

**MIS Standards, Workload Measurement and
Statistical Data Collection**

**Reference Guide
for
Nursing**

December 2011

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1 INTRODUCTION

1.1 Purpose

The purpose of this reference guide is to educate readers regarding the Management Information Systems (MIS) Standards and their application to the discipline of nursing in the Newfoundland and Labrador Health Care System.

1.2 What are the MIS Standards?

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

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

Core components of the MIS Standards are:

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

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

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

The MIS Standards 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.

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

1.3 What is the Role of the Provincial MIS Committees?

The Provincial MIS Committees are discipline-specific groups that:

- make recommendations regarding implementation of the components of the MIS Standards applicable to their discipline;
- promote the use of the workload measurement systems by their discipline; and
- provide a vital link between the professions, Department of Health and Community Services (DHCS) and the Data Quality and Standards Division of the Newfoundland and Labrador Centre for Health Information (the Centre).

Currently there are 18 provincial MIS committees for the following disciplines:

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

The Provincial Data Quality and Reporting MIS Committee includes finance representatives from all Regional Health Authorities, the DHCS and the Centre. It has overarching responsibility for issues related to the quantity and quality of the data collected provincially.

The Provincial Nursing MIS Committee was formed in 1997 to facilitate implementation of the MIS Standards as they apply to the nursing services in the province of Newfoundland and Labrador. The ongoing work of the Committee includes:

- provide provincial leadership and facilitate regional implementation for MIS Standards in nursing services;
- promote the implementation of WMS to managers and staff and provide direction/strategies to address education needs and resource requirements;
- share knowledge and expertise regarding the MIS Standards, data collection and reporting;
- serve in an advisory capacity to the CIHI and the Centre on issues related to the strategic application of the MIS Standards for nursing services;
- make recommendations regarding the level of detail required for internal reporting and external reporting to the Provincial MIS Database at DHCS;
- identify and recommend key indicators for utilization by nursing management to assist in the interpretation and use of nursing financial and statistical data;
- strike time-limited, adhoc subcommittees to address specific issues or projects;
- promote data quality by identifying concerns such as gaps in data reporting to support information needs, addressing solutions for those gaps, analyzing indicator reports, etc.; and
- produce an annual report card detailing the progress of nursing workload implementation and statistical data collection and reporting throughout the province.

Information about the Terms of Reference and membership for all MIS committees can be obtained from the MIS Standards staff at the Centre, also see Section 16 Resources.

1.4 What is the Role of the Centre for Health Information?

The Centre for Health Information was established to provide quality information to health professionals, the public and health system decision makers. Through collaboration with the health system the Centre supports: the development of standards; maintains key provincial health databases; prepares and distributes health reports; and supports and conducts applied health research and evaluations. The Centre's mandate also includes the development of a confidential and secure Electronic Health Record for the Province.

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

2 KEY CONCEPTS

2.1 Code Structure and Matching Principle

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

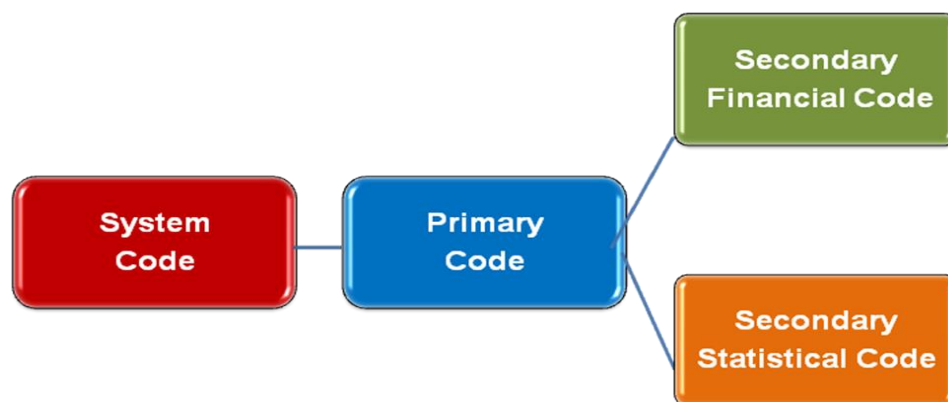


Figure 1

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

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

The **primary code** refers to a numerical name for a functional centre or accounting centre. Functional centres in the nursing inpatient/resident and ambulatory care functional centre framework section are speciality specific. See section 3 for further detail.

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

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

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

- The **functional centre direct cost reporting** level builds on the functional centre framework, linking revenues, expenses, statistics and indicators to provide a comprehensive picture of a functional centre's resource utilization, activity and productivity. Functional centres in the nursing inpatient/resident and ambulatory care functional centre framework section are speciality specific.
- The **functional centre full cost reporting** level builds upon the functional centre direct cost reporting level by including the indirect costs associated with each functional centre.
- The **service recipient reporting** level changes the focus from the functional centre to the service recipient and is often referred to as a "case costing." All financial and statistical data is linked to a specific person who receives services. This provides a comprehensive picture of how medical, nursing, therapeutic and support services are utilized in the treatment of various patient, client or groups. It can demonstrate the impact of practice patterns, programs, services and case mix groups on functional centres, service outcomes and the health service organization as a whole.

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

2.2 Broad Occupational Groups

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

Management and Operational Support Personnel (MOS)

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

- directors;
- managers;
- supervisors;

- administrative support staff;
- clerical support staff, and
- medical service aids, etc.

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

Unit-Producing Personnel (UPP)

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

Examples include:

- registered nurses;
- licensed practical nurses;
- laboratory technicians;
- accounts payable clerks;
- pharmacists;
- therapeutic professionals (e.g. recreation specialists, physiotherapists, psychologists, etc.); and
- therapeutic assistants (e.g. social work assistants, occupational therapy support workers, etc.).

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

Medical Personnel (MP)

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

Examples include:

- pathologists;
- psychiatrists;
- cardiologists;
- medical interns;
- medical students; and
- medical residents.

Note: The designation of a broad group category is based on function; job category and union category should not be considered. Job category is not appropriate because one job category in an institution can be management and operational support in one functional centre, yet the same job category can be unit-producing in another functional centre (e.g. clerical staff in most clinical departments are MOS but in admitting departments they are UPP). Union category does not apply as therapists performing the same job are union in some organizations and non-union in others.

2.3 Categorization of Earned Hours

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

$$\text{Earned Hours} = \text{Worked Hours} + \text{Benefit Hours} + \text{Purchased Service Hours}$$

Figure 2

Worked Hours

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

- regular worked hours, including paid coffee breaks;
- worked statutory holidays;
- relief staff hours, such as vacation relief and sick relief;
- overtime;
- call back hours paid and banked¹; and
- attendance at on-site committee meetings and in-service education² (non-service recipient workload).

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

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

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

Benefit Hours

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

- statutory holidays and vacation;
- sick and bereavement leave;
- workers compensation leave;

- attendance at facility orientation, formal education and training sessions (educational leave);
- union leave with pay; and
- any other paid leave of absence.

Purchased Service Hours

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

Notables

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

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

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

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

2.4 Categories of Service Recipient

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), their significant others and others as defined by the health service organization.

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

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

Inpatient

An individual who has been officially accepted by a hospital for the purpose of receiving one or more health services; who has been assigned a bed, bassinet or incubator; and whose 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. This category includes: individuals receiving acute, physical rehabilitation: mental health and addiction services in a hospital setting: and those admitted to emergency while awaiting a bed on a nursing inpatient unit.

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

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

Client Hospital

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

Client Community

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

Client Home Care

An individual who has been officially accepted by a Regional Health Authority to receive one or more home health or home support services in his/her place of residence (e.g. private residence, assisted living residence), at an alternative health delivery location (e.g. community health office) or at a location that meets the client's needs (e.g. school, public place); and whose person identifiable data is recorded in the registration or information system of the Regional Health Authority and to whom a unique identifier is

assigned to record and track services. Examples include individuals receiving home health services such as the treatment of acute conditions, maintenance of chronic health conditions, rehabilitation to improve functional abilities, etc. and/or home support services such as homemaking, home maintenance, personal care and respite services (provincially defined).

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

Referred-In

A hospital client or specimen: that has been referred for hospital services from another health service organization; and whose 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 an MRI exam; respiratory services such as hyperbaric chamber and specimens to be tested by the clinical laboratory.

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

Resident

An individual who has been officially accepted into a designated long-term care bed for the purpose of receiving one or more health services; 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. This category includes individuals admitted to residential facilities providing mental health or addiction services in a community setting (provincially defined).

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

Facility/Organization/Citizen Partnership

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

A citizen partnership that has been established to address an identified health issue and whose membership consists of citizens or citizen groups and other key stakeholders (e.g. health care providers, community agencies) that have knowledge of the concern and/or could influence change; and, whose encounter may be recorded within a uniquely-identifiable hard copy file or record rather than in the registration or information system of the organization. Examples include: a "farm safety coalition" that was formed

to discuss ways to prevent tractor accidents amongst teenagers; a "food security coalition" organized to advance the concept of a food charter to support local agriculture products; and a "playground partnership" established to discuss ways to build a safe new play area that will meet the needs of the children in a low-income community.

Service Recipients not Uniquely Identified

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

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

3 PRIMARY ACCOUNTS – FUNCTIONAL CENTRES

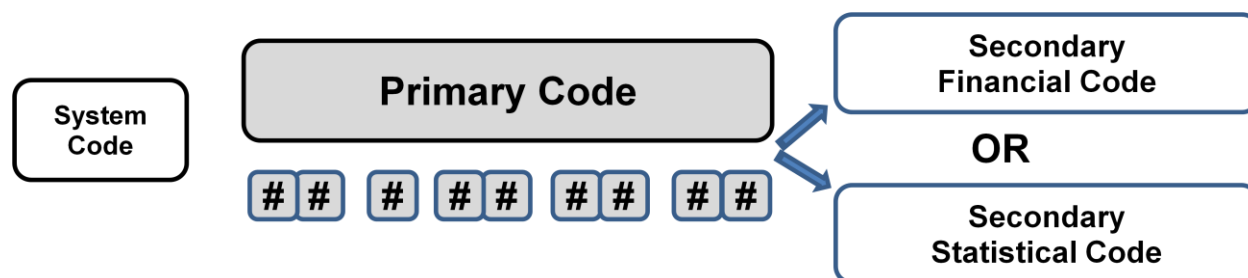


Figure 3

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

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

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



Figure 4

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

Account Type

7

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

Fund Type

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

Framework

71 2 The 3rd digit indicates where the service was provided. nursing inpatient/resident services are represented by 71 2 (see Figure 5).

Functional Centre (level 3)

71 2 ## The 4th & 5th digits indicate the type of service provided. For nursing services these are primarily speciality specific functional centres. This is referred to as level three reporting.

Functional Centre (level 4)

71 2 ## ♦♦ The 6th & 7th digits indicate further breakdown of services for some functional centres. These accounts are sub-categories of level three accounts. This is referred to as level four reporting.

Functional Centre (level 5)

71 2 ## ♦♦ ★★ The last two digits of the primary account code are used to provide additional detail and may be reserved for board use in some situations. This is referred to as level five reporting.

Function centres are used to aggregate and integrate information concerning specific activities. The account assigned to a functional centre provides the reader of the information with insight into the activity that has generated the data reported. For example, the primary account number **71 2 10 10 00** tells the reader that the data is related to the general medical nursing inpatient unit of a hospital (as illustrated in Figure 5).

Refer to primary account section of the MIS Standards for further information.

Example 1: A general medical nursing inpatient unit in a hospital is represented by primary account number **71 2 10 10 00** (as illustrated in Figure 5).

7	1	2	10	10	00
Account Type	Fund Type	Framework Section	FC Level 3	FC Level 4	FC Level 5
1 - 6 Balance Sheet Accounts 7 Functional Centres for Revenue, Expense and Statistics 8 Accounting Centre	1 Operating Fund 2 Inactive 3 Inactive 4 Board Designated 5 Capital 6 Special Purpose 7 Inactive 8 Endowment Revenue – Unrestricted 9 Endowment Revenue - Restricted	1 Admin & Support 2 Nursing Inpatient/ Resident 3 Ambulatory Care 4 Diagnostic & Therapeutic 5 Community & Social Services 6 Inactive 7 Research 8 Education 9 Undistributed	05 Nursing Admin 07 Nursing Medical Resources 10 Medical Nursing Unit 20 Surgical Nursing Unit 30 Combined Medical/ Surgical Nursing Unit 40 Intensive Care Nursing Unit 50 Obstetrics Nursing Unit 60 Operating Room 62 Combined O.R. and Recovery Room 65 Post Anaesthetic Recovery Room 70 Pediatric Nursing Unit 75 Mental Health & Addiction Services Nursing Unit 80 Physical Rehabilitation Nursing Unit 90 Palliative Nursing Unit	Accounts specific to previous level and provide further breakdown. e.g. 10 General Medical Unit 20 Endocrinology Nursing Unit 25 Clinical Investigation Nursing Unit 30 Communicable Diseases Nursing Unit 35 Dermatology Nursing Unit 40 Cardiology Nursing Unit 45 Family Practice Nursing Unit 50 Gastroenterology Nursing Unit 55 Metabolic Nursing Unit 60 Neurology Nursing Unit 65 Oncology Nursing Unit 70 Nephrology Nursing Unit 75 Rheumatology Nursing Unit 80 Respiriology Nursing Unit 85 Medical Assessment Nursing Unit 90 Hematology Nursing unit	Accounts specific to previous level and provide further breakdown.

Figure 5

Example 2: A medical speciality clinic is represented by primary account number **71 3 50 10 00** (as illustrated in Figure 6)

7	1	3	50	10	00
Account Type	Fund Type	Framework Section	FC Level 3	FC Level 4	FC Level 5
1 - 6 Balance Sheet Accounts 7 Functional Centres for Revenue, Expense and Statistics 8 Accounting Centre	1 Operating Fund 2 Inactive 3 Inactive 4 Board Designated 5 Capital 6 Special Purpose 7 Inactive 8 Endowment Revenue – Unrestricted 9 Endowment Revenue - Restricted	1 Admin & Support 2 Nursing Inpatient/Resident 3 Ambulatory Care 4 Diagnostic & Therapeutic 5 Community & Social Services 6 Inactive 7 Research 8 Education 9 Undistributed	05 Ambulatory Care Administration 07 Ambulatory Care Medical Resources 10 Emergency 14 Telephone Health Services 15 Combined Emergency/ Speciality Clinics 20 Poison and Drug Information Services 29 Home Infusion 30 Neuromotor Rehabilitation 40 Speciality Day/ Night Care 50 Speciality Clinics 52 External Clinics 55 Private Clinics 67 Day Surgery Pre- and Post-Operative 69 Day Surgery Combined OR, PARR and Pre- and Post-Operative Care	Accounts specific to previous level and provide further breakdown. e.g. 05 Speciality Clinic Administration 10 Medical Speciality Clinic 15 Surgical Speciality Clinic 17 Combined Medical/ Surgical Speciality Clinic 20 Cardiac Speciality Clinic 25 Family Practise Speciality Clinic 30 Geriatric Speciality Clinic 35 Gynaecology Speciality Clinic 40 Metabolic Speciality Clinic 43 Endocrine Speciality Clinic 45 Neurology Speciality Clinic 50 Obstetrics Speciality Clinic 55 Oncology Speciality Clinic 60 Opthamology Speciality Clinic 65 Orthopaedic Speciality Clinic 70 Paediatric Speciality Clinic 75 Plastic Speciality Clinic 80 Mental Health & Addiction Services Speciality Clinic 82 Mental Health Speciality Clinic 84 Addiction Services Speciality Clinic 85 Rehabilitation Speciality Clinic 95 Rheumatology Speciality Clinic 97 Clinics – Residual Speciality Clinic	Accounts specific to previous level and provide further breakdown.

Figure 6

Example 3: Nursing services in the community sector is represented by primary account number **71 5 92 21 00** (as illustrated in Figure 7).

7	1	5	92	21	00
Account Type	Fund Type	Framework Section	FC Level 3	FC Level 4	FC Level 5
1 - 6 Balance Sheet Accounts 7 Functional Centres for Revenue, Expense and Statistics 8 Accounting Centre	1 Operating Fund 2 Inactive 3 Inactive Board Designated 5 Capital 6 Special Purpose 7 Inactive 8 Endowment Revenue – Unrestricted 9 Endowment Revenue - Restricted	1 Admin & Support 2 Nursing Inpatient/Resident 3 Ambulatory Care 4 Diagnostic & Therapeutic 5 Community & Social Services 6 Inactive 7 Research 8 Education 9 Undistributed	91 Mental Health and Addictions Programs 92 Community Support Programs 93 Family Support Programs 94 Community Youth Corrections Programs 95 Health Promotion and Protection Programs	Accounts specific to previous level and provide further breakdown. e.g. 21 Nursing Services 22 Social Work Services 23 Physiotherapy Services 24 Occupational Therapy Services 25 Nutrition Services	Accounts specific to previous level and provide further breakdown.

Figure 7

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

Greater Levels of Detail

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

Research (71 7)

The research framework section is designed to capture the expenses and revenues (if any) of research services. This would include health care professionals and technicians whose mandate is research. As such, their hours and compensation are reported in this type of functional centre, not the nursing functional centre.

Compensation for unit-producing staff members that participate in research but are assigned to a nursing functional centre is reported in that functional centre. The workload related to data collection is reported as the non-service recipient activity,

research and the workload related to clinical interventions is reported as the service recipient activity (assessment, therapeutic intervention or consultation/collaboration), according to category of service recipient.

If a health care professional is involved to a significant degree (greater than 20%) in both research and service recipient activities, the compensation for this individual should be apportioned to both of the appropriate functional centres to reflect the actual expenses. The workload and portion of earned hours that resulted in service recipient activity (patient/resident/client care) should be accounted for in the nursing specific functional centre and the workload and hours associated with the research should be accounted for in the research functional centre.

Education (71 8)

The education framework section is designed to capture the expenses and revenue (if any) of dedicated staff educators. This would include staff members that provide employee orientation sessions, in-service classes or formal programs for students from educational organizations. As such, their hours and compensation are reported in this functional centre not the nursing functional centre.

Compensation for unit-producing staff members that provide staff education but are assigned to a nursing functional centre is reported in that functional centre. The workload related to education is recorded as the non-service recipient activity, teaching/in-service.

If a health care professional is involved to a significant degree (greater than 20%) in both education and service recipient activities, the compensation for this individual should be expensed to both of the appropriate functional centres to reflect the actual activity. The workload and portion of earned hours that resulted in service recipient activity should be accounted for in the nursing functional centre and the workload and hours associated with education should be accounted for in the education functional centre.

Unit-producing staff members that provide service recipient education should be assigned to the appropriate nursing functional centre. The workload related to educating service recipients is recorded as the service recipient activity, therapeutic intervention.

Marketed Services Ancillary Operations (71 9 20 **)

Marketed services are in the nature of business enterprises and do not include the direct provision of clinical services to registered patients/residents/clients or the provision of education or research services associated with the organization. Marketed service activities may be cost recovery or profit-generating activities. Any excess of cost over revenue/recovery becomes a part of the cost per weighted case for the organization. Patient/resident/client services are never classified as a marketed service even if a profit is generated. If the service is funded outside of Department of Health and Community Services funding, the activity is designated as an "other fund" clinical service functional centre.

When services are financed by third parties that are not funding bodies, this is recorded as revenue and linked to the appropriate functional centre providing the service (e.g. WHSCC, insurance, self pay).

When services are provided for the service recipients or staff of another organization and this service is material, this is classified as a marketed service by the providing organization and a purchased service for the organization receiving the service. In particular, this would apply when a contract for the service has been negotiated and the service is continuous. All compensation and supplies must be distributed to the marketed service functional centre. It is recognized that in some situations a marketed service may be at cost. No service activity, caseload status or workload statistics are reported by the organization selling the service.

Example of marketed services:

If an organization is routinely providing services every Friday to another organization, the compensation and associated hours for the staff providing this service would be charged to the marketed service functional centre and all recoveries for this service would be credited to this functional centre.

The use of a marketed service functional centre will preserve the integrity of performance indicators for the provision of care by the organization

4 SECONDARY FINANCIAL ACCOUNTS

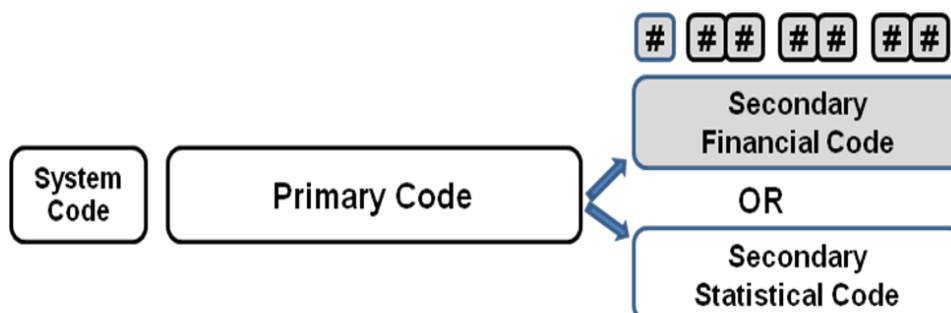


Figure 8

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

The secondary financial account code is made up of four distinct segments totalling seven coding positions. Secondary account codes are three, five or seven digits in length which are structured in a specific manner (see Figure 9).

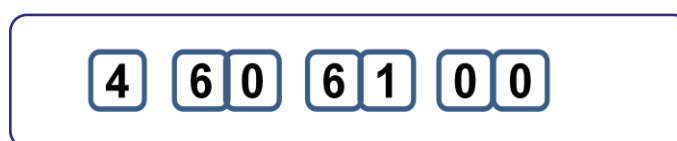


Figure 9

Broad Group

- 4 The first block is a single character which identifies the secondary financial broad group. Broad group 4 is supplies. (See Figure 10 for further broad groups)

Nature of Secondary Revenue or Expense

- 60 The second block is two characters long and defines the nature of the revenue or expense. In this example it is supplies – medical and surgical.

Capture of Further Detail of Secondary Revenue or Expense

- 61 The third block is used to capture further detail and is specific to previous code block. In this example it is supplies – medical and surgical – dressings.

Further breakdown of Secondary Revenue or Expense

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

Secondary financial account **4 60 61 00** is used to represent medical surgical supply expenses specifically dressings (as illustrated in Figure 10).

4	60	61	00
Broad Group	Nature of Revenue and Expense	Capture of further detail	Capture of further detail
1 Revenues 2 Inactive 3 Compensation 4 Supplies 5 Traceable Supplies and Other Expenses 6 Sundry 7 Equipment Expense 8 Contracted-Out Services 9 Buildings and Grounds Expense	Supplies for the following 50 Food 60 Medical Surgical 64 Pharmacy 70 Clinical Laboratory 75 Medical imaging 77 Electro-Diagnostic 80 Respiratory 82 Therapeutics	Accounts specific to previous level and provide further breakdown. 40 Instruments 50 Sutures & Staples 60 General Medical and Surgical Supplies 61 Dressings 62 Catheters 63 Needles 64 Syringes Gloves	Accounts specific to previous level and provide further breakdown.

Figure 10

The broad groups of secondary financial accounts are:

Revenue

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

Compensation

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

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

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

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

- worked salaries;
- benefit salaries; and
- purchased service salaries

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

Supplies

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

Traceable Supplies and Other Expenses

These are consumable supplies or other expenses that:

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

Sundry

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

Equipment Expenses

Equipment expenses are the operating expenses of equipment, including maintenance, repairs, depreciation, gain or loss on disposal, interest on equipment loans and rental or lease expenses incurred or any other operating expense incurred in the provision of equipment for use by functional centres in the facility. Depreciation costs for all equipment as well as preventative and repair costs for all clinical equipment are to be

expensed to functional centres. This will improve the comparability of costs across organizations. When comparing costs across organizations it is important to understand that there could be variations in the allocation methodology and reporting of these costs.

Contracted-Out Services

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

Buildings and Grounds Expense

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

5 SECONDARY STATISTICAL ACCOUNTS

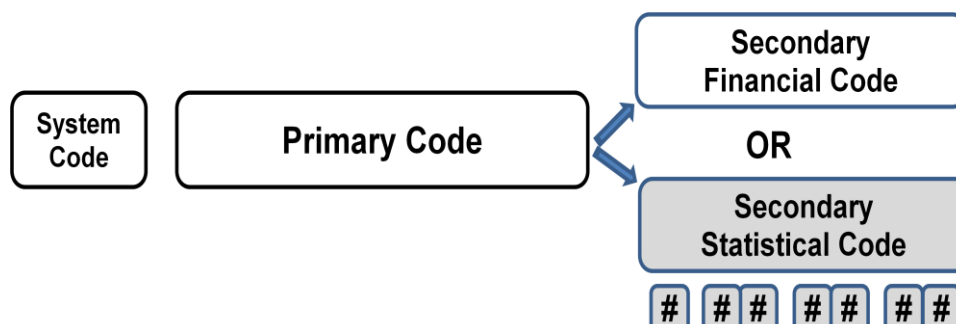


Figure 11

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

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

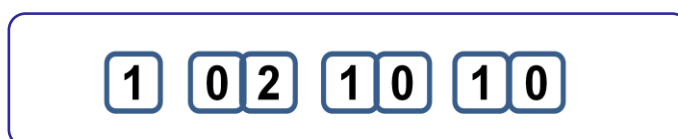


Figure 12

Secondary Statistical Accounts

- 1 The first block is a single character that identifies the secondary statistical broad group. In this example broad group 1, workload is used (see Figure 13 for further broad groups).

Nature of Statistic

- 02 The second block consists of two characters and identifies the statistic itself and is specific to the previous code block (example – workload units, inpatient admissions, etc.).

Capture of further detail of the Statistic

- 10 The third block is used to capture further detail and is related the nature of the statistic and is specific to the previous code block (example – category of service recipient).

Further breakdown of the Nature of Statistic

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

1	02	10	10
Broad Group	Nature of Statistic	Capture of Further Detail	Additional Breakdown
1 Workload 2 Staff Activity 3 Earned Hours 4 Service Activity and Caseload Status 7 Functional Centre Operation 8 Health Service Organization Operation & Contracted-out Services	Workload Units -Service Recipient Activities 02 Workload Units Service Recipient Activities 03 Drug Distribution 07 Diagnostic Therapeutic 08 Respiratory Services 13 Food Services 14 Health Records 90 Workload Units Non-Service Recipient Activities	Category of Service Recipient 10 Inpatient 20 Client Hospital 40 Resident 50 Facility/ Organization/ Citizen Partnership 60 Service Recipient not Uniquely Identified 80 Client Community 90 Client Home Care	Activity Category 10 Assessment 20 Therapeutic Intervention 30 Consultation/ Collaboration

Figure 13

The MIS Standards organizes all statistical data into six broad groups that identify the nature of the statistic. These broad groups are further explained on page 25.

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

Secondary statistical account **4 50 20 00** is used to represent the service activity called visits - face-to-face related to a client in a hospital setting. It is one of the required statistics for nursing in the **71 3** functional centre framework.

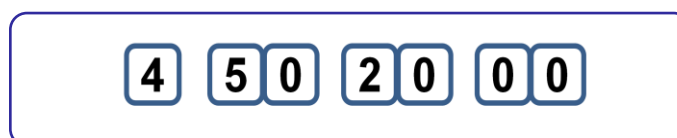


Figure 14

4	50	20	00
Broad Group	Nature of Statistic	Capture of Further Detail	Additional Breakdown
1 Workload 2 Staff Activity 3 Earned Hours 4 Service Activity & Caseload Status 7 Functional Centre Operation 8 Health Service Organization Operation and Contracted-Out Services	Service Activity and Caseload Status Statistics 01 Inpatient Admissions 03 Inpatient Days 04 Residence Days 37 Surgical Visits 38 Obstetrics 42 Mothers Delivered 43 Facility Live Births 44 Stillbirths 50 Visits - Face-to-Face 52 Resident Admissions 56 Visits - Non-Face-to-Face 83 Attendance Days-Face-to-Face 85 Attendance Days-Non-Face-to-Face 89 New Referrals 90 Active Carryovers	Category of Service Recipient 10 Inpatient 20 Client Hospital 40 Resident 50 Facility/ Organization/Citizen Partnership 60 Service Recipient not Uniquely Identified 80 Client Community 90 Client Home Care	Accounts specific to previous level and provide further breakdown.

Figure 15

All statistics must be reported in the same functional centre as the activity took place. This includes workload, earned hours, service activity and caseload status statistics.

The broad groups of secondary statistical accounts are:

Workload

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

Staff Activity

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

Earned Hours

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

Service Activity and Caseload Status

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

Functional Centre Operation

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

Health Service Organization Operation and Contracted-Out Services

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

6 WORKLOAD MEASUREMENT SYSTEM

What is a Workload Measurement System?

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

- department management tool to provide systematic quantification of workload to assist in staffing, planning, budgeting and performance monitoring;
- standardized method for recording workload that will yield uniform data for internal and external reporting, permitting historical trending and selective national and peer group comparisons.

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

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

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

Who Records Workload?

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

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

In today's environment, traditional management duties are often delegated to UPP staff, although this may not be greater than 20% for any individual staff member. These staff

members are designated as UPP with UPP worked hours and non-service recipient activity workload is used to record time for management work. Clinical leaders are not unit producers if their primary role is management. When comparing performance indicators across organizations, knowledge of the service delivery model is essential. Although these models may reduce overhead costs in traditional administrative functional centres and reduce reported management hours in nursing functional centres, there may be an offsetting increase in the cost per workload unit as UPP non-service recipient activity workload may increase.

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

6.1 Generic Workload Measurement and Reporting Framework

The workload measurement system classifies workload into two main categories: service recipient activities and non-service recipient activities. In this context the term “service recipient” should be considered synonymous with the terms “client,” “resident,” “inpatient,” etc., whichever term best suits the health organization’s philosophy of care and mandate.

GENERIC WORKLOAD MEASUREMENT AND REPORTING FRAMEWORK

Conceptual Model for Nursing

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Workload Categories	SERVICE RECIPIENT ACTIVITIES			NON-SERVICE RECIPIENT ACTIVITIES			
Activity Categories	Assessment	Therapeutic Intervention	Consultation/ Collaboration	Functional Centre Activities	Organizational /Professional Activities	Teaching/ In-Service	Research
Component Activities	Screening	Treatment Procedures	Case Conferences	Functional Centre Management	Board/ Committee Functions	Students	Project 1
	Physical Health Assessment	Self-care Facilitation	Professional Consultation	Employee Meetings	Public Relations	Professionals	Project 2
	Psycho-Social Assessment	Medication Management	Service Rounds	Caseload Management	Professional Activities	Academic	Travel
	Diagnostic Tests & Measures	Activity Enhancement	Team Meetings	Maintenance	Program Management	In-Service Education	
	Service Planning	Elimination Management	Clinical Documentation	Quality Management	Advocacy – Professional	Travel	
	Functional Needs Assessment	Communication Enhancement	Report	Travel for Functional Centre Activities	Travel		
	Cognitive Assessment	Coping Assistance & Support		Travel to and from the place where service recipient activities are provided*			
	Diagnostic Procedures	Childbearing Care					
	Clinical Documentation	Locate/Arrange Resources					
		Service Recipient Transportation					
		Counselling					
		Service Recipient Teaching					
		Advocacy – Service Recipient Specific					
		Discharge Planning					
		Monitoring/ Evaluation					
		Clinical Documentation					

Figure 16

**Note: Organizations that are involved in a lot of travel "to and from the place where the service recipient activities are provided" may want to report this travel separately.*

Service Recipient Activities

All work on behalf of service recipients (e.g. inpatients, residents, clients) is recorded, even if outside regular working hours (e.g. during overtime hours); but not unpaid worked hours. This is necessary in order to have a full understanding of service needs and potential costs. Service recipient workload activities are divided into three main components: (See below);

Assessment

Assessment refers to a series of activities/interventions conducted for the purposes of:

- evaluating the need for services;
- assessing an individual's physical, psycho-social, emotional and cognitive health status;
- identification of service recipient goals and expected outcomes;
- identification of a diagnosis and consequences of health conditions; and
- determining the extent of services required.

Assessment in this context is a formal, comprehensive process that may include observations, interviews/verbal reporting, the administration of specific assessment tools and standardized tests and measures.

This activity includes:

- preparation;
- collection of background information relevant to the service recipient's health and health management profile;
- analysis of the assessment findings;
- formulation of a working diagnosis;
- development of the care/therapeutic intervention plan;
- documentation of assessment findings;
- assessment for the purposes of re-evaluating and updating goals, expected outcomes; and
- documenting health status at the time of discharge.

Assessment excludes the ongoing monitoring activities and evaluation associated with a specific intervention.

Information may be obtained from a variety of sources such as the patient/client/resident, family, employer, teacher, written documentation from the health record and other sources.

Therapeutic Intervention

Therapeutic intervention refers to all activities carried out with or on behalf of a service recipient and/or significant other(s) that are aimed at health promotion and disease prevention, improving/maintaining health status or minimizing the impact of deterioration on function and the quality of life. Therapeutic interventions are often individually designed and supervised by the service provider for a specific person, organization or group.

Activities include:

- selection and prescription of activities according to the individual's physical and psychological impairments or disabilities, physical and psychological limitations, and requirements for equipment or assistive technology;
- preparation of treatment (individual or group);
- provision of specific techniques and procedures ;
- monitoring, revising and/or progressing activity or programs based on the service recipient's responses; and
- clinical documentation related to the intervention activities.

Therapeutic intervention includes individual, family, couples, group sessions, preparation for therapy, administering the therapy and clinical documentation.

Consultation/Collaboration

Consultation/collaboration refers to contact with service providers from within the organization, other organizations, the community or other agencies for discussion regarding specific service recipients to obtain, provide or exchange information relative to the person's care. The purpose of the consultation may be focused on the needs of a service recipient/family or on improving the effectiveness of a system/environment. Discussions may be formal or informal. It includes any regularly scheduled or attended meetings of professionals to coordinate team efforts for activities provided to service recipients.

Examples of consultation/collaboration activities:

- case conferences;
- service rounds;
- team meetings;
- completion of referrals;
- shift report; and
- clinical documentation related to these activities is also included.

Note: Clinical documentation includes those activities related to the service recipient records, including documentation of assessment findings, service planning, intervention/treatment plans, discharge plans, specific interventions provided and preparation or review of reports, written opinions, etc. Time spent on documentation should be recorded under the appropriate category of assessment, therapeutic intervention or consultation/collaboration, depending on the nature of the documentation.

Non-Service Recipient Activities

Non-service recipient activities are integral to the functional centre's operations but they do not involve the delivery of services to service recipients and/or their significant others. Non-service recipient workload is divided into four main components (see below) and has the following characteristics:

- it is not directly related to service recipient care but supports the activity of the department/program, the organization or the community;
- it includes activities related to education or research; and
- it is not normally census driven.

Functional Centre Activities

Functional centre activities are 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:** Includes but is not limited to:
 - housekeeping/clerical activities;
 - organizing files;
 - orienting staff;
 - recording and calculating workload and other statistical data;
 - preparing non-clinical documentation;
 - compiling data for reports and management purposes;
 - management activities related to discipline specific activity; and
 - development of discipline specific service programs;
- **Employee Meetings:** Includes, but is not limited to, formal and informal meetings of functional centre staff for the purpose of disseminating and receiving information pertaining to the operation of the functional centre and the organization;
- **Caseload Management:** Includes, but is not limited to, prioritization and assignment of service recipients within a caseload, receiving of referrals, etc.;
- **Maintenance:** Includes, but not limited to, activities such as maintaining a safe, tidy environment, maintenance of equipment and inventory control;
- **Quality Management:** Includes, but is not limited to, time spent attending quality management meetings, performing and documenting activities that improve the quality of services delivered in keeping with organizational policies and industry standards; and
- **Travel:** Includes, but is not limited to, internal and external travel associated with the activities listed above, as well as travel associated with the provision of services to service recipients within the organization or in their home. Also includes portering* of service recipients when performed by staff.

**Portering of service recipients is considered a non-service recipient activity, under activity category functional centre activities when it does not require the skills of your discipline.*

Organizational/Professional Activities

Organizational/professional activities are performed for the general functioning and direct benefit of the organization, community or profession. Such activities may include:

- **Board/Committee Functions:** Activities performed during worked hours relating to the preparation, attendance and follow-up of health service organization board/committee functions (e.g. Accreditation Committee meetings, Occupational Health and Safety Committee work);
- **Program Management:** Management activities related to multidisciplinary program(s) and program management activities related to the organization as a whole;
- **Public Relations:** Activities directly associated with the public relations function of the health service organization. Includes, but is not limited to, planning, meetings and participation in the event (e.g. media events, information programs, preparing articles for publication, etc.);
- **Professional Activities:** Services provided to the professional, scientific and local communities, agencies and service groups during worked hours (e.g. participation in professional association committees);
- **Advocacy-Professional:** Activities related to advocacy on behalf of your profession; and
- **Travel:** Internal and external travel associated with the above organizational/professional activities.

Teaching/In-Service

Teaching/in-service includes activities devoted to the dissemination of knowledge by functional centre staff, through lectures, presentations, observations or direct participation, to individuals other than service recipients. It includes, but is not limited to, clinical placements of students, information sessions for other staff, formal lectures to university/college students. This also includes in-service education received by staff. Some examples include:

- **Students:** Activities associated with the preparation, orientation, instruction, supervision and/or evaluation of students prior to, during or immediately following their clinical placements. Excluded are service recipient related activities performed during the course of teaching;
- **Professionals:** Activities associated with the preparation, orientation, presentation and/or instruction of other professional staff;
- **Academic:** Activities involved in the preparation and presentation of course/lecture material to students and evaluation of students as part of their academic curriculum;

- **In-Service Education:** Activities include, but are not limited to, receiving usually brief, in-house educational information sessions presented by other staff of the organization, orientation to new procedures or equipment, grand rounds and reading of professional journals, books and on-line articles; and
- **Travel:** Internal and external travel associated with the above teaching/in-service activities.

Note: Professional development, which is tracked by the payroll system as a benefit hour (usually as education leave), is excluded from this in-service education definition. Professional development activities are longer, more formal, discipline-specific and are usually greater than ½ day in duration. Professional association annual conferences, courses, symposiums, seminars and workshops are examples of typical professional development activities. It also includes related travel.

Research

Research is defined as 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. This category includes activities performed during worked hours such as reviewing previous research, writing research proposals, compiling and analyzing data, report writing and travel related to these activities.

It excludes the provision of service recipient activities, which is provided as a part of the research program. These are recorded as service recipient workload units under the appropriate category.

Note: Informal research is recorded as non-service recipient, teaching/in-service workload.

6.2 Recording Methodology

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



One Workload Unit = One Minute

Figure 17

The Generic Workload Measurement and Reporting Framework has been designed to support collection of workload using either an actual or standard time recording system.

Actual Time Recording

The actual time spent providing service recipient and non-service recipient activities are recorded retrospectively (after the fact). This can be accomplished by recording the time associated with an activity completed. To avoid potential errors, it is recommended staff

record the actual time of an activity, rounded to the nearest five minute mark (see Figure 18).

Minutes Spent in the Activity	Time Recorded
1-2	0
3-7	5
8-12	10
13-17	15
18-22	20
23-27	25
etc.	

Figure 18

Standard Time Recording

Standard times are facility specific time values and therefore reflect the style of practice at the facility and the environment in which the work is done. Each standard time should represent a desirable and achievable goal for the personnel and not merely describe the actual current levels or the ideal world. Standards are especially useful when there are high volumes of activities with minimal time variations such as procedures and routine clinic visits which consistently take a predictable time to complete.

The functional centre can establish standard time values for each activity. Staff can then select those activities performed and a time value will automatically be attached. Each standard time represents the functional centre's average time to perform the activity for the average service recipient, with the average care provider in normal circumstances. When the range of time for a specific activity is large specific times can be developed for unique service recipients or environments.

To calculate workload multiply the number of interventions times the value assigned to that intervention; then add the total time values for all interventions to determine total service recipient workload.

6.3 Validity and Reliability

The validity of a workload measurement system is defined as its ability to measure what it is supposed to measure. Workload measurement systems should be reviewed annually to ensure that:

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

The reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to be measuring consistently. Inter-rater reliability refers to the

extent to which data is reproducible by various staff members. It is important that different staff using the same measurement tool, measuring the same individual, at the same time, will derive a consistent result. A reliable system provides consistent data.

Factors that may influence the reliability of workload information include:

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

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

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

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

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

7 SERVICE ACTIVITY STATISTICS

Service activity statistics are captured in functional centres providing service recipient care. Together with caseload status statistics they identify the volume of activities that are provided to specific service recipients.

Service activity statistics supplement workload statistics in providing valuable information concerning the resources required for specific activities; they are intended to be used with matching workload statistics to measure functional centre productivity and the resource consumption of specific activities. These statistics are used with financial statistics to cost service recipient activity. The same categories of service recipients applied to workload statistics should be used with service activity and caseload statistics in order to identify the resource consumption of specific service recipient types (e.g. inpatient, resident, and client).

Required service activity statistics for nursing functional centres:

Applicable Functional Centre	Required Service Activity Statistics
Nursing Inpatient Services (excluding Operating and Recovery Rooms and Labour and Delivery, including Emergency if it has admitted patients)	4 03 Inpatient Day 4 03 10 Admit/Child 4 03 40 Newborn
Nursing Resident Services	4 04 Resident Day 4 04 40 Resident
Operating Room, Combined Operating and Post Anaesthetic Recovery Room, ¹ Cardiac Catheterization Laboratory, Endoscopy Specialty Day/Night Care, Day Surgery Combined Operating & Post Anaesthetic Recovery Room and Pre & Post Operative Care ¹	4 37 Surgical Visit - 4 37 10 Inpatient 4 37 22 Client Hospital - Surgical Day Care 4 37 24 Client Hospital - Other
Post Anaesthetic Recovery Room, Combined Operating and Post Anaesthetic Recovery Room, ¹ Day Surgery Combined Operating & post Anaesthetic Recovery Room and Pre & Post Operative Care ¹	4 39 Post Anaesthetic Recovery Room Visit 4 39 10 Inpatient 4 39 22 Client Hospital - Surgical Day Care 4 39 24 Client Hospital - Other

Applicable Functional Centre	Required Service Activity Statistics
Labour and Delivery	4 38 ** Obstetrical Visits (By Category of Service Recipient) 4 42 Mothers Delivered
Emergency (See Nursing Inpatient Services for admitted patient's statistics)	4 50 ** Visits - Face - to - Face (By Category of Service Recipient) 4 56 ** Visits - Non - Face - to - Face (By Category of Service Recipient)
Combined Emergency/Specialty Clinics	4 50 20 10 Visits - Face - to - Face Client Hospital - ER Visit 4 50 20 20 Visits - Face - to - Face Client Hospital - Clinic Visit 4 56 20 10 Visits - Non - Face - to - Face - Client Hospital - ER Visit 4 56 20 20 Visits - Non - Face - to - Face - Client Hospital - Clinic Visit
Ambulatory Care Services, Day Surgery Pre - & Post - Operative Care Day Surgery Combined Operating & Post Anaesthetic Recovery Room and Pre & Post Operative Care ¹	4 50 ** Visits - Face-to-Face (By Category of Service Recipient) 4 56 ** Visits - Non-Face-to-Face (By Category of Service Recipient)
Medical Imaging Nursing	4 50 ** Visits - Face - to - Face (By Category of Service Recipient) 4 56 ** Visits - Non - Face - to - Face (By Category of Service Recipient)
Applicable Functional Centre	Optional Service Activity Statistics
Nursing Inpatient Services Ambulatory Care Services	4 83 Attendance Days - Face-to-Face 4 85 Attendance Days - Non - Face - to - Face
Nursing Inpatient Services Ambulatory Care Services	4 92 Group Sessions

Figure 19

¹Note: Multiple statistics are required for combined functional centres. Service activity statistics should reflect all activity occurring in the functional centre.

Required Statistics - Definitions

- **Inpatient Days** are 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.
- **Mothers Delivered** is the number of women delivered of a single live birth or stillbirth, or multiple live births or stillbirths, or a combination of these, resulting from one pregnancy. Multiple births are counted as one delivery. Includes delivery by caesarean section.
- **Obstetric Visits** are the visits related to the care of women in the antepartum, intrapartum, and postpartum stages of pregnancy.
- **Post-Anaesthetic Recovery Room Visits** are the occasions during which a service recipient received post-anaesthetic recovery room services after a surgical intervention in the operating room or procedure room. If an individual receives post-anaesthetic services on more than one occasion during the same calendar day, each occasion will be recorded as another post-anaesthetic recovery room visit.

Note: This is a provincial definition.

- **Resident Days** are the number of days during which service is provided to a resident, between the census taking hours on successive days. The day of admission is counted as a resident day, but the day of separation is not. 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.
- **Surgical Visits** are the occasions during which a service recipient had a surgical intervention performed in an operating room or procedure room. Such cases are often, but not always, abstracted. If an individual returns to the operating room or procedure room for further surgery during the same calendar day, this intervention will be counted as another surgical visit. A surgical visit is recorded for surgical cases that are started and then fail or have to be abandoned, but are not recorded for cancelled surgical cases.

Note: This is a provincial definition.

- **Visits - Face-to-Face** are defined as the occasions during which service recipient activities are provided face-to-face or by videoconference on an individual or group basis, to a service recipient or significant other. These services are documented according to the organization's policy and are provided for longer than five minutes. If a person is seen more than once in a 24-hour period, more than one visit – face-to-face is recorded for that day. If a person is seen by two staff members at the same time, only one visit is recorded, both staff members record workload.

- **Visits - Non-Face-to-Face** are defined as the occasions when service recipient activities are provided to service recipients or significant others by means other than by face-face. These occasions take the place of a visit – face-to-face. Examples may include visits via telephone, email or other forms of electronic communication, either on an individual or a group basis. These services are documented according to the health service organization's policy and are provided for more than 5 minutes. A service activity statistic, a sub-category of service activity and caseload status, Broad Group 4. If a person is contacted more than once in a 24-hour period, more than one visit – non-face-to-face is recorded for that day.

Discussion of a service recipient with another professional over the phone is recorded as service recipient workload: consultation/collaboration but no activity statistic is recorded. When answering telephone requests from the general public for information about the service, the time is recorded as non-service recipient: organizational/professional activities, but no activity statistic is recorded.

In some cases such as suicide or crisis hot lines, caller names may not be provided. Workload and related statistics can be recorded under the service recipient category of 'service recipients not uniquely identified'. Departments providing services via telephone must implement appropriate documentation policies to safeguard the organization and the professional, and to provide information for future interactions with the person.

- **Visits - Face-to-Face - Client Hospital- ER Visit** are visits to a combined Emergency Room and Specialty Clinic service of a facility, usually unscheduled, at which the individual is triaged/assessed, may have diagnostic tests conducted, and treatment provided
- **Visits - Face-to-Face - Client Hospital- Clinic Visit** are visits to a combined emergency room and specialty clinic service of a facility to receive diagnostic, consultative, treatment and teaching services for one of the following reasons:
 - as a result of a referral from a primary care practitioner to the attending physician;
 - as a planned follow up from a previous visit, or
 - to be seen by a primary care practitioner such as a family practice clinic.

Clinic visits are usually scheduled and are provided to registered persons who attend for less than three hours on average.

- **Visits - Non-Face-to-Face - Client Hospital- ER Visit** are the occasions when service recipient activities are provided to clients by telephone in lieu of a visit - face-to-face to the combined emergency room and specialty clinic service of a facility, that are emergent in nature. These services are documented according to the health service organization's policy and are provided for longer than five minutes.
- **Visits - Non-Face-to-Face - Client Hospital- Clinic Visit** are the occasions when service recipient activities are provided to clients by telephone in lieu of a visit - face-to-face to the combined emergency room and specialty clinic service of a facility, that

are of a clinic nature. These services are documented according to the health service organization's policy and are provided for longer than five minutes.

Optional Statistics - Definitions

- **Attendance Days – Face-to-Face** refers to the number of calendar days during which primary service activities are provided to service recipients face-to-face or by videoconference on an individual or group basis. It is intended to represent a meaningful interaction that involves the provision of services and not simply a social interaction. Service is provided for longer than five minutes and is documented according to the health service organization policy.

Only one attendance day – face-to-face is recorded for each person, each day, for each functional centre even if several different staff interact with the person or if the person visits the department several times during the day. If several providers in one functional centre report contact with the same service recipient during a 24-hr period, the total workload associated with these contacts is recorded and linked to one attendance day – face-to-face for the functional centre.

An attendance day – face-to-face is intended to reflect a therapeutic interaction and a minimum of 5 minutes of service (not necessarily staff time) is required. If the person is involved in a group activity, the workload units of the nurse assigned for the individual patient may not be greater than 5 minutes, on a per person basis. However, the service received by the person is greater than 5 minutes; therefore an attendance day is counted.

An attendance day – face-to-face requires face-to-face contact with the service recipient or significant other, either in-person or by video conference. If the service recipient and significant other(s) are seen together, only one attendance day – face-to-face is recorded. The workload will reflect the additional time that may be required to communicate with more than one person. If the significant other is seen without the service recipient, an attendance day is recorded under the service recipient registration number/name.

- **Attendance Days - Non-Face-to-Face** refers to the calendar days during which service recipient activities are provided to service recipients or significant others by means other than by face-to-face. These calendar days take the place of an attendance – day face-to-face. Examples may include attendance days via telephone, email or other forms of electronic communication, either on an individual or group basis. These services are documented according to the health service organization's policy and are provided for more than 5 minutes.

Note: If services are provided face-to-face and non-face-to-face on the same calendar day, only an attendance day – face-to-face is recorded for that day, regardless of which occurred first.

- **Group Sessions** are defined as the formal service activities that are material in length, and are planned and delivered by one or more service providers to two or more service recipients, at the same time.

8 CASELOAD STATUS STATISTICS

Caseload status statistics are captured in functional centres providing service recipient care. Together with service activity statistics they identify the volume of activities that are provided to specific service recipients.

Caseload status statistics supplement workload statistics in providing valuable information concerning the resources required for specific activities; they are intended to be used with matching workload statistics to measure functional centre productivity and the resource consumption of specific activities. These statistics are used with financial statistics to cost service recipient activity. The same categories of service recipients applied to workload statistics should be used with caseload status statistics in order to identify the resource consumption of specific service recipient categories (e.g. inpatient, resident, client).

Required service activity statistics for nursing functional centres:

Applicable Functional Centre	Required Caseload Status Statistics
Nursing Inpatient Services (excluding Operating and Recovery Rooms and Labour and Delivery, including Emergency if it has admitted patients)	4 01 Inpatient Admissions 4 01 10 Adult/Child 4 01 20 Newborn 4 10 Inpatient Discharge 4 10 10 Adult/Child 4 10 40 Newborn 4 11 Inpatient Death 4 11 10 Adult/Child 4 11 40 Newborn 4 12 00 10 Inpatient Transfer - In 4 12 00 20 Inpatient Transfer - Out
Nursing Resident Services	45 2 Resident Admission 45 3 Resident Discharge 45 4 Resident Death 45 5 00 10 Resident Transfer - In 45 5 00 20 Resident Transfer - Out
Labour and Delivery	4 43 Facility Live Births 4 43 90 Caesarean Sections 4 43 97 All Other Types of Deliveries 4 44 Stillbirths
Applicable Functional Centre	Optional Caseload Status Statistics
Nursing Inpatient Services	4 08 Service Recipients Waiting for Correct Facility Placement 4 09 Service Recipient Days Waiting for Correct Facility Placement
Ambulatory Care Services	4 14 Deaths after Arrival 4 22 Deaths on Arrival (Emergency Rooms only)

Applicable Functional Centre	Optional Caseload Status Statistics
Nursing Inpatient Services Ambulatory Care Services	4 06 Individuals on Waiting List 4 89 ** New Referral By Category of Service Recipient 4 90 ** Active Carryover By Category of Service Recipient

Figure 20

Required Statistics - Definitions

- **Facility Live Births** is the infants who show evidence of life at birth as defined in the Vital Statistics Act of a province/territory.
- **Still Births** are the complete extractions or expulsions from the mother of a product of conception weighing 500 grams or more in which after such expulsion or extraction, there is no breathing, beating of the heart, pulsation of the umbilical cord, or unmistakable movement of voluntary muscle.
- **Inpatient Admissions** is 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 services organization.

- **Inpatient Death** is the official separation of inpatients deemed deceased after admission and before discharge from a health service organization. Inpatient deaths do not include stillbirths.
- **Inpatient Discharges** is the official departure of live inpatients from the health services organization. Discharge of a newborn is deemed to occur at the time of official release from the health service organization.
- **Inpatient Transfer** is the transfer of inpatients (when in the same category and type of service recipient) 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.
- **Resident Admission** is 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.
- **Resident Death** is the official separation of residents deemed deceased, after admission and before discharge, from a health service organization.

- **Resident Discharge** is the official discharge of live residents from a health service organization.
- **Resident Transfer** is the transfer of residents (when in the same category and type of service recipient) 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.

Optional Statistics - Definitions

- **New Referrals** are defined as the number of service recipients, registered with the functional centre, who received services in the current month, and who had not received services from the functional centre in a prior month. Only one new referral should be counted by the functional centre for the time interval during which the service recipient's file remains open and the individual receives services. For inpatients and residents, only one new referral should be counted per admission, even if the services were interrupted or temporarily discontinued during the admission. For clients, only one new referral should be counted for the time interval during which the client's file remains open and the client receives services. A file is closed when services are terminated and/or interventions are no longer necessary or effective, or a 12-month period has elapsed since the person has received services and no planned follow up is intended.

Note: If the status of a service recipient changes (i.e. changes from inpatient to client), a new referral is recorded by the functional centre for that individual as well as when work is done on behalf of a patient.

- **Active Carryovers** are defined as the number of registered service recipients who were new referrals in a prior month and who have received services from the functional centre during the current month.

Note: A new referral or active carryover is counted when there is face-to-face or non-face-to-face contact with the service recipient or significant other, as well as when work is completed on behalf of a service recipient.

- An **Active Service Recipient** is an individual who is either a new referral or an active carryover during the current month. The total number of active service recipients during a given period is equal to the sum of new referrals plus the number of active carryovers for that period, and reflects the total number of individuals who received services during the month (active caseload). An annual count cannot be derived by adding all new referrals and active carryovers for the year as active carryovers are not cumulative. To accurately count the number of active service recipients on an annual basis, functional centres must use a master registry or similar process to track this information.

Active Service Recipients = New Referrals + Active Carryovers (for a given month)

Figure 21

- **Deaths After arrival** is 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 (for use by ambulatory care functional centres).
- **Death on Arrival** are the death of service recipients prior to arrival at the health service organization where a pronouncement of death is made (for use by emergency function centres only).
- **Individuals on the waiting list** represent the number of individuals at a specific point in time who have been accepted to receive services, but who have not yet received services.
- **Service Recipient Days Waiting for Appropriate Facility Placement** are the calendar days service recipients have spent waiting to move to a health service organization that will better meet their needs.
- **Service Recipients Waiting for Appropriate Facility Placement** are the service recipients waiting to move to a health service organization that will better meet their needs.

9 SPECIAL RECORDING SITUATIONS

Clinics and Rounds:

The total period of time spent by the staff person is recorded even if not all service recipients discussed are on the therapist/provider's caseload. No service activity and caseload status statistics are recorded unless the service recipients participate in the rounds. If service recipient-specific recording is required, the total time is divided evenly amongst all service recipients under the care of the therapist/provider.

Note: Time spent discussing a person's care with family members is recorded as either assessment or therapeutic intervention depending on the nature of the conversation. This also applies to team meetings in which the service recipient and/or significant other is in attendance.

In clinical practice there are often several activities occurring at once. When selecting a workload category, select the activity that best describes the major focus of the activity. For example, if a one hour session with a client consists of 50 minutes of assessment and 10 minutes of therapeutic intervention, record all 60 minutes as assessment workload. If time with a client is more evenly divided between activities then the time can be divided as well (e.g. 30 minutes in each category).

Multiple Staff Members Providing Care

If two staff members from the same functional centre participate in service recipient activities at the same time, both report workload; however, only one set of service activity and caseload status statistics is recorded. For example, a therapist and support worker from the same functional centre are both involved in an assessment, only one attendance day and one new referral/active carryover statistic is recorded.

Group Activities

If one staff person provides care to a group of 10 service recipients for a one hour period of time, the workload time of the staff person is recorded as 60 minutes and 10 attendance days are recorded. If collecting workload on a service recipient-specific basis each individual receives 6 minutes of service recipient workload.

Students

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

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

Volunteers

Volunteers are not paid employees of the organization, are not considered unit-producers and do not collect and report workload or service activity/caseload status statistics.

Services Provided in Absence of Service Recipient

A person can be counted as part of your caseload in a given month if services are provided in the absence of the service recipient (e.g. arranging for equipment and documenting in a client's chart). Although, there is no attendance day the time spent can be recorded as service recipient workload and a new referral or active carryover will be collected when appropriate. This means that if there is no attendance day for the period (month) there can still be a caseload statistic.

Travel Time for Service Recipient Activities

Travel time to get to a client is often necessary in order to provide service recipient care; however, the amount of time that is consumed traveling to a client is not related to the needs of the person but rather to the characteristics of the organization, such as number of sites, physical layout, organizational structure, staff assignments and the geographic area to be covered. Therefore, it is concluded that it is not appropriate to record travel time as service recipient workload.

Workload tools can be used to track staff travel time specifically (either continuously or by sampling) in order to provide insight into the impact on workload and assist in better decision-making. This is particularly useful in Regional Health Authorities with multiple service sites.

Waiting Time

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

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

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

Educational Activities of Unit-producing Staff

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

Research Activities of Unit-producing Staff

All activities performed by functional centre unit-producing staff who are involved in formally designed, systematic approved clinical investigations directed to advancing knowledge in the field of health care using recognized methodologies and procedures, are recorded as non-service recipient workload. This includes reviewing and writing proposals, completing and analyzing data and writing reports. Unit-producing time in this activity should not be charged to the research framework unless the time spent by an individual in this activity is greater than 20% of that individual's time. In that case the individual is considered multi-functional and earned hours are divided between the two functional centres.

Reporting Options for Service Recipient Workload

Service recipient activity workload can be recorded on a service recipient-specific basis or therapist/provider-specific basis. Service recipient-specific recording requires the provider to record the amount of time spent in service recipient activities (assessment, therapeutic intervention or consultation/collaboration) for each person during the reporting period. This can be more time consuming than therapist/provider-specific recording depending on the type of recording methodology and technology involved and is required for case costing. Therapist/provider-specific recording requires the provider to record their total time for the period spent in service recipient activities. In this case, one cannot identify the amount of time devoted to a specific individual. Regardless of the level of recording detail chosen, the total workload statistics will be the same.

Additional Points Related to Non-Service Recipient Workload

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

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

insight into the activities that consume clinician's time. This may include:

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

Technology Requirements

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

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

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

10 STATISTICAL DATA COLLECTION IN COMMUNITY HEALTH

Provincial working groups for most program areas in the community sector have developed a document outlining the required statistical data that should be collected and reported in Client and Referral Management System (CRMS) for that program. Unfortunately, system enhancements are needed to realize this goal. The final report for the appropriate working group should be referred to for all information related to workload, service activity and caseload status statistics data collection and reporting. The following documents are available from:

- Final Report of the CRMS Documentation Standards and Statistical Reporting Working Group for Addictions Programs (2003) and Addendum (2004);
- Final Report of the CRMS Documentation Standards and Statistical Reporting Working Group for Mental Health Programs (2004);
- Final Report of the CRMS Documentation Standards and Statistical Reporting Working Group for Community Supports Programs (2006);
- Final Report of the CRMS Documentation Standards and Statistical Reporting Working Group for Health Promotion and Protection Programs (2007);
- Proposed Revisions to the Recommendations of the CRMS Working Group for Community Support Programs to Support Reporting for Personal Care Home Monitoring (2008); and
- Final Report of the CRMS Documentation Standards and Statistical Reporting Working Group for Community Youth Corrections Programs (2010).

As of September 2011, the CRMS Standards Sub-Committee is conducting a validation exercise of the WMS Recommendations in preparation for implementation in CRMS.

11 STATISTICAL DATA COLLECTION FOR NURSES WORKING IN MEDICAL IMAGING

Nurses who work in Medical Imaging (MI) areas are assigned to the MI nursing functional centre. Workload collection and reporting is covered in the Medical Imaging Reference Guide for MIS Standards, Workload Measurement and Statistical Data Collection. Please refer to that document for information on data collection and reporting.

12 STATISTICAL DATA COLLECTION RECORDING EXAMPLES

Abbreviations Used in the Examples

*SRA = Service Recipient Activity,
NSRA = Non-Service Recipient Activity
Min. = minutes*

Note: Service activity and caseload statistics are often collected automatically in the ambulatory care, inpatient/resident areas by registration/admission systems. Workload statistics are also often collected as a by-product of electronic documentation.

Inpatient Examples

Example 1

On the second day of a patient's admission you prepare him for a procedure. You spend 10 minutes collecting supplies, five minutes explaining the procedure to the inpatient and 30 minutes performing the procedure. Clean-up time takes 10 minutes and you spend five minutes documenting the procedure.

Workload	SRA - Therapeutic Intervention = 60 min.
Service Activity	Inpatient Days
Caseload	N/A
Category of Service Recipient	Inpatient

Example 2

A mother is discharged from hospital. Her baby remains in the neonatal intensive care unit. You make a 20 minute phone call updating the mother regarding the infant's progress.

Workload	SRA - Therapeutic Intervention = 20 min.
Service Activity	Inpatient Days
Caseload	N/A
Category of Service Recipient	Inpatient

Example 3

Mr. Jones has suffered a fracture and has just been admitted to your unit to undergo surgery. You are required to do an admission assessment. The initial assessment takes 30 minutes and you spend 10 minutes documenting your assessment. You then spend 10 minutes discussing your assessment with the surgical resident.

Workload	SRA - Assessment = 40 min. Consultation/Collaboration = 10 min.
Service Activity	Inpatient Days
Caseload	Inpatient Admission
Category of Service Recipient	Inpatient

Example 4

You work on a surgical unit and spend 60 minutes attending rounds. Six of the patients discussed are on your caseload.

Workload	SRA - Consultation/Collaboration = 60 min.
Service Activity	Inpatient Days
Caseload	N/A
Category of Service Recipient	Inpatient

Note: If you were recording on a patient-specific basis, you would record 10 minutes for each patient.

Client Hospital Examples

Example 5

You work in the emergency department. A client presents with a fractured arm. After an assessment by you (15 minutes) and the physician, the individual is sent for an x-ray. Later they return to emergency to have a cast applied. You assist the physician, and the procedure takes 30 minutes including preparation time, clean up time and documentation.

Workload	SRA – Assessment = 15 min. Therapeutic Intervention = 30 min.
Service Activity	Visit – Face-to-Face = 1
Caseload	N/A
Category of Service Recipient	Client - Hospital

Note: There is a planned break; therefore only one visit is collected.

Example 6

It has been a true Canadian winter. Rather than have a 79-year-old client venture out on the slippery streets, the staff of the diabetes education clinic located in the hospital discussed her glucometer readings, diet and exercise regimen for 60 minutes with her and her son over the telephone.

Workload	SRA – Therapeutic Intervention = 60 min.
Service Activity	Visit – Non-Face-to-Face = 1
Caseload	Active Carryover = 1
Category of Service Recipient	Client - Hospital

Example 7

You spend 30 minutes seeing a new client in the ophthalmology clinic at the hospital in the morning. You spend 15 minutes doing an assessment and 15 minutes doing a treatment. During the afternoon, the client calls you regarding some concerns about the morning's treatment and you spend an additional 10 minutes on the telephone giving reassurance.

Workload	SRA – Assessment = 15 min. Therapeutic Intervention = 25 min.
Service Activity	Visit – Face-to-Face = 1 Visit – Non-Face-to-Face = 1 Attendance Day – Face-to-Face (optional)
Caseload	New Referral = 1
Category of Service Recipient	Client - Hospital

Example 8

A patient came to your hospital, was prepped in surgical day care and had a procedure in the main OR. Because of complications an order was written to admit the patient to the intensive care unit.

	Surgical Day Care	Operating Room	Intensive Care Unit
Workload	SRA: <i>Total workload units provided and recorded under the appropriate Activity.</i>	SRA: <i>Total workload units provided and recorded under the appropriate Activity.</i>	SRA: <i>Total workload units provided and recorded under the appropriate Activity.</i>
Service Activity	Visit – Face-to-Face = 1	Surgical Visit = 1	Inpatient Admission
Caseload	N/A	N/A	Inpatient Day
Category of Service Recipient	Client - Hospital	Client – Hospital-Surgical Day Care	Inpatient

Long Term Care Examples

Example 9

A new resident, Mr. Smith, is being admitted to your facility. Mr. Smith's family is upset because their father is being admitted to a long-term care facility. You spend 90 minutes doing an assessment. You spend an additional 60 minutes offering support and reassurance to Mr. Smith's family.

Workload	SRA – Assessment = 90 min. Therapeutic Intervention = 60 min.
Service Activity	Resident Days
Caseload	Resident Admission
Category of Service Recipient	Resident

Example 10

You spend 40 minutes assisting four residents with their meal in the resident dining room.

Workload	SRA – Therapeutic Intervention = 40 min.
Service Activity	Resident Days
Caseload	N/A
Category of Service Recipient	Resident

Note: If you record workload on a resident-specific basis you would record 10 minutes for each resident.

Student Related Examples

Example 11

You and a senior level nursing student travel 15 minutes each way to a client's home for a follow-up visit two days after discharge from a surgical unit. While the student spends 15 minutes with the client performing a dressing change you consult with a nutritionist about your client's diet.

	Nursing Student	Nurse
Workload	SRA: Therapeutic Intervention = 15 min. NSRA: Functional Centre Activity - Travel = 30 min.	SRA: Consultation/Collaboration = 15 min. NSRA: Functional Centre Activity - Travel = 30 min.
Service Activity	Visit – Face-to-Face = 1 Attendance Day – Face-to-Face = 1 (optional) Usually collected by staff member.	
Caseload	New Referral = 1 Usually collected by staff member.	
Category of Service Recipient	Home Client Care	

Service Recipient not Uniquely Identified Examples

Example 12

Two nurses provide a 60 minute breast-feeding information session at their community health centre. This information session was advertised as a drop in session and 20 unregistered participants were in attendance.

Workload	SRA – Therapeutic Intervention = 60 min. (Recorded by each nurse)
Service Activity	Visits – Face-to-Face = 20 Group Session = 1 (optional)
Caseload	N/A
Category of Service Recipient	Service Recipient not Uniquely Identified

Note: Total 20 visits - face-to-face can be collected by 1 staff member or each staff member can collect 10 visits - face-to-face.

Example 13

You attend a health fair for which you spent 30 minutes preparing. You provided a variety of information (i.e. breast-feeding, safety, nutrition) to 25 people for 175 minutes. It took you 20 minutes to travel each way to the fair site.

Workload	SRA: Therapeutic Intervention = 205 min. (30 min. preparation and 175 min. presentation) NSRA: Functional Centre Activity – Travel = 40 min.
Service Activity	Visits – Face-to-Face = 25
Caseload	N/A
Category of Service Recipient	Service Recipient not Uniquely Identified

Example 14

You work in a poison control centre. It takes you 10 minutes to provide and record telephone advice to an individual on a drug reaction.

Workload	SRA: Therapeutic Intervention = 10 min.
Service Activity	Incoming Call for Poison and Drug Information = 1
Caseload	N/A
Category of Service Recipient	Service Recipient not Uniquely Identified

Non-Service Recipient Workload and Earned Hours Examples**Example 15**

You spend 20 minutes reading your e-mail and sending messages in response.

Workload	NSRA: Functional Centre Activities = 20 min.
-----------------	--

Example 16

You spend 15 minutes making appointments.

Workload	NSRA: Functional Centre Activities = 15 min.
-----------------	--

Example 17

You are a branch president for your union. You participate in a regular monthly meeting (120 minutes).

Workload	NSRA: Organization/Professional Activities = 120 min.
-----------------	---

Example 18

You prepare (20 minutes) and present (30 minutes) a case study for other professional staff members.

Workload	NSRA: Teaching/In-Service = 50 min.
-----------------	-------------------------------------

Example 19

Are the following recorded as worked or benefit hours?

	Worked Hours	Benefit Hours
Coffee Breaks	X	
Statutory Holidays		X
Overtime	X	
Sick Leave		X
Family Leave		X
Educational seminar offered on a workday, out of town		X
Two hour educational seminar offered by your corporation at your facility on a workday	X*	

*Recorded as NSRA: Teaching/In-Service (include any travel time in the WMS as well).

13 TURNING DATA INTO INFORMATION

13.1 Information Pathways

Financial information is maintained in the Meditech systems of the Regional Health Authorities as well as the Client Pay Module of the Client and Referral Management System (CRMS).

Statistical information in Newfoundland and Labrador is collected by frontline staff in a number of ways:

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

Regardless of the method of data collection, the information must be entered into the statistical general ledger of the regional Meditech system for regional use and external reporting.

Financial and statistical information is submitted electronically by the Regional Health Authorities to the Provincial MIS Database at the Department of Health and Community Services. The information is used for budget monitoring, service planning, resource allocation, etc.

The Department of Health and Community Services submits the data electronically to the Canadian MIS Database (CMDB) at CIHI. This information is used to determine Canada's health expenditures, meet international reporting requirements, calculate national economic indicators such as the gross domestic product and conduct health and health system evaluation and analyses. The diagram below illustrates the flow of financial and statistical information from the points of data collection within the Regional Health Authorities to the CMDB.

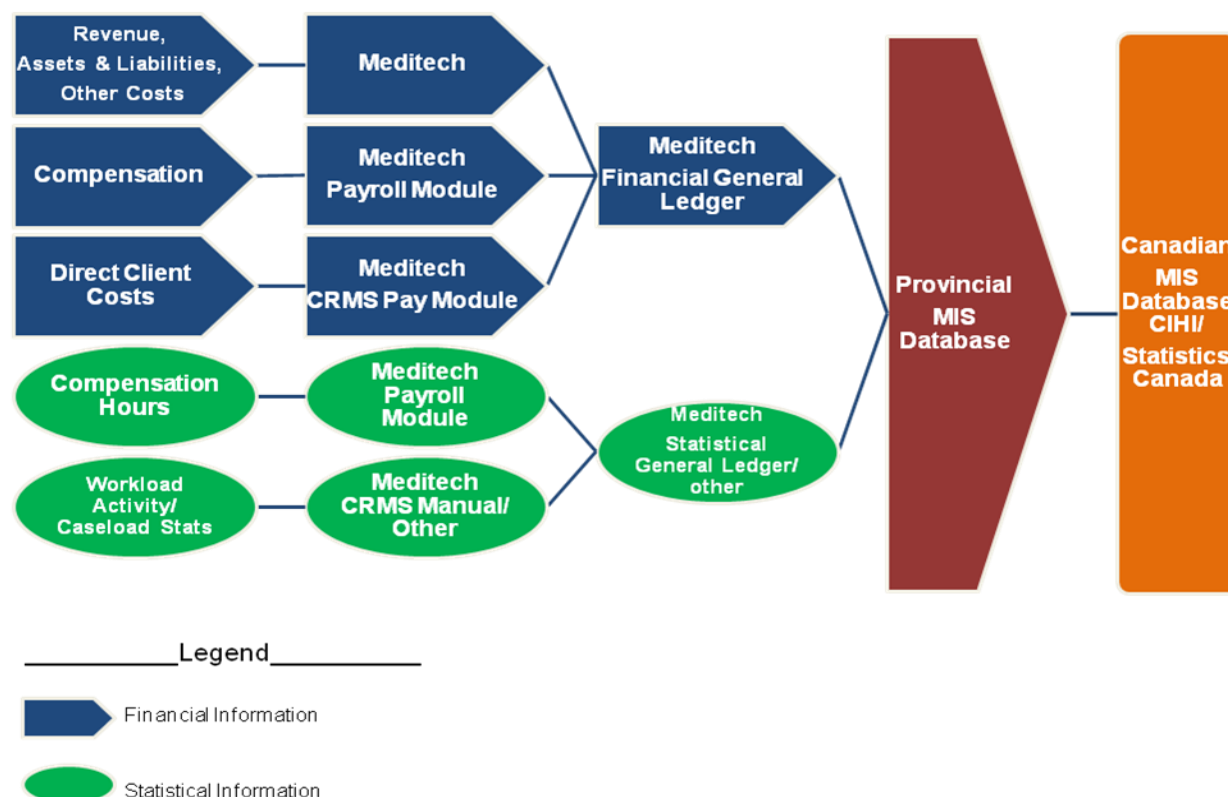


Figure 22

13.2 Performance Indicators

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

Indicators are ratios or percentages calculated from financial and/or other statistics that quantify a relationship between the data elements. Indicators measure performance and provide information that can be used to facilitate decisions or compare performance, such as, cost per workload unit (see Figure 23). They turn data into useful information.

The MIS Standards contain numerous indicators within the five categories of financial, staffing, productivity, utilization and workload. They can be used to analyze and interpret workload data, service activity and caseload status statistics and can assist staff and managers in analyzing and evaluating their services. Indicators are valuable decision-support tools for service planning, impact analysis and effective management. Implementation of a workload measurement system and reporting of workload and other statistical data is not the ultimate goal however; the primary value in workload measurement is the use of the information to make better management decisions. 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.

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

- cost per workload unit;
- workload units per activity;
- cost per workload unit by service recipient type; and
- worked productivity

Cost per Workload Unit

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

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

Figure 23

The costs in this formula can be defined as:

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

Workload can be defined as:

- **total** (service recipient and non-service recipient);
- **service recipient**; or
- **non-service recipient**.

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

Factors that may affect this indicator include:

- staff mix;
- workload measurement system in use;
- overtime;
- use of on-call staff; and
- sick time;

- education and orientation costs;
- benefit compensation packages; and
- 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 (i.e. impact analysis).

Cost per Workload Unit by Service Recipient Type

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

$$\text{Cost per Workload Unit by Service Recipient Type} = \frac{\text{Total Cost for Functional Centre}}{\text{Total Service Recipient Workload Units}} \times \text{Workload Units per Type}$$

Figure 24

Therapeutic functional centres need to consider the impact of patient/resident/client type changes on their department. This can be done by measuring the rate of referrals for specific types of service recipients, calculating the number of attendance days generated by the average referral for this type and identifying the average workload for this type of attendance day.

Workload Units per Activity

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

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

Figure 25

The workload units used could be:

- **total** (service recipient and non-service recipient);
- **service recipient; or**
- **non-service recipient.**

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

when considering changes in service recipient type (i.e. chronic rather than acute, or inpatient rather than client).

Factors that can affect this indicator include:

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

Productivity

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

The options for increasing productivity include:

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

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

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

Two of the most commonly calculated productivity indicators are:

- unit-producing personnel worked productivity (%); and
- unit-producing personnel total productivity (%).

UPP Worked Productivity (%)

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

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

Figure 26

UPP Total Productivity (%)

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

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

Figure 27

Performance Indicators Related to Resource Consumption

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

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

- unit-producing worked productivity (%);
- unit-producing total productivity (%);
- percentage of distribution of workload, by category of service recipient;
- percentage of distribution of workload, by workload categories;
- direct cost per workload unit;
- workload units per attendance day;
- workload units per new referral;
- service recipient workload units per UPP full-time equivalent; and
- number of full-time equivalents per occupational group/class.

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

- identification of staff hours required to meet workload requirements;
- construction of a staffing schedule that reduces resource requirements;
- equitable staffing assignments;

- appropriate skill mix;
- optimal education level for the type of services provided; and
- best process for care delivery.

How can Workload Information be used for Costing?

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

How can Organizations Apply Performance Indicators?

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

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

Budgeting/Impact Analysis

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

1. Predicted Volume X Service Recipient Workload per Activity = Predicted Service Recipient Workload
2. Predicted Service Recipient Workload X Cost per Service Recipient Workload Unit = Predicted Total Cost
3. Benefit Hours + Salaries + Benefit Contribution Dollars must then be added to develop the total budget.

Figure 28

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

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

Example: change of an acute inpatient service to a rehab service

To determine impact on staffing:

1. Number of Rehab Referrals \times Service Recipient Workload Units per New Referral = Expected Rehab Service Recipient Workload Units
2. $\frac{\text{Expected Rehab Service Recipient Workload}}{\text{Service Recipient Workload Units per FTE}}$ = # of FTEs required
3. To determine budget impact:

Service Recipient Workload	\times	Cost per Service Recipient Workload Unit	=	Total Cost Estimated
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4. Then a comparison needs to be made between the costs of acute vs. rehab services to determine the impact of the change on staffing needs.

Figure 29

Staffing/Scheduling

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

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

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

Workload information can also be used to determine staff assignments. Rather than determining staff assignments based on the number of service recipients, the assignments can be determined based on the workload generated by each service recipient. This can lead to more equitable assignments, higher staff morale and better care. This will lead to more accurate workload collection. Staff travel time also needs to be considered when assigning caseloads 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, that identifies types of specific activities, can also be useful for skill mix decisions. The tasks that are frequently selected can be reviewed to determine the level of expertise that is required to complete the tasks and this information can be helpful in determining the appropriate ratio of staffing. **Caution should be exercised when using this process as the level of expertise required to provide service recipient care is not only the sum of specific tasks.** It should also take into account the analysis required to determine appropriate strategies to respond to the data generated by these tasks. The workload resources required could be the same in two units but the level of expertise necessary to provide care may be different depending on the complexity of care.

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

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

Cost Minimization

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

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

Quality Initiatives

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

14 PERFORMANCE INDICATORS FOR NURSING

The Provincial Nursing MIS Committee has identified a number of indicators as being appropriate for use by its discipline. Additional indicators can be found in the MIS Standards.

14.1 Financial Indicators

Direct Cost per Service Recipient Workload Unit

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

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

Figure 30

Total Compensation Expense to Direct Operating Expense (%)

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

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

Figure 31

14.2 Staffing Indicators

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

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

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

Figure 32

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

Worked Hours to Earned Hours (%)

Worked hours to earned hours is the proportion of earned hours that is attributable to the worked hour's component. It is calculated by dividing the total worked hours by the total earned hours in a given period. This indicator may be calculated for a given functional centre, broad occupational group or occupational class.

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

Figure 33

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

Benefit Hours to Earned Hours (%)

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

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

Figure 34

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

14.3 Productivity Indicators

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

Worked Productivity (%)

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

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

Figure 35

Total Productivity (%)

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

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

Figure 36

14.4 Utilization Indicators

Service Recipient Workload Units per Inpatient/Resident Days

Service recipient workload units per inpatient/resident days is the average length of unit-producing personnel time devoted to one inpatient/resident day of stay. It is calculated by dividing inpatient/resident service recipient workload units by the inpatient/resident days for the functional centre in a given period.

$$\frac{\text{Inpatient Service Recipient Workload Units}}{\text{Inpatient Days for the Functional Centre}}$$

Figure 37

$$\frac{\text{Resident Service Recipient Workload Units}}{\text{Resident Days for the Functional Centre}}$$

Figure 38

Service Recipient Workload Units per Visit

Service recipient workload units per visit is the average length of unit-producing personnel time spent during a service recipient visit. It is calculated by dividing the service recipient workload units by the number of visits (face-to-face and telephone) to a functional centre in a given period. This indicator may be further broken down by category of service recipient. In those cases, the numerator and denominator should only include the workload units and the number of specified visits per category. This can also be calculated for the visits of a particular service or patient/resident/client population, provided the workload units can be identified for that service or population.

$$\frac{\text{Service Recipient Workload Units}}{\text{Total Visits (Face-to-Face and Non-Face-to-Face)}}$$

Figure 39

14.5 Workload Indicators

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

Distribution of service recipient workload units by category of service recipient is the percentage of unit-producing personnel time that is attributable to the various categories of service recipients. It is calculated by dividing the number of service recipient workload units for a specified category of service recipient (e.g. inpatient, resident, client hospital) by the total number of service recipient workload units for a given period and multiplying by 100.

$$\frac{\text{Service Recipient Workload Units (Specified by Category of Service Recipient)}}{\text{Service Recipient Workload Units for all Categories of Service Recipients}} \times 100$$

Figure 40

Distribution of Workload Units by Workload Category (%)

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

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

Figure 41

Interpreting Workload Indicators Results

Why would your workload measurement values change when the type(s) of service recipients and volume remain the same? Some possible reasons that could affect service recipient and non-service recipient values include:

- service recipient activities:
 - physician ordering practices may have changed;
 - advances in technology;
 - staff may be over or under recording due to their perceived uses of the system;
 - there may be new staff who do not understand how to use the system; and
 - clinical practices may have changed.
- non-service recipient activities:
 - new organizational expectations for unit-producing staff involvement in committees;
 - development of a new service/program;
 - introduction of a new facility computer system requiring in-service education;
 - change in student volumes;
 - availability of support staff;
 - participation in a new research project; and
 - new expectation for community or staff support.

Why would your workload data differ from that of another organization when the type(s) of service recipients and volume are the same? Possible reasons include:

- differences in physician ordering practices;
- staff may be doing work in one hospital that is performed by other health care providers in another setting;
- differences in technological support;
- differences in the physical environment (e.g. distance between service recipients, availability of elevators);
- differences in support systems such as proximity of equipment or supplies;
- differences in service recipient needs despite having the same diagnosis (e.g. socio-economic needs, distance to the facility);
- differences in provider mix (e.g. professional to assistant ratio and levels of support staff); and
- differences in clinical practice.

14.6 Sample Performance Indicator Report

Sample Performance Indicator Report					
	Fiscal Year				
	Fiscal Period				
	Facility A	Facility B	Facility C	Facility D	Facility E
	Functional Centre	Functional Centre	Functional Centre	Functional Centre	Functional Centre
Performance Indicators					
Financial					
Direct Cost per Service Recipient Workload Unit	\$1.69	\$1.42	\$1.17	\$1.32	\$1.60
Total Compensation to Total Expenditures	99.1%	97.5%	98.2%	96.7%	97.6%
Staffing					
UPP Worked to Earned Hours	52.6%	81.0%	80.5%	82.5%	83.7%
UPP Benefit to Earned Hours	17.4%	19.0%	19.5%	17.5%	16.3%
Productivity					
UPP Worked Productivity (%)	48.0%	54.3%	61.7%	61.1%	54.6%
Total UPP Productivity (%)	67.4%	78.3%	81.6%	88.5%	78.0%
Utilization					
SR Workload Units per Visit					
Inpatient	50.53	70.72	50.35	55.32	59.28
Client Hospital	54.26	73.95	45.00	55.85	93.38
Client Home Care	21.14	20.49	0.00	0.00	65.23
Client Community	30.20	0.00	41.55	0.00	33.00
Resident	45.31	48.64	18.66	60.62	0.00
Facility/Organization/Citizen Partnership	0.00	100.71	0.00	30.00	0.00
SR not Uniquely Identified	15.15	34.11	28.88	33.29	78.15
Workload					
% Distribution of Service Recipient Workload Units					
Inpatient	46.8%	44.1%	46.8%	38.6%	20.9%
Client Hospital	39.0%	44.0%	34.5%	42.4%	76.9%
Client Home Care	1.0%	2.3%	0.0%	0.0%	0.5%
Client Community	1.5%	0.0%	3.4%	0.0%	0.3%
Resident	11.3%	8.2%	15.2%	14.3%	0.0%
Facility/Organization/Citizen Partnership	0.0%	0.4%	0.0%	0.0%	0.0%
SR not Uniquely Identified	0.4%	1.0%	0.1%	4.7%	1.4%
% Distribution of Workload Units					
% Service Recipient Workload Units	71.3%	69.4%	75.6%	69.1%	70.0%
% Non-Service Recipient Workload Units	28.7%	30.6%	24.4%	30.9%	30.0%

Figure 42

Data does not represent any one facility or region.

15 IMPORTANT POINTS ABOUT DATA COLLECTION

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

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

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

Workload measurement collection expectations and targets should be incorporated into:

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

Maintenance of workload measurement systems requires:

- involvement of all staff;
- formal annual review by staff or whenever there are changes in service recipient types or care processes;
- on-going in-service education; and
- regular reliability testing.

Manager responsibilities:

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

Staff responsibilities:

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

16 RESOURCES

National Resource Materials

The Standards for Management Information Systems in Canadian Health Services Organizations (MIS Standards) are published on CD-Rom bi-annually by CIHI. A copy is sent to the Chief Financial Officers of each Regional Health Authority, the DHCS and the Centre upon release by CIHI. Further details regarding all topics enclosed in this reference guide are contained in the MIS Standards. If you require access to the national MIS Standards, please contact the appropriate regional financial department.

Provincial Resource Materials

Resource documents and information available from the MIS staff of the Centre include:

- Provincial Reporting Requirements User Guide
- discipline specific reference guides;
- information sheets relating to earned hours, workload, data quality and statistical data collection (FACT sheets);
- audit tools and answer guides;
- discipline specific indicator reports;
- annual statistical summary;
- annual Nursing Report Card; and
- current membership lists and Terms of Reference for MIS committee.

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

Education

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

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