



# Hospital Mental Health Database, 2016–2017

User Documentation



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# 1 Introduction

This document provides users of the Hospital Mental Health Database (HMHDB) with information on its composition, its data quality and the fitness of the data for various uses.

The HMHDB is an annual (fiscal year), pan-Canadian, event-based database that contains information on inpatient discharges for psychiatric conditions from both general and psychiatric hospitals. The current database contains information on admission and discharge dates, as well as diagnosis and demographic information. Since the HMHDB is event-based rather than person-based, a client who had more than one hospital discharge for a psychiatric condition in the fiscal year will appear in the database multiple times. In addition, the HMHDB is created based on information regarding discharges from hospitals, including deaths. Some clients who are hospitalized in a given fiscal year are not discharged until a subsequent fiscal year. In these cases, records are included in the database in the year of discharge, not the year of admission to hospital.

## What's new for 2016–2017?

- The number of variables for diagnosis and diagnosis type each increased from 35 to 50, to accommodate Quebec data collection changes for the Hospital Morbidity Database (HMDB).
- For records from the Ontario Mental Health Reporting System (OMHRS), diagnosis codes and DSM-5 diagnosis categories were based on the DSM-5 classification system that replaced DSM-IV-TR.
- The assignment of diagnosis codes to diagnosis categories was modified. For more information, see [Section 6 — Revision history](#).
- Statistics based on the HMHDB are available through the [Quick Stats](#) application on CIHI's website. A historical [series of reports on hospital mental health services](#) can be found on CIHI's website as well.

The HMHDB has 2 primary components:

- General hospital data based on psychiatric discharges, which is extracted as a subset of the Discharge Abstract Database (DAD)/HMDB<sup>i</sup> and OMHRS; and
- Psychiatric hospital data, which is extracted from the DAD/HMDB, the Hospital Mental Health Survey (HMHS) and OMHRS.

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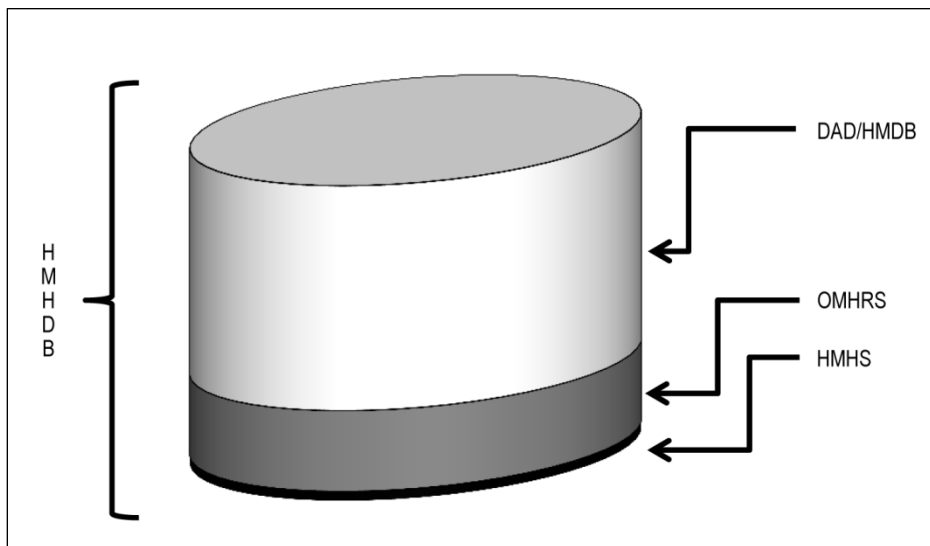
i. The DAD receives data directly from acute care facilities or from their respective health/regional authority or ministry/department of health. Facilities in all provinces and territories except Quebec are required to report. Data from Quebec is submitted to CIHI directly by the ministère de la Santé et des Services sociaux du Québec. This data is appended to the DAD to create the HMDB.

For DAD/HMDB facilities, hospital type is based on the Analytical Institution Type Code, a CIHI-defined data element used to identify the level of care for facilities in the DAD/HMDB. Prior to assigning this value, CIHI consults and confirms the level of care with the institutions and the provincial and territorial ministries or departments of health. For OMHRS facilities, hospital type is based on the OMHRS Peer Group. OMHRS Peer Group is based on the nature of the services, the type of hospital in which the service is located, the provincial or regional designation and/or the self-assignment of the facility. HMHS facilities reported directly to CIHI and are psychiatric facilities.

The data sources for the HMHDB are illustrated in the figure, with jurisdiction-specific details in Table 1. The process for creating the HMHDB is discussed in greater detail below.

Quality assessment for the 2016–2017 data, of which the present document is a summary, was conducted in April 2018.

**Figure** Data sources for the Hospital Mental Health Database



**Notes**

- HMHDB: Hospital Mental Health Database.
- DAD: Discharge Abstract Database.
- HMDB: Hospital Morbidity Database.
- OMHRS: Ontario Mental Health Reporting System.
- HMHS: Hospital Mental Health Survey.

**Table 1** Data sources for general and psychiatric hospitals in the Hospital Mental Health Database, 2016–2017

| Province/territory        | Data source  |
|---------------------------|--------------|
| British Columbia          | DAD          |
| Alberta                   | DAD          |
| Saskatchewan*             | DAD<br>HMHS  |
| Manitoba <sup>†</sup>     | DAD<br>OMHRS |
| Ontario <sup>‡</sup>      | DAD<br>OMHRS |
| Quebec                    | HMDB         |
| New Brunswick             | DAD          |
| Nova Scotia               | DAD          |
| Prince Edward Island      | DAD          |
| Newfoundland and Labrador | DAD          |
| Yukon                     | DAD          |
| Northwest Territories     | DAD          |
| Nunavut                   | DAD          |

**Notes**

\* A Saskatchewan psychiatric facility, Saskatchewan Hospital, provided data to CIHI for the HMHS.

† A Manitoba psychiatric facility, Selkirk Mental Health Centre, reported to OMHRS.

‡ Ontario general and psychiatric hospitals reported discharges from designated adult mental health beds, as well as other selected psychiatric discharges, to OMHRS. All other discharges were reported to the DAD.

DAD: Discharge Abstract Database.

HMHS: Hospital Mental Health Survey.

OMHRS: Ontario Mental Health Reporting System.

HMDB: Hospital Morbidity Database.

## 2 Concepts and definitions

### 2.1 Purpose

The purpose of the HMHDB is to compile and provide pan-Canadian information on discharges from psychiatric and general hospitals for clients who have a primary diagnosis of mental illness or addiction.

### 2.2 Population

The population of reference is defined as all discharges that have a most responsible diagnosis of a psychiatric condition, from psychiatric and general hospitals in Canada that were *expected to submit* data to the DAD/HMDB, the HMHS or OMHRS, between April 1, 2016, and March 31, 2017. This definition reflects a change from years prior to 2014–2015. Previously, the population of reference was based on discharges from hospitals that *submitted* data to the DAD/HMDB, the HMHS or OMHRS in the given fiscal year.

All records from psychiatric facilities and OMHRS facilities are extracted for the HMHDB. Discharges with diagnosis codes not attributable to a psychiatric condition are classified to the category non-mental health (non-MH) disorders. Statistics in this report exclude discharges for non-MH disorders.

In 2016–2017, a total of 181,756 discharges (74.81%) were extracted from the DAD/HMDB; 60,961 discharges (25.09%) were from OMHRS; and 255 discharges (0.1%) were from the HMHS.

Table 2 shows the number of facilities that reported data, the number of discharges and the total length of stay for general and psychiatric hospitals. In 2016–2017, the HMHDB contained data on 242,037 discharges. Of these discharges, 214,458 (88.6%) were psychiatric discharges from general hospitals; the remaining 27,579 (11.4%) discharges were from psychiatric hospitals. These discharges came from 801 hospitals located across Canada.

**Table 2** Discharges and length of stay by hospital type,\* Hospital Mental Health Database, 2016–2017

| Type of hospital | Number of submitting facilities | Number of discharges | Length of stay (total days) |
|------------------|---------------------------------|----------------------|-----------------------------|
| General          | 750                             | 214,458              | 3,599,241                   |
| Psychiatric      | 51                              | 27,579               | 2,073,416                   |
| <b>Total</b>     | <b>801</b>                      | <b>242,037</b>       | <b>5,672,657</b>            |

**Note**

\* The generic term “hospital” is used throughout this report, while the analysis is based on reporting facilities. It is possible that a hospital may have more than one reporting facility.

It is important to note that a hospital may have more than one reporting facility. Facilities that are represented in Table 2 may correspond to a free-standing facility, a unit within a hospital or a collection of beds within a hospital. The number of facilities included in the HMHDB may vary from one fiscal year to the next for various reasons. These include a reorganization that results in some hospitals reporting under 2 separate facility numbers, where previously they reported under only 1; the reappearance in the database of a facility that previously had discharge counts at 0; and the exclusion of facilities from the HMHDB due to data quality issues or reporting constraints.

## 2.3 Data elements and concepts

The data elements in the HMHDB focus primarily on hospital discharges and lengths of stay and are based on admission and discharge dates. In addition, the data elements include a client identifier (i.e., encrypted HCN), diagnoses, age at admission, age at discharge, sex and discharge disposition.

Table 3 provides a list of the key data elements in the HMHDB data file. Extended descriptions of these and additional data elements (e.g., primary diagnosis) are available in the document *Hospital Mental Health Database Data Dictionary for Fiscal Year 2016–2017*, which can be found on the [HMHDB metadata web page](#).



**Table 3** Main data elements, Hospital Mental Health Database

| Data element           | Description   |
|------------------------|---|
| PROV                   | Province or territory in which the reporting facility is located                                    |
| BIRTHDATE              | Birthdate of person   |
| SEX                    | Sex of person   |
| PATIENT_POSTALCODE     | Residential postal code of person   |
| ADMITAGE               | Age of person at the time of admission  |
| ADMITDATE              | The date that the person was admitted to the facility   |
| SEPDATE                | The date the person was formally discharged (through discharge or death) from the facility          |
| LOS                    | The total number of days the person was hospitalized  |
| ENCRYPTED_HCN          | Encrypted health card number  |
| HEALTH_CARD_PROV_CODE* | Province/territory issuing health card number   |
| PSYCH_HOSP             | Indicates whether a record is from a general or psychiatric facility                                |
| DIAGCATEGORY†          | Broad mental health category based on the most responsible discharge diagnosis code                 |
| DISCHARGE_DISPOSITION  | Identifies the location where the person was discharged to or the status of the person on discharge |

**Notes**

\* Not available for records from Quebec and the HMHS.

† Please refer to the appendix Mental illness diagnosis codes and categories in the *HMHDB Data Dictionary for Fiscal Year 2016–2017*, which can be found on the [HMHDB metadata web page](#).

## 3 Major data limitations

Prior to 2006–2007, the HMHDB did not include encrypted HCN or any other variable designed to uniquely identify a client. For those years, a client's records cannot be linked across time. As mentioned previously, clients who have had multiple discharges appear in the database on multiple occasions. For 2006–2007 onward, the HMHDB includes both encrypted HCN and the province/territory that issued the HCN, which can be used in combination to identify unique clients and link their records within the HMHDB and with other CIHI data.

Changes to the database frame occur each year for a number of reasons, as noted in [Section 2.2 — Population](#). Frame changes result in some limits on comparability, particularly for more detailed analyses. For example, changes in the number of psychiatric hospitals in a jurisdiction (due to re-typing, closure, etc.) will have a greater impact on analyses that provide

a breakdown by facility type. Large changes to length of stay or number of discharges may partly reflect changes such as mergers, closures and splits, as well as non-frame changes such as bed numbers.

HMHDB extraction criteria were modified in 2011–2012, as described in [Section 5.1 — Data collection/abstraction](#). The changes result in some limits on comparability with prior years, particularly for more detailed analyses.

Finally, the integration of OMHRS into the HMHDB resulted in data limitations that are important to note. As of 2006–2007, OMHRS data has been integrated into the HMHDB for designated adult inpatient mental health beds in Ontario. The major limitations that persist from 2006–2007 are summarized as follows:

- 2 types of mental health diagnostic codes are captured in an OMHRS record: *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV-TR) codes and DSM-IV-TR Diagnostic Categories. About 20% and 18% of OMHRS records in the HMHDB for 2006–2007 and 2007–2008, respectively, had neither diagnostic category nor DSM-IV-TR codes. This missing diagnostic information will affect some estimated indicators that were generated for diagnosis-specific groupings. For 2008–2009, the proportion of records with missing diagnostic information decreased substantially to less than 1%. Since 2009–2010, the proportion has dropped to 0.
- There is a potential data quality issue in the HMHDB for 2007–2008 onward due to the issue of OMHRS open episodes of care. Open episodes are those for which an admission record was submitted to CIHI but not a subsequent record. These are cases for which a quarterly, change-in-status or discharge assessment was expected during the current reporting quarter but was not received and accepted into the OMHRS database at CIHI. By the end of 2015–2016, open episodes represented approximately 0.1% of the total number of episodes in the OMHRS database and no longer presented a significant data quality issue. A portion of these open episodes may be the result of persons being discharged from the facility without a discharge assessment being submitted to CIHI. Consequently, these clients are not included in the HMHDB (as it is based on discharges).
- When the Ontario Ministry of Health and Long-Term Care (MOHLTC) mandated reporting to OMHRS, each facility that reported to OMHRS was assigned a new facility number to report discharges from designated adult mental health beds; however, discharges related to mental health treatment for clients in undesignated mental health beds in these facilities were still reported with the previous facility number. As a result, some facilities have at least 2 different facility numbers over time and more than one number in a given year. In some instances, 2 facility numbers may be used to represent a single facility. Any analysis at the facility level should be conducted after considering the source of the facility number.

## 4 Coverage

### 4.1 HMHDB frame

The frame of the HMHDB includes all facilities that were expected to submit data on psychiatric discharges to the DAD/HMDB, the HMHS or OMHRS. A hospital was expected to submit data for inclusion in the HMHDB if that hospital contributed any records to the HMHDB in the 3-year period ending March 31, 2017. Data on discharges for psychiatric conditions was submitted by hospitals from all provinces and territories. The proportion of data from general hospitals as compared with psychiatric hospitals has remained relatively stable over time (Table 4).

**Table 4** Proportion of discharges by hospital type, Hospital Mental Health Database, 2006–2007 to 2016–2017

| Fiscal year | General | Psychiatric |
|-------------|---------|-------------|
| 2006–2007   | 86.9%   | 13.1%       |
| 2007–2008   | 86.7%   | 13.3%       |
| 2008–2009   | 87.1%   | 12.9%       |
| 2009–2010   | 87.1%   | 12.9%       |
| 2010–2011   | 86.4%   | 13.6%       |
| 2011–2012   | 87.7%   | 12.3%       |
| 2012–2013   | 86.1%   | 13.9%       |
| 2013–2014   | 86.9%   | 13.1%       |
| 2014–2015   | 88.1%   | 11.9%       |
| 2015–2016   | 88.0%   | 12.0%       |
| 2016–2017   | 88.6%   | 11.4%       |

All hospital discharges that were treated in designated adult mental health beds in Ontario have been captured in OMHRS as of 2006–2007. Since that time, discharges for psychiatric conditions in Ontario treated in non-OMHRS beds are reported to the DAD and extracted from there for inclusion in the HMHDB.

## 4.2 Frame maintenance procedures

The DAD/HMDB and OMHRS teams at CIHI have kept all internal users of their data apprised of changes affecting those facilities that report to the DAD/HMDB and OMHRS.

## 4.3 Impact of the frame maintenance procedures

As changes to the HMHDB frame occur yearly, the major impact of such changes will be on the comparability of the data over time. In some jurisdictions, restructuring of health services has meant that institutions have been reclassified. Often the changes involve psychiatric facilities becoming part of a general hospital or part of a larger hospital system. As such, in addition to an impact on temporal comparisons, provincial comparisons of indices, such as average length of stay, will be affected because of variations in the amount of reclassification between psychiatric and general hospitals.

CIHI provides guidance to each ministry of health on how to manage DAD submissions when 2 acute care facilities amalgamate. CIHI recommends that a single DAD abstract be submitted when the patient is formally discharged, using the facility number that is in effect at that time. For the period of the stay when a prior facility number was in effect, CIHI recommends that a separate abstract should not be submitted.

When OMHRS Ontario facility closures, mergers and splits happen, based on current direction from the MOHLTC, OMHRS Ontario facilities should discharge patients from the old facility number and admit them under the new facility number, with the new admit date being the same as the old discharge date. As the HMHDB takes a snapshot of OMHRS and is based on discharges, this will result in false discharges in the HMHDB for the given fiscal year, followed by real discharges at the actual discharge and a splitting of the true length of stay for that episode of care.

# 5 Collection and non-response

## 5.1 Data collection/abstraction

The 4 data sources for the HMHDB are the DAD, the HMDB, the HMHS and OMHRS (see the figure). Data from the DAD/HMDB for general hospitals was included in the HMHDB when the most responsible diagnosis was a psychiatric condition. Data from psychiatric hospitals and OMHRS facilities was included regardless of diagnosis. However, discharges for non-MH disorders are excluded from the statistics in this report.

For 2016–2017,<sup>ii</sup> diagnostic data was submitted to the DAD/HMDB using the ICD-10-CA coding format and to OMHRS using the DSM-5 coding format.

Extraction of the data files for the HMHDB was conducted according to the diagnostic classification system in which the data was originally coded. Discharges were then grouped into broad mental health categories<sup>iii</sup> based on the first-listed DSM-5 diagnosis category for OMHRS records or the primary diagnosis code for all other records. Prior to 2016–2017, OMHRS records were assigned to broad mental health categories based on the specific DSM-IV-TR code that was the primary diagnosis. Due to this change, as of 2016–2017, the specific primary diagnosis code for an OMHRS record may not be consistent with the assigned broad mental health category. For example, the first-listed DSM-5 diagnosis category could be “depressive disorders,” leading to assignment to the broad mental health category “mood disorders.” For the same record, the specific DSM-5 code listed first (considered primary) could be for an anxiety disorder.

The OMHRS database is longitudinal in nature — late data is accepted as long as it meets the current submission specifications. This means that later data cuts may include records from a previous quarter that were submitted after the submission deadline for that previous quarter. As of May 15, 2017, late submissions accounted for approximately 4.2% of OMHRS records with an assessment reference date in 2016–2017; this rate may vary by facility. The HMHDB uses the fourth quarter snapshot of the OMHRS database for the fiscal year and does not make revisions thereafter.

The data that comprised the HMHS was received from provincial providers in electronic format. Table 5 identifies jurisdictions and classification systems used to report their data.

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ii. The DSM-IV-TR coding format was still used for a small amount diagnostic data submitted to OMHRS and to the HMHS for 1 psychiatric facility in Saskatchewan.

iii. Please refer to the appendix Mental illness diagnosis codes and categories in the *HMHDB Data Dictionary for Fiscal Year 2016–2017*, which can be found on the [HMHDB metadata web page](#).

**Table 5** Diagnosis classification coding systems, by province/territory

| <b>Province/territory</b>        | <b>Diagnosis classification coding system</b> |
|----------------------------------|---|
| <b>British Columbia</b>          | ICD-10-CA                                     |
| <b>Alberta</b>                   | ICD-10-CA                                     |
| <b>Saskatchewan</b>              | ICD-10-CA, DSM-IV-TR                          |
| <b>Manitoba</b>                  | ICD-10-CA, DSM-IV-TR, DSM-5                   |
| <b>Ontario</b>                   | ICD-10-CA, DSM-IV-TR, DSM-5                   |
| <b>Quebec</b>                    | ICD-10-CA                                     |
| <b>New Brunswick</b>             | ICD-10-CA                                     |
| <b>Nova Scotia</b>               | ICD-10-CA                                     |
| <b>Prince Edward Island</b>      | ICD-10-CA                                     |
| <b>Newfoundland and Labrador</b> | ICD-10-CA                                     |
| <b>Yukon</b>                     | ICD-10-CA                                     |
| <b>Northwest Territories</b>     | ICD-10-CA                                     |
| <b>Nunavut</b>                   | ICD-10-CA                                     |

## 5.2 Data quality control

Controls on data quality for the HMHDB are based on protocols developed for the DAD, the HMDB, the HMHS and OMHRS.

Data from the DAD is subject to a series of data quality steps that are intended to ensure data accuracy, to maintain the frame and to identify problem areas. In 2010–2011, the most recent reabstraction study on the contents of the DAD indicated that the level of overall error was minimal. You can find information about data quality for the DAD, HMDB and OMHRS on the following web pages:

- On the page [Discharge Abstract Database \(DAD\) Metadata](#), under Data Quality, look for the PDF *Current-Year Information, 2016–2017*.
- On the page [Hospital Morbidity Database \(HMDB\) Metadata](#), under Data Quality, look for the PDF *Current-Year Information, 2016–2017*.
- On the page [Ontario Mental Health Reporting System \(OMHRS\) Metadata](#), under Data Quality, look for the PDF *2016–2017*.
- In [CIHI's online store of products](#), look for “Discharge Abstract Database (DAD) Re-abstraction Studies.”

## 5.3 Non-response

Analyses in this section are based on the population of reference, as defined in [Section 2.2 — Population](#) and [Section 4.1 — HMHDB frame](#).

**Unit non-response** occurs when entire records are missing from the database. The unit non-response rate at the record level was 0.1% in 2016–2017 due to the following issues:

- Eden Mental Health Centre in Manitoba did not submit data in time for inclusion in the HMHS, which resulted in an estimated 140 discharges not being included in the HMHDB.
- Qikiqtani General Hospital in Nunavut submitted partial data to the DAD, which resulted in an estimated 102 discharges not being included in the HMHDB.

**Item non-response** usually occurs when a record that is received has some missing data elements that should not be missing. Item non-response differs from unit non-response in that unit non-response deals with the number of units or records that are missing, while item non-response deals with the number of data elements that are missing within a record.

Item non-response for a data element is calculated as follows and expressed as a percentage:

$$(1 - (\text{number of records for which the data element was reported} \div \text{number of records for which the data element should have been reported})) \times 100$$

Within the HMHDB data, certain data elements are available for only one of the data sources. Partial reporting can also be a function of provincial practices; an example is the 2-letter postal abbreviation that is used for Quebec discharges instead of the 6-digit postal code. Item non-response rates for some of the key data elements in the HMHDB are listed in Table 6.

**Table 6** Item non-response rates (percentage), Hospital Mental Health Database, 2016–2017

| Data element          | Psychiatric hospital discharges<br>N = 27,579 | General hospital discharges<br>N = 214,458 | All hospital discharges<br>N = 242,037 |
|-----------------------|---|--|--|
| Patient Postal Code*  | 2.3   | 0.4  | 0.6                                    |
| Discharge Disposition | 0.9   | 0.0  | 0.1                                    |
| Encrypted HCN†        | 2.0   | 1.0  | 1.1                                    |
| Patient Date of Birth | 20.9  | 26.7                                       | 21.6                                   |

**Notes**

- \* The percentages listed reflect missing values only. Quebec provides the 2-letter postal abbreviation (QC). A method is in place to map these discharges to their appropriate health region. Additionally, jurisdictions may use a 2-letter postal (or other) abbreviation or the 3-digit forward sortation area code instead of the full postal code. For example, XX may be used in the *postal code* field in the DAD/HMDB to indicate that the patient is homeless. These instances are not counted above as true non-responses, as data has been reported.
- † The percentages listed reflect blank values and specific codes used in OMHRS and the DAD/HMDB to indicate unknown or invalid values. HCN is not provided by the 1 facility that reported via the HMHS (255 psychiatric hospital discharges [0.1% of the HMHDB or 0.92% of psychiatric hospital discharges] for 2016–2017). For details on non-response rates for source data holdings (DAD/HMDB and OMHRS), please refer to their respective user documentation (links provided in [Section 5.2 — Data quality control](#)).

## 5.4 Adjustment for invalid diagnosis codes

Invalid DSM-IV-TR diagnosis codes were sometimes submitted to OMHRS or the HMHS. CIHI's revision procedures, based on a complete list of valid DSM-IV-TR codes, automatically modify some of these invalid codes. Invalid codes that could not be corrected remain in the database as submitted.



## 6 Revision history

Since the HMHDB was acquired from Statistics Canada, the main changes to the database have involved the frame, diagnostic coding and the addition of a client identifier. Diagnostic coding using the International Classification of Diseases has changed from using version ICD-9-CM to version ICD-10-CA. Another classification system, DSM-IV-TR, is used for OMHRS data. In 2006–2007, a client identifier consisting of a person’s encrypted HCN was added. Additionally, the data element of the province/territory issuing the HCN was added in 2012–2013 (and retrospectively included back to 2006–2007) to improve the accuracy of linkage of client discharges.

In 2011–2012, the following major changes were made:

- Additional mental health codes (O99.3, R41.0 and R41.3 in ICD-10-CA) were added to the extraction criteria for the DAD/HMDB.
- Extraction criteria for OMHRS records were modified to include all discharges.
- The broad mental health category diagnostic grouping table was further refined and now includes additional ICD-10-CA and DSM-IV-TR codes.
- New data elements (Homeless, Admitted via Emergency, Facility Postal Code and Discharge Disposition) were included.

The mental health codes R41.0 and R41.3 were removed from the extraction criteria as of 2014–2015.

Although the population of reference was redefined as of 2014–2015, as noted in [Section 2.2 — Population](#), there was no change to the HMHDB extraction criteria. As of 2014–2015, records that do not meet the criteria for the population of reference remain in the database but are excluded from data quality analyses, such as those included in this report.

In 2016–2017, the following changes were made:

- The number of variables for diagnosis and diagnosis type each increased from 35 to 50, to accommodate Quebec data collection changes for the HMDB.
- For records from OMHRS, diagnosis codes and DSM-5 diagnosis categories were based on the DSM-5 classification system that replaced DSM-IV-TR.
- For OMHRS records, broad mental health category in the HMHDB was assigned based on the DSM-5 diagnosis category<sup>iv</sup> instead of the specific diagnosis code.
- The assignment of diagnosis codes to diagnosis categories was modified. Several ICD-10-CA and DSM-IV-TR diagnosis codes were regrouped into HMHDB broad mental health categories as follows:

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iv. Please refer to the appendix Mental illness diagnosis codes and categories in the *HMHDB Data Dictionary for Fiscal Year 2016–2017*, which can be found on the [HMHDB metadata web page](#).

**Table 7** Regrouped ICD-10-CA and DSM-IV-TR codes

| <b>Coding classification system</b> | <b>Diagnosis code</b>           | <b>Previous broad mental health category</b> | <b>Revised broad mental health category (as of 2016–2017)</b> |
|-------------------------------------|---------------------------------|--|---|
| <b>DSM-IV-TR</b>                    | 312.31                          | Other mental health disorders                | Substance-related disorders                                   |
|                                     | 300.3, 308.3, 309.81            | Anxiety disorders                            | Other mental health disorders                                 |
|                                     | 309.21, 303.23                  | Other mental health disorders                | Anxiety disorders   |
| <b>ICD-10-CA</b>                    | F53.1                           | Organic disorders                            | Mood disorders  |
|                                     | F63.0                           | Other mental health disorders                | Substance-related disorders                                   |
|                                     | F94.0                           | Other mental health disorders                | Anxiety disorders   |
|                                     | F68.1                           | Personality disorders                        | Other mental health disorders                                 |
|                                     | F42, F43.0, F43.1, F43.8, F43.9 | Anxiety disorders                            | Other mental health disorders                                 |

These changes were the outcome of a process undertaken by CIHI to align ICD-10-CA codes to DSM-5 diagnosis categories. This alignment process was undertaken to support comparable reporting across provinces/territories on indicators related to mental illness hospitalizations. The diagnosis code regrouping affects comparability across years for the distribution of records among broad mental health categories. Most changes involved the categories anxiety disorders and other mental health disorders.

## 7 Comparability

The HMHDB makes a number of comparisons possible for indicators such as hospital length of stay and number of discharges. When making comparisons over time (using previous iterations of the database) or across provinces/territories, users should be aware that certain limitations might apply. In particular, comparisons over time might be affected by changes in the frame that result in changes to the number of reporting facilities, and by changes to the extraction criteria for the HMHDB. As mentioned in [Section 6 — Revision history](#), changes to the assignment of diagnosis codes to diagnosis categories may also affect comparability.

The HMHDB synthesizes data on hospital discharges from several sources. As such, it is a unique resource for pan-Canadian information on and comparison of discharges that have a most responsible diagnosis of a psychiatric condition. A dynamic presentation of the latest mental health statistics is provided through the [Quick Stats](#) application on CIHI's website. The data set also allows for comparisons among mental health diagnosis categories, between general and psychiatric hospitals, as well as among provinces, territories and health regions.

## 8 Contact

For more information about the HMHDB, email the [Mental Health and Addictions program area](#) or visit [CIHI's Mental Health and Addictions web page](#).



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