Overview of Administrative Health Datasets

Purpose

This document describes administrative datasets at Alberta Health available for research, planning, policy development, and quality improvement projects. Disclosure of data is subject to the *Health Information Act* and appropriate approvals (see *Data Disclosure Guidelines* for more information). To request data, use the *Request Application Form*.

Dataset	From	Notes
1. **Alberta Blue Cross (ABC) Claims**	Apr 1, 1994	Health benefit data primarily on seniors and their dependents
2. **Alberta Continuing Care Information System (ACCIS)**	Jan 1, 2010	Includes Long-Term Care & Community Care* (From Apr 1, 2011) * This dataset is currently considered incomplete
3. **Ambulatory Care**	Apr 1, 1997	Includes Emergency Department visits and Day Procedures
4. **Inpatient (DAD)**	Apr 1, 1993	Discharge Abstract Database/Hospital Morbidity
5. **Pharmaceutical Information Network (PIN) Dispenses**	Apr 1, 2008	Pharmacy dispenses (no financial information)
6. **Population Registry**	Apr 1, 1993	Includes basic demographic and geographic information
7. **Practitioner Claims**	Jan 1, 1994	Fee-for-Service and Shadow-billed claims
8. **Vital Statistics – Births**	Jan 1, 2005	*With authorization from Service Alberta*
9. **Vital Statistics – Deaths**	Jan 1, 1999	*With authorization from Service Alberta*
10. **Longitudinal Demographic Profile (LDP)**	Apr 1, 2000	Demographics, service utilization, chronic diseases, CRGs, costs

All datasets can be linked using a recipient's Unique Lifetime Identifier (ULI). When releasing data, this identifier is scrambled using an algorithm that preserves the ability to link across datasets.

Note: Each of these datasets is complex and requires a high level of understanding to ensure proper analysis. For example, Ambulatory Care and Inpatient require knowledge of Canadian coding classifications and Canadian Institute of Health Information (CIHI) grouping methodologies; Practitioner Claims requires knowledge of the Schedule of Medical Benefits (SOMB) along with billing practices and changes; the Alberta Continuing Care Information System requires knowledge of interRAI assessment tools.

Dataset Descriptions

1. Alberta Blue Cross Pharmacy Claims: Covers only seniors, their dependents, and persons on assistance.

ABC provides information on the following types of claims records covered under supplementary health benefit plans and paid by Alberta Blue Cross on behalf of Alberta Health:

- Prescription drug dispensing under supplementary health benefit plans (97 per cent of ABC records).

- Private or semi-private hospital accommodation.

- Claims for extended health services, such as ambulance services, clinical psychological services, home nursing care, prosthetic and orthotic benefits.

Elements include:

- Claim type/subtype, date of claimed service, date of payment.

- Information about recipients, such as benefit group (non-group, seniors, etc.).

- Claim details, including Drug Identification Number (DIN), quantity, and financial amounts (amount claimed, amount allowed, copay, coordination of benefit (COB), and net payment).

- Prescriber and pharmacy identifiers.

Updated monthly and annually. ABC claims may be submitted up to 365 days after the date of service. A six-month lag is typically used which captures close to 100 per cent of all claims.

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2. Alberta Continuing Care Information System (ACCIS) consists of two standardized datasets that capture both community client and facility resident information.

Continuing care services provide individuals, with different care needs, a broad range of health and personal care, accommodation and hospitality services in three main settings:

i. Home living is for people who live in their own home, apartment, condominium or in another independent living option;

ii. Supportive living (this includes both designated and non-designated living options) combines accommodation services with other supports and care;

iii. Facility living includes long-term care facilities like nursing homes and auxiliary hospitals.

a) Community Care (CC): Covers Home Care (HC) clients living in the community (home and supportive living) who were active as of April 1, 2011. On occasion, an individual can be living in long-term care and receive home care for specialized services.

* Note**:** dataset is considered *incomplete* with significant volumes of historical data yet to be submitted.

Elements include:

- Demographics, admission and discharge information for all HC clients.

- Annual RAI-HC assessments for only those clients who are considered long-term supportive or maintenance client groups.

- Outcome scales, quality indicators and resource utilization groupers as outputs from the interRAI assessment instruments.

b) Long Term Care (LTC): Covers residents who were living in a LTC facility as of January 1, 2010.

Elements include:

- Demographics, admission and discharge information and medical or social leaves.

- RAI-MDS 2.0 assessments which are completed quarterly (or more frequently if significant change in status) on all LTC residents.

- Outcome scales, quality indicators and resource utilization groupers as outputs from the interRAI assessment instruments.

Both CC and LTC:

- Admissions may go back a number of years before 2010/2011.

- ACCIS accepts data submissions at any time but a typical delay is 4-8 weeks.

- Historical data can be inserted into an episode at any time as there are no locked periods.

- Some data elements are considered updatable, meaning it reflects a change of information for a client/resident.

- Almost all information can be corrected or deleted by the frontline once submitted to ACCIS.

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3. Ambulatory Care: Includes emergency department and day procedures.

Ambulatory care is facility-based outpatient medical and/or surgical care that is provided in publically-funded clinic, day surgery, and emergency department settings. Ambulatory cancer care data and community mental health data are not currently available in this dataset.

From April 1, 1997 to March 31, 2010, ambulatory care data was captured using Alberta's provincial reporting system and grouping methodology (Ambulatory Care Classification System - ACCS). Since April 1, 2010 Alberta submits ambulatory care data to CIHI's National Ambulatory Care Reporting System (NACRS) and utilizes CIHI's Comprehensive Ambulatory Care Classification System (CACS) grouping methodology.

Elements include:

- Demographics, admission/discharge/transfer information, provider information, coded diagnoses and intervention information.
- MIS Functional Centre Accounts and ACCS/CACS derived data (grouping information).
- Emergency department data includes additional data elements, such as triage information and dates/times.

4. Inpatient: Hospital morbidity/separations. Also known as Discharge Abstract Database (DAD)

Acute inpatient care provides necessary treatment, examination and observation for patients occupying a hospital inpatient bed, with the goal of discharging patients as soon as they are stable.

This dataset also contains records for patients hospitalized and discharged from free-standing rehabilitation and psychiatric hospitals in Alberta.

The data are reported to CIHI; the grouping methodology used is CIHI's case mix group product versions - and as of 2007, Case Mix Groups+ (CMG+).

Elements include:

- Demographics, admission/discharge/transfer information, provider information, coded diagnoses and intervention information.
- Special Care Unit information and CMG+ derived data (grouping information).

The Morbidity and Ambulatory Care Abstract Reporting System (MACAR) is the provincial software application used in Alberta to process and report records from both ambulatory care and acute inpatient care. The MACAR application submits the processed dataset records to both CIHI and Alberta Health.

Both Ambulatory Care and Inpatient:

- Coded in ICD-9-CM (prior to April 2002) and ICD-10-CA/CCI (April 2002 to present).

- While MACAR accepts data submissions at any time, it is typical to see a delay of 4-8 weeks from the time of patient discharge to allow for chart processing, coding/abstracting, data submission, auditing and correction at the facility level.

Updated monthly, however, all information can be corrected or deleted once submitted; caution is recommended when using open year data. Once a fiscal year is closed, data can no longer be modified. Alberta Health typically discloses data from the closed annual files available in the late Fall each year.

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5. Pharmaceutical Information Network (PIN) Dispenses: Prescription dispenses

A record is created in PIN each time a prescription is dispensed to a patient.

Elements include:

- Drug dispense event information (dispense date, pick-up date, cancelation date).

- Patient, prescriber, dispenser, and facility information.

- Drug information details, such as Drug Identification Number (DIN), Anatomic Therapeutic Classification (ATC) code, quantity, and compound components.

Limitations:

- Cost and benefit payment information is not available.

- Reason for the prescription is not captured.

- Information is on dispensed drugs—not prescriptions; in-hospital dispenses are not included.

- Accuracy and completeness of data improves over time (currently, about 95 per cent of all pharmacists submit records).

Records updated weekly; one month lag typically applied.

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6. Population Registry: Basic demographic and geographic information.

The Registry contains demographic information for all Albertans with Alberta Health Care Insurance Plan coverage. It is used as a base for Alberta population counts.

Several registry tables are available that report registration data as at month end, quarter end, or fiscal year end. These tables have different lag times - usually four or six months after the date the information is effective – to allow time for any updates, such as address changes, to be reported to Alberta Health.

Note that if registrants do not report address changes, etc., the information on file will not be current. Alberta Health uses other data sources to update registration data when a move to another provinces or death has occurred, even if the person or family does not report the changes.

The fiscal year end file is considered to be the most accurate snapshot of each registrant as at March 31. This file is useful for consistently reporting recipient date of birth, gender, and postal code at fiscal year-end (rather than using service event data which may vary). This file includes all registrants that were eligible for health services at any time in the fiscal year.

Elements include:

- Personal Health Number, date of birth, sex, postal code

- Active coverage, birth and death indicators as at March 31

- Migration indicators - whether the person has migrated into Alberta or out of Alberta during the fiscal year (no information on where the person came from or went to)

- Indicator for invalid recipient address (i.e., mail returned to Alberta Health)

- Date and reason coverage was cancelled

The fiscal year end table has a 6-month lag and is typically available in late October each year.

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7. <u>Practitioner Claims</u>: Fee-for-service and shadow-billed claims

This dataset consists of processed claims for eligible Albertans and medical reciprocal patients to pay medical doctors and other allied practitioners (optometrists, podiatrists, podiatric surgeons, and dentists) and to track shadow-billed claims. "Eligible Albertans" have lived in Alberta for more than three months and are registered with Alberta Health to receive Alberta Health Care Insurance Plan benefits.

Elements include:

- Patient information: identifier, demographic information, location.

- Provider information: identifier, specialty, role, location, referring provider identifier and discipline.

- Service information: health service code, date of service, amount paid (role, trays, time surcharges, total), service units paid and calls claimed, facility, up to three diagnostic codes, shadow billed claims.

Usage considerations:

- Claims data are collected for the purpose of paying providers fee-for-service payments or for tracking shadow-billed services.

- Providers may use a diagnostic code such as V70 (general medical examination) which does not provide useful diagnostic information.

- Patient demographic information should be retrieved from the Population Registry where it is validated.

- For many fee modifiers, it is not possible to calculate the effect of a modifier on the total amount paid.

- The codes for fee payments (Schedule of Medical Benefits) are updated over time when changes occur.

- Coded in ICD-9-CM/Schedule of Medical Benefits (modified CCP).

Updated weekly; a six month payment lag from date of service is typically used to provide accurate and complete data.

Vital Statistics: Service Alberta is the data custodian and must authorize any disclosure.

Alberta Health adds the identifier (ULI) to Vital Statistics data to permit linkage to other data sources.

8. Vital Statistics - Births:

All live births delivered within Alberta must be registered with Alberta Vital Statistics. Upon birth, the Notice of a Live Birth or Stillbirth form (PNOB) is completed and forwarded to Alberta Vital Statistics. In addition to the PNOB, the parents/guardians are required to register the birth with Alberta Vital Statistics completing the Registration of Birth form within ten days of the birth event. This information is then entered into the Alberta Vital Statistics information system and a birth certificate is issued.

Elements include:

- Date of birth, sex, location of birth, hospital identifier

- Kind of birth (e.g. twins), birth order, gestation, birth weight

- Demographic information on the mother

9. Vital Statistics - Deaths:

All deaths occurring in Alberta must be registered with Alberta Vital Statistics. Information in the file is derived from the Death Registration form, medical certificate of death, and the medical examiner's certificate of death (where appropriate). Additional derived variables are added to the file to facilitate queries and analysis of the data. Since 2000, the 10th revision of the International Classification of Diseases (ICD) is used for coding the underlying cause of death.

Elements include:

- Date of death, place of death, hospital identifier

- Cause of death, attendant at time of death, autopsy

- Demographic information including age, sex, residence

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10. Longitudinal Demographic Profile (LDP): Captures Albertans registered with the Alberta Health Care Insurance Plan since April 1, 2000.

This dataset enables the observation of trends, such as health care utilization, costs, and health care burden, by individual and by fiscal year. The data can be used to study the characteristics of Albertans who consume healthcare services and is available to those with the proper approval to use individual-level data.

 The dataset has four sections of data elements:

1. **Demographics:** (from Population Registry - most are at fiscal year-end). Elements include: age, sex, location, in/out migration indicators, birth/death flags, socioeconomic status (SES) proxy

2. **Health service utilization:** Elements include: annual visits to General Practitioner (GP)/Specialist, inpatient and outpatient visits (ED/non-ED), long-term care days

3. **Chronic diseases/Clinical Risk Groupers (CRGs):** Elements include: individuals diagnosed with the following chronic diseases: Hypertension, Diabetes, Asthma, Chronic Obstructive Pulmonary Disease (COPD), Ischemic Heart Disease (IHD), Congestive Heart Failure (CHF), and Dementia. Clinical Risk Groupers (CRGs) relate the historical clinical and demographic characteristics of the individual to the amount and type of healthcare resources they will consume.

4. **Health care costs:** Elements include: total fee-for-service costs for GPs, specialists, allied professionals, emergency services, and inpatient as well as Alberta Blue Cross (ABC) drug costs and long-term-care (LTC) cost estimates.

Other Datasets

- Financial information related to health costing: Actual cost information related to medical services is submitted from limited facilities primarily in Calgary and Edmonton. Groupers are used to cost ambulatory and inpatient care.

Other data sources held by the Ministry are not currently disclosed as they are: highly aggregated or highly identifiable, not collected consistently over time, incomplete across geographies, or of substandard quality.

General Data Limitations

1. Virtually all data collected for the Ministry is for administrative purposes, such as management of the Alberta Heath Care Insurance Plan (AHCIP).

2. For some data, only a portion of the data collected is submitted (no source records) to Alberta Health (e.g., costing data).

3. Data elements collected may change over time. Some data elements currently available may be unavailable in early years (and vice-versa).

The Ministry collects information about publicly-funded programs and services. There is no information on activities outside the public system.

Further Information

Metadata on commonly requested data elements from the datasets described above is available in the document Commonly Requested Data Elements.

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