

THE MINISTRIES OF HEALTH REPORTING SYSTEMS, MAINTAINED DATABASES AND UTILIZATION OF THE DATA

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INTRODUCTION

Essentially, three systems and related databases perform the same functions for the other care services that the hospital abstract does for the acute care system in hospitals. **CCIMS –Continuing Care Information Management Information System** covers the residential care, home care, home support and adult day care service sector. **CPIM(S) – Client/Patient Information System** covers mental health in the community (Mental Health Centers and Residential Care). **AIMS – Addictions Information Management System** covers drug and alcohol services.

There are differences in that the **DAD** covers an episode of care: being acute, the episode is usually well defined and short. In Mental Health and Home and Community Care, the episode is often long – sometimes life-long, so the notion of sending in an abstract at the end of the episode is not useful in most circumstances (just as the **DAD** was not very much use for Extended Care – by the time you received the record after discharge, the case might be years old). The **CPIM** and **CCIMS** reporting systems are concerned more with reporting, on a period or monthly basis, admissions to the system and services provided to clients in that period.

Health authorities are required to provide detailed data, on a wide range of their activities, to the Ministries of Health. **CCIMS** and **CPIM** are operational systems and initially, much of this data was used to assist the ministries in managing the delivery of these services. Latterly this information is being increasingly used to monitor the activities of the health authorities reporting compliance of the independent service providers, and for planning, evaluation, and research purposes.

Most of the existing systems for collecting the data predate regionalization. Some were designed to collect detailed management information, some to assist in funding decisions, and some to allow health system analysis. While some of the systems have been altered to adapt to changing circumstances, some of them continue to provide information more suitable to direct management of service delivery rather than to monitoring of a distributed and delegated service system. **HAMIS** (and **HARP**) was developed post regionalization, specifically to collect financial and summary statistical data from the new health authorities.

Work is continuing to update systems to provide more appropriate information for the current and evolving management structure. However, limited resources and continuing restructuring of health authority governance means this work will not happen all at once, but will, rather, be spread out over a period of years.

REPORTING REQUIREMENTS

Given that the systems described below are in a state of flux, the major reporting requirements are as follows:

(1) Organization Based Reporting

Health Authority Management Information System (HAMIS)

Health authorities are required to transmit financial and statistical data on the basis of a 13 period reporting cycle, established annually by the ministries, in consultation with the health authorities.

The **HAMIS** collects health authority financial and statistical general ledger information, based on the national MIS Guidelines (Chart of Accounts) issued by the Canadian Institute of Health Information. General ledger data is collected from provincial health service providers by the health authorities and transmitted to the Ministry of Health as data files generated by the **Health Authority Reporting Program (HARP)**.

HAMIS produces various financial and statistical detail reports on the operations of health authorities and Health Service Providers. **HAMIS** reports include year to date information dependant on the last information submitted by each health authority. These reports are also available electronically to health authorities, through the internet.

(2) Person Based Reporting

Discharge Abstract Database (DAD)

Hospitals are required to fill out a discharge abstract report for each inpatient and day care surgery patient after discharge from the hospital and these are transmitted to CIHI throughout the year. Submission of information is required within sixty days of the end of the discharge period. There is no reporting of compliance to this deadline except at the fiscal year-end. In practice, it generally takes six months, after the fiscal year end, for data to be available.

The information captured includes the following information:

- The institution and date of reporting
- Patient/Client demographics
- Admission
- Separation
- Patient Service
- Service Transfer
- Provider
- Diagnoses
- Interventions
- Special Care, Mental Health Indicators

The information is provided back to the province by way of monthly computer tape.

Continuing Care Management Information System (CCIMS)

Health authorities are required to input continuing care information into the **CCIMS** on a regular basis.

The **CCIMS** is an integral component of the day-to-day operations of Home and Community Care Services in some regions of the province. In other areas, **CCIMS** is not used for operational purposes by the health authorities but data is entered into the system to fulfill reporting requirements. Work is currently underway to develop a Minimum Reporting Requirement for HCC data to redefine the data requirements of the ministries. When implemented health authorities will be able to submit data directly to the Ministry through a data transfer mechanism, instead of entering information into **CCIMS**.

The major functions of **CCIMS** are to:

- Maintain a registry of clients receiving care from one or more continuing care services including demographics, assessment information, and service authorizations;
- Maintain a file of agencies, companies, and health units who provide services to continuing care clients;
- To record the actual amount of services provided to the client, and the period of time in which the client received the services (starting and ending dates for the service episode);
- Provide reports to support planning, monitoring, funding and management activities by both health authorities and Ministry of Health; and,
- Calculate and generate payments for provider home support claims.
- Calculate the rate of client contributions.

The major business functions supported by the **CCIMS** are shown below:

- Ministry of Health business functions:
 - Rate calculations
 - Income status
 - Person specific data which can be used for analysis purposes, including summaries of utilization patterns, client profiles, and utilization of services cross-programs through linkage of records to other databases
 - Provision of summarized data for national reporting requirements

- Regional/Local business functions:
 - Home support payment calculations
 - LTC and direct care bring forward dates for client reassessments and annual reviews
 - Service authorization
 - Client caseload auditing
 - Facility activity reports
 - Service provider information
 - Client specific information
 - Client profiles by providers
 - Reports to service managers

A subset of the data in **CCIMS** is available through the Home and Community Care Data Warehouse, for monitoring, policy, evaluation and planning purposes.

Work is underway on a **CCIMS** retirement strategy expected to be complete by 2005/06.

Client/Patient Information Management System (CPIM)

Health authorities are required to input community mental health centre information into the **CPIM** on a regular basis. Not all authorities comply with this requirement as some have developed their own management systems. The first version of Minimum Reporting Requirements (MRR) for mental health data has been developed, which has redefined the data requirements of the ministries. The MRR was implemented in 2003/2004, and some regions of the province have begun to submit data files to the Ministry instead of entering data into **CPIM**.

Meanwhile, **CPIM** is the primary application used by mental health providers, Adult Mental Health Services (AMHS) and other authorized users (e.g., Ministry for Children and Families, acute care hospitals) to provide care information the community mental health services provided. **CPIM** is used by mental health service providers for clinical purposes and by Ministry staff, health authorities, and program managers for planning and resource allocation.

The **CPIM** is an on-line database of clients who receive mental health services at community mental health centres throughout the province. The system tracks the movement of clients over time and locations and provides a record of the current and historical services provided to clients.

Information contained in the system includes:

- Client personal information (e.g. PHN, gender, client name, alias's, address information through **CPIM**-Client Registry interface)
- Care episode information (e.g. location, type of location, admission/termination dates, case manager/therapist)
- Pharmacare plan G eligibility (No-charge Psychiatric Medication program)
- Caution alert warning that the patient is a danger to self or others
- Demographic data (e.g. employment status, marital status, living situation, referral source)
- Diagnostic data (DSM-IV classification, complicating factors such as alcohol or drug abuse)
- Service data (including date of service, type of service, case manager/therapist type)

Although **CPIM** is designed to track an individual's interaction with mental health services, it can also produce a number of reports on an organizational or geographic basis. A subset of the data in **CPIM** is available through the Mental Health Data Warehouse, for monitoring, policy, evaluation and planning purposes.

Work is underway on developing a **CPIM** retirement strategy.

Health Sector Compensation Information System (HSCIS)

HSCIS provides health sector compensation information to the Health Employers Association of BC (HEABC) and the Ministries. **HSCIS** is required to meet Ministry program and funding needs, analytical needs for statistics and trends and compensation and negotiation information for collective agreements. Both the Ministry and the HEABC require detailed compensation information from health sector employers.

Public Health Information System (PHIS)

PHIS is an automated, integrated, client health record and reporting system, which supports public health provider interventions, tracking, follow-up, case management, reporting and referral management. **PHIS** includes both an immunization tracking, and a communicable disease case management and surveillance component. The system is designed to be used province wide allowing for access to one client record by multiple public health providers and programs anywhere in the province, and for access to and sharing of communicable disease surveillance and immunization information. Currently, the system is in use in only part of the province. The system is administered by the BC Centre for Disease Control.

UTILIZATION OF DATA

The data from the various collection systems is utilized in a number of ways:

(A) Data Analysis Tools:

PURRFECT

Population Utilization Rates and Referrals For Easy Comparative Tables (PURRFECT) enables users to analyze both how populations use health care services and how services are provided regionally. The applications that make up **PURRFECT** can each perform different types of searches on the available data, including utilization data from BC hospitals, Continuing Care, the Medical Services Plan, Community Mental Health Centres, and Vital Statistics.

The summary information in the **PURRFECT** database simply expresses the use made of Acute Care, MSP, Mental Health, and Continuing Care services. A particular feature is the ability to produce age-standardized rates, for comparisons of utilization rates across the province. As with the base databases from which the summary data is taken, **PURRFECT** does not contain direct information on the quality of care or its costs.

There are nine applications in **PURRFECT**:

- Local/Regional Referral Analysis (ADTSPEC)
- Age-Standardized Utilization Rates (ASUR)
- Continuing Care Age-Standardized Utilization Rates (CCASUR)
- Hospital Comparative Reports (HOSPCOMP)
- MSP Referrals (MSPREF)
- Population Query System (PEOPLE)
- Summary Referral Patterns (REFERRAL)
- Utilization Rates by Health Program and Year (URHPY)
- Vital Statistics Summary by LHA Report (VSTAT)

All of the data in **PURRFECT** is for the latest available five year period and does not contain information for the current year to date.

Health Data Warehouse (HDW)

The **Health Data Warehouse (HDW)** provides online access to community-level population health indicators and data sets. This information is intended to support local and provincial health authorities in monitoring progress in improving and maintaining the health of the population and the functioning of the health systems for which they are responsible. They help answer questions about the overall health of the population, the socioeconomic and environmental factors that influence health, and the quality of health services received. **HDW** is the repository for data from outside sources which is available for the HA/HSDA/LHA boundaries used for analysis of health care (for example, Census data).

The *HDW* contains the health indicators grouped under the following headings:

- Health Status
- Living and working conditions
- Individual capacities, skills and choices
- Physical environment
- Health services
- Aboriginal health
- Disease and injury prevention
- Community and health system characteristics

(B) Standard Reports:

HAMIR

The *Health Authority Management Indicators Report (HAMIR)* is a quarterly report that provides a management perspective of the organizational performance of the health authorities and the Provincial Health Services Authority (PHSA) using selected financial and statistical indicators. The report allows the health authorities and the Ministries of Health Services/Planning to compare the performance of health authorities with each other and the provincial average.

The September 2002 issue of *HAMIR* includes data for the following indicators for the health authorities, PHSA, denominational health facilities, and former RHBs:

Financial

- Current Ratio
- Surplus/Deficit as a Percentage of Total Expenses
- Administration Expense as a Percentage of Total Expenses
- Administration and Support Expenses as a Percentage of Total Expenses
- Information Systems Expense as a Percentage of Total Expenses
- Compensation Expense as a Percentage of Total Expenses

Productivity

- Worked Hours as a Percentage of Total Earned Hours
- Worked and Purchased Hours as a Percentage of Total Earned Hours
- Patient Care Unit-Producing Personnel Worked and Purchased Hours as a Percentage of Total Worked and Purchased Hours (excluding Medical Compensation Hours)

Utilization

- Admissions from Emergency as a Percentage of Inpatient Admissions
- Acute Inpatient Days as a Percentage Change from Previous Fiscal Year
- Alternate Level of Care Days as a Percentage of Total Acute Inpatient Days
- Total Surgical Cases as a Percentage Change from Previous Fiscal Year
- Surgical Day Care Cases as a Percentage of Total Surgical Cases
- Average Length of Stay (Acute/Rehabilitation)

Operational Efficiency

- Cost per Weighted Case.

Summary Of Reported Health Authority Activities

This report is a one-page high level summary of activities for each of the six health authorities and the province as a whole, for the period to date. It shows the total revenue, total expenditure and operating deficit for the period to date, as well as a limited number of workload and other statistics for the Acute Care, Mental Health and Home and Community Care Sectors.

Supplementary Report

This financial report is in three parts. Parts 1 and 2 are each one-page reports showing details of Revenue and Expenditure and compares revenue and expenditure in the following ways:

Current year to prior year	Year to date and full year (using projected results for the current year)
Current year actual to budget	Year to date and full year (using projected results for the current year)

In addition, variances are calculated in actual dollars and percentage.

Part three of the report compares detailed year to date balance sheets for the current and prior years with those from the audited financial statements for the prior year and a current year-end projected balance sheet.

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