



Pharmacist Database Manual, Version 3.0

Updated December 2012

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Our Vision

Better data. Better decisions.
Healthier Canadians.

Our Mandate

To lead the development and maintenance of comprehensive and integrated health information that enables sound policy and effective health system management that improve health and health care.

Our Values

Respect, Integrity, Collaboration,
Excellence, Innovation

Table of Contents

Acknowledgements	iii
Foreword	v
Form Mapping Document	v
Pharmacist Database Manual	v
Preface	vii
1 Introduction	1
1.1 About the Database	1
1.2 Purpose of This Document	2
2 List of Data Elements and Rationales	2
3 Guidelines for Data Submission	6
3.1 Data Providers	6
3.2 Annual Data Collection Date	6
3.3 Deadline for Submission	6
3.4 Records for Submission	7
4 Data Acceptance Rules	7
5 File Layout and File Submission	8
5.1 File Characteristics	8
5.2 File-Naming Convention	8
5.3 Data Submission and Transmission	9
6 Record Layout	9
6.1 Specification Updates	9
6.2 Control Record Format	10
6.3 Pharmacist Record Layout	11
7 File and Record Processing	31
7.1 File Integrity Validation Processing	31
7.2 Record Validation Processing	31
7.3 Error Correction	31
Appendix A—Data Provider Identifier Codes	33
Appendix B—Province/Territory Codes	35
Appendix C—Country Codes	37
Appendix D—Canadian University Codes	45

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- Alberta College of Pharmacists
- Canadian Association of Chain Drug Stores
- Canadian Pharmacists Association
- Canadian Society of Hospital Pharmacists
- College of Pharmacists of British Columbia
- Government of Northwest Territories
- Manitoba Pharmaceutical Association
- National Association of Pharmacy Regulatory Authorities
- New Brunswick Pharmaceutical Society
- Newfoundland and Labrador Pharmacy Board
- Nova Scotia College of Pharmacists
- Ontario College of Pharmacists
- Ordre des pharmaciens du Québec
- Prince Edward Island Pharmacy Board
- Saskatchewan College of Pharmacists
- Yukon Government

Foreword

This document outlines the data submission specifications and data dictionary for the Pharmacist Database (PDB) at the Canadian Institute for Health Information (CIHI), including the technical specifications and file and record layout for data submission to CIHI; all data elements, value labels and definitions; and a brief rationale for the collection of each data element.

This is one of two documents that data providers should assess carefully prior to undertaking any work in terms of system development. The other is the jurisdiction-specific *Form Mapping Document*.

Form Mapping Document

This document is developed for each data provider. It assesses the information collected on the data provider's registration and renewal forms and maps (matches/aligns) it to the data elements and values in this manual. The *Form Mapping Document* also identifies which membership/registration categories for each jurisdiction should be submitted to CIHI as part of the data submission.

Pharmacist Database Manual

In this publication, the PDB team has combined the functions of two former reference documents—*Pharmacist Database Data Submission Specifications Manual* and *Pharmacist Database Data Dictionary*. This was done to create one point of reference for data providers and interested parties for all questions regarding the creation of the PDB.

Preface

CIHI is an independent, pan-Canadian, not-for-profit organization working to improve the health of Canadians and the health care system by providing quality health information.

CIHI's mandate, as established by Canada's health ministers, is to coordinate the development and maintenance of a common approach to health information for Canada. To this end, CIHI is responsible for providing accurate and timely information that is needed to establish sound health policies, manage the Canadian health system effectively and create public awareness of factors affecting good health.

To meet this mandate, CIHI's core functions include the coordination and promotion of national health information standards and health indicators, the development and management of health databases and registries, the funding and facilitation of population health research and analysis, the coordination and development of education sessions and conferences, and the production and dissemination of health information research and analysis.

The PDB is one of 27 health databases maintained by CIHI. Any questions regarding the PDB should be directed to

Program Lead, Pharmacist Database
Canadian Institute for Health Information
495 Richmond Road, Suite 600
Ottawa, Ontario K2A 4H6

Phone: 613-241-7860
Email: pdb@cihi.ca

1 Introduction

Effective management of health human resources requires access to accurate, comparable and timely data. Currently there is very little standardized national data on health professionals, except for physicians and regulated nursing professionals. To continue fulfilling its mandate and increase the availability of standardized value-added information for health human resources, CIHI has developed five new national supply-based databases for the following professional groups: pharmacists, occupational therapists, physiotherapists, medical laboratory technologists and medical radiation technologists.

This document is the result of work completed through a consultation process between CIHI and potential data providers in order to meet the priority information needs of the profession of pharmacy. The data elements, values and associated definitions were developed and reviewed by the representatives from the provincial and territorial regulatory authorities for pharmacists, the Canadian Association of Chain Drug Stores, the Canadian Pharmacists Association, the Canadian Society of Hospital Pharmacists, the National Association of Pharmacy Regulatory Authorities and the Pharmacist Database development team at CIHI.

1.1 About the Database

CIHI's PDB collects national, standardized supply-based data on pharmacists in Canada.

The PDB aims to provide standardized comparative data and reports on the demographic, geographic, education and employment information of pharmacists in Canada. The data allows for clear and objective analyses that will support informed decision-making and policy formulation. The data is also used for statistical reporting and research purposes, including, but not limited to, pan-Canadian reports, analytical tools, an annual statistical report, ad hoc data/information requests and analytical studies pertaining to the supply and distribution of the pharmacist workforce in Canada.

CIHI is a secondary source of data; the data for the PDB is supplied by the provincial pharmacy regulatory bodies (provincial licensing data for their respective province) and two territorial ministries, which license pharmacists in the territories.

The data providers are responsible for data collection, which occurs during the annual licensing/registration process. The data providers must complete any manipulation of the jurisdictional data that is necessary to meet the national standards before submitting the data files to CIHI. They must submit data in the form of a sequential text file, per the specifications outlined in this document.

1.2 Purpose of This Document

The purposes of this document are to

- Provide the rationale for collecting specific data elements;
- Define the data elements and sub-elements collected by the PDB;
- Provide technical specifications for data submission to the PDB; and
- Provide technical specifications for CIHI's Information and Technology Services team for the maintenance of the PDB.

Data providers submitting data to CIHI for the PDB must ensure that the data aligns with the specifications outlined in this document.

2 List of Data Elements and Rationales

The PDB aims to provide demographic, geographic, education and employment information at the provincial/territorial and national levels to support health human resources planning and health care delivery. To this end, the data elements that make up the national minimum data set for pharmacy are identified below, along with the rationale for their inclusion in the PDB.

Field Number/Data Element	Rationale
Identifiers and Demographics The number and demographic characteristics of health personnel who are registered, licensed or otherwise part of the available health workforce provide important information. For example, they permit an examination of how age and sex can influence workforce participation.	
1. Provincial/Territorial Unique Identification/Registration Number	Needed to uniquely identify a professional within a particular jurisdiction and to follow changes specific to that individual over time (within the jurisdiction submitting data).
2. Gender	Needed to calculate sex-related workforce indicators (for example, proportion of the workforce that is female).
3. Year of Birth	Needed to calculate age-related workforce indicators (for example, the average age of the workforce).

Field Number/Data Element	Rationale
Geography and Related Geography is important in a country the size of Canada, and understanding the distribution of health personnel (for example, in terms of rural or urban practice/employment setting) and how this distribution relates to geography is important to workforce planning and policy development. Please note that the full six-digit postal code of employment is collected in the domain Employment—Current (Specific) .	
4. Province/Territory of Residence (Canadian)	Needed to analyze the geographical distribution of the workforce. In addition, information on a registrant's Canadian province/territory or country of residence is used (in combination with other elements) to reduce the level of double counting of registrants registered in more than one Canadian jurisdiction.
5. Country of Residence	
6. Province/Territory of Registration (Canadian)	Needed to analyze the geographical distribution of the workforce. In addition, information on a registrant's Canadian province/territory of registration is used (in combination with other elements) to reduce the level of double counting of registrants registered in more than one Canadian jurisdiction.
Education Monitoring basic information on the education attained by the workforce can allow for the examination of the sequencing and timing of different educational attainments (for example, initial education in the profession of interest, highest education in the profession of interest and highest education outside of the profession of interest) of the workforce. Year of graduation for basic education in the profession is also used to generate an indicator for the maximum length of time in the workforce (that is, years since graduation from basic education in the profession). Looking at province of graduation allows for the examination of a jurisdiction's capacity to retain pharmacists trained in the jurisdiction and can also be used to target recruitment efforts (for example, to specific Canadian schools, provinces or countries).	
7. Level of Basic Education in Pharmacy	Used to monitor changes in the basic educational attainment of the workforce.
8. Year of Graduation for Basic Education in Pharmacy	Used to examine the sequencing and timing of different educational attainments (initial education in the profession of interest, other education in the profession of interest and other education outside of the profession of interest) of the workforce. Year of graduation for basic education in the profession is also used to generate an indicator of the maximum length of time in the workforce (that is, years since graduation from basic education in the profession).
9. Canadian University of Graduation for Basic Education in Pharmacy	Used to identify where basic education in pharmacy was completed. It allows monitoring of the Canadian-educated/internationally educated composition of the workforce and analysis of provincial and territorial capacity to retain graduates.
10. Country of Graduation for Basic Education in Pharmacy	
11. Highest Level of Post-Basic Education in Pharmacy	Used to monitor changes in the educational attainment of the workforce.
12. Year of Graduation for Highest Level of Post-Basic Education in Pharmacy	Used to monitor trends in the sequencing and timing of pharmacy educational attainments.

Field Number/Data Element	Rationale
13. Canadian University of Graduation for Highest Level of Post-Basic Education in Pharmacy	Used to identify where post-basic education in pharmacy was completed. It allows monitoring of the Canadian-educated/internationally educated composition of the workforce and analysis of provincial and territorial capacity to retain graduates (for provinces and territories with education programs).
14. Province of Graduation for Accredited Residency in Pharmacy (Canadian)	
15. Country of Graduation for Highest Level of Post-Basic Education in Pharmacy	
Employment—Current (General) An understanding of employment and practice characteristics as well as the nature of labour force participation of health personnel (for example, whether personnel are working full time or part time) can help inform policy decisions, from the national and provincial/territorial levels (for example, more educational seats to produce more health personnel could be funded) to the site of employment (for example, more full-time positions could be made available).	
16. Employment Status	Used to differentiate between those registrants (either an employee or self-employed) who are employed and working in pharmacy; employed in other than pharmacy or unemployed and seeking work in pharmacy; or employed in other than pharmacy or unemployed and not seeking work in pharmacy. Capturing this data element provides opportunities to estimate the available registered workforce in different ways. When assessed in combination with other data elements, an estimation of the capacity of the available workforce can be determined.
Employment—Current (Specific) Primary Employment—the employment, with an employer or in a self-employed arrangement, that is associated with the highest number of usual weekly hours worked. Secondary Employment—the employment, with an employer or in a self-employed arrangement, that is associated with the second-highest number of usual weekly hours worked.	
17. 24. 31. Employment Category (for Primary, Secondary and Third Employment)	Used to differentiate between those in an employee–employer work relationship and those who are self-employed. For registrants in an employee–employer work relationship, the distinction between permanent and temporary employment (in combination with other data elements such as Employment Status and Range of Estimated Weekly Practice Hours for Employment) provides an indication of changes in the conditions of employment for a profession (for example, a change to more temporary rather than permanent work arrangements with employers). When assessed in combination with other data elements, an estimation of the capacity of the available workforce can be determined.

Field Number/Data Element	Rationale
18. 25. 32. Range of Estimated Weekly Practice Hours (for Primary, Secondary and Third Employment)	Used to identify some basic conditions of employment. Allows for a rudimentary assessment of the capacity within the existing pharmacy workforce in terms of the number of hours of work. Also allows for the categorization of the pharmacy workforce in terms of Statistics Canada and international (Organisation for Economic Co-operation and Development) definitions of part-time hours (29 hours or less) and full-time hours (30 hours or more).
19. 26. 33. Province/Territory of Employment (Canadian) (for Primary, Secondary and Third Employment)	Needed to analyze the geographical distribution of the workforce. Information on a registrant's location of employment is used (in combination with other elements) to reduce the level of double counting of registrants registered in more than one Canadian jurisdiction. Collecting a location for up to three employments (primary, secondary and third) provides an indication of the proportion of the workforce registering and/or living in Canada but conducting most of their employment activity outside of Canada.
20. 27. 34. Country of Employment (for Primary, Secondary and Third Employment)	
21. 28. 35. Postal Code of Employment (for Primary, Secondary and Third Employment)	Collected to examine the geographical distribution of the workforce at all of the desired units of analysis (national, provincial/territorial and sub-provincial/-territorial) and to investigate geographic concepts relevant to health planning (such as the urban–rural distribution of the health workforce).
22. 29. 36. Position (for Primary, Secondary and Third Employment)	Used to indicate the role that the professional plays within an employment setting. It allows for a more precise differentiation of those professionals primarily involved in direct service provision versus other roles, for example, education.
23. 30. 37. Place of Employment (for Primary, Secondary and Third Employment)	Used to indicate the setting in which the professional engages in employment activity. It permits monitoring of changes in the setting of employment activity over time. Collecting this element permits an examination of, among other information, the number of professionals engaged in employment activity in the community versus in an institutional setting.
Other	
38. Registration Date	Used by CIHI to confirm that records submitted to CIHI fall within the data collection period assigned to each submitting jurisdiction by CIHI.

3 Guidelines for Data Submission

3.1 Data Providers

The data providers are the 10 provincial regulatory bodies, which supply licensing membership data for their respective province, and two territorial ministries, which license pharmacists in the territories.

The table below provides further details on the data providers for the PDB.

Data Provider	Corresponding Province/Territory of Data Submission
Newfoundland and Labrador Pharmacy Board	Newfoundland and Labrador
Prince Edward Island Pharmacy Board	Prince Edward Island
Nova Scotia College of Pharmacists	Nova Scotia
New Brunswick Pharmaceutical Society	New Brunswick
Ordre des pharmaciens du Québec	Quebec
Ontario College of Pharmacists	Ontario
Manitoba Pharmaceutical Association	Manitoba
Saskatchewan College of Pharmacists	Saskatchewan
Alberta College of Pharmacists	Alberta
College of Pharmacists of British Columbia	British Columbia
Government of Northwest Territories	Northwest Territories
Yukon Government	Yukon

3.2 Annual Data Collection Date

In accordance with the agreement between the data providers and CIHI, data will be provided annually for the point-in-time data collection date of October 1. All jurisdictions have different registration periods. For the purposes of the PDB, the data provided should include all registrations received between the start of the data provider's registration period and September 30 (inclusive) of the data submission year.

3.3 Deadline for Submission

In accordance with the agreement between the data providers and CIHI, registration data can be submitted to CIHI anytime between October 1 and October 31 of the respective data submission year.

The deadline for submission is October 31 of the data submission year.

3.4 Records for Submission

The target population for the PDB is all pharmacists submitting **active** registrations with the data providers.

- **Active:** Based on the annual practice permit, the registrant is eligible to practise as a pharmacist.

Details regarding which registration/membership categories should be included in the **active** category and subsequently submitted to CIHI are included in each jurisdiction-specific *Form Mapping Document*.

The data provider must be able to extract and submit only active records.

4 Data Acceptance Rules

- Data should be edited at the source. Only error-free data should be submitted. Error-free data is defined as information that
 - Conforms to the physical record and file layout defined in this document; and
 - Contains only valid information or code values defined in the pharmacist record layout.
- A submission file can contain only registration data for the period agreed upon in the data agreement.
- Data will be submitted in a file of a fixed record length.
- A control record will be present at the start of the data file. The purpose of the control record is to describe the contents of the file. Partial transmissions, where the record count does not match the total count on the control record, will be rejected in their entirety without any further validation.
- A notification of acceptance or rejection of the data submissions will be transmitted back to the supplying data provider. Accepted data will be integrated into CIHI's data holdings; rejected records will not be integrated into CIHI's data holdings.
- Data that does not pass CIHI's edits and validations will be rejected. The respective data provider will receive specific notification of the errors encountered.
- Data providers will be informed of errors detected in their submitted files via a detailed error report. The data provider may supply corrected records by resubmitting the entire data file (a file that contains both corrected records plus all of the original records that were without errors).

5 File Layout and File Submission

5.1 File Characteristics

Registration data is submitted in a fixed-length file with a fixed record length of 128 characters. This file must consist of the following:

- A control, or header, record—This record describes the contents of the file and must be the first record in the file. The control record must be 128 characters in length.
- Detailed records (individual record-level data)—These records must all be in the same format and be 128 characters in length. Each record describes the education and employment characteristics of a single pharmacist. There may be one and only one record per pharmacist.

The file to be created is a plain (ASCII) text file without delimiters (such as tabs or commas) and must have “.txt” as the file extension. Each record must start on a new line. Detailed information on the record layout for the control record and the detailed records is provided in Section 6.

5.2 File-Naming Convention

File names are standardized to facilitate the receipt and processing of pharmacist data. The file name indicates the database name (and, indirectly, the profession), submitting data provider, data collection period and file version. The file name layout is as follows:

Field	Value and/or Valid Format	Description
Occupation Identification Code	PHA	Indicates the Pharmacist Database
Current Data Year	YYYY (format)	The year of data submission
Data Provider Identifier	AAAAA (format) See Appendix A for values	A five-character code assigned by CIHI to the data provider
File Version Number	99 (format)	Indicates which version of the file is being submitted The first file to be submitted for a given data submission year should have a file version number of 01. In subsequent iterations of the file, the version number will increase by one each time: 02, 03, etc.
File Name Extension	.txt	The file name extension must be “.txt” to indicate a text file

Example File Name

- PHA2008AB00101.txt

This example file name identifies this file as being a pharmacist file for the year 2008 from the data provider AB001. It is the first iteration of the file to be received from the data provider.

5.3 Data Submission and Transmission

To protect the safety of confidential information and satisfy national and provincial privacy legislation, CIHI requests that all data files be submitted via CIHI's electronic Data Submission Services (eDSS).

CIHI offers eDSS as a means of transmitting electronic files to CIHI via the internet. Data providers must have the ability to connect to the internet using a browser such as Microsoft Internet Explorer, Netscape or Mozilla Firefox to take advantage of this service.

eDSS provides security that meets corporate and industry standards through the use of

- Secure encrypted protocols during file upload and transfer from the client's machine to CIHI's servers; and
- Restriction of system access to only those users who have been authorized and authenticated.

Data providers interested in taking advantage of this service are advised to contact CIHI's Central Client Services by email at help@cihi.ca.

Although eDSS is CIHI's preferred method of receiving data, data providers who do not have sufficient infrastructure may be allowed to submit data on a CD or DVD that is sent by registered mail or bonded courier service. For further information, please send an email to the Program Lead, Pharmacist Database, at pdb@cihi.ca.

6 Record Layout

6.1 Specification Updates

Changes were made to the *Pharmacist Database Manual, Version 3.0*. The definitions of the following elements have been changed:

Data Dictionary Version 2.0	Database Manual Version 3.0
Definition	Definition
No updates	No updates

6.2 Control Record Format

A control record is required at the start of each file. The control record describes the contents of the file. The type of information to be provided in the control record and the format of that information is outlined in the table below.

Field Number	Data Element	Start Byte	Length	Type	Values and/or Format
1	Occupation Abbreviation	1	5	Character	PHARM
2	Data Provider Identifier	6	5	Character	AAAAA (format) See Appendix A for values
3	Current Data Year	11	4	Character	YYYY
4	Number of Records	15	6	Numeric	The total number of records in the file excluding the control record
5	File Creation Date	21	8	Date	YYYYMMDD The date the file was created
6	Provincial/Territorial Unique Identification/Registration Number Type	29	1	Character	R (Registration Number) or S (Substitute Number)
7	Filler	30	99	Character	Xs are added to the end of the record so that the control record is the same length as the detailed records

Notes

Field 6: Provincial/Territorial Unique Identification/Registration Number Type

Unique provincial/territorial identification/registration numbers for pharmacists may be included in one of two ways:

1. The actual **registration** number may be used; or
2. A **substitute** (dummy) number may be used.

The type of number to be supplied is left to the discretion of the jurisdiction; however, regardless of which type of number is provided, the number for each respective registrant must be the same every year. If dummy numbers are supplied, they must remain consistent every year for each individual registrant (this enables CIHI to conduct longitudinal analysis on the data).

Field 7: Filler

Filler of 99 Xs will be accepted per previous specifications.

Sample Control Record

- PHARMAB001200800075020081031Rxxxxxxxxxxxxxxxxxxxxxxxxxxxx . . .

Occupation Abbreviation	Data Provider Identifier	Current Data Year	Number of Records	File Creation Date (YYYYMMDD)	Provincial/Territorial Unique Identification/Registration Number Type (R [Registration] or S [Substitute])	Filler
PHARM	AB001	2008	000750	20081031	R	Xs

In this sample control record

- PHARM indicates that the professional is pharmacist;
- AB001 indicates that the record was submitted by data provider AB001;
- 2008 indicates that the data collection year is 2008;
- 000750 indicates that there are 750 records in the file (**not** including the control record);
- 20081031 indicates that the file was created on October 31, 2008;
- R indicates that the registration numbers are actual registration numbers; and
- Xs indicate that the record is padded with filler characters.

6.3 Pharmacist Record Layout

The following table provides the detailed information required to create records in a sequential file suitable for processing by CIHI.

Note: In field 1 (Provincial/Territorial Unique Identification/Registration Number), the length of the number varies between data providers. If the number being submitted is shorter than the maximum length (12 characters), the unique identification number must be left justified and the remainder of the field must be filled with spaces (blanks) to a maximum of 12 characters.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
1	Provincial/Territorial Unique Identification/Registration Number	1	12	Provincial/territorial registration number or suitable alternative	A lifetime registration number, or suitable alternative, that uniquely identifies a pharmacist within a particular jurisdiction. This number is a lifetime unique identifier assigned by the submitting jurisdiction for administrative purposes.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
2	Gender The reported sexual category of a registrant, at the time of registration or renewal. Used for administrative purposes.	13	1	F: Female	
				M: Male	
				7: Not Collected	Data element is not collected and/or not submitted by the data provider.
				9: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
3	Year of Birth Year of birth of the registrant.	14	4	Valid Date: YYYY	
				9997: Not Collected	Data element is not collected and/or not submitted by the data provider.
				9999: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
4	Province/Territory of Residence (Canadian) The province/territory of residence at the time of registration or renewal.	18	2	See Appendix B	Canadian province/territory codes
				97: Not Collected	Data element is not collected and/or not submitted by the data provider.
				98: Not Applicable	Data element is collected but does not apply.
				99: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
5	Country of Residence The country of residence (if outside of Canada) at the time of registration or renewal.	20	3	See Appendix C	Country codes
				997: Not Collected	Data element is not collected and/or not submitted by the data provider.
				998: Not Applicable	Data element is collected but does not apply.
				999: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
6	Province/Territory of Registration (Canadian) The province/territory of registration, based on the jurisdiction or organization submitting pharmacist data.	23	2	See Appendix B	See field 4
				97: Not Collected	
				98: Not Applicable	
				99: Unknown	

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
7	Level of Basic Education in Pharmacy Basic education program used to prepare a pharmacist for practice. This refers to the initial education in pharmacy used, in whole or in part, for consideration of licensure as a pharmacist in Canada. Master's and doctorate credentials would be identified as initial education in pharmacy only if the education permitted direct entry to practice (for example, entry-level PharmD). All other pharmacy-related post-secondary education is captured under Highest Level of Post-Basic Education in Pharmacy.	25	2	10: Diploma	Diploma or equivalent conferred by a university or comparable institution.
				20: Baccalaureate	An undergraduate degree conferred by a university or comparable institution.
				30: Master's	A graduate-level university degree.
				35: PharmD	A clinical/practice-based post-graduate-level university degree.
				97: Not Collected	Data element is not collected and/or not submitted by the data provider.
				99: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
8	Year of Graduation for Basic Education in Pharmacy Year of completion of initial education program used to prepare a pharmacist for entry to practice.	27	4	Valid Date: YYYY	Valid year of graduation
				9997: Not Collected	Data element is not collected and/or not submitted by the data provider.
				9999: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
9	Canadian University of Graduation for Basic Education in Pharmacy Name of Canadian university of completion of initial education program used to prepare a pharmacist for entry to practice.	31	8	See Appendix D	Canadian university for pharmacy codes
				99999997: Not Collected	Data element is not collected and/or not submitted by the data provider.
				99999998: Not Applicable	Data element is collected but does not apply.
				99999999: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
10	Country of Graduation for Basic Education in Pharmacy Name of country (if outside of Canada) of completion of initial education program used to prepare a pharmacist for entry to practice.	39	3	See Appendix C	Country codes
				997: Not Collected	Data element is not collected and/or not submitted by the data provider.
				998: Not Applicable	Data element is collected but does not apply.
				999: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
11	Highest Level of Post-Basic Education in Pharmacy Highest other post-secondary education achieved in pharmacy that resulted in a degree (this includes any post-basic pharmacy education leading to a degree, for example, bridging or upgrade education).	42	2	20: Baccalaureate	An undergraduate degree in pharmacy conferred by a university or comparable institution.
				30: Master's	A graduate-level university degree in pharmacy.
				35: PharmD	A clinical/practice-based post-graduate-level university degree in pharmacy.
				40: Doctorate	A post-graduate-level university degree in pharmacy.
				50: Accredited Residency	An organized, directed, post-graduate training program in a defined area of pharmacy practice.
				97: Not Collected	Data element is not collected and/or not submitted by the data provider.
				98: Not Applicable	Data element is collected but does not apply.
				99: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
12	Year of Graduation for Highest Level of Post-Basic Education in Pharmacy Year of completion of highest post-basic education in pharmacy.	44	4	Valid Date: YYYY	Four-digit year
				9997: Not Collected	Data element is not collected and/or not submitted by the data provider.
				9998: Not Applicable	Data element is collected but does not apply.
				9999: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
13	Canadian University of Graduation for Highest Level of Post-Basic Education in Pharmacy Name of Canadian university of completion of highest post-basic education in pharmacy.	48	8	See Appendix D	Canadian university for pharmacy codes
				99999997: Not Collected	Data element is not collected and/or not submitted by the data provider.
				99999998: Not Applicable	Data element is collected but does not apply.
				99999999: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
14	Province of Graduation for Accredited Residency in Pharmacy (Canadian) Name of province of completion of accredited residency in pharmacy.	56	2	See Appendix B	Canadian province codes
				97: Not Collected	Data element is not collected and/or not submitted by the data provider.
				98: Not Applicable	Data element is collected but does not apply.
				99: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
15	Country of Graduation for Highest Level of Post-Basic Education in Pharmacy Name of country (if outside of Canada) of completion of highest post-basic education in pharmacy.	58	3	See Appendix C	Country codes
				997: Not Collected	Data element is not collected and/or not submitted by the data provider.
				998: Not Applicable	Data element is collected but does not apply.
				999: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
16	Employment Status At the time of registration or renewal, a registrant's work status.	61	2	12: Employed in the Profession of Pharmacy	Employed in the profession of pharmacy, as a pharmacist or in a pharmacy-related field.
				22: Employed in Other Than the Profession of Pharmacy, Seeking Employment in the Profession of Pharmacy	Employed outside of the profession of pharmacy and seeking employment in the profession of pharmacy, as a pharmacist or in a pharmacy-related field.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
		61	2	32: Employed in Other Than the Profession of Pharmacy, Not Seeking Employment in the Profession of Pharmacy	Employed outside of the profession of pharmacy and not seeking employment in the profession of pharmacy, as a pharmacist or in a pharmacy-related field.
				42: Unemployed and Seeking Employment in the Profession of Pharmacy	Not currently employed and seeking employment in the profession of pharmacy, as a pharmacist or in a pharmacy-related field.
				52: Unemployed and Not Seeking Employment in the Profession of Pharmacy	Not currently employed and not seeking employment in the profession of pharmacy, as a pharmacist or in a pharmacy-related field.
				97: Not Collected	Data element is not collected and/or not submitted by the data provider.
				99: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
17	Primary Employment Category Employment category for primary employment, at the time of registration or renewal.	63	2	10: Permanent Employee	Status with employer is permanent: indeterminate duration of employment (no specified end date) and guaranteed or fixed number of hours of work per week.
				20: Temporary Employee	Status with employer is temporary: fixed duration of employment (defined start and end date) and guaranteed or fixed number of hours of work per week.
				30: Casual Employee	Status with employer is on an as-needed basis: no fixed duration of employment and no guaranteed or fixed number of hours of work per week.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
		63	2	40: Self-Employed	A person engages independently in the profession, operating his or her own economic enterprise. The individual may be the working owner of an incorporated or unincorporated business or professional practice, or he or she may be in a business relationship characterized by a verbal or written agreement(s) in which the self-employed individual agrees to perform specific work for a payer in return for payment.
				97: Not Collected	Data element is not collected and/or not submitted by the data provider.
				98: Not Applicable	Data element is collected but does not apply.
				99: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
18	Range of Estimated Weekly Practice Hours for Primary Employment At the time of registration or renewal, within primary employment, the range of usual (that is, typical or average) weekly hours of work in employment related to practice. For registrants in an employee—employer employment category, range indicated is inclusive of all practice hours but should not exceed the hours (including overtime) for which a registrant is scheduled/approved and recognized. For registrants who are in a self-employed employment category, range indicated is inclusive of all practice hours (for example, travel time, preparation and service provision).	65	2	10: 40 and More	Forty or more usual hours of work per week.
				20: 30–39	Between 30 and 39 (inclusive) usual hours of work per week.
				30: 15–29	Between 15 and 29 (inclusive) usual hours of work per week.
				40: 14 or Fewer	Fourteen or fewer usual hour of work per week.
				97: Not Collected	Data element is not collected and/or not submitted by the data provider.
				98: Not Applicable	Data element is collected but does not apply.
				99: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
19	Province/Territory of Primary Employment (Canadian) The province/territory of primary employment at the time of registration or renewal.	67	2	See Appendix B	Canadian province/territory codes
				97: Not Collected	Data element is not collected and/or not submitted by the data provider.
				98: Not Applicable	Data element is collected but does not apply.
				99: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
20	Country of Primary Employment The country (if outside of Canada) of primary employment at the time of registration or renewal.	69	3	See Appendix C	Country codes
				997: Not Collected	Data element is not collected and/or not submitted by the data provider.
				998: Not Applicable	Data element is collected but does not apply.
				999: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
21	Postal Code of Primary Employment At the time of registration or renewal, the postal code assigned by Canada Post for the registrant's primary employment. The postal code reflects the site where service is delivered (when available); the employer or business office postal code may be provided as an alternate (for example, if employer or business office location is different from the site where service is delivered and only the employer or business office postal code is available). The site where service is delivered refers to the worksite where the registrant is directly engaged in employment associated with the profession of pharmacy, as a pharmacist or in a pharmacy-related field.	72	6	Format: A9A9A9	The six-digit postal code assigned by Canada Post.
				999997: Not Collected	Data element is not collected and/or not submitted by the data provider.
				999998: Not Applicable	Data element is collected but does not apply.
				999999: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
22	Primary Position At the time of registration or renewal, the main role within the primary place of employment (for registrants with multiple roles in a place of employment, identify the position associated with the most hours worked).	78	2	12: Director of Pharmacy	Major role is in the uppermost range of managerial/administrative positions with little or no direct client service provision.
				14: Pharmacy Owner/Manager	Pharmacy owner with a major role in the day-to-day operation of a pharmacy, although may include some direct client service provision.
				16: Pharmacy Manager	Major role is in the day-to-day operation of a pharmacy combined with significant direct client service provision.
				22: Institutional Leader/Coordinator	Major role is in the direct provision of pharmacist services with a leadership role in the professional practice within a hospital or other health care facility.
				32: Staff Pharmacist	Major role is in the direct delivery of pharmacist services to clients.
				34: Pharmacist Consultant	Major role is in the provision of advice on the use of medications by individuals or within institutions, or on the provision of pharmacy services within and outside of institutions.
				40: Educator	Major role is as an educator for a particular target group.
				50: Researcher	Major role is in knowledge development and dissemination of research.
				56: Industrial Pharmacist	Major role is in the research, manufacturing and/or other related activities associated with the development of pharmaceutical products.
				60: Other	Position is not otherwise identified.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
		78	2	97: Not Collected	Data element is not collected and/or not submitted by the data provider.
				98: Not Applicable	Data element is collected but does not apply.
				99: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.
23	Primary Place of Employment The primary place of employment, whether as an employee or self-employed, at the time of registration or renewal. This is the site where service is delivered. The site where service is delivered refers to the worksite where the registrant is directly engaged in employment associated with the profession of pharmacy, as a pharmacist or in a pharmacy-related field.	80	3	012: Hospital and Other Health Care Facility	Hospital or other health care facility, including rehabilitation facility, mental health facility and residential care facility.
				022: Community Pharmacy	Retail setting where drugs and related products are distributed primarily through direct face-to-face client contact.
				026: Other Pharmacy	Setting in which retail drugs and related products are distributed to clients through other than direct face-to-face client contact.
				032: Group Professional Practice/Clinic	A community-based group professional practice/business or clinic organized around the delivery of primarily onsite health services, including pharmaceutical care, by a group of health professionals. Clients typically come to the professionals' location to receive services. Other support staff may also be involved; however, the health professionals are the focus of service provision.
				060: Community Health Centre	A community-based organization, which may be the first point of contact for clients, offering a range of primary health, social and/or other non-institutional-based services, including pharmaceutical care.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
		80	3	062: Other Community-Based Pharmacist Practice	Pharmacist practice, not otherwise classified, that focuses on the delivery of onsite or offsite community-based, direct client care pharmacy services.
				100: Post-Secondary Educational Institution	A post-secondary institution (university, college or equivalent institution) with a primary focus on the delivery of education.
				120: Association/Government/Para-Governmental	An organization or government that deals with regulation, advocacy, policy development, program development, research and/or the protection of the public, at a national, provincial/territorial, regional or municipal level (includes military services and correctional services).
				122: Health-Related Industry/Manufacturing/Commercial	A health-related industry whose focus of activities is not the direct delivery of health care services but rather health-related products, services and/or sales (medical device companies, pharmaceutical companies, insurers, etc.).
				124: Community Pharmacy Corporate Office	The head office of a community pharmacy chain or equivalent enterprise directing community retail pharmacy operations.
				140: Other	Place of employment not otherwise identified.
				997: Not Collected	Data element is not collected and/or not submitted by the data provider.
				998: Not Applicable	Data element is collected but does not apply.
				999: Unknown	Data collector or data submitter is unable to obtain the required information for a specific data element.

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
24	Secondary Employment Category Employment category for secondary employment, at the time of registration or renewal.	83	2	10: Permanent Employee	See field 17
				20: Temporary Employee	
				30: Casual Employee	
				40: Self-Employed	
				97: Not Collected	
				98: Not Applicable	
				99: Unknown	
25	Range of Estimated Weekly Practice Hours for Secondary Employment At the time of registration or renewal, within secondary employment, the range of usual (that is, typical or average) weekly hours of work in employment related to practice. For registrants in an employee–employer employment category, range indicated is inclusive of all practice hours but should not exceed the hours (including overtime) for which a registrant is scheduled/approved and recognized. For registrants who are in a self-employed employment category, range indicated is inclusive of all practice hours (for example, travel time, preparation and service provision).	85	2	10: 40 and More	See field 18
				20: 30–39	
				30: 15–29	
				40: 14 or Fewer	
				97: Not Collected	
				98: Not Applicable	
				99: Unknown	
26	Province/Territory of Secondary Employment (Canadian) The province/territory of secondary employment at the time of registration or renewal.	87	2	See Appendix B	See field 19
				97: Not Collected	
				98: Not Applicable	
				99: Unknown	

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
27	Country of Secondary Employment The country (if outside of Canada) of secondary employment at the time of registration or renewal.	89	3	See Appendix C	See field 20
				997: Not Collected	
				998: Not Applicable	
				999: Unknown	
28	Postal Code of Secondary Employment At the time of registration or renewal, the postal code assigned by Canada Post for the registrant's secondary employment. The postal code reflects the site where service is delivered (when available); the employer or business office postal code may be provided as an alternate (for example, if employer or business office location is different from the site where service is delivered and only the employer or business office postal code is available). The site where service is delivered refers to the worksite where the registrant is directly engaged in employment associated with the profession of pharmacy, as a pharmacist or in a pharmacy-related field.	92	6	Format: A9A9A9	See field 21
				999997: Not Collected	
				999998: Not Applicable	
				999999: Unknown	

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
29	Secondary Position At the time of registration or renewal, the main role within the secondary place of employment (for registrants with multiple roles in a place of employment, identify the position associated with the most worked hours).	98	2	12: Director of Pharmacy	See field 22
				14: Pharmacy Owner/Manager	
				16: Pharmacy Manager	
				22: Institutional Leader/Coordinator	
				32: Staff Pharmacist	
				34: Pharmacist Consultant	
				40: Educator	
				50: Researcher	
				56: Industrial Pharmacist	
				60: Other	
				97: Not Collected	
				98: Not Applicable	
				99: Unknown	

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
30	Secondary Place of Employment The secondary place of employment, whether as an employee or self-employed, at the time of registration or renewal. This is the site where service is delivered. The site where service is delivered refers to the worksite where the registrant is directly engaged in employment associated with the profession of pharmacy, as a pharmacist or in a pharmacy-related field.	100	3	012: Hospital and Other Health Care Facility	See field 23
				022: Community Pharmacy	
				026: Other Pharmacy	
				032: Group Professional Practice/Clinic	
				060: Community Health Centre	
				062: Other Community-Based Pharmacist Practice	
				100: Post-Secondary Educational Institution	
				120: Association/Government/Para-Governmental	
				122: Health-Related Industry/Manufacturing/Commercial	
				124: Community Pharmacy Corporate Office	
				140: Other	
				997: Not Collected	
				998: Not Applicable	
				999: Unknown	
31	Third Employment Category Employment category for third employment, at the time of registration or renewal.	103	2	10: Permanent Employee	See field 17
				20: Temporary Employee	
				30: Casual Employee	
				40: Self-Employed	
				97: Not Collected	
				98: Not Applicable	
				99: Unknown	

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
32	Range of Estimated Weekly Practice Hours for Third Employment At the time of registration or renewal, within third employment, the range of usual (that is, typical or average) weekly hours of work in employment related to practice. For registrants in an employee–employer employment category, range indicated is inclusive of all practice hours but should not exceed the hours (including overtime) for which a registrant is scheduled/approved and recognized. For registrants who are in a self-employed employment category, range indicated is inclusive of all practice hours (for example, travel time, preparation and service provision).	105	2	10: 40 and More	See field 18
				20: 30–39	
				30: 15–29	
				40: 14 or Fewer	
				97: Not Collected	
				98: Not Applicable	
				99: Unknown	
33	Province/Territory of Third Employment (Canadian) The province/territory of third employment at the time of registration or renewal.	107	2	See Appendix B	See field 19
				97: Not Collected	
				98: Not Applicable	
				99: Unknown	
34	Country of Third Employment The country (if outside of Canada) of third employment at the time of registration or renewal.	109	3	See Appendix C	See field 20
				997: Not Collected	
				998: Not Applicable	
				999: Unknown	

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
35	Postal Code of Third Employment At the time of registration or renewal, the postal code assigned by Canada Post for the registrant's third employment. The postal code reflects the site where service is delivered (when available); the employer or business office postal code may be provided as an alternate (for example, if the employer or business office location is different from the site where service is delivered and only the employer or business office postal code is available). The site where service is delivered refers to the worksite where the registrant is directly engaged in employment associated with the profession of pharmacy, as a pharmacist or in a pharmacy-related field.	112	6	Format: A9A9A9	See field 21
				999997: Not Collected	
				999998: Not Applicable	
				999999: Unknown	

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
36	Third Position At the time of registration or renewal, the main role within the third place of employment (for registrants with multiple roles in a place of employment, identify the position associated with the most worked hours).	118	2	12: Director of Pharmacy	See field 22
				14: Pharmacy Owner/Manager	
				16: Pharmacy Manager	
				22: Institutional Leader/Coordinator	
				32: Staff Pharmacist	
				34: Pharmacist Consultant	
				40: Educator	
				50: Researcher	
				56: Industrial Pharmacist	
				60: Other	
				97: Not Collected	
				98: Not Applicable	
				99: Unknown	

Field Number	Data Element	Start Byte	Length	Values and/or Format	Definition
37	Third Place of Employment The third place of employment, whether as an employee or self-employed, at the time of registration or renewal. This is the site where service is delivered. The site where service is delivered refers to the worksite where the registrant is directly engaged in employment associated with the profession of pharmacy, as a pharmacist or in a pharmacy-related field.	120	3	012: Hospital and Other Health Care Facility	See field 23
				022: Community Pharmacy	
				026: Other Pharmacy	
				032: Group Professional Practice/Clinic	
				060: Community Health Centre	
				062: Other Community-Based Pharmacist Practice	
				100: Post-Secondary Educational Institution	
				120: Association/Government/Para-Governmental	
				122: Health-Related Industry/Manufacturing/Commercial	
				124: Community Pharmacy Corporate Office	
				140: Other	
				997: Not Collected	
				998: Not Applicable	
				999: Unknown	
38	Registration Date Date assigned by the primary data collector indicating that the data provided falls within the parameters of the data collection period CIHI assigns to each submitting jurisdiction.	123	6	Format: YYYYMM	Four-digit year and two-digit month.

7 File and Record Processing

Once data files are received by CIHI, all records undergo specific processing before being included in the PDB. That processing occurs in the following sequence:

7.1 File Integrity Validation Processing

- File integrity validation processing checks the physical characteristics of the data file. Each detailed record is checked to ensure that there is no duplicate or blank Provincial/Territorial Unique Identification/Registration Number and that its record length matches the specifications. The contents of the file's control record are checked for errors and the detailed records are counted. The count ensures that the number of detailed records is the same as the control record count.
- If the file does not pass the file integrity validation processing, the entire file will be rejected and a report outlining the errors will be produced.

7.2 Record Validation Processing

- Record validation processing validates the data elements included in each record for format, content and internal consistency.
- This includes the validation of code fields (for example, for the element Gender, the only possible choices for code values are M—*male*, F—*female*, 7—*not collected* and 9—*unknown*).
- The data also undergoes tests of the logical relationships between specific fields. For example, an error is identified if a Year of Graduation for Basic Education in Pharmacy is less than Year of Birth.
- Should the submitted codes not match the standardized CIHI codes, or if a logical relationship between fields is incorrect, a report will be generated that will identify the error, and the record will not be included in the PDB.

7.3 Error Correction

- Reports that identify errors will be shared with the respective data providers. Errors are reviewed jointly by CIHI and the respective data providers and corrected by the data provider. This is an iterative process and requires ongoing consultation between CIHI and the data provider in the weeks after file submission. The data providers are expected to correct the source data and to resubmit the entire file—that is, the original clean records plus the corrected records.

Appendix A—Data Provider Identifier Codes

Value	Data Provider	Corresponding Province/Territory of Data Submission
NL001	Newfoundland and Labrador Pharmacy Board	Newfoundland and Labrador
PE001	Prince Edward Island Pharmacy Board	Prince Edward Island
NS001	Nova Scotia College of Pharmacists	Nova Scotia
NB001	New Brunswick Pharmaceutical Society	New Brunswick
QC001	Ordre des pharmaciens du Québec	Quebec
ON001	Ontario College of Pharmacists	Ontario
MB001	Manitoba Pharmaceutical Association	Manitoba
SK001	Saskatchewan College of Pharmacists	Saskatchewan
AB001	Alberta College of Pharmacists	Alberta
BC001	College of Pharmacists of British Columbia	British Columbia
NT001	Government of Northwest Territories	Northwest Territories
YT001	Yukon Government	Yukon

Source

Canadian Institute for Health Information.

Appendix B—Province/Territory Codes

Value	Value Label
NL	Newfoundland and Labrador
PE	Prince Edward Island
NS	Nova Scotia
NB	New Brunswick
QC	Quebec
ON	Ontario
MB	Manitoba
SK	Saskatchewan
AB	Alberta
BC	British Columbia
YT	Yukon
NT	Northwest Territories
NU	Nunavut

Sources

Canadian Postal Guide, from <http://www.canadapost.ca/tools/pg/manual/PGaddress-e.pdf>.

ISO 3166-2: 1998 *Codes for the Representation of Names of Countries and Their Subdivisions—Part 2: Country Subdivision Code*.

Appendix C—Country Codes

If you have any difficulty locating the appropriate code, please contact the Program Lead, Pharmacist Database, at pdb@cihi.ca.

Code	Country
AFG	Afghanistan
ALA	Åland Islands
ALB	Albania
DZA	Algeria
ASM	American Samoa
AND	Andorra
AGO	Angola
AIA	Anguilla
ATA	Antarctica
ATG	Antigua and Barbuda
ARG	Argentina
ARM	Armenia
ABW	Aruba
AUS	Australia
AUT	Austria
AZE	Azerbaijan
BHS	Bahamas
BHR	Bahrain
BGD	Bangladesh
BRB	Barbados
BLR	Belarus
BEL	Belgium
BLZ	Belize
BEN	Benin
BMU	Bermuda
BTN	Bhutan
BOL	Bolivia
BES	Bonaire, Sint Eustatius and Saba
BIH	Bosnia and Herzegovina
BWA	Botswana
BVT	Bouvet Island
BRA	Brazil
IOT	British Indian Ocean Territory
VGB	British Virgin Islands
BRN	Brunei Darussalam
BGR	Bulgaria

Code	Country
BFA	Burkina Faso
BDI	Burundi
KHM	Cambodia
CMR	Cameroon
CAN	Canada
CPV	Cape Verde
CYM	Cayman Islands
CAF	Central African Republic
TCD	Chad
CHL	Chile
CHN	China
CXR	Christmas Island
CCK	Cocos (Keeling) Islands
COL	Colombia
COM	Comoros
COG	Congo
COD	Congo, The Democratic Republic of the Congo
COK	Cook Islands
CRI	Costa Rica
CIV	Côte d'Ivoire
HRV	Croatia
CUB	Cuba
CYP	Cyprus
CZE	Czech Republic
DNK	Denmark
DJI	Djibouti
DMA	Dominica
DOM	Dominican Republic
ECU	Ecuador
EGY	Egypt
SLV	El Salvador
GNQ	Equatorial Guinea
ERI	Eritrea
EST	Estonia
ETH	Ethiopia
FRO	Faeroe Islands
FLK	Falkland Islands (Malvinas)
FJI	Fiji
FIN	Finland
FRA	France
GUF	French Guiana

Code	Country
PYF	French Polynesia
ATF	French Southern Territories
GAB	Gabon
GMB	Gambia
GEO	Georgia
DEU	Germany
GHA	Ghana
GIB	Gibraltar
GRC	Greece
GRL	Greenland
GRD	Grenada
GLP	Guadeloupe
GUM	Guam
GTM	Guatemala
GGY	Guernsey
GIN	Guinea
GNB	Guinea-Bissau
GUY	Guyana
HTI	Haiti
HMD	Heard Island and McDonald Islands
VAT	Holy See (Vatican City State)
HND	Honduras
HKG	Hong Kong
HUN	Hungary
ISL	Iceland
IND	India
IDN	Indonesia
IRN	Iran, Islamic Republic of
IRQ	Iraq
IRL	Ireland
IMN	Isle of Man
ISR	Israel
ITA	Italy
JAM	Jamaica
JPN	Japan
JEY	Jersey
JOR	Jordan
KAZ	Kazakhstan
KEN	Kenya
KIR	Kiribati
PRK	Korea, Democratic People's Republic

Code	Country
KOR	Korea, Republic of
KWT	Kuwait
KGZ	Kyrgyzstan
LAO	Lao People's Democratic Republic
LVA	Latvia
LBN	Lebanon
LSO	Lesotho
LBR	Liberia
LBY	Libya
LIE	Liechtenstein
LTU	Lithuania
LUX	Luxembourg
MAC	Macau, Special Administrative Region
MKD	Macedonia, The former Yugoslav Republic of
MDG	Madagascar
MWI	Malawi
MYS	Malaysia
MDV	Maldives
MLI	Mali
MLT	Malta
MHL	Marshall Islands
MTQ	Martinique
MRT	Mauritania
MUS	Mauritius
MYT	Mayotte
MEX	Mexico
FSM	Micronesia, Federated States of
MCO	Monaco
MNG	Mongolia
MNE	Montenegro
MSR	Montserrat
MAR	Morocco
MOZ	Mozambique
MMR	Myanmar
NAM	Namibia
NRU	Nauru
NPL	Nepal
NLD	Netherlands
ANT	Netherlands Antilles
NCL	New Caledonia
NZL	New Zealand

Code	Country
NIC	Nicaragua
NER	Niger
NGA	Nigeria
NIU	Niue
NFK	Norfolk Island
MNP	Northern Mariana Islands
NOR	Norway
PSE	Occupied Palestinian Territory
OMN	Oman
PAK	Pakistan
PLW	Palau
PAN	Panama
PNG	Papua New Guinea
PRY	Paraguay
PER	Peru
PHL	Philippines
PCN	Pitcairn
POL	Poland
PRT	Portugal
PRI	Puerto Rico
QAT	Qatar
MDA	Republic of Moldova
REU	Réunion
ROU	Romania
RUS	Russian Federation
RWA	Rwanda
SHN	Saint Helena
KNA	Saint Kitts and Nevis
LCA	Saint Lucia
SPM	Saint Pierre and Miquelon
VCT	Saint Vincent and the Grenadines
WSM	Samoa
SMR	San Marino
STP	Sao Tome and Principe
SAU	Saudi Arabia
SEN	Senegal
SRB	Serbia
SYC	Seychelles
SLE	Sierra Leone
SGP	Singapore
SVK	Slovakia

Code	Country
SVN	Slovenia
SLB	Solomon Islands
SOM	Somalia
ZAF	South Africa
SGS	South Georgia and the South Sandwich Islands
ESP	Spain
LKA	Sri Lanka
SSD	South Sudan
SDN	Sudan
SUR	Suriname
SJM	Svalbard and Jan Mayen Islands
SWZ	Swaziland
SWE	Sweden
CHE	Switzerland
SYR	Syrian Arab Republic
TWN	Taiwan, Province of China
TJK	Tajikistan
TZA	Tanzania, United Republic of
THA	Thailand
TLS	Timor-Leste
TGO	Togo
TKL	Tokelau
TON	Tonga
TTO	Trinidad and Tobago
TUN	Tunisia
TUR	Turkey
TKM	Turkmenistan
TCA	Turks and Caicos Islands
TUV	Tuvalu
UGA	Uganda
UKR	Ukraine
ARE	United Arab Emirates
GBR	United Kingdom of Great Britain and Northern Ireland
UMI	United States Minor Outlying Islands
USA	United States of America
VIR	United States Virgin Islands
URY	Uruguay
UZB	Uzbekistan
VUT	Vanuatu
VEN	Venezuela (Bolivarian Republic of)
VNM	Vietnam

Code	Country
WLF	Wallis and Futuna Islands
ESH	Western Sahara
YEM	Yemen
ZMB	Zambia
ZWE	Zimbabwe

Sources

HL7; ISO 3166 December 2006—3 alpha variable representation.

Appendix D—Canadian University Codes

If you have any difficulty locating the appropriate code, please contact the Program Lead, Pharmacist Database, at pdb@cihi.ca.

ESIS Code	Post-Secondary Institution Name
59001000	University of British Columbia—Parent Institution
48001000	University of Alberta—Parent Institution
47005000	University of Saskatchewan—Parent Institution
46005000	University of Manitoba—Parent Institution
35017000	University of Waterloo—Parent Institution
35015000	University of Toronto—Parent Institution
24005000	Université Laval
24003000	Université de Montréal—Parent Institution
12004000	Dalhousie University
10001000	Memorial University of Newfoundland—Parent Institution

Source

Statistics Canada: The above list has been derived from the Post-Secondary Institution Code Set used by Statistics Canada as part of the Enhanced Student Information System (ESIS). ESIS is the national survey that enables Statistics Canada to publish information on enrolments at and graduates of Canadian post-secondary education institutions. Further information can be obtained from the following website: <http://www.statcan.gc.ca/concepts/psis-siep/postsecond-eng.htm>.

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495 Richmond Road, Suite 600
Ottawa, Ontario K2A 4H6

Phone: 613-241-7860

Fax: 613-241-8120

www.cihi.ca

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Talk to Us

CIHI Ottawa

495 Richmond Road, Suite 600
Ottawa, Ontario K2A 4H6
Phone: 613-241-7860

CIHI Toronto

4110 Yonge Street, Suite 300
Toronto, Ontario M2P 2B7
Phone: 416-481-2002

CIHI Victoria

880 Douglas Street, Suite 600
Victoria, British Columbia V8W 2B7
Phone: 250-220-4100

CIHI Montréal

1010 Sherbrooke Street West, Suite 300
Montréal, Quebec H3A 2R7
Phone: 514-842-2226

CIHI St. John's

140 Water Street, Suite 701
St. John's, Newfoundland and Labrador A1C 6H6
Phone: 709-576-7006