MIS GUIDELINES and WORKLOAD MEASUREMENT REFERENCE GUIDE

HEALTH INFORMATION MANAGEMENT and REGISTRATION SERVICES

February 2005

Published by the Provincial Health Information Management /Registration MIS Committee and the

Newfoundland and Labrador Centre for Health Information

Table of Contents

Introduction to the MIS Guidelines	1
Functional Centres/Primary Accounts	2
Secondary Accounts Secondary Financial Accounts Select Secondary Accounts Secondary Statistical (Non-Financial) Accounts	7 8
Health Information Management & Registration Statistics	13
Other Key Functional Centre & Organizational Statistics	15
Categorization of Personnel	18
Categorization of Hours	19
Categories of Service Recipients	20
Workload Measurement System	21
Health Information Management WMS	22
Registration WMS	34
Time Recording Methodology	39
Who Should Record Workload Data	42
Recommendations for WMS Implementation and Data Collection	43
How to Collect and Report This Data in a Meditech Environment	45
Indicators – What They Are and How to Use Them	45
Application of Performance Indicators	48
Performance Indicators Recommended By The Provincial HIM/Registration MIS Committee	51
Internal Management Reporting and Use	54
Provincial Reporting Requirements	54
Reference	55
Appendices	
A Provincial HIM/Registration MIS Committee Terms of Reference	57
B Membership Contact Information	61

Introduction to the MIS Guidelines

The Guidelines for Management Information Systems in Canadian Health Service Organizations, *the MIS Guidelines*, are published by the Canadian Institute for Health Information (CIHI). The MIS Guidelines are the national data standard for the collection and reporting of financial and statistical information from health service organizations. Originally developed for hospitals, the Guidelines have been expanded over the years to include all types and sizes of health organizations.

The primary goal of the MIS Guidelines is to provide standardized, basic operational management information to front line managers as well as administrators throughout the health system. Implementation of the MIS Guidelines 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 calculate key indicators, providing a useful tool to measure and monitor performance.

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

In January 1997, the Provincial Health Information Management/Registration MIS Committee was formed. The group's mandate was to facilitate implementation and use of the MIS Guidelines for Health Information Management/Registration services in our province, particularly the workload measurement system. While much progress has been made to date, the work of the Committee continues today, as outlined in the terms of reference found in Appendix A.

The Workload Measurement System (WMS) for Health Information Management/Registration Services was originally developed by Health Canada. Since the formation of the MIS Group, and subsequently the Canadian Institute for Health Information in 1994, the WMS was incorporated into the MIS Guidelines. It provides key workload and related statistics for inclusion in indicator analysis. CIHI periodically updates the MIS Guidelines, and related WMS, but does not plan to continue to support the WMS for Health Information Management at this time.

The Provincial Health Information Management/Registration MIS Committee recognized the need to revise the current Health Records WMS to reflect expanded roles of staff and the highly technical environment in which they work. No WMS exists in the current MIS Guidelines for Registration Services; rather key staff activity statistics are recorded instead. Therefore, to achieve a comprehensive and standardized WMS for Health Information Management services in the province, the national Health Information Management WMS was adapted in 1999 to meet local needs, yet be consistent with national reporting guidelines. In 2002, a significant revision was undertaken to improve the accuracy and comprehensiveness of the WMS. In addition, common principles were applied and a new WMS was developed for Registration services.

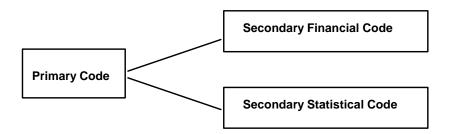
This reference guide has been developed to assist Health Information Management/Registration staff to implement the MIS Guidelines within their facilities, including the WMS, in accordance with the MIS Guidelines principles, yet customized for provincial use. By doing so, health information management /registration services will improve the accuracy and comparability of data available for internal and external use. Health Information Management/Registration

services recording WMS data currently are expected to make necessary revisions to their data collection processes for April 1, 2005. Other services are expected to begin the implementation process by that date, recognizing completion will take many months.

Functional Centres/Primary Accounts

The **Functional Centre** framework is a five level hierarchical arrangement of departments or functional centres that recognizes the diversity in size and specialization of health service organizations. This framework provides a method for organizing financial and statistical information for both internal and external reporting purposes. The hierarchical arrangement allows varying sizes of health service organizations to use the structure and yet also permits information to be "rolled-up" or consolidated for external comparative reporting.

The MIS Guidelines Chart of Accounts coding structure consists of the following code blocks.



The primary code refers to a functional centre or accounting centre. The secondary codes identify specific types of information about the functional centre, either financial or statistical in nature. Each secondary code is associated with an appropriate primary code. Each digit of an account code identifies specific information.

Many organizations use additional numbers either before or after the MIS accounts to designate a facility, site, or program. The MIS Coordinator in your organization can provide additional information on the accounts used for your particular service. The creation of primary and secondary accounts should be discussed with the individual responsible for MIS reporting within your organization to ensure that accounts correctly reflect the activity which occurs and that the secondary accounts are correctly linked with the primary account or functional centre.

Each department or service that is a cost centre (has a designated budget) is assigned a primary account code within the functional centre framework. These primary account codes contain 9 digits and are structured in a specific manner, as described below.

ACCOUNT TYPE

7

The account number will always start with a 7 to indicate that this account represents a functional centre.

FUND TYPE

71

The second 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 third digit indicates the framework section to which the service belongs. This is the Administration and Support Services framework (section 1) for Health Information Management and Registration.

FUNCTIONAL CENTRE (Level 3)

71 1 **

The next two digits indicate the type of service provided. This is referred to as level three reporting. The ** indicates that there are options for this section of the account code.

FUNCTIONAL CENTRE (Level 4)

71 1 ** ++

The next two digits indicate further breakdown of functions for some level three functional centres, and are known as level four functional centres.

FUNCTIONAL CENTRE (Level 5)

71 1 ** ++ xx

The last two digits indicate further breakdown of functions for some level four functional centres, and are referred to as level five functional centres.

Functional/Accounting Centre Account Code Structure

Account Type	Fund Type	Framework Section	Functional Centre Level 3	Functional Centre Level 4	Functional Centre Level 5
7	1	1	**	++	XX
1. to 6. Balance Sheet accounts 7. Functional Centres for Revenue, Expense and Statistics 8. Accounting centres	 Operating Fund Other DHCS funding Other funding Board Designated Capital Special Purpose Inactive Endowment 	 Administration and Support Nursing Inpatient/ Resident Ambulatory care Diagnostic and Therapeutic Community and Social Services Research Education 	30 Communications . 45 Housekeeping 50 Laundry/Linen 75 Biomedical Eng. 80 Registration 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
	(Unrestrict.) 9. Endowment				

The **Matching Principle** in accounting associates both revenues and expenses to a defined time period. The MIS Guidelines 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.

All workload and activity statistics must be reported in the same functional centre as the resources consumed to produce the activity. This includes human, financial and capital resources.

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 centres for various services should be made in consultation with your finance department staff. 'CMDB' means this level of detail is required for national reporting to the Canadian MIS Database.

71 1 Administrative and Support Services Framework Section

71 1 80 Registration (CMDB)

71 1 80 20 Inpatient/Resident/Client Registration
71 1 80 40 Client Registration
71 1 80 60 Emergency Registration
71 1 80 80 Centralized Booking
71 1 80 80 20 Operating Room Booking
71 1 80 80 40 Client Booking

71 1 90 Health Information Management (CMDB)

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

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

71 1 80 Registration (CMDB)

The Functional Centre 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 Inpatient/Resident/Client Registration

The Functional Centre pertaining to the provision of the service which schedules the admission of inpatients/residents/clients; receives, collects, and documents inpatient/resident/client information, and assigns inpatients/residents/clients to 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 Centre 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 Centre 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. The Functional Centre 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.

71 1 80 80 Centralized Booking

The Functional Centre 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 Centre pertaining to the provision of the service which schedules and coordinates the booking of patients, for surgical procedures.

71 1 80 80 40 Client Booking

The Functional Centre pertaining to the provision of the service which schedules and coordinates the booking of services recipient for health services.

71 1 90 Health Information Management (Health Records) (CMDB)

The Functional Centre pertaining to the accurate and complete collection, transcription, preservation, and dissemination of health-related data. Excludes and admitting, registration or library functions.

71 1 90 05 Health Records Administration

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

71 1 90 20 Transcription

The Functional Centre 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 Centre 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 Centre pertaining to all non-medical transcription and associated transcription-related duties.

71 1 90 40 Health Record Processing

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

Secondary Accounts

The Secondary Account Codes provide for recording of either financial or statistical information. In a similar format to the primary codes, broad groups have been established with subcategories for greater detail. These codes are linked to primary codes to identify financial or statistical performance indicators for a specific functional centre. Secondary financial accounts are designed to provide additional information on the nature of revenues and expenses in an organization. Financial accounts can then be linked to the secondary statistical accounts within the same functional centre to produce financial performance indicators for the functional centre. For example: Cost per Workload Unit or Cost per Registration.

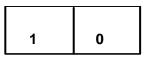
Secondary Financial Statistics

The code structure for secondary financial accounts consists of 5 digits as illustrated below:

Example:



1	0
•	



Broad Group

or Expense

- 1. Revenues
- 2. Inactive
- 3. Compensation
- 4. Supplies
- 5. Traceable Supplies & Other Expenses
- 6. Sundry
- 7. Equipment
- 8. Referred-Out
- 9. Buildings and Grounds
 - Expenses
 - -Undistributed

Nature of Revenue

10 Print/Stationary/Office

- 15 Supplies-Housekeeping 20 Supplies-Laundry
- 60 Medical Surgical
- 65 Drugs
- 66 Medical Gases
- 70 Supplies Lab

Capture of Further Detail

10 Printed Forms

- 20 Paper Stocks
- 30 Printing Supplies
- 40 Duplicating Supplies
- 50 Photocopying Supplies
- 60 Microfilm
- 70 Computer Supplies
- 90 General Office Supplies

The above figure illustrates the account used to record the expense related to Supplies – Print/Stationary/Office Supplies - Printed Forms. Such secondary financial accounts are used as EOC's (Expense Object Codes) in Meditech Systems and are used throughout the organization to identify the specific expenses and revenues for each functional centre.

The broad groups of secondary financial accounts are:

Revenue

When revenue is generated in relation to clinical services for <u>facility</u> 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 center. Compensation costs are reported according to three broad occupational groups: Management and Operational Support, Unit-Producing Personnel and Medical Personnel.

Supplies are consumable products used by a functional centre. Accounts exist for items ranging from paper, computer supplies, test manuals and forms, to medications, and other clinical products. There are specific accounts unique to Lab functional centres for supplies such as reagents, glassware, etc.

<u>Traceable Supplies and other expenses</u>

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; and
- usually do not behave linearly with workload.

Sundry

Sundry costs are those which 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 centres and are actually overhead costs for the organization as a whole. However some organizations have elected to distribute these costs to functional centres. The primary purpose for distribution is better accountability for expenses.

Example of an overhead supply cost is laundry.

Example of an overhead sundry expense cost is long distance telephone charges.

Equipment

Depreciation costs for all equipment and preventative and repair costs for all clinical equipment are to be expensed to functional centres. This will improve the comparability of costs across organizations.

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

(For a full listing of the Secondary Financial Accounts, please refer to the 2004 MIS Guidelines or to the Provincial User Guide, 2005/2006)

Broad Group No. 1: Revenues

- 1 20 Recoveries From External Sources
- 1 30 Contributed Services
- 1 40 Donations
- 150 Grants
- 1 60 Investment Revenue
- 1 70 Revenue from Other Funds
- 1 90 Other Revenue

Broad Group No. 3: Compensation

- 3 11 MOS Worked Salaries
- 3 13 MOS Benefit Salaries
- 3 15 MOS Benefit Contribution Expenses
- 3 19 MOS Purchased Services
- 3 51 UPP Worked Salaries
- 3 53 UPP Benefit Salaries
- 3 55 UPP Benefit Contribution Expenses
- 3 59 UPP Purchased Service Salaries

3 91	MP Worked Salaries
3 93	MP Benefit Salaries
3 95	MP Benefit Contribution Expenses
	MP Purchased Services
Broad (Group No. 4: Supplies
4 10	Supplies - Printing, Stationery and Office Supplies
4 10 10	Printed Forms
4 10 20	Paper Stocks
4 10 30	Printing Supplies
4 10 40	Duplicating Supplies
4 10 50	Photocopying Supplies
4 10 60	Microfilm
4 10 70	Computer Supplies
4 10 90	General Office Supplies
4 95	Supplies - General
4 95 10	Department Supplies – General
Broad (Group No. 5: Traceable Supplies and Other Expenses – NOT APPLICABLE
	Group No. 6: Sundry
	Departmental Sundry
6 10 10	
6 10 15	
6 10 20	
6 10 22	
6 10 24	,
6 10 26	
6 10 30	Course Registration Fees and Materials
6 20	Travel Expense - Service Recipient
6 20 10	
	Provincial/Territorial Travel
6 20 14	
6 22	Travel Expense - Board
6 22 10	Local Travel
6 22 12	Provincial/Territorial Travel
6 22 14	Out of Province/Territory Travel
6 24	Travel Expense - Staff
6 24 10	Local Travel
	Provincial/Territorial Travel
6 24 14	Out of Province/Territory Travel
	Travel Expense - Recruitment and Relocation
6 26 10	
6 26 20	Relocation

6 30 Bank Charges

6 40 6 50		rocessing sional Fees
6 60 6 60 10 6 60 20 6 60 30 6 60 40))	Fees License Fees Membership Fees Accreditation Fees Subscription Fees
6 70 6 75 6 80 6 85	Insurar	Relations
6 90 6 95 6 96 6 97	Sundry Meeting	Land or Building (Excluding Equipment) Expenses - Not Elsewhere Classified g Expense partmental Services
Broad 7 10 7 10 20 7 10 22 7 10 40 7 10 42	Equipn) 2)	No. 7: Equipment Expense nent Maintenance - External Equipment Maintenance - Contract Software Maintenance - Contract Equipment Maintenance - Other Software Maintenance - Other
7 20 7 30 7 50 7 51 7 55	Replac Amortiz Net Ga	nent Maintenance - Interdepartmental ement of Major Equipment Parts zation on Major Equipment - Distributed in or Loss on Disposal of Major Equipment t on Major Equipment Loans
7 60 7 65 7 80 7 90	Minor E Amortiz	Lease of Major Equipment Equipment Purchases zation - Software Licenses and Fees nent Expense - Not Elsewhere Classified
Broad	Group	No. 8: Referred-Out Services

8 10 Administrative and Support Services

Broad Group No. 9: Buildings and Grounds Expense – Undistributed

Secondary Statistical Accounts (Non-Financial Accounts)

Secondary statistical accounts are designed to provide additional information on the nature of activities that occur within an organization. The statistical code block is made up of four distinct segments, totaling seven coding positions. Each code block provides specific information for the reader.

These Secondary Statistical Accounts form the structure of the organization's Chart of Statistics, which is held within the Statistical General Ledger of the Meditech System. These accounts are often referred to as SOC's or Statistical Object Codes.

Secondary Statistical Code Structure

The first segment is a single character, which identifies the secondary statistical broad group as listed above. The second segment, which consists of two characters, identifies the nature of the statistic (e.g. workload units). The fourth and fifth digits are used to capture further detail regarding the category and type of service recipient, or activity category. The sixth and seventh digits can be used for additional detail.

Example 1:

Account 1 14 00 10 is the secondary statistical account code for reporting Workload Units–Health Records – Total Record Processing.

0

		J		
Broad Group	Workload	Са	tegory of Service Recipient	Activity Category
1 Workload 2 Staff Activity 3 Earned Hours 4 Service Acts & Caseload Status 7 Functional Centre Operation 8 Health Services Organization Operation	02 Workload Units- Retrospective: Serv. Rec. Act. 03 Serv. Rec. Act- Drug Distribution 07 Serv. Rec. ActDiag/Ther 13 Patient Food Services 14 Health Records 15 Diagnostic 16 Therapeutic	00 10 20 30 40 50 60	Inpatient Client Referred-In Resident Facility/Organization	10 Record Processing 20 Transcription 30 Record Imaging 40 Release of Info. 50 Health Data/Info. 60 Records Maintenance 70 Functional Centre Support

Example 2: The following example shows the account code used to report Account 2 55 20 00 Staff Activity-Service Recipient Registrations Completed-Client-Other.

2 5 5 2 0 **Broad Group Workload Units Activity Category** 1 Workload 55 Service 10 Inpatient 20 Client -Other 2 Staff Activity Recipient Registrations 30 Client-SDC 3 Earned Hours 4 Service Activity & Completed 40 Resident Caseload Status 7 Functional Centre Operation 8 Health Service Organization Operation

The Broad Groups of Secondary Non-Financial Statistics are:

Workload

The workload units (measured in minutes) for the various clinical services are reported under this series of accounts. The workload units for reporting are calculated through use of workload measurement systems.

Staff Activity

These statistics include 'surrogate' measures of workload such as counts of services provided, eg. number of registrations completed, number of meal days served, number of records filed, etc.

Earned Hours

These accounts are used to report the number of worked, benefit and purchased hours for staff of the functional centre.

Service Activity and Caseload Status

This series of accounts are used to report statistics related to the volume of services provided. E.g. inpatient days, visits, procedures, etc.

Functional Centre Operation

Statistics which describe something about the functional centre are found in this broad group. E.g. number of FTE's

Health Service Organization Operation

This account grouping is used to report information about the organization as a whole. E.g. Total Days Stay.

Statistical accounts are not standard across all functional centres, but each is appropriate for one or more defined functional or accounting centres. These are identified in the MIS Guidelines Chart of Secondary Statistical Accounts.

Secondary Statistical accounts can only be reported at the level defined by the Department of Health and Community Services, unless specified in the account code listing. If lower level accounts have been created for internal use, these must be "rolled-up" to the DHCS account prior to data submission.

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 centre.

1 14 ** XX - Health Information Management Workload Units

By 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 and Information Services

60 Records Maintenance

70 Support Activities

170 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 centres, one workload unit is equivalent to one minute of unit-producing personnel time spent performing the primary service mandate of the functional centre.

1 70 ** XX Registration/Appointments Workload Units

By Service Recipient

** 00 No applicable Category

By Activity Category

XX 10 Registration

20 Appointment Bookings

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 centre 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 in order 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 Centres

To be reported by Registration and Health Information Management Functional Centres 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 Centres 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 Registration Functional Centres

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

2 56 10	Operating Room
2 56 20	Client

2 60 Requests for Release of Information Processed

To be reported by Health Information Management Functional Centres

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 61 Transcription Lines Typed

To be reported by Health Information Management or specific Transcription Functional Centres

The lines typed to transcribe dictated medical and/or diagnostic test results into the service recipient's health record or for other dictated/written reports; as defined to be a 60 character line. Regions 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 centre 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 centre have received or will receive salaries.

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

OTHER KEY FUNCTIONAL CENTRE & ORGANIZATIONAL STATISTICS

The definitions of other statistics that Health Information Management staff are often involved in reporting on behalf of other functional centres or the organization as a whole, are outlined below. It is important to verify that the counts taken from registration systems are actually counting the statistic desired, as per the MIS Guidelines definition.

Readers should refer to the Provincial DHCS Reporting Requirements User Guide (Appendix L) for a listing of functional centres which report these statistics.

8 28 Bassinet Days Staffed and in Operation

The calendar days that bassinets were available and staffed to provide services to newborns at the required type and level of service during the reporting period. Excludes bassinets set up outside the nursery and normally used for infants other than newborns.

8 26 Bassinets Staffed and in Operation

The bassinets available and staffed to provide services to newborns at the required type and level of service at the beginning of the fiscal year. Excludes bassinets set up outside the nursery and used for infants other than newborns.

8 27 Beds Days Staffed and in Operation

The calendar days that beds and cribs were available and staffed to provide services to inpatients/residents at the required type and level of service during the reporting period. Includes bassinets set up outside the nursery and used for infants other than newborns.

8 25 Beds Staffed and in Operation

The beds and cribs available and staffed to provide services to inpatient/residents at the required type and level of service, at the beginning of the fiscal year. Includes bassinets set up outside the nursery and used for infants other than newborns.

4 14 Deaths After Arrival (DAA)

The death of service recipients who were formally accepted as clients and died before being separated from the health service organization. Also includes clients with a written order for inpatient admission, who died before admission occurred.

4 22 Deaths on Arrival (DOA)

The death of service recipients who died before arriving at the ER of the health service organization.

4 01 Inpatient Admissions

The official acceptance into the health service organization of an adult/child/newborn/postnatal newborn, who requires medical and/or health services on a time limited basis.

The admission procedure involves the assignment of a bed, bassinet or incubator. 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.

4 03 Inpatient Days

The days during which services are provided to an inpatient, between the census taking hours on successive days. The day of admission is counted as an inpatient day but the day of separation is not an inpatient day. When the service recipient is admitted and separated (discharged or died) on the same day, one inpatient day is counted.

4 11 Inpatient Deaths

The official separation of inpatients deemed deceased after admission and before discharge from a health service organization. Inpatient deaths do not include stillbirths.

4 10 Inpatient Discharges

The official departure of live inpatients from the health service organization. Discharge of a newborn is deemed to occur at the time of official release from the health service organization.

4 12 Inpatient Transfers

The transfer of inpatients within a health service organization from the care and responsibility of one functional centre to that of another functional centre subsequent to admission and prior to discharge.

4 38 Obstetric Visits

The visits, related to the care of women in the ante-, intra-, and postpartum stages of pregnancy.

7 34 Operating Days

The calendar days, in a reporting period, during which the functional centre provided services.

4 52 Resident Admissions

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.

4 04 Resident Days

The days on which services are provided to a resident, between the census taking hours on two successive days. The day of admission is counted as a resident day, but the day of separation is not a resident day. When the service recipient is admitted and separated on the same day (discharged or died), one resident day is counted. Includes leave days (e.g. social leave, extended leave, and hospital leave) when the resident is absent from the health service organization.

4 54 Resident Deaths

The official separation of residents deemed deceased, after admission and before discharge, from a health service organization.

4 53 Resident Discharges

The official discharge of live residents from a health service organization.

4 55 Resident Transfers

The transfer of residents within a health service organization from the care and responsibility of one functional centre to that of another functional centre subsequent to admission and prior to discharge.

8 29 Service Days (Provincial Account)

The number of Inpatient Days generated based on the type of medical service provided to the patient, based on the Main Patient Service Summary types of the Discharge Abstract Database.

4 37 Surgical Visits

The service recipients who have had a surgical intervention in an operating room. If an individual returns to the operating room for further surgery during the same calendar day, this intervention will be counted as another visit.

8 61 Total Days' Stay

The accumulated inpatient/resident days since admission, of inpatients/residents who were discharged from the health service organization or who died in the health service organization during the reporting period. Includes service recipients admitted in a previous reporting period. The day of admission is counted as an inpatient/resident day but the day of separation is not counted as an inpatient/resident day. When the inpatient/resident is admitted and separated on the same day, one inpatient/resident day is counted.

4 50 Visits - Face-to-Face

The occasions during which service recipient activities are provided face-to-face or by videoconference on an individual or group basis. These services are documented according to the health service organization's policy and are provided for longer than five minutes.

4 51 Visits - Telephone

The occasions when service recipient activities are provided by telephone in lieu of a face-to-face visit. These services are documented according to the health service organization's policy and are provided for longer than five minutes.

Categorization of Personnel

The MIS Guidelines recommend all staff be assigned to one (or more) of three Broad Occupational Groups. By doing so, it improves the accuracy of productivity analysis and identifies the degree of overhead or support associated with the service.

Management and Operational Support (MOS) are the personnel, including purchased consultant services, whose primary function is the management or support of the operation of the functional center, although at times they may occasionally carry out unit-producing activities. This group includes directors, managers and supervisors, secretaries, clerical support staff etc.

Unit-producing Personnel (UPP) are those personnel whose primary function is to carry out the activities that contribute directly to the fulfillment of the mandate of the service for the Health Information Management/Registration Service. UPP include registration clerks, transcriptionists, health records technicians, file clerks, etc. These personnel are credited with workload units. It is recognized that UPP staff may, at times, perform activities that are not unit-producing.

<u>Volunteers</u> are not unit-producers and do not collect and report workload or service activity statistics.

Remember that staff who are primarily involved in <u>Research or Staff Education</u> are charged to the Education and Research functional centres, not the Diagnostic and/or Therapeutic Dept.

<u>Students</u> are not considered unit-producing personnel unless they contribute significantly to the provision of care and function at a reasonably independent level. In the case of laboratory students, they are always supervised by a staff member and work along side that supervisor. They do not work independently, therefore, they are not considered Unit-Producing Personnel.

Only unit-producing staff report 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 who routinely participate in unit-producing bench work should record workload for those clinical activities. If such activity consumes more than 20% of their time, the manager should have his/her compensation and worked hours split between the Management and Support and Unit-Producing Personnel Broad Groups accordingly. Failure to link workload with unit-producing worked hours will skew certain performance indicators.

Note: The designation of broad group category is based on <u>function</u>. Job category and Union category are not to be considered. Job category is not appropriate because one job category in an institution can be management and support in one functional centre and yet the same job category can be unit-producing in another functional centre. i.e. Clerical staff in most clinical departments are MOS but in Registration they are UPP. Union category does not apply as staff performing the same job may be union in some organizations and non-union in others.

If an UPP staff member is responsible for management activities on an occasional basis, this activity is recorded as Support Activity workload (Functional Centre Activities) within UPP worked hours. However if an individual is responsible for management activity for greater than 20% of their time, the worked hours of these staff should be split between MOS and UPP categories. **No workload is recorded for the management portion of their time.**

Medical Personnel (MP) are physicians who are compensated for their professional services either on a fee for service or salary basis, including interns and residents.

Categorization of Hours

The MIS Guidelines categorize the earned hours of staff (hours for which staff will be paid) into three categories: Worked, Benefit and Purchased Hours.

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

Earned hour statistics measure the use of labour in fulfilling the mandate of the service. 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 only the actual hours that are worked. e.g. An hour of overtime is recorded as only one hour but the expenses may be at time and half.

Worked Hours

Worked hours are those hours that are spent carrying out the mandate of the service. Staff 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 (actual hours worked)
- Callback hours paid and banked (actual hours worked)

Callback 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 are a component of worked salaries.

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 are not present at work 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
- Union leave with pay
- Any other paid leave of absence
- Lunch breaks when they are compensated

Education Hours

Staff time spent in education can fall into both worked and benefit categories. The MIS Guidelines describe education recorded as benefit hours as formal planned events for self-development and education recorded as worked hours as informal, short duration inservice sessions. When education occurs during worked hours, "Functional Centre Support" workload is reported.

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.

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. Ideally worked hours should be generated from the payroll system to ensure accuracy.

Staff working unpaid hours should record this information for internal purposes.

Time in Lieu

In many organizations staff are given time off in lieu of paid overtime. In the future, hours will be considered neither 'worked' or 'benefit' hours when taken to ensure the appropriate matching of workload and worked hours for the calculation of performance indicators. Rather, overtime hours will be expensed (or banked) as they are earned when revisions to the compensation accounts are implemented provincially (target date April 2005).

Categories of Service Recipients

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

The MIS Guidelines recognize and define six categories of service recipients. They are:

- Inpatient Individuals admitted to acute care facilities or specialty hospitals such as those
 providing rehabilitation or pediatric services, who have been assigned a bed, a unique
 identifier, and who have been accepted by the organization for the purpose of receiving
 services on a time-limited basis
- **Resident** Individuals admitted to extended care facilities, personal care homes and group homes, who have been accepted by the organization for medical, health, and/or residential services on a longer-term basis, have been assigned a bed and a unique identifier.
- **Referred-In-**An individual or specimen that has been referred for services from another health service organization (as locally defined); and whose person 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 MRI scans, Respiratory Therapy services such as hyperbaric chamber, and specimens tested by the Clinical Laboratory.

- Client Individuals receiving services in ambulatory clinics, in their homes, through day/night and outreach programs, who have been accepted by the organization to receive services without being admitted as an inpatient or resident, and who has been assigned a unique identifier. This category was previously known as "outpatients".
- **Facility/Organization** An entity officially registered with the organization to receive services, such as restaurants, pools, day care centres, etc.
- Service Recipients, Not Uniquely Identified –Individuals, facilities or organizations who
 receive services from a health organization when not currently registered as an inpatient,
 resident, client, facility or organization and whose encounter is not recorded through a
 registration system. Examples include individuals calling hot lines for counseling services,
 attending drop-in centres, and participants in health promotion activities aimed at educating
 the community as a whole.

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

Workload Measurement Systems

A workload measurement system (WMS) is defined as a tool for measuring the volume of services provided in terms of a standardized unit of productive personnel time. A WMS serves two purposes. First, as a department management tool to provide systematic quantification of workload to assist in staffing, planning, budgeting and performance monitoring. Secondly, as a 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.

Conceptual models provide a framework for the collection of workload data. Such models are intended to be inclusive of all the significant activities with which staff are involved. The basic unit of measure is one minute (one workload unit). Through the use of standard or actual time recording, staff can record how the majority of their time is spent during the workday. This workload measurement system is not designed to capture 100% of the workday. Rather, a target of 80-85% is a realistic expectation, which can be further refined within a specific facility/service over time.

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 many regional health boards, 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 are encouraged. This approach is consistent with recent WMS redevelopment projects undertaken on the national level by CIHI. However, such values **must** be derived through the use of 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.

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, 2004 MIS Guidelines)

	HEALTH INFORMATION MANAGEMENT								
Record Processing	Transcription	Record Imaging	Release Of Information	Health Data & Information Services	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	Routine Requests Complex Requests Court Ordered Requests	Clinical/ Financial Info. Reporting Research External Reporting	Record Purging Record Destruction Maintenance of Records & Records Information Systems	Functional Centre Activities Organizational / Professional Teaching/ In-service Support to Registration Support to Switchboard			

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

RECORD PROCESSING

ASSEMBLY AND ANALYSIS

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.

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; and,
- 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.

Standard Time Value:

Inpatient Record Assembly - Facility Specific standard time Client Record Assembly (Surgical & Medical Day Care) - 2.8 minutes per record Client Record Assembly (Emergency, Clinics) - Facility Specific standard time Resident Record Assembly - Facility Specific standard time or Actual time

Item for Count: Number of records assembled, by inpatient, client 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; and,
- 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.

Standard Time Value:

Inpatient Record Analysis – Facility Specific standard time Client Record Analysis - Facility Specific standard time Resident Record Analysis – Facility Specific standard time or Actual time

Item for Count: Number of records analyzed, by inpatient, client and resident.

ASSEMBLY AND ANALYSIS Combined Unit Value

Standard Time Value:

Inpatient Record Assembly – 11.2 minutes standard time unit value or facility standard time.

Client – Facility Specific standard time

Resident - Actual time

CODING AND ABSTRACTING

CODING AND ABSTRACTING

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 research and statistical purposes.

START TIME: Health record accessed and coding/abstracting initiated.

STOP TIME: Completion of abstract, including generation of coding sheets.

Standard Time Value:

Coding and Abstracting Inpatient Record – 15.7 minutes per record or facility specific standard time

Coding and Abstracting Client (Surgical & Medical Day Care) Record – 5.6 minutes per record or facility specific standard time

Coding and Abstracting Resident Record – Actual time

Item for Count: Number of records coded and abstracted, by inpatient, client and resident.

CODING AND ABSTRACTING RELATED PROCEDURES

Definition: The processes used to support coding and abstracting services such as month end procedures such as edits, reports, tape generation, balancing count with ADT, etc. and maintenance of system integrity, etc.

Actual Time Value

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.)

Standard Time Value: 2.3 minutes per record OR facility specific standard time if master summary sheet is generated.

Item for Count: Number of Incomplete Records processed

INCOMPLETE RECORD NOTIFICATION

Definition: Consists of the time spent on determining those physicians 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.

Actual Time Value

RECORD RETRIEVAL/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. The unit value includes time to:

START TIME: Initiation of numerically listing records to be retrieved, e.g. sorting clinic lists.

- make and insert outguide, or sign out in computer tracking system, and,
- remove record.

STOP TIME: Completion of retrieving last record on list.

Standard Time Value: 2.1 minutes per chart or facility specific standard time. (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

NON-ROUTINE 'MIA' RECORD RETRIEVAL

Definition: The process of locating and extracting a health record that is missing (i.e. has not been located in the usual places and within the usual timeframe).

Actual Time

Item for Count: Number of (MIA) Non-Routine Records Retrieved, by Inpatient, Client, and Resident

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 outguide if necessary, and
- update on computer if necessary.

STOP TIME: Completion of inserting last record to be filed.

Standard Time Value: 0.85 minutes per record

Item for Count: Number of Records filed, by Inpatient, Client, and Resident

NOTE: Time is counted at the point of final filing.

LOOSE REPORT FILING

Definition: The process of filing loose reports that **do not arrive** with the 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.

Standard Time Value: 1.2 minutes per report

Item for Count: Number of reports of loose filing filed. *Note: One report may be comprised of several sheets.*

EXTERNAL COLLECTION AND DISTRIBUTION

Definition: The process of distributing records and/or reports upon request to various functional centres 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.

Standard Time Value: Actual or Facility Specific Standard Time

Item for Count: Number of Record Distributed, by Inpatient, Client and Resident

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 Value: Actual

TRANSCRIPTION

TRANSCRIPTION

Definition: The process of transcribing dictated/written reports that are designated for the health record (e.g. separation summaries, histories, physicals) or are unrelated to the health record, such as administrative correspondence, research reports, etc. The unit value should include the time spent checking pronunciation and spelling. Unit values should be determined for the specific word processor or computer systems used in each functional centre.

The line will be the basic unit of measure. However, each facility must determine the average character count, including spaces, for each line to be counted in its system. In many, but not all, systems, an average line equals 60 characters, or 12 words with an average of 5 characters per word.

START TIME: Initiation of processing a report including dictating and word processor machines switched on, cassette in machine, headphones on, printer set up and selection of patient. STOP TIME: Completion of report and sending output to the printer.

Standard Time Value: Facility specific value

Item for Count: # of lines transcribed, as locally defined

For regional use, may measure non-medical and medical transcription separately.

TRANSCRIPTION RELATED PROCEDURES

Definition: The procedures associated directly or indirectly with transcription. They include preparation of equipment and work area, printing reports, prioritizing and scanning dictation, distributing material and/or photocopying, reports separating and distributing by fax or mail, etc.

START TIME: Initiation of the activity. STOP TIME: Completion of the activity.

Actual or Facility Specific Time Value

RECORD IMAGING

SCANNING

Definition: The process of reproducing health records onto an electronic storage medium which includes preparation of document for imaging, scanning and verification of legibility, completeness, etc.

START TIME: Initiation of obtaining records for scanning from permanent file.

- obtain health record for scanning;
- prepare each image in record;
- scan each image in record;
- index record documents;
- check digitized record;
- verify legibility;
- electronically file record; and
- file disk.

STOP TIME: Records are set aside.

Standard Time Value: 1.6 minutes/sheet

Item for Count: Number of sheets scanned, double sided sheets count as 2.

RELEASE OF INFORMATION

ROUTINE REQUESTS

Definition: The process of answering telephone requests for release of service recipient information such as demographic, admission or visit history or other information readily available through computer system. Included is the time to verify authorization for release of service recipient information and fully answer request (e.g. obtain record, log request) or transfer to written request process.

START TIME: Telephone answered.

STOP TIME: Completion and logging of request. Telephone replaced.

Standard Time Value: 5.4 min. or Facility Specific standard time

Item for count: Number of Routine Requests processed

COMPLEX REQUESTS

The process of answering in-person and written requests for release of service recipient information. Included is the time to:

START TIME: Read and verify a mail request or receive an in-person request for information.

- 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; and
- 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.

Standard Time Value: 19.4 minutes or Facility Specific standard time

Item for count: Number of Complex Requests processed

COURT ORDERED REQUESTS

Definition: The process of responding to a court order (e.g. subpoena) requesting the provision of a service recipient's health record. Included is:

START TIME: Acceptance of a court order as served.

- determine service recipient identification;
- retrieve the record;
- prepare the record for court (page numbering, table of contents, statement of the true copy);
- photocopy;
- re-assemble the record;
- re-file the record;
- log the request; and
- file subpoena.
- notify health practitioner of release, if applicable

STOP TIME: Completion of the above noted process.

Actual Time Value

HEALTH DATA AND INFORMATION SERVICES

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; and
- clinical/financial information reports.

Health Data and Information Services are comprised of three categories of activities:

CLINICAL/FINANCIAL INFORMATION 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, 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

Actual Time Value

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

Actual Time Value

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

Actual Time Value

RECORDS MAINTENANCE

RECORD PURGING

Definition: The designated and planned process of identifying and retrieving 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 purge

- -Retrieve records
- -Remove desired records or portions thereof for storage or destruction
- -Complete storage or destruction

STOP TIME: Complete required documentation

Actual Time Value

RECORD DESTRUCTION

Definition: The process of preparing documents for destruction including retrieval, logging of data (electronically or manually), boxing/bagging documents, transporting and witnessing the destruction of records.

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

Actual Time Value

MAINTENANCE OF RECORDS AND RECORDS INFORMATION SYSTEMS

Definition: The process of maintaining an active and inactive filing system(s), as well as the process of maintaining information systems (databases, etc.) including:

- CPI
- Creation of volumes
- Permanent file
- Incomplete records
- Correction of error messages
- Maintenance of system integrity with updates (e.g. software, Meditech updates, etc.)

Actual Time Value

SUPPORT ACTIVITIES

FUNCTIONAL CENTRE ACTIVITIES

Definition: Activities required for the operation/maintenance of the functional centre 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 centre quality improvement activities
- Travel (internal and external) related to any of the above activities and patient portering.

Actual Time

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 followup 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 related to the above activities.

Actual Time

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 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.
- Inservice 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 in duration, more formal, educational events such as annual conferences, courses, symposiums, and workshops.

Actual Time

SUPPORT TO REGISTRATION

Definition: Time spent in support of the Registration functional Centre, registering inpatients, resident or clients as required, usually during evenings or nights when registration staff are not on duty.

Actual Time

SUPPORT TO SWITCHBOARD

Definition: Time spent manning facility switchboard, answering and directing telephone calls, paging, and responding to emergencies as required.

Actual Time

REGISTRATION WMS

REGISTRATION WMS CONCEPTUAL MODEL

REGISTRATION/APPOINTMENTS					
Registration	Appointments Scheduled	Support Activities			
Inpatient/Resident Admissions	Appointments Booked (OR/Client)	Functional Centre Activities			
Bed Utilization Management	External Bookings	Organizational/Professional			
Client Registrations (SCD/Other)	Other Appointment Related Procedures	Teaching/In-Service			
Transfer/Separation Procedures		Support to Health Information Management			
Other Registration Related Procedures		Support to Switchboard			

REGISTRATION

INPATIENT ADMISSIONS

Definition: Admission Procedure - Inpatients/Newborns

The official acceptance into the health service organization of an adult/child/newborn/postnatal newborn who requires medical and/or health services on a time limited basis. The admission procedure involves the assignment of a bed, bassinet or incubator.

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 arrangement for patient transport;

STOP TIME: Completed records ready to be distributed (face sheet completed)

Standard Time Value: 14.7 minutes per admission

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 arrangement for resident transport;

STOP TIME: Completed records ready to be distributed (face sheet completed)

Standard Time Value: Facility Specific Standard Time

Item for Count: Number of Resident Admissions

BED UTILIZATION MANAGEMENT

Definition: Activities undertaken to ensure facility bed utilization is optimized, for maximum efficiency and the determining of overall bed availability, e.g. ward rounds, Length of Stay and Occupancy Rate analysis, etc. Excludes time spent seeking an available bed or a specific patient.

START TIME: Initiation of activity STOP TIME: Completion of activity

Actual Time

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 are individuals seen through emergency, surgical day care and ambulatory clinics. The unit value includes time to:

START TIME: Presentation of Client for Registration

- Validate client's appointment;
- Search CPI for patient match;
- create / update client information ;
- print ID card if applicable
- request records or create new record;
- generate/complete all necessary forms;

direct client to appropriate area;

STOP TIME: Completion of the registration process.

Standard Time Value: 2.0 minutes per client registration

Item for Count: Number of Client registrations processed

Note: Due to its unique new-patient registration process in OPIS, the NCTRF will use a facility specific standard time value.

Client Registrations are reported separately for Surgical Day Care vs other Client registrations.

TRANSFER/SEPARATION PROCEDURES

Definition: The process of transferring/separating a patient from or within a health service organization in the information system, including deaths; excludes time to arrange an external transfer (i.e., transfers between facility to facility, doctor to doctor, service to service, bed to bed); 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 CPI; and,
 STOP TIME: Completion of transfer/separation procedure.

Standard Time Value: 1.0 minute

Item for count: Number of transfer/separation procedures completed

OTHER REGISTRATION RELATED PROCEDURES

Definition: Activities undertaken related to registration such as generation of census and ER departure statistics reports, completing hostel bookings, OR bookings, etc.

START TIME: Initiation of activity STOP TIME: Completion of activity

Actual time or Facility Specific Standard Time

APPOINTMENTS SCHEDULED

APPOINTMENTS SCHEDULED

INDIVIDUAL APPOINTMENTS BOOKED

Definition: The process of booking and/or rebooking individual appointments for various ambulatory services within the facility/program.

START TIME: Receipt of notification or request (person presents, telephone, referral received);

- identify patient
 - set time slot/ schedule or reschedule

STOP TIME: Notify patient or referral source by phone, letter or in-person.

Standard Time Value: Facility Specific standard time – over time, the committee will attempt to determine a provincial time.

Item for count: Number of individual appointments booked

Note: OR Appointments Booked are reported separately from Client Appointments Booked.

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: Initiation of activity STOP TIME: Completion of activity

Actual Time

Note: OR Appointments Booked are reported separately from Client Appointments Booked.

EXTERNAL BOOKINGS

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.

Standard Time Value- Facility Specific standard time

Item for count: Number of external booked or rebooked appointments

OTHER APPOINTMENT RELATED PROCEDURES

Definition: Activities undertaken related to appointment scheduling such as travel arrangements and clinic room bookings for traveling clinics, etc.

START TIME: Initiation of activity STOP TIME: Completion of activity

Actual Time

SUPPORT ACTIVITIES

FUNCTIONAL CENTRE ACTIVITIES

Definition: Activities required for the operation/maintenance of the functional centre 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 centre quality improvement activities
- Travel (internal and external) related to any of the above activities and patient portering.

Actual Time

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 followup of health service organization board/committee functions. e.g. Accreditation teams, Occupational Health and Safety Committees, etc.
- Court appearances and discoveries
- 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.
- 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 related to the above activities.

Actual Time

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 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.
- Inservice 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 in duration, more formal, educational events such as annual conferences, courses, symposiums, and workshops.

Actual Time

SUPPORT TO HEALTH INFORMATION MANAGEMENT

Definition: Time spent in support of the Health Information Management functional Centre, retrieving health records, filing, and other duties as required, usually during evenings or nights when Health Information Management staff are not on duty.

Actual Time

SUPPORT TO SWITCHBOARD

Definition: Time spent manning facility switchboard, answering and directing telephone calls, paging, and responding to emergencies as required.

Actual Time

Time Recording Methodology

The Health Information Management/Registration WMS employs two time-recording methodologies to measure the time used to perform functional centre activities. They are the Standard Time-Recording Methodology and the Actual Time-Recording Methodology. For both methodologies a standard unit of measure has been established. The unit of measure is the workload unit, where one workload unit is equivalent to one minute of unit-producing time spent on provision of services.

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.

HEALTH INFORMATION MANAGEMENT WMS Activity and Time Recording Methodology Summary

Workload Category	Activity Category	Component Activities	Time Recording
		Assembly	Standard/Actual
	Assembly & Analysis	Analysis	Standard/Actual
		Assembly & Analysis	Standard/Actual
	Coding & Abstracting	Coding/Abstracting	Standard/Actual
		Coding and Abstracting Related Procedures	Actual
Record	Incomplete Record	Incomplete Record Processing	Standard
	Management	Incomplete Record Notification	Actual
Processing		Routine Record Retrieval	Standard
		Non-Routine "MIA" Record	Actual
	Record Retrieval/Filing	Retrieval	
		Record Filing	Standard
		Loose Report Filing	Standard
	External Collection/ and Distribution		Standard/Actual
	Related Record Processing Procedures		Actual
Transcription	ption Transcription Transcription Related Procedures		Standard
Transcription			Standard /Actual
Record Imaging	Scanning		Standard
Release of	Routine Requests		Standard
Information	Complex Requests		Standard
Illioilliation	Court Ordered Requests		Actual
Health Data &	Clinical/Financial Information Reporting		Actual
Information	External Reporting		Actual
Services	Research		
Records	Record Purging		Actual
Maintenance	Record Destruction		Actual
Mannenance	Maintenance of Records and Records Information Systems		Actual
	Functional Centre Activities		Actual
Support Activities	Organizational/Professional		Actual
	Teaching / In-service		Actual
ACUAINE2	Support to Switchboard		Actual
	Support to Registration		Actual

REGISTRATION WMS Activity and Time Recording Methodology Summary

Workload Category	Activity Category	Component Activities	Time Recording
	Inpatient/Resident Admissions		Standard
Registrations	Bed Utilization Management		Actual
	Client Registrations		Standard
	Transfer/Separation Procedures		Standard
	Other Registration Related Procedures		Actual or Standard
Appointment	Appointments Booked	Individual	Standard
		Block	Actual
Bookings	External Bookings		Standard
	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

Who Should Record Workload Data?

The Health Information Management/Registration WMS is intended, primarily, for use by the Unit-Producing Personnel of the functional centre. Examples of unit-producing personnel include transcriptionists, file clerks, registration clerks, health records technicians, 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 Centre 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 Management/Registration MIS Committee has reviewed recent MIS Guideline revisions and implementation progress to date. While significant progress has been made, not all regions 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 regional Health Information Management/Registration services in achieving this, the following recommendations are provided, summarizing key expectations.

- 1. The 2004 MIS Guidelines related to Health Information Management/Registration be implemented for April 1, 2005.
- 2. Current functional centres be reviewed and revised as necessary to ensure the correct primary accounts are used, incompliance with the 2004 MIS Guidelines.
- Workload data should be recorded to ensure all activities of staff are included in the
 workload measurement system (WMS). Regional boards are encouraged to collect this data
 on either a sampling or continuous basis, using a manual or automatic data collection
 process that is practical for that board.
- 4. All staff be assigned to the appropriate Category of Personnel. Clerical staff (transcriptionists/data entry operators) are classified as Unit-Producing Personnel if they are directly involved with providing the records/registration services. However, clerical staff who are not directly involved with health records processing, such as administrative secretaries, are classified as Management and Operational Support.
- 5. Workload data should be collected and reported based on the following Categories of Service Recipients: Inpatients, Clients, Facility/Organization, and Residents, where applicable.
- 6. 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.
- 7. The recommended level of detail for reporting data at the <u>regional</u> 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
 - 2 61 Transcription Lines Typed
 - 2 62 Images Processed
- 8. The recommended level of detail for reporting facility specific data at the <u>provincial</u> 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
 - 2 61 Transcription Lines Typed
 - 2 62 Images Processed
- 9. WMS and Activity statistics should be reported internally each month for regional use and included in monthly electronic submissions to the Provincial MIS Database at the DHCS.
- 10. 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.
- 11. All data reported to the Statistical General Ledger of the boards should be reviewed and verified for accuracy prior to use at the regional 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.
- 12. 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 In a Meditech Environment

Some statistics will be captured directly through the ADT and Health Records modules of Meditech. 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 regions with data capture and tallying at month end. These are available from Committee members.

Indicators – What They Are and How To Use Them

Indicators link two data elements together to measure performance and to provide information that can be used to facilitate decision making or compare performance. There are many indicators that can be produced by the data elements contained in the MIS database. This document will primarily discuss those that are related to resource consumption.

Workload data can be linked to financial data or other statistical data to create performance indicators. These indicators can be used for planning, staffing, budgeting and measuring efficiency. Implementation of a workload measurement system and reporting of workload data is not the ultimate goal. The primary value in workload measurement is the use of information to make better decisions related to resource consumption. This is essential, in order 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.

The MIS Guidelines contain the formulas and explanations for many indicators. They are classified into the following categories: Financial, Staffing, Utilization, Productivity, and Workload. Readers are advised to refer to the recommendations of the Provincial Health Information Management/Registration MIS Committee for suggested indicators for use by Health Records services within the province.

Selected examples of some key indicators, their calculations, and interpretation follow.

Cost per Workload Unit

This indicator describes the cost to provide a workload unit.

Cost per Workload Unit = <u>Defined Cost</u> Workload Units

The costs in this formula can be defined as:

- Full cost which includes both direct and indirect functional centre costs. Indirect costs are
 overhead costs distributed to the functional centre from the administration or support
 functional centres and the undistributed accounting centres. Direct costs are those which
 are charged to the functional centre. Direct costs are controlled by the manager and provide
 more useful information for decision making than total or indirect cost.
- Direct cost only, or

 a specific component of direct cost such as unit-producing compensation, supplies or sundry.

The Workload Units used could be:

- Total (Service Recipient and Support)
- Service Recipient or
- Support

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 commonly used financial indicators is "Direct Cost per Service Recipient Workload Unit". Total cost per Service Recipient Workload Unit is used in service recipient-specific costing. Managers will find that "Compensation Cost per Workload Unit" is valuable to support human resource decisions.

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 centre due to changes in population served, program or service.

Workload Units per Activity

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

Workload Units /Activity = Workload Units for the Defined Activity

Volume of Activity

The Workload Units used could be:

- Total (Service Recipient and Support)
- Service Recipient or
- Support

This 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 Support workload is not volume dependent and this workload 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
- organizational policies
- facility layout
- patient/resident/client acuity

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:

- Maintain the inputs but increase the outputs
- Decrease the inputs but maintain the outputs
- Decrease both the inputs and outputs but decrease the inputs more than the outputs
- Increase both the inputs and outputs but increase the outputs more than the inputs
- Decrease the inputs and increase the outputs

Productivity = Workload Units ÷ 60 x 100
UPP Worked Hours

The MIS Guidelines includes coffee break time as part of the worked hours. Coffee breaks alone can account for 7-8% of worked hours. In addition, approximately 5% is usually lost to personal or delay time. Therefore the maximum productivity which can be expected is approximately 87-88%. 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 services
- inaccurate reporting of either worked hours or workload

Two of the most commonly calculated productivity indicators are:

□ Unit-Producing Personnel Worked Productivity (%): This indicator calculates the percentage of all unit-producing worked and purchased hours spent in the provision of Service Recipient Activities. It is calculated as follows:

Service Recipient Workload Units ÷60, x 100
Unit-Producing Personnel Worked and Purchased Hours

□ Unit-Producing Personnel Total Productivity (%): This indicator calculates the percentage of all unit-producing personnel worked and purchased hours spent in the provision of Service Recipient and Support Activities. It is calculated as follows:

Service Recipient and Support Workload Units ÷60, x 100 Unit-Producing Personnel Worked and Purchased Hours

Applications of Performance Indicators

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 which 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. 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 an Organization Apply Performance Indicators?

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.

Predicted Volume x Service Recipient Workload per Activity = Predicted Service Recipient Workload

Predicted Service Recipient Workload x Cost per Service Recipient Workload Unit = Predicted Total Cost

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

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 which are linked to the particular activity.

Example: Change of an inpatient service to a client (outpatient) service To determine staffing impact:

Number of Inpatient procedures generated by that service x Service Recipient Workload Units per Inpatient Procedure = Inpatient Service Recipient Workload that will not be generated after the closure.

Expected Client Service Recipient Workload = # of expected client procedures x Workload Units per Client Procedure

Inpatient Workload – Client Workload = Difference in workload expected.

Difference in Expected Client Service Recipient Workload ÷ Service Recipient Workload Units per FTE = # of FTE's not required/required, depending on if the new client workload exceeds or is less than the Inpatient workload it is replacing.

To determine budget impact:

Service Recipient workload x Cost per Service Recipient Workload Unit = Total Cost estimated

Staffing/Scheduling

Workload can be used to justify current staffing, and identify staff increases or reductions based on workload requirements. Patient census alone can not identify needs since all service recipients are not alike and do not consume the same resources.

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 which 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, 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 workload. 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 in order 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 workload measurement system, which identifies types of specific activities, can also be useful for skill mix decisions. The tasks which are frequently selected can be reviewed to determine the level of expertise which 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 the sum of specific tasks but also the analysis required to determine the strategies required 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 required to provide care may be different depending on the level of complexity of care needs.

If the appropriate matching of workload and actual hours, to improve productivity, can not 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 required 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 Guidelines. Provincially, a Health Human Resource project has been collecting detailed Earned Hours data used for MIS based reporting, in addition to other workload, caseload and related statistics.

Cost Minimization

A workload measurement system, 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 workload measurement system can identify specific tasks performed by laboratory staff that could be performed by other staff, to reduce costs. This could be 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 the staff to continue to perform the tasks.

Example: There may be sufficient clerical or portering activities to 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 Recommended by the Provincial Health Information Management/Registration MIS Committee

Indicators are ratios or percentages, which quantify the relationship between two data elements. The MIS Guidelines suggests key indicators which are grouped under the following headings for ease of use:

- Financial,
- Staffing,
- Productivity,
- Utilization
- Workload

These indicators have been reviewed by the provincial MIS committee and selections made from four of those categories of those indicators deemed to be of greatest value to managers, regional boards and the ministry. Each health service organization should calculate these key indicators on an ongoing basis to monitor and trend performance. These indicators support self evaluation over time as well as peer group comparison. Additional indicators can be utilized periodically to meet specific management needs. Many indicators, particularly workload indicators, have been customized to the data currently recommended by the Health Information Management/ Registration Committee. All indicators can be calculated on a site-specific basis, as well as rolled up to a regional level for regional reporting.

The following table highlights the indicators recommended for use by Health Information Management and Registration functional centres. The formulas for calculation are noted below. Separate calculations should be made for the Health Information Management and Registration functional centres.

Summary of Indicators for HIM and Registration Services

Indicator Name	Health Information Management	Registration
Financial Indicators	Management	
Direct Cost per Workload Unit	Χ	X
2. Total Compensation Expense to Direct Operating Expense %	Χ	X
3. Supplies Expense to Direct Operating Expense %	X	X
Staffing Indicators		
4. # of UPP Full-time Equivalents (FTE's)	Χ	X
5. UPP Worked Hours to Earned Hours	Χ	X
Productivity Indicators		
6. Worked Productivity %	Χ	X
7. Total Productivity %	X	X
8. Workload Units per UPP Full-time Equivalent (FTE)	Χ	X
Workload Indicators		
9. % Distribution of Workload, by activity category	X	X
10. % Distribution of Coding and Abstracting activity, by category of service recipient	X	
11. % Distribution of Information Requests activity, by type of request	Optional	

Financial Indicators

1. Direct Cost per Workload Unit

The average cost per health information management workload unit). It is calculated by dividing the functional centre's direct operating expenses by the total health information management workload units (excluding support activities) generated by that functional centre in a given period.

<u>Direct Operating Expense</u>

Total Workload Units (excluding support activities)

2. Total Compensation Expense to Direct Operating Expense (%)

The percentage of the direct operating expense of a functional centre which is attributable to the total compensation expense. It is calculated by dividing the total compensation expense for all personnel by the direct operating expense in a given period.

Total Compensation Expense for all Personnel x 100
Direct Operating Expense

3. Supplies Expense to Direct Operating Expense (%)

The percentage of the direct operating expense of a functional centre which is attributable to the supplies expense. It is calculated by dividing the supplies expense (including traceable supplies and other expenses) by the direct operating expense in a given period.

Supplies Expense x 100
Direct Operating Expense

Staffing Indicators

4. Number of UPP Full-Time Equivalents (FTE's)

The average number of Unit-Producing Personnel full-time equivalents. It is calculated by dividing the earned hours for all UPP employees (full-time & part-time) by the normal earned hours for a full-time equivalent in a given period.

<u>Total Earned Hours for All UPP Staff</u> Normal Earned Hours for one UPP FTE

5. UPP Worked Hours to Earned Hours

The proportion of Unit-Producing Personnel earned hours which is attributable to the worked hours component. It is calculated by dividing the total worked hours by the total earned hours in a given period.

Total UPP Worked Hours Total UPP Earned Hours

Productivity Indicators

6. UPP Worked Productivity (%)

The proportion of Unit-Producing Personnel worked hours that is attributable to health information management or registration activities (excluding support activities) as measured by the workload measurement system.

Workload Units (excluding Support Workload Units) ÷ 60 x 100 UPP Worked and Purchased Hours

7. Total Worked Productivity (%)

The proportion of total Unit-Producing Personnel worked hours that is attributable to health information management or registration activities **and** support activities as measured by the workload measurement system.

Total Workload Units (including Support Activity Workload Units) ÷ 60 x 100 UPP Worked and Purchased Hours

8. Workload Units per Unit-Producing Full-Time Equivalent (FTE)

The average number of workload units generated by each unit-producing personnel full-time equivalent. It is calculated by dividing the workload units (excluding Support Activities workload units) by the number of unit-producing personnel full-time equivalents.

Workload Units (excluding Support Activity Workload Units)
Unit-Producing Personnel FTE's

Workload Indicators

9. % Distribution of Workload, by Workload Category

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.

Workload Units (Specified Activity) x 100
Total Workload Units for all Activities

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 & Information Services, Records Maintenance, and Support Activities. For Registration/Appointments: Registration, Appointment Bookings, and Support Activities.

10. % Distribution of Coding & Abstracting Activity, by Category of Service RecipientThe proportion of time spent on coding and abstracting activity which is attributable to inpatients, clients and residents.

Amount of time spent on coding and abstracting activities of a specified category x 100

Total time spent on coding and abstracting in same period

11. % Distribution of Information Requests Activity, by Type of Request (optional) The percentage of time spent on information requests attributable to each type of request (Routine, Complex and Court Ordered).

Amount of Time Spent Processing Request of a specified type x 100 Total Time Spent Processing All Requests in Same Period

Internal Management Reporting and Use

"You Can't Manage What You Can't Measure"

The data collected through the WMS and the associated activity statistics should be compiled and reported on a monthly basis to the administrator of the Health Information Management, Registration and Communications Services. Individual site reports are of value to site managers, as well as to the Director of these services. In combination with a monthly financial report, managers are able to calculate key performance indicators with which they can monitor and measure departmental performance. Ideally, such indicators can be automatically generated from automated systems. Managers are encouraged to work closely with Information Systems staff and Finance Dept staff to develop automatic reporting for all stakeholders containing information at an appropriate level of detail for the user and in a timely fashion.

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

Provincial Reporting Requirements

The following data should be reported monthly at the <u>provincial</u> level by being included in the monthly electronic submissions made to the Provincial MIS Database at the Department of Health and Community Services. Of prime importance is inclusion of this data in the year end period 13 data submissions from the regional boards as this submission is considered to be the

'official' statistical report for the board. Period 13 data is used widely at the provincial level as well as submitted to the Canadian MIS Database at the Canadian Institute for Health Information, Ottawa, Canada for national and international use.

Total Workload Units

- 1 14 Health Information Management Workload Units, at the workload activity level
- 1 70 Registration Workload Units, at the workload activity level

Earned Hours

3 10 ** ** Management and Operational Support Personnel, by hours type and bargaining unit 3 50 ** ** Unit-Producing Personnel, by hours type and bargaining unit

Staff Activity Statistics

- 2 55 Service Recipient Registrations Completed by HIM/Reg Staff, by Category of Service Recipient
- 2 56 Service Recipient Appointments Scheduled, by Source
- 2 60 Requests for Release of Information Processed
- 2 61 Transcription Lines Typed
- 2 62 Images Processed

REFERENCE

2004 MIS Guidelines, Canadian Institute for Health Information, Ottawa, Canada

APPENDIX A

Terms of Reference

Provincial Health Records/Registration MIS Committee

TERMS OF REFERENCE

Approved May 14, 2002

Purpose:

To facilitate implementation and ongoing use of the MIS Guidelines for Health Records/Registration services in the province, reflecting regional and provincial information needs and organizational structures.

Goals:

- 1. To promote the implementation of the MIS Guidelines for Health Records/Registration by interpreting the Guidelines (particularly the WMS) and providing recommendations for application.
- 2. To identify and define data elements for collection, time recording and reporting methodologies to support MIS implementation.
- 3. To promote use of standardized data collection and analysis in support of management decision-making.
- 4. To provide an opportunity for sharing of information regarding the collection, analysis, interpretation and use of data between Health Records/Registration services in the province.
- 5. To liaise with the Canadian Institute for Health Information; the Nfld. & Labrador Centre for Health Information; the Newfoundland and Labrador Health Records Association and Health Records/Registration staff in the province regarding issues related to the use of MIS Guidelines in Health Records/Registration.
- 6. To act as a resource to others within the regions and to promote education activities related to the MIS Guidelines for Health Records/Registration.
- 9. To promote data quality through initiatives such as development of reference guides, provision of in-services, audits, etc., in conjunction with NLCHI staff.

Membership:

Regional representation invited from all areas of the province providing dedicated Health Records/Registration services. Current membership includes representation from the following boards:

- Health Labrador Corporation
- Grenfell Regional Health Services
- Western Health Care Corporation
- Central West Health Corporation
- Central East Health Care Institutions Board
- Peninsulas Health Care Corporation
- Avalon Health Care Institutions Board
- Health Care Corporation of St. John's

- NF Cancer Treatment and Research Foundation
- Department of Health and Community Services

Representatives from Health and Community Services boards will participate as applicable.

Others may be invited as required.

Resource to the Committee:

MIS Manager, NLCHI

Chairperson:

- S Responsibilities Set agendas, chair meetings and ensure follow-up actions are taken. Represent the Committee as required.
- S Term of Office Appointed by the members, reviewed annually

Recorder:

S Recorder duties to rotate among members for each meeting.

Frequency of Meetings:

At the call of the Chair. A minimum of one face-to-face meeting per year is expected with 2-3 teleconference meetings as required.

Reporting:

Minutes to be forwarded to:

- All committee members;
- MIS Manager at NLCHI
- Regions that declined membership but wish to receive minutes and
- Executive of the Newfoundland and Labrador Health Records Association

Accountability:

MIS Manager from the Newfoundland and Labrador Centre for Health Information.

APPENDIX B Membership Contact Information

Provincial Health Information Management /Registration MIS Committee MEMBERSHIP AND CONTACT INFORMATION

Ms. Marguerite Foote, Chair

Regional Director, Health Information Management Central West Health Corporation Central NF Regional Health Centre Union Street Grand Falls, NL A2A 2E1 Phone: 292-2265

Fax: 292-2148 mfoote@cwhc.nf.ca

Ms. Debbie Whalen

Regional Director of Health Records and Information Systems Avalon Health Care Institutions Board Carbonear General Hospital 86 Highroad South Carbonear, NL A1Y 1A4

Phone: 945-5608 Fax: 945-5158 dwhalen@ahcib.ca

Ms. Jean Sheppard

Director of Health Records and Communications Central East Health Care Institutions Board James Paton Memorial Hospital 125 Trans Canada Highway Gander, NL A1V 1P7

Phone: 256-5743 Fax: 256-2715

jsheppard@cehcib.nf.ca

Ms. Susan Bourgeois

Director of Health Records Health Labrador Corporation Capt. William Jackman Memorial Hospital

Labrador City, NL A2V 2K1

Phone: 944-9273 Fax: 944-7439 sbourgeois@hlc.nf.ca

Ms. Faye Drodge (minutes only)

Client Records Manager Health & Community Services – St. John's Region P.O. Box 13122 20 Cordage Place St. John's, NL A1B 4A4 Phone: 738-4137 Fax: 738-4930

fayedrodge@hcssjr.nf.ca

Ms. Ruth Frizzell

Manager, Admissions Management Health Care Corporation of St. John's Health Sciences Centre 300 Prince Phillip Drive St. John's, NL A1B 3V6 Phone: 777-6815

Phone: 777-681 Fax: 777-8060

ruth.frizzell@hccsj.nf.ca

Ms. Sharon Penney

Director, Health Records
Health Care Corporation of St. John's
Health Sciences Centre
300 Prince Phillip Drive
ST. John's, NL A1B 3V6
Phone: 777-7694

Phone: 777-7694 Fax: 777-6456

sharon.penney@hccsj.nl.ca

Ms. Sharon Mullett

Regional Director, Health Records Peninsulas Health Care Corporation P.O. Box 340 Burin, NL A0E 1E0 Phone: 891-3367

Phone: 891-3367 Fax: 891-1337

smullett@peninsulas.ca

Ms. Marilyn Matthews

Regional Director, Registration/Clinical Records
Western Health Care Corporation
Western Memorial Regional Hospital
P.O. Box 2005, 1Brookfield Avenue

Corner Brook, NL A2H 6J7 Phone: 637-5000 x5283

Fax: 637-5591

mmatth@healthwest.nf.ca

Ms. Hazel Noel

Regional Director, Health Records Grenfell Regional Health Services Board Charles S. Curtis Memorial Hospital St. Anthony, NL A0K 4S0

Phone: 454-3333 x273

Fax: 454-0102 hnoel@grhs.nl.ca

Ms. Sherri Tiller-Park

Information Manager Health & Community Services-Western Region

P.O. Box 156

Corner Brook, NL A2H 6C7 Phone: 637-5000 x5248

Fax: 637-5488

sherritiller@hcsw.nf.ca

Ms. Agnes Butler

Manager, Health Records NF Cancer Treatment & Research Foundation Dr. H. Bliss Murphy Cancer Centre 300 Prince Phillip Drive St. John's, NL A1B 3V6 Phone: 777-8226

Fax: 777-6795 abutler@nctrf.nf.ca

Ms. Judy Lynn Wiseman (Minutes Only)

Director, Health Records Health & Community Services- Eastern Region P.O. Box 1614, Park Place Clarenville, NL A0E 1J0 Phone: 466-6354

Phone: 466-6354 Fax: 466-6330

judylwiseman@mail.gov.nf.ca

Mr. Derek Penney

Consultant, Board Services
Department of Health & Community Services
P.O. Box 8700,
St. John's, NL A1B 4J6
Phone: 729-7681

Phone: 729-7681 Fax: 729-4009 dgpenney@gov.nl.ca

Ms. Ann Vivian-Beresford (Resource to the Committee)

MIS Guidelines Manager NL Centre for Health Information 1 Crosbie Place St. John's, NL A1B 3Y8 Phone: 757-2403

Fax: 757-2411 annvb@nlchi.nl.ca