharge,
  - participation in community agency boards, and
  - Educational sessions for service agencies.

Technology Requirements

Information systems provide essential infrastructure for the workload measurement process. The nature of workload data is such that technology can greatly assist in its collection and analysis. Information systems are tools that support the use of workload information by providing ready access to data and presenting this information in statistical reports. Patient/resident/client management systems have themselves evolved to the point where workload measurement can occur as a by-product of documentation. There are many different technology options that can optimize this "point of care" documentation including handheld, pen based and barcode devices. The MIS Standards do not specify a particular software package or technology option to be employed in workload measurement.

Currently in Newfoundland and Labrador there are several means by which organizations collect, analyze and report workload data. These include: a completely manual process; manual collection with data entered or scanned into a central computer system; workload collected as a by-product of documentation in an automated system; and handheld entry devices which download into a computer system.

A variety of computerized options are currently used to collect and/or report workload data including direct entry into Ameritech systems, use of customized software and use of spreadsheet programs such as Excel. Clinicians working in Health and Community Services will use the Client and Referral Management System (CRMS) to collect and report workload data.

Turning Data into Information

Information Pathways

Financial Information is maintained in the Ameritech systems of the zone as well as the Client Pay Module of the Client and Referral Management System (CRMS).

Statistical information in Newfoundland and Labrador is collected by frontline staff in several ways:

- electronically (by spread sheet or computer program)
- as a by-product of charting (collected in the background in your computer system)
- manually

Regardless of the method of data collection, the information must be entered into the statistical general ledger of the Ameritech system for the zone's use and external reporting.

Financial and statistical information is submitted electronically by the Zones to the Provincial MIS Database at the DHCS. The information is used for budget monitoring, service planning, resource allocation, etc.

The DHCS submits the data electronically to the Canadian MIS Database at CIHI. This information is used to determine Canada's health expenditures, meet international reporting requirements, calculate national economic indicators such as the gross domestic product and conduct health and health system evaluation and analyses. Figure 20 below illustrates the flow of financial and statistical information from the points of data collection within NLHS to the CIHI.

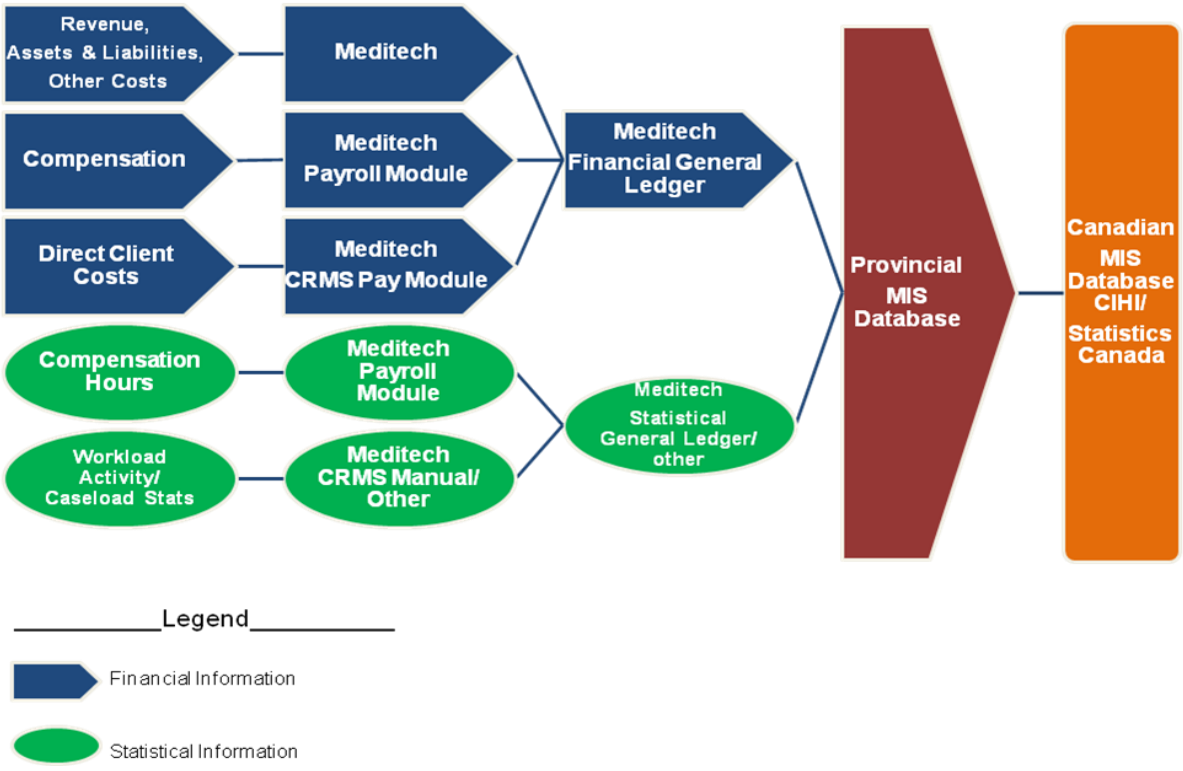

Figure 20

Performance Indicators

Data are statistics that, on their own, may not have a great deal of value or meaning. To be useful and relevant, good quality data must be turned into meaningful information, which is accurate, timely, comprehensive, useable, and relevant. When workload data is linked to financial or other statistical data to create performance indicators, the data can then be used for decision-making.

Indicators are ratios or percentages calculated from financial and/or other statistics that quantify a relationship between the data elements. Indicators measure performance and provide information that can be used to facilitate decisions or compare performance, such as, cost per workload unit (see Figure 21). They turn data into useful information.

The MIS Standards contain numerous indicators within the five categories of financial, staffing, productivity, utilization, and workload. They can be used to analyze and interpret workload data, service activity and caseload status statistics and can assist staff and managers in analyzing and evaluating their services. Indicators are valuable decision-support tools for service planning, impact analysis and effective management.

Implementation of a workload measurement system and reporting of workload and other statistical data is not the goal; however, the primary value in workload measurement is the use of the information to make better management decisions. This is essential to gain value from the time, effort and dollars

consumed in the workload collection process. Appropriate use of the information and feedback to staff will enhance understanding and support for accurate information, resulting in better data quality.

Selected examples of some key indicators, their calculations and interpretation have been included in this section:

- cost per workload unit
- cost per workload unit by service recipient type
- workload units per activity
- UPP worked productivity
- UPP total productivity

Cost per Workload Unit

This indicator describes the cost to provide one minute of service or one workload unit.

$$\text{Cost per Workload Unit} = \frac{\text{Defined Cost}}{\text{Workload Units}}$$

Figure 21

The costs in this formula can be defined as:

- **full cost** which includes both direct and indirect functional centre costs
- **direct cost** which includes only direct functional centre cost
- **a specific component** of direct cost such as unit-producing compensation, supplies or sundry

Workload can be defined as:

- **total** (service recipient and non-service recipient)
- **service recipient**
- **non-service recipient**

The cost and workload values selected for measurement will be dependent on the intended use of the data. The components of this indicator must be known when comparing costs across organizations. One of the most used financial indicators is direct cost per service recipient workload unit. Total cost per service recipient workload unit is used to support case costing analysis. Managers will find that compensation cost per workload unit is valuable to support human resource decisions as well.

Factors that may affect this indicator include:

- staff mix
- workload measurement system in use
- overtime
- use of on-call staff

- sick time
- education and orientation costs
- benefit compensation packages
- compensation levels

Cost per workload unit can be used, in conjunction with workload units per activity, to determine costs of new programs and services and to determine the financial resources to be added, transferred, or removed from a functional center due to changes in population served, program or service (i.e., impact analysis).

Cost per Workload Unit by Service Recipient Type

Workload units by service recipient type is used in calculating the costs of specific patient/resident/client type services for funding purposes and for calculating the impact of changes in service recipient characteristics.

$$\text{Cost per Workload Unit By Service Recipient Type} = \frac{\text{Total Cost for functional center}}{\text{Total Service Recipient Workload Units}} \times \text{Workload Units per Type}$$

Figure 22

Functional centres need to consider the impact of patient/resident/client type changes on their department.

Workload Units per Activity

This indicator describes how workload is related to a specific activity, such as an attendance day, admission, or visit.

$$\text{Workload Units Per Activity} = \frac{\text{Workload Units for the Defined Activity}}{\text{Volume of Activity}}$$

Figure 23

The workload units used could be:

- **total** (service recipient and non-service recipient)
- **service recipient**
- **non-service recipient**

The workload unit(s) used will depend on the intended use of the data. When calculating staffing for changes in-patient/resident/client volumes, only the service recipient workload should be considered as non-service recipient workload is not volume dependent and will remain despite changed service volumes. This would also apply when considering changes in service recipient type (i.e., chronic rather than acute, or inpatient rather than client).

Factors that can affect this indicator include:

- availability of support staff on the unit
- availability of other health professionals
- physician ordering practices
- care delivery models
- nursing care models
- organizational policies
- facility layout
- patient/resident/client acuity and demographics

Productivity

Productivity is the relationship between inputs and outputs. In this context inputs are worked hours and outputs are workload units. The goals or targets set for productivity indicators depend on the circumstances and the strategic goals of the organization.

The options for increasing productivity include:

- maintaining the worked hours but increasing the workload units
- decreasing the worked hours but maintaining the workload units
- decreasing both the worked hours and workload units but decreasing the worked hours more than the workload units
- increasing both the worked hours and workload units but increasing the workload units more than the worked hours
- decreasing the worked hours and increasing the workload units

The MIS framework does not include coffee breaks in workload measurement. Coffee breaks alone can account for 7-8% of worked hours; in addition, at least 5% is usually lost to personal or delay time. Therefore, the maximum productivity which can be expected is approximately 87%. Realistically, 80-85% total productivity is a reasonable level of accountability of how worked hours were spent. If productivity is higher than this, it could be related to:

- staff working through coffee and/or lunch
- presence of students
- staff working unpaid hours to provide service recipient care
- inaccurate reporting of either worked hours or workload

Two of the most calculated productivity indicators are:

- Unit-producing personnel worked productivity (%)
- Unit-producing personnel total productivity (%)

UPP Worked Productivity (%)

Productivity is expressed as a percentage and therefore will be multiplied by 100. This indicator calculates the percentage of all unit-producing personnel worked and purchased hours spent in the provision of service.

$$\text{UPP Worked Productivity \%} = \frac{(\text{Service Recipient Workload Units}) \div 60}{\text{UPP Worked + Purchased Hours}} \times 100$$

Figure 24

UPP Total Productivity (%)

This indicator calculates the percentage of all unit-producing personnel worked and purchased hours spent in the provision of service recipient and non-service recipient activities.

$$\text{UPP Total Productivity \%} = \frac{[(\text{Service Recipient + Non-Service Recipient Workload Units}) \div 60]}{(\text{UPP + Purchased Hours})} \times 100$$

Figure 25

Performance Indicators Related to Resource Consumption

The following performance indicators are considered the most useful for organizational comparisons and to also provide a comprehensive picture of a department/program. Individual organizations may elect to produce other indicators that are relevant to its needs.

The formulas for these indicators are included in the MIS Standards:

- Unit-producing worked productivity (%)
- Unit-producing total productivity (%)
- percentage of distribution of workload, by category of service recipient
- percentage of distribution of workload, by workload categories
- direct cost per workload unit
- workload units per in-house exam
- service recipient workload units per UPP full-time equivalent
- number of full-time equivalents per occupational group/class

To effectively allocate and use resources policy makers, health administrators and professionals must understand resource consumption and costs of caring for groups of service recipients with varying needs, in different settings. Workload measurement data, in conjunction with other information, can provide valuable information to support decisions. At the department level these decisions include:

- identification of staff hours required to meet workload requirements

- construction of a staffing schedule that reduces resource requirements
- equitable staffing assignments
- appropriate skill mix
- optimal education level for the type of services provided
- best process for care delivery

How can Workload Information be used for Costing?

The allocation of functional centre costs is based on workload data that is considered to be the most accurate statistic to use. Workload values affect not only the allocation of functional centre direct costs to types of service recipients but also the distribution of indirect costs (administrative and support costs). This occurs because indirect costs are distributed to types of service recipients based on the direct costs.

How can Organizations Apply Performance Indicators?

Reports generated using the financial and statistical data collected provide functional centre managers, senior health care executives and the board of trustees with information critical for decision-making. A view of specific information across all the organizations in a zone (e.g., drugs, unit-producing compensation) can be important for a senior manager. The examples listed below will demonstrate some of the different ways financial and statistical data can be aggregated across health service delivery settings (e.g., acute care hospital, community health care centre, home care):

- budgeting/impact analysis
- staffing/scheduling
- human resource decisions
- cost minimization
- quality initiatives

Budgeting/Impact Analysis

Workload information can be used to determine zero based or flexible budgets for existing services or for planning the budget of a new or altered service.

1. Predicted Volume X Service Recipient Workload per Activity = Predicted Service Recipient Workload

2. Predicted Service Recipient Workload X Cost per Service Recipient Workload Unit = Predicted Total Cost

3. Benefit Hours + Salaries + Benefit Contribution Dollars must then be added to develop the total budget.

Figure 26

Increase/Decrease/Transfer of Service Recipients or Dollars within an Organization/ Between Organizations.

Workload information can prove helpful when trying to determine the staffing impact of increasing or decreasing a particular activity or when trying to determine the appropriate transfer of funds/staff that are linked to the activity.

Example: change of an acute inpatient service to a rehab service to determine impact on staffing:

1. Number of Rehab Referrals X Service Recipient Workload Units per New Referral = Expected Rehab Service Recipient Workload Units

2. Expected Rehab Service Recipient Workload = # of FTEs required
   Service Recipient Workload Units per FTE

3. To determine budget impact:

   Service Recipient Workload X Cost per Service Recipient Workload Unit = Total Cost Estimated

4. Then a comparison needs to be made between the costs of acute vs. rehab services to determine the impact of the change on staffing needs.

Figure 27

Staffing/Scheduling

Workload can be used to justify current staffing and identify staff increases or reductions based on workload requirements. Patient census alone cannot identify needs since not all service recipients are equal and do not require the same health services.

An increase in productivity can reduce costs by eliminating non-productive time. This can be achieved through a better matching of workload requirements and actual staffing and by monitoring trends of resource needs by day of week and time of year. Staffing schedules can sometimes be altered to provide a better match.

Non-productive time can only be identified if service recipient and non-service recipient workload is accurately defined and measured. A system that presumes that all time not related to service recipient activities is automatically non-service recipient time or a system that assumes non-service recipient activity is directly related to service recipient time will not provide the required information. Non-service recipient activities need to be specifically defined with associated time values.

Workload information can also be used to determine staff assignments. Rather than determining staff assignments based on the number of service recipients, the assignments can be determined based on the workload generated by each service recipient. This can lead to more equitable assignments, higher staff morale and better care. This will lead to more accurate workload collection. Staff travel time also needs to be considered when assigning caseloads to reduce non-service recipient workload. Included in this decision process one must also consider the knowledge and skill required to provide care for specific types of patients/residents/clients.

Human Resource Decisions

A WMS, that identifies types of specific activities, can also be useful for skill mix decisions. The tasks that are frequently selected can be reviewed to determine the level of expertise that is required to complete the tasks and this information can be helpful in determining the appropriate ratio of staffing. **Caution should be exercised when using this process as the level of expertise required to provide service recipient care is not only the sum of specific tasks**. It should also consider the analysis required to determine appropriate strategies to respond to the data generated by these tasks. The workload resources required could be the same in two units but the level of expertise necessary to provide care may be different depending on the complexity of care.

To improve productivity, if the appropriate matching of workload and actual hours cannot be achieved within the current staffing complement, the manager may need to alter the full-time/part-time ratio to allow the flexibility required to provide the desired match.

Given current fiscal restraints and recruitment/retention issues in many health disciplines, there is a growing interest in capturing more human resource related data through the MIS Standards.

Cost Minimization

A WMS, which examines specific activities, can be used to identify non-value-added activities or to identify improved processes or timing for providing specific tasks. If activities are not vital to clinical outcomes or client satisfaction, they may be considered for elimination. The identification of these activities usually occurs during the implementation and validation/revalidation of standard time tools.

Activities can be linked to care plans or critical pathways to assist in quantifying and selecting alternate modes of care. Physician-driven activities can also be quantified, and this can provide valuable information when discussing critical paths with the medical staff.

A WMS can identify specific tasks performed by staff that could be performed by other staff, thus reducing costs. This could involve the work of other health care professionals or support staff. However, when these tasks do not consume significant time, it may be more cost effective for staff to continue to perform the tasks.

Example: If there are sufficient clerical or portering activities, it may warrant the transfer of these tasks to non-professional staff.

Quality Initiatives

Workload data can identify processes that could be improved. These processes may be controlled by the functional centre manager or by another department. If tasks are transferred to another department the workload measurement systems will identify the staffing and cost implications for both departments.

Performance Indicators for the Provincial Health Information Services MIS Committee

Financial Indicators

Direct Cost per Workload Unit

Direct cost per service recipient workload unit is the average direct cost per service recipient workload unit. It is calculated by dividing the functional centre's direct operating expenses by the total service recipient workload units generated by the functional centre in each period.

$$\frac{\text{Direct Operating Expense}}{\text{Total Service Recipient Workload Units}}$$

Figure 28

Sick Leave Expense to Total Compensation Expense (%)

The percentage of the compensation expense of a functional center which is attributable to the sick leave expense. It is calculated by dividing the sick leave expense for all personnel by the total compensation expense in each period.

$$\frac{\text{Sick Leave Expense for all Personnel}}{\text{Total Compensation Expense}} \times 100$$

Figure 29

Sick Leave Expense per UPP FTE

The average cost of sick leave per UPP full time equivalent of a functional center. It is calculated by dividing the sick leave expense by the number of UPP FTE's in each period.

$$\frac{\text{Sick Leave Expense}}{\text{\# UPP FTE's}}$$

Figure 30

Total Compensation Expense to Direct Operating Expense (%)

Total compensation to the direct operating expense is the proportion of the direct operating expense of a functional center attributable to the total compensation expense. It is calculated by dividing the total

compensation expense for all personnel by the direct operating expense for that functional center in each period.

$$\frac{\text{Total Compensation Expense for All Personnel}}{\text{Direct Operating Expense}} \times 100$$

Figure 31

Total Supplies Expense to Direct Operating Expense (%)

Supplies expense to the direct operating expense is the proportion of the direct operating expense of a functional centre attributable to the supply's expenses. It is calculated by dividing the supplies expense by the direct operating expense for that functional centre in each period. (Indicator Reports include in direct operating expenses all expenses related to compensation, supplies, and sundry; other expenses related to equipment and renovation costs have been removed from this calculation due to differences identified in reporting the information.)

$$\frac{\text{Total Supplies Expense}}{\text{Direct Operating Expense}} \times 100$$

Figure 32

Staffing Indicators

Number of Full-Time Equivalents (FTE) by Broad Occupational Group

Number of FTE by broad occupational group is the average number of full-time equivalents for each broad occupational group (MOS or UPP). It is calculated by dividing the earned hours for all employees (full-time and part-time) in a specific broad occupational group by the normal earned hours for a full-time equivalent in that specific group in each period.

$$\frac{\text{Total Earned Hours for all Staff in a Broad Occupational Group}}{\text{Normal Earned Hours for one FTE in a Broad Occupational Group}}$$

Figure 33

The number of UPP FTEs can be further analyzed by occupational class by modifying this formula.

Worked Hours to Earned Hours (%)

Worked hours to earned hours is the proportion of earned hours that is attributable to the worked hour's component. It is calculated by dividing the total worked hours by the total earned hours in each

period. This indicator may be calculated for a given functional center, broad occupational group, or occupational class.

$$\frac{\text{Worked Hours}}{\text{Earned Hours}} \times 100$$

Figure 34

A similar calculation can be used to analyze the types of worked hours (e.g., determine the proportion of Worked Hours that were regular hours vs. overtime hours).

Benefit Hours to Earned Hours (%)

Benefit hours to earned hours is the proportion of earned hours that is attributable to the benefit hour's component. Benefit hours are periods of paid absence such as sick leave, vacation, education leave, etc. It is calculated by dividing the total benefit hours by the total earned hours in each period. This indicator may be calculated for a given functional center, broad occupational group, or occupational class.

$$\frac{\text{Benefit Hours}}{\text{Earned Hours}} \times 100$$

Figure 35

A similar calculation can be used to analyze the types of benefit hours (e.g., determine the proportion of benefit hours that were related to sick leave, education leave).

Productivity Indicators

Worked and total productivity are commonly used indicators; the ratios of worked and total productivity show the amount of staff time spent in service recipient activities versus the total time spent carrying out the mandate of the service. While worked productivity is an important indicator on its own it should not be used exclusively as it does not consider time spent in non-service recipient activity which can be significant in some functional centres. Both indicators can vary depending on the type and location of the service, as well as the support available to UPP staff and should be reviewed keeping these factors in mind.

Worked Productivity (%)

Worked productivity (%) is the percentage of all unit-producing personnel worked hours spent in the delivery of services to or on behalf of specific service recipients. It is calculated by dividing the service recipient workload units (converted to hours) by the worked hours plus purchased hours of the unit-producing personnel in each period and multiplying by 100. This has traditionally been the most widely used productivity indicator.

$$\frac{\text{Service Recipient Workload Units} \div 60}{\text{Unit-Producing Personnel Worked + Purchased Hours}} \times 100$$

Figure 36

Total Productivity (%)

Total productivity is the percentage of all unit-producing personnel worked spent in the provision of service recipient activities and non-service recipient activities. It is calculated by dividing the service recipient and non-service recipient workload units (converted to hours) by the worked hours plus purchased hours of the unit-producing personnel in each period and multiplying by 100.

$$\frac{\text{Service Recipient + Non-Service Recipient Workload Units} \div 60}{\text{Unit-Producing Personnel Worked + Purchased Hours}} \times 100$$

Figure 37

Workload Units per Full-Time Equivalent (FTE)

Service recipient workload units per FTE is the average number of service recipient workload units generated by each unit-producing personnel full-time equivalent. It is calculated by dividing the service recipient workload units by the number of unit-producing personnel full-time equivalents (see previous staffing indicator for the calculation of the number of unit-producing personnel FTEs). This indicator is commonly used to establish realistic caseload guidelines, monitor staff productivity and workload, and determine the impact of changes in service demands.

$$\frac{\text{Service Recipient Workload Units}}{\text{Number of Unit-Producing Personnel FTEs}}$$

Figure 38

Total Workload Units per Full-Time Equivalent (FTE)

Total workload units per FTE is the average number of total workload units generated by each unit-producing personnel full-time equivalent. It is calculated by dividing the total workload units by the number of unit-producing personnel full-time equivalents (see previous staffing indicator for the calculation of the number of unit-producing personnel FTEs). This indicator is commonly used to establish realistic caseload guidelines, monitor staff productivity and workload, and determine the impact of changes in service demands.

$$\frac{\text{Service Recipient + Non-Service Recipient Workload Units}}{\text{Number of Unit-Producing Personnel FTEs}}$$

Figure 39

Utilization Indicators

Service Recipient Workload Units per Activity

$$\text{Workload Units /Activity} = \frac{\text{Workload Units for the Defined Activity}}{\text{Volume of Activity}}$$

Figure 40

Workload Indicators

Distribution of Workload Units by Activity (%)

The percentage of unit-producing personnel time that is attributable to the various workload activities. It is calculated by dividing the number of workload units for a specified activity by the total number of workload units for a given period and multiplying by 100.

$$\frac{\text{Workload Units (Specified Activity)}}{\text{Total Workload Units for all Activities}} \times 100$$

Figure 41

This calculation should be performed for each Workload Category, e.g., for Health Information Management, the following workload activities would be included: Record Processing, Transcription, Record Imaging, Release of Information, Health Data Reporting, Records Maintenance, and Support Activities. For Registration functional center s, the workload activities would include Admissions, Registrations, Appointments and Scheduling and Support Activities.

Distribution of Workload Units by Category of Service Recipient (%)

Distribution of workload unit by workload category is the percentage of unit-producing personnel time spent in the two workload categories (service recipient and non-service recipient activities). It is calculated by dividing the number of workload units of one of the specified categories by the total number of workload units (service recipient and non-service recipient activities) for a given period and multiplying by 100.

$$\frac{\text{Specified Category (e.g., Service Recipient Activities) Workload Units}}{\text{Service Recipient and Non-Service Recipient Workload Units}} \times 100$$

Figure 42

Interpreting Workload Indicators Results

The data collected through the WMS and the associated activity statistics should be compiled and reported monthly to the administrator of the discipline specific service. Individual site reports are of value to site managers, as well as to the director of each service. In combination with a monthly financial report, managers can calculate key performance indicators with which they can monitor and measure performance. Ideally, such indicators can be automatically generated from the Meditech system using an NPR report. Directors of are encouraged to work closely with information systems staff and finance department staff to develop automatic reporting for all stakeholders containing information at an appropriate level of detail for the user and in a timely fashion.

Many managers use MIS performance indicators as components of balanced scorecards, or other quality reporting required by their zone. Such data is vital for benchmarking activities, a valuable process for discovering best practices among peer organizations.

The basic operational management information provided by the MIS data is the foundation for day-to-day management functions as well as strategic decision making and impact analysis.

Important Points about Data Collection

Secondary statistical information, such as, workload, service activity and caseload status statistics, is collected by unit-producing personnel (UPP) only.

Care should be taken to ensure that only the worked hours of staff (UPP) are matched to the workload that is generated, as these two pieces of data will be used to produce productivity information. Failure to accurately match these data elements will skew productivity indicators.

When management staff members provide direct care (unit-producing) for a portion of their time, their workload and earned hours for that time should be included in the functional center totals.

Workload measurement collection expectations and targets should be incorporated into:

- staff orientation programs
- job descriptions for all staff
- performance evaluations and reviews
- the strategic goals of the organization

Maintenance of workload measurement systems requires:

- involvement of all staff

- formal annual review by staff or whenever there are changes in service recipient types or care processes
- on-going in-service education
- regular reliability testing

Manager responsibilities:

- provide leadership for implementation
- ensure adequate reference material is available
- understand all components of the system
- regularly monitor the results to ensure data quality
- investigate sources of inconsistent data
- use the information to support decision-making
- provide feedback to all staff recording workload (e.g., individual reports, discussion of analysis)

Staff responsibilities:

- record data accurately to quantify services provided
- record data in a timely manner
- accurately measure the resource requirements of their patients
- understand the workload measurement system, both recording and interpretation of results
- share knowledge with new staff, such as accurate use of reference material

Resources

National Resource Materials

The Standards for Management Information Systems in Canadian Health Services Organizations (MIS Standards) are published on CIHI's website. Upon release, a copy is sent to the Department of Health and Community Services, and the Chief Financial Officers of each zone. Further details regarding all topics enclosed in this reference guide are contained in the MIS Standards. If you require access to the national MIS Standards, please contact the appropriate financial department.

Provincial Resource Materials

Resource documents and information available from the provincial MIS consultants include:

- Provincial Reporting Requirements User Guide
- discipline specific reference guides
- discipline specific indicator reports (through information request)

Resource documents and support are also available through MIS Committee members.

Education

CIHI provides a series of education sessions including eLearning and WebEx sessions on an on-going basis and in-person sessions a minimum of once per year. The topics for these sessions vary and a current schedule may be obtained either through CIHI's website or by contacting the MIS consultants. Educational workshops are also available and can be customized for specific needs and offered on a site specific or zonal basis.

MIS Consultants

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APPENDIX B

WMS Activity and Time Recording Methodology Summary

WMS Provincial Standard Times Unit Value Summary

2021

HEALTH INFORMATION MANAGEMENT

WMS Activity and Time Recording Methodology Summary

Workload Category	Activity Category	Component Activities	Time Recording
Record Processing	Assembly & Analysis	Assembly	Standard
		Analysis	Standard
		Assembly & Analysis	Standard/Actual
	Coding & Abstracting	Coding/Abstracting	Standard
		Coding and Abstracting Related Procedures	Actual
	Incomplete Record Management	Incomplete Record Processing	Standard
		Incomplete Record Notification	Actual
	Record Retrieval/Filing	Routine Record Retrieval	Standard
		Non-Routine "MIA" Record Retrieval	Actual
		Record Filing	Standard
		Loose Report Filing	Standard
	External Collection/ and Distribution		Actual
	Related Record Processing Procedures		Actual
Transcription	Transcription		Standard
	Transcription Related Procedures		Actual
Record Imaging	Scanning		Standard
	De/Re-Indexing		Actual
	Scanning Related Procedures		Actual
Release of Information	Routine Requests		Standard
	Complex Requests		Standard or Actual
Health Data Reporting	Internal Reporting		Actual
	External Reporting		Actual
	Research		Actual
Records Maintenance	Record Purging		Actual
	Record Destruction		Actual
	Maintenance of Records		Actual
	Information Systems Support		Actual
Support Activities	Functional Centre Activities		Actual
	Organizational/Professional		Actual
	Teaching / In-service		Actual
	Support to Switchboard		Actual
	Support to Registration		Actual

REGISTRATION

WMS Activity and Time Recording Methodology Summary

Workload Category	Activity Category	Component Activities	Time Recording
Admissions	Inpatient/Resident Admissions		Standard
	Transfer/Separation Procedures		Actual
	Bed Management		Actual
	Other Admission Related Procedures		Actual
Registrations	Client Registrations		Standard
	Other Registration Related Procedures		Actual
Appointments & Scheduling	Appointments Booked	Individual	Standard (Facility)/ Actual
		Block	Actual
	External Bookings/Referrals		Actual
	Other Appointment Related Procedures		Actual
Support Activities	Functional Centre Activities		Actual
	Organizational/Professional		Actual
	Teaching In-Service		Actual
	Support to Health Information Management		Actual
	Support to Switchboard		Actual

Health Information Services and Registration

WMS Provincial Standard Times Unit Value Summary

2021

Workload Activities	Component Activities	Inpatient (minutes)	Client-MDC/SDC (minutes)	Client-ER/Clinics (minutes)	Resident (minutes)
HEALTH INFORMATION SERVICES					
Record Processing	Assembly	9.3	N/A	N/A	N/A
	Analysis	3.8	N/A	N/A	N/A
	Assembly & Analysis	14.7	3.1	ER-0.5 Clinic 1.2	N/A
Coding & Abstracting	Coding & Abstracting	19.66	8.3	N/A	N/A
Incomplete Record Management	Incomplete Record Processing	2.4	6.56	N/A	N/A
Record Retrieval & Filing	Routine Record Retrieval	1.9	1.9	2.4	N/A
	Record Filing	0.92	0.92	0.92	N/A
	Loose Report Filing	1.6	1.6	1.6	N/A
Record Imaging	Scanning	0.4			
Release of Information	Routine Requests	10.5			
Transcription	Transcription	0.45			

REGISTRATION						
Workload Activities	**Component Activities**	**Inpatient**	**Client-MDC/SDC**	**Client -ER**	**Client -Clinics**	**Resident**
Admissions	Admissions	14.3	N/A	N/A	N/A	14.3
	Transfer/Separation Procedures	0.52	N/A	2.0	N/A	0.52
Registrations	Client Registrations	N/A	2.8 (scopes)	2.3	1.4	N/A
Appointments & Scheduling	Individual Appointments Booked	N/A	3.6 (scopes)	N/A	1.24	N/A

NL Health Services