

**MENTAL** HEALTH SERVICES



HOSPITAL MENTAL HEALTH  
SERVICES IN CANADA  
2000–2001



Canadian Institute  
for Health Information  
Institut canadien  
d'information sur la santé



# **Hospital Mental Health Services in Canada**

**2000–2001**

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# Hospital Mental Health Services in Canada 2000–2001

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## **Acknowledgements**

The Mental Health and Addiction Services Team wishes to thank all those who contributed to the creation of the first report on *Hospital Mental Health Services in Canada*. In particular, the Team thanks our Mental Health and Addiction Services Advisory Group members. With their thoughtful input, this report was made more meaningful and relevant to CIHI's clients. Another significant contribution was made by CIHI's Analysis Systems Group. Their work in developing *Find A Statistic* will make hospital mental health data more accessible and useful to all CIHI data users.





## Foreword

The first report on *Hospital Mental Health Services in Canada* aims to provide users with a comprehensive description of CIHI's national hospital mental health data. Through communicating about the availability and applicability of the data, CIHI hopes to encourage and achieve broader and more frequent use of this health information resource. Along with the release of the written report, CIHI has added provincial/territorial and regional-level hospital mental health data to the electronic information publicly available through the *Find A Statistic* function at [www.cihi.ca](http://www.cihi.ca).

The national hospital mental health data have been used in the report to calculate indicators of inpatient hospital service utilization at the provincial and territorial levels. The indicators are intended to support regional-level management of hospital mental health services. Highlights of the report include discussions about considerations in interpreting the indicator results, and the interdependencies among the indicators. The report also focuses on the need for comprehensive data beyond inpatient hospital data.

Schizophrenia, a serious mental illness, was selected to be the focus of a special study in the report. The focus on schizophrenia demonstrates how data users can drill into the data to more closely examine trends in use of inpatient hospital services for specific mental illness and addiction diagnoses. This section also emphasizes the need for comprehensive, system-wide data collection that would allow for more informative analysis about how a range of health and social services may be used by those who require treatment for mental illness and/or addiction.

Through this first report on *Hospital Mental Health Services in Canada*, CIHI hopes to raise awareness about the availability of the data, encourage broad use of the data, and generate support and interest on the part of stakeholders in further developing Canada's health information system in the areas of mental illness and addiction.



## Introduction

In 2001, as part of the Roadmap Initiative,<sup>1</sup> the Canadian Institute for Health Information (CIHI) developed a set of indicators for hospital-based inpatient mental health and addiction services. The indicators are intended to address the need for improved national, regional-level health information to inform governance and management of this important and complex sector of the Canadian health information system.<sup>2</sup>

The indicators were developed through a comprehensive consultative process. An Expert Working Group comprised of content experts in the fields of mental health and addiction services from federal and provincial governments, health regions, academia, national associations and consumer groups collaborated with CIHI throughout the project. The group provided input in the identification, development and evaluation of the indicators. The indicators were pilot-tested in 13 Canadian health regions. Refinements to the indicators were made based on the feedback of stakeholders.

The indicators are those that could be compiled using *existing* data. The data are primarily derived from the CIHI Hospital Mental Health Database (HMHDB), which currently is the only Canadian database dedicated exclusively to standardized, national mental illness/addiction data. The HMHDB contains data from inpatient hospital services for the treatment of mental illness/addiction. The indicators relate primarily to utilization of services as that is the nature of the HMHDB data. One indicator, suicide death rate, is reported using Statistics Canada's Vital Statistics data.

This report is descriptive as opposed to evaluative in nature, and expands on the information provided on the Mental Health and Addiction Services Prototype Indicator Report<sup>3</sup> released in 2001. The data used in the report is fiscal year 2000–2001, which is the most recent Hospital Mental Health data available. The report contains a range of information presented as follows:

- Background information about hospital mental health data in Canada
- Highlights of the analysis of the indicators at the provincial/territorial level
- A focus on Schizophrenia using data from the Hospital Mental Health Database, included to demonstrate how HMHDB data can be used
- An overview of *Find A Statistic*, the electronic report-generating capability associated with the indicators and accessible through [www.cihi.ca](http://www.cihi.ca)
- Methodological Notes

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<sup>1</sup> Canadian Institute for Health Information. *Health Information Roadmap: Responding to Needs*. Ottawa, 1999.

<sup>2</sup> Canadian Institute for Health Information. *Development of Indicators for Mental Health and Addiction Services—Phase 1 Project Report*. Ottawa, 2001. See [www.cihi.ca](http://www.cihi.ca).

<sup>3</sup> Canadian Institute for Health Information. *Mental Health and Addiction Services Prototype Indicator Report*. Ottawa, 2001. See [www.cihi.ca](http://www.cihi.ca).

This is the first time the HMHDB data have been used for much of the following analysis. Throughout the study, many challenges and questions were encountered. An attempt has been made to provide meaningful discussion related to the questions that arise when reviewing the results. This report, for the first time, also draws attention to the value of HMHDB data, and the need to further increase the comprehensiveness and quality of the data. The need for data from community-based mental health and addiction services is a recurring theme throughout the report. Ongoing efforts will be directed towards expanding the depth and breadth of the data to further enrich future reports.

# **National Hospital Mental Health Services Data**

The primary source of the data for this report is the CIHI Hospital Mental Health Database (HMHDB).

## **Background**

The Hospital Mental Health Database is a national database containing information on separations (inpatient discharges from hospital whether alive or deceased) involving mental illness/addiction from Canadian psychiatric and general hospitals.<sup>4</sup> The data have been maintained by CIHI since fiscal year 1994–1995. Statistics Canada maintains an historical series for the time period 1930–1994.

The HMHDB is created by the combination of data from two sources. Data from psychiatric hospitals are captured and maintained in the Hospital Mental Health Survey. Data from general hospitals are extracted from the CIHI Hospital Morbidity Database. Once collected and verified, the data from the two sources are combined to form the HMHDB.

## **Scope**

The HMHDB includes medical diagnosis and demographic data for inpatient psychiatric and general hospital separations with a primary diagnosis of mental illness/addiction. Diagnosis codes are based on the International Classification of Diseases, Version 9 (ICD-9), Chapter V. All Canadian provinces and territories are represented in the data.

It must be emphasized that because only a small proportion of those suffering from mental illness/addiction receive treatment in hospitals as inpatients, the HMHDB captures only a fraction of the range of health services delivered for the treatment of mental illness/addiction. The majority of individuals suffering from mental illness/addiction receive treatment on an outpatient basis, from general practitioners or specialists, and/or through community-based services including consumer-run services. Many individuals may not receive formal treatment through health services. As a result, the data in the HMHDB capture an important, but narrow view of mental illness/addiction treatment services.

## **Inclusion Criteria**

The focus of the HMHDB is on separations from psychiatric and general hospitals. The HMHDB is an event-based rather than a person-based system, meaning the same individual could be represented more than once in the database if they were admitted and discharged multiple times during a given fiscal year. Increases in the number of separations may be related to increases in the number of separations per patient, increases in the number of patients being separated, or both.

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<sup>4</sup> See Methodological Notes for definitions of psychiatric and general hospitals.

Important to note is that information for a given hospital stay is only captured once an inpatient is separated. Therefore, one must exercise caution when calculating measures of utilization since the total days stay captured in the database reflects the total days stay associated with the separations reported for that fiscal year. In other words, if an individual is admitted during a given fiscal year but not separated during that year, the length of stay of the individual is not captured in that fiscal year's data. The length of stay for that event will be captured in the fiscal year during which the patient is separated. Even a small number of separations with long lengths of stay have a significant effect on the results for some statistics, such as average length of stay.

### **Exclusion Criteria**

The HMHDB excludes patients treated for mental illness/addiction as outpatients, in residential care facilities or group homes, in day and night centres and in the offices of private practitioners. It also excludes individuals treated in institutions for the mentally disabled, and alcohol/drug treatment agencies. General hospital data in the HMHDB exclude newborns, and inpatients whose residence is outside the province of hospitalization. A limit of 4999 days is placed on length of stay for general hospital separations. Psychiatric hospital data include inpatients whose residence is outside the province of hospitalization; no limit is placed on length of stay.

## Highlights of the Provincial/Territorial-Level Indicator Analysis

The indicators reported are the following:

1. Hospital separation rate involving mental illness/addiction
2. Average length of stay for diagnoses involving mental illness/addiction
3. Hospital days stay rate involving mental illness/addiction
4. Percentage of general hospital total separations involving mental illness/addiction
5. Percentage of general hospital total days stay involving mental illness/addiction
6. Suicide death rate

Definitions of the indicators are included in Appendix A.

### Factors that Affect Indicator Results

Many factors contribute to the wide-ranging results in the analysis of the indicators at the provincial/territorial and regional levels. Factors include, but are not limited to, geography, population health, provincial and regional health service resources, and health services administration, to name a few. Consideration of these factors and the effect they may have on indicator results is very important when conducting comparative analysis. The variation in results between provinces/territories or between health regions should raise questions about the following systematic differences:

- Differences in provincial/territorial or regional health policy, practices, and resources
- Differences in geography and urban/rural population distribution
- Variation in environmental and socio-economic characteristics
- Differences in types of patients served and acuity of illness
- Variation in the range of health services available beyond general and specialty hospital (such as psychiatric hospitals) inpatient services, including alternate levels of care
- Variation in accessibility and awareness of alternative points of entry to the health system

The above list suggests a few of the factors that should be considered when making provincial/territorial and/or regional comparisons. Contextual information is provided in the report where possible. Additional regional contextual information is available in *Find A Statistic*.

### Find A Statistic at [www.cihi.ca](http://www.cihi.ca)

A primary goal of the report on *Hospital Mental Health Services in Canada* is to make indicator data publicly available and easily accessible. To this end, CIHI developed a mental health indicators component for an existing electronic, report-generating capability known as *Find A Statistic*. *Find A Statistic* is publicly accessible at [www.cihi.ca](http://www.cihi.ca).

Within *Find A Statistic*, the results for the mental health and addiction services indicators are calculated at national, provincial/territorial and health region levels. Health region-level data include the following:

- Indicator results for health regions with populations over 75,000
- Regional contextual information related to population, demographics and hospital mental health resources
- A table showing the inflow to each region based on the number of separations involving inpatients who are not residents of the region but who use the region's hospital inpatient services

Through *Find A Statistic*, and subject to CIHI's policies and principles for the protection of personal health information,<sup>5</sup> users can view and generate reports of the indicator results by hospital type, diagnosis groups, age groupings, and sex. Results are available at national, provincial and regional levels.

*Find A Statistic* is designed to be a user-friendly information resource. Please visit [www.cihi.ca](http://www.cihi.ca) to access the tool. Feedback about ease of use, usefulness, and suggestions for improvement are welcome.

## **Variables Used in the Calculation of the Indicators**

A range of variables was used in the calculation of the indicators. The variables were selected based on the desire to drill into the data while adhering to strict privacy and confidentiality restrictions.

The variables used in the calculation of the indicators include the following:

### **Sex**

- Male
- Female
- Both

### **Age groupings**

- 5-year age ranges, or
- Five age groupings:
  - Less than 15 years
  - 15–24 years
  - 25–44 years
  - 45–64 years
  - 65 years and over

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<sup>5</sup> For more information about CIHI's privacy guidelines, please see the Methodological Notes and/or visit [www.cihi.ca](http://www.cihi.ca) to view the document entitled *Privacy and Confidentiality of Health Information at CIHI*.



### Diagnosis groupings based on groupings from ICD-9, Chapter V:

- Severely Mentally Ill
- Less Severely Mentally Ill
- Alcohol and Drug
- Cognitive Disorders

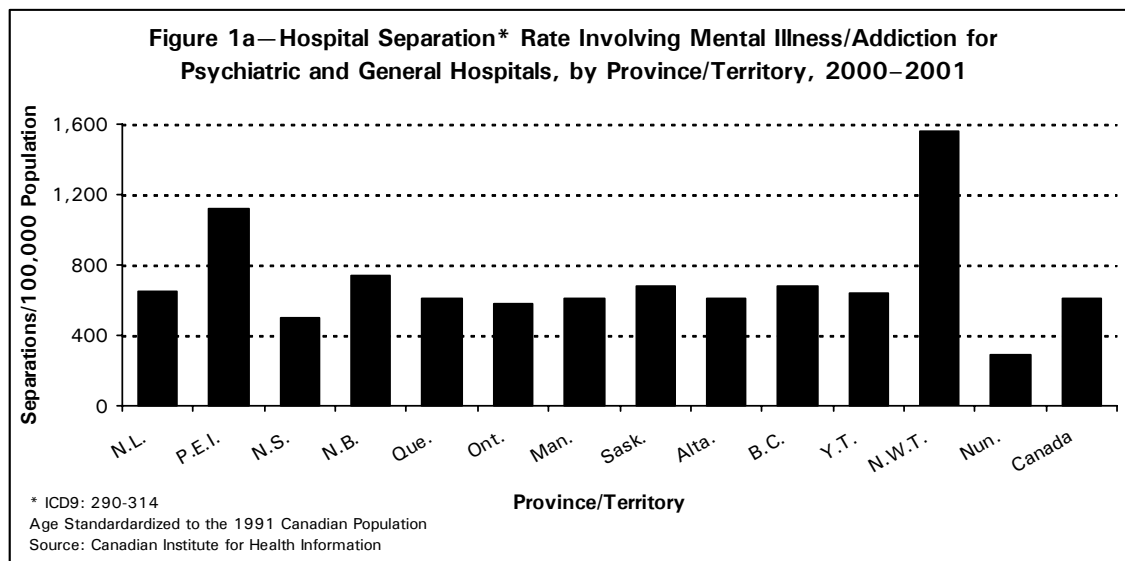
For specific information about the diagnosis groupings used and the associated ICD-9 codes, refer to the Methodological Notes.

## Provincial/Territorial-Level Indicator Analysis

Following is a discussion of the highlights of the indicator analysis at the provincial/territorial level. The graphs and the discussion are presented to demonstrate how the indicators can be used to create an informative view of the delivery of hospital services for mental illness/addiction. Although the results for each individual indicator are informative, the greatest benefit from the analysis can be gained when the results of the indicators are interpreted in conjunction with each other. A range of additional analyses are available at [www.cihi.ca](http://www.cihi.ca) through *Find A Statistic*, or can be calculated by CIHI on a “by request” basis.<sup>6</sup>

### 1. Hospital Separation Rate Involving Mental Illness/Addiction by Province/Territory, 2000–2001

This indicator reports the level of provincial/territorial hospital inpatient activity, in terms of separations, for the treatment of mental illness/addiction. It answers the question “How many hospital inpatient separations are occurring for mental illness/addiction in the province/territory each year?”

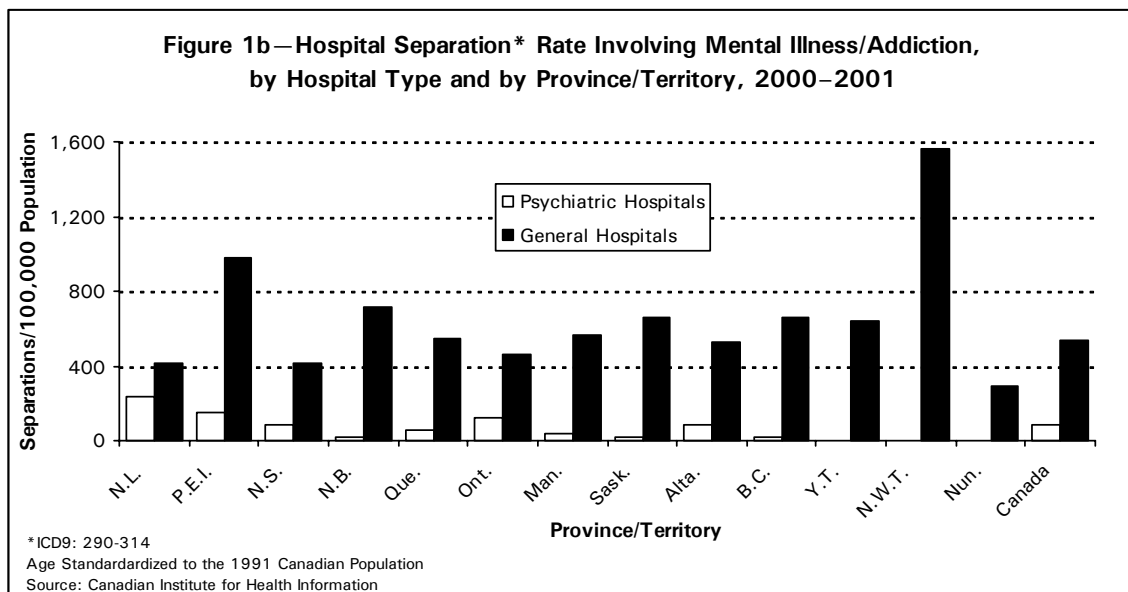


<sup>6</sup> Canadian Institute for Health Information. *2003 Products and Services Catalogue*. Ottawa, 2003. Available at [www.cihi.ca](http://www.cihi.ca)

Provincial/territorial separation rates from both psychiatric and general hospitals vary from 266 separations per 100,000 population (Nunavut) to 1,551 separations per 100,000 population (Northwest Territories), with a rate of 612 separations per 100,000 population for Canada.<sup>7</sup>

The variation in provincial/territorial separation rates reflects differences in capacity to provide inpatient hospital services (i.e. resources) and differences in patterns of resource use. Capacity and utilization are intertwined and it would be informative to distinguish between the two. For example, policy in determining the supply of inpatient beds reflects historic decisions that vary over time and across Canada according to perceived needs, approaches to the delivery of care, and other influences. How clinicians respond to the bed-supply may affect patterns of hospitalizations (admissions and lengths-of-stay).

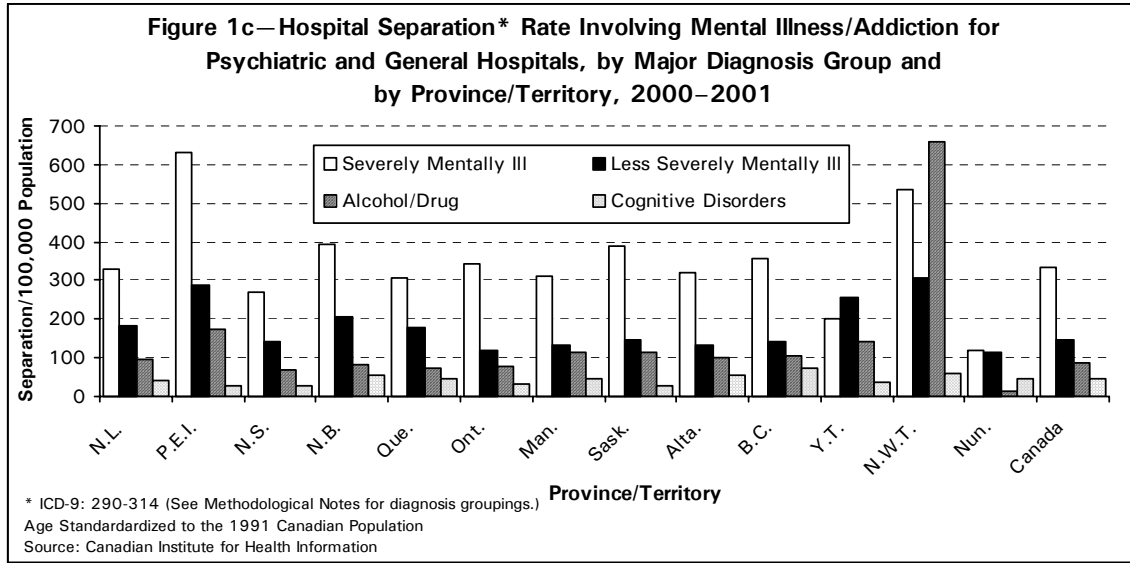
The ability to answer questions such as *“To what extent are the available inpatient beds designated for the treatment of mental illness/addiction being used?”* and *“How does the mix of diagnoses admitted to hospital and the duration of inpatient care vary with the number of available beds?”* would make for richer provincial/territorial- and regional-level comparisons. Currently, Canadian hospital data do not capture capacity in the form of the number of beds in general hospitals “designated” for the treatment of mental illness/addiction. Further, inpatients being treated for mental illness/addiction are not always hospitalized in such designated beds. Therefore, analyses looking at capacity versus utilization are currently not possible at the Canadian level. As hospital reporting systems become more sophisticated and comprehensive, however, such analyses may be possible in the future.



<sup>7</sup> Where appropriate, separation rates have been age standardized using the direct method of age standardization.

A breakdown of separations between psychiatric and general hospitals reveals that most hospital separations (87.1%) for mental illness/addiction occur in general hospitals.

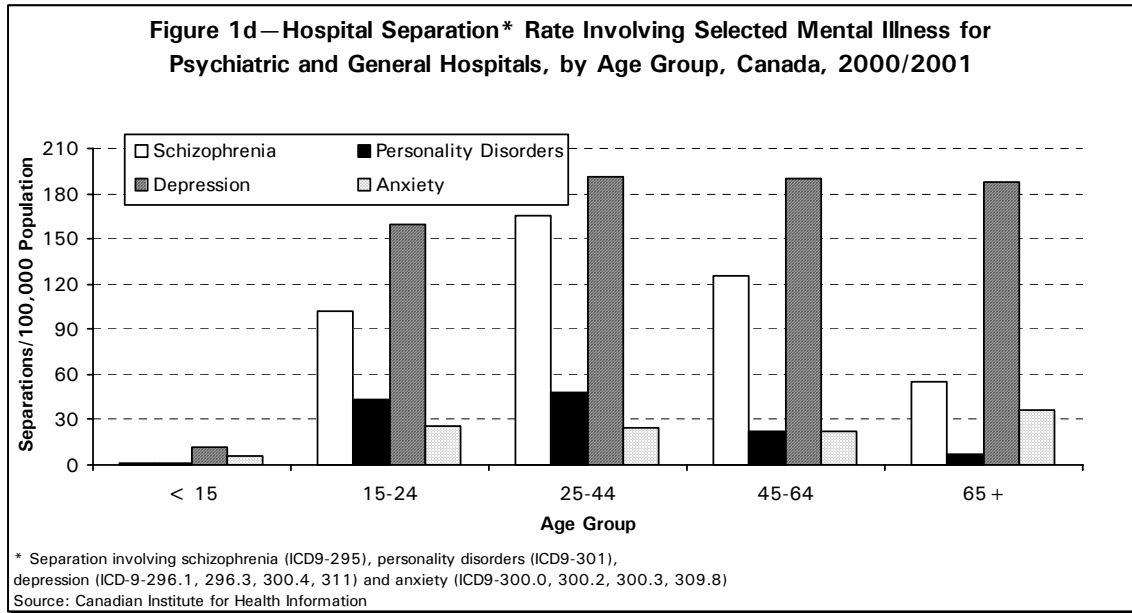
There are no psychiatric hospitals in the Yukon, Northwest Territories (N.W.T.) or Nunavut. Patients requiring psychiatric hospital services travel to the provinces to receive care.



The breakdown of hospital separations by diagnosis groups (see grouping definitions in Methodological Notes) shows that, in most provinces, the majority of separations are attributable to severe mental illness. An exception to this is the N.W.T. where the greatest number of separations is for alcohol and drug-related diagnoses. Many factors could contribute to this pattern including incidence and prevalence of alcohol/drug related illness, and the availability and accessibility of a range of alternatives to inpatient hospital services such as community-based health services. Further, even the geography and climate of the territory may require patients to travel long distances to receive treatment and/or necessitate hospital admission as opposed to emergency, outpatient, or community-based treatment.

Although the separation rate for the N.W.T. is high, average length of stay (ALOS) for mental illness/addiction in general hospitals (see Figures 2a and 2b) for the N.W.T. is among the shortest in Canada. In other words, there are more separations from general hospitals occurring for mental illness/addiction, but they are for shorter lengths of stay as compared to other provinces/territories.

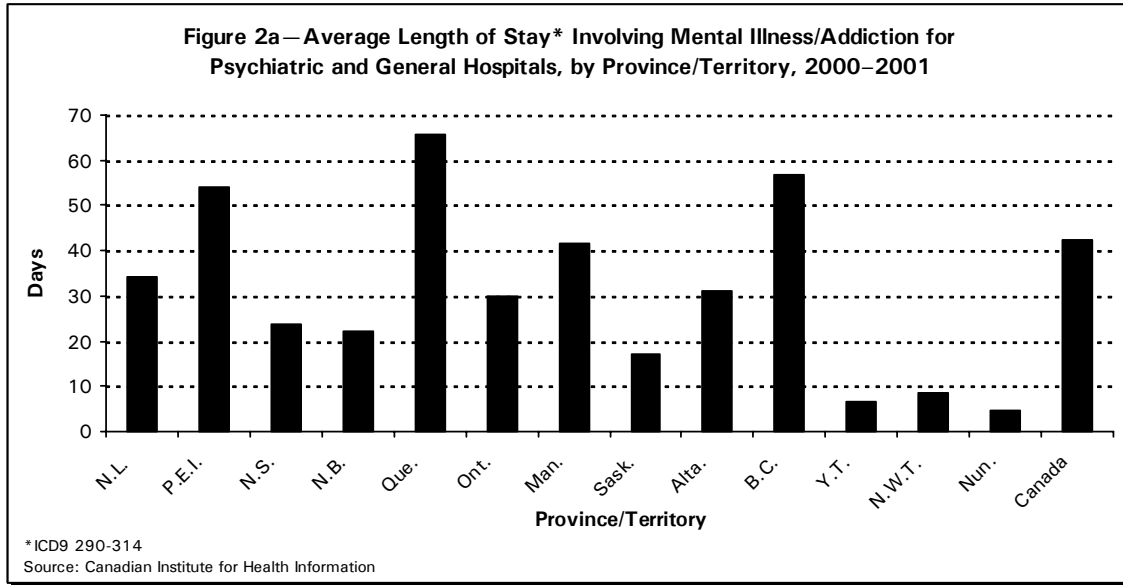
Examples involving high separation rates but short ALOS highlight one limitation of the HMDDB data. As a separation-based database as opposed to a person-based database, individuals are not identified in the HMDDB. Separations can represent a few individuals separated many times or many individuals separated only a few times, or some combination of the two. Although the relationship between separation rates and ALOS is of much interest, without the ability to do analysis of readmission rates, it is difficult to conclusively interpret indicator results.



Further drilling into the separation data by selected mental illness diagnoses shows that schizophrenia and depression are among the most common diagnoses for inpatient hospital services for mental illness/addiction in all broad age groups.

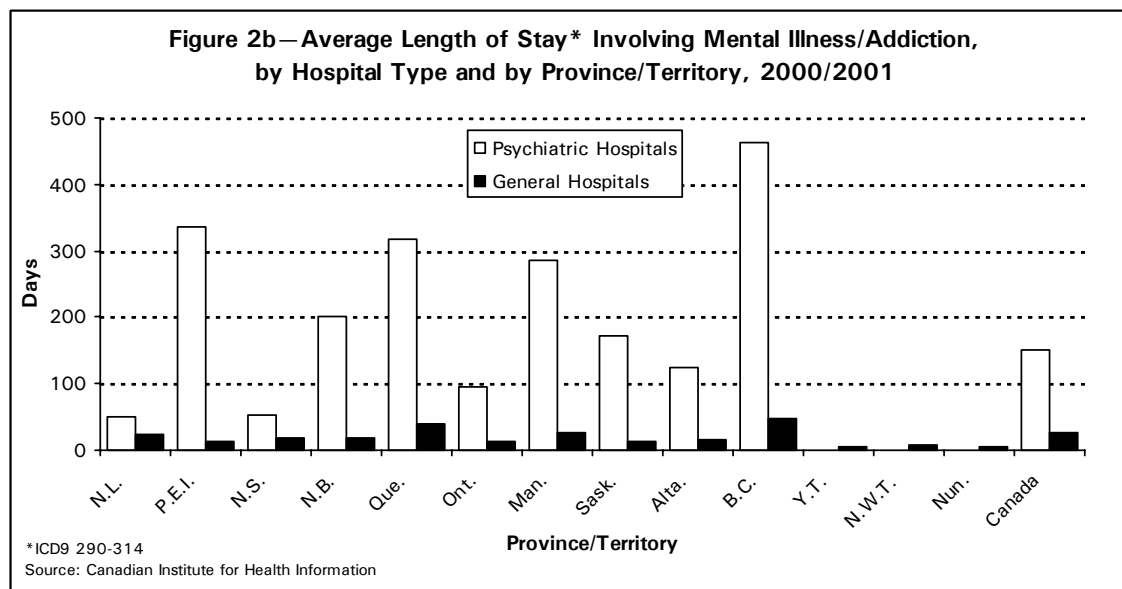
## 2. Average Length of Stay (ALOS) for Diagnoses Involving Mental Illness/Addiction by Province/Territory, 2000–2001

Information about the average length of time inpatients spend in hospital for the treatment of mental illness/addiction is useful for describing patterns in service use and delivery. ALOS is a frequently used indicator of utilization in health services.



ALOS ranges from 4.8 days (Nunavut) to 65.7 day (Quebec) at the provincial/territorial levels, with a Canadian ALOS of 42.4 days for separations reported in 2000–2001.

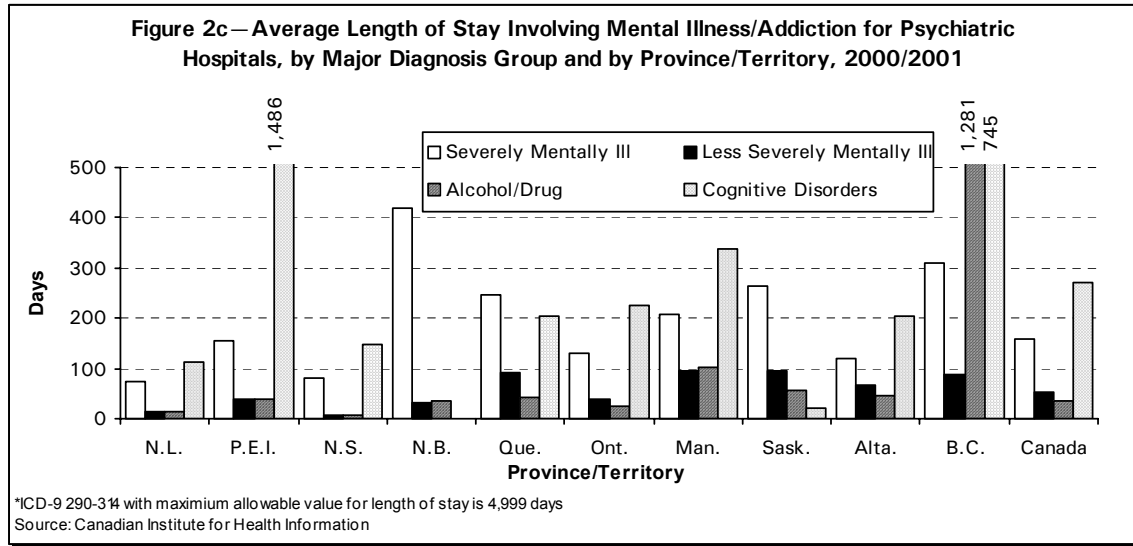
There are high average lengths of stay for some provinces. The care and treatment of some individuals suffering from conditions such as severe mental illness or cognitive disorders can sometimes involve stays in hospital of years or even decades. The separation of as few as one inpatient with an extremely long length of stay has a significant impact in increasing the average length of stay and the days stay indicators. The effect of a few such separations of inpatients with long lengths of stay are visible in the results for Prince Edward Island (P.E.I.), Quebec (Que.) and British Columbia (B.C.). To add context to these results, the dynamics between separation rates and length of stay are further discussed in the next section of the report.



ALOS differs a great deal between general and psychiatric hospitals, with the longer ALOS for the inpatient treatment of mental illness/addiction occurring in psychiatric hospitals. The short ALOS seen in the results for the territories, where there are no psychiatric hospitals, further illustrates this pattern.

The Yukon, N.W.T. and Nunavut do not have psychiatric hospitals. Inpatients are treated in general hospitals; those requiring treatment in psychiatric hospitals travel to the provinces to receive such services. A provincial/territorial analysis of patterns of inflow and outflow of psychiatric hospital inpatients to and from other provinces/territories showed that the total of these separations represented less than 1% of all separations. The greatest inflow of inpatients was to Ontario, primarily from British Columbia, Quebec and Manitoba. Inpatients leaving the Territories received treatment in Alberta, Manitoba and Ontario.

The analysis of inflow/outflow patterns cannot presently be done for general hospital separations because separations with residence postal codes outside of the province of hospitalization are not captured in the Hospital Morbidity Database portion (general hospital data) of the HMDDB.



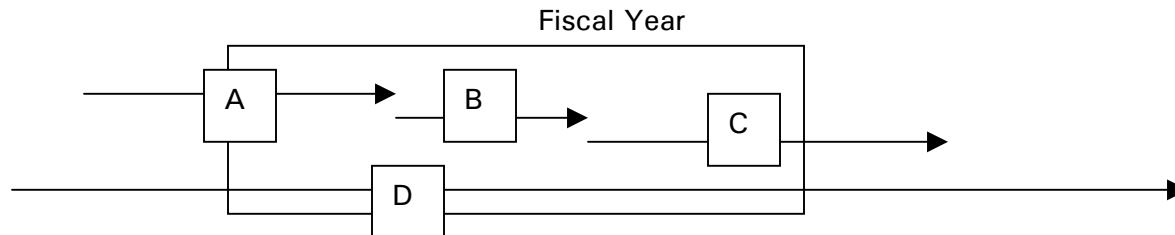
ALOS in psychiatric hospitals, broken down by diagnosis groupings, shows that the longer ALOS are generally attributable to severe mental illness and cognitive disorders. As previously identified, individuals with severe mental illness or cognitive disorders may periodically have extremely long lengths of stay. The impact of the separation of one or more patients with a long length of stay can be seen in the results, particularly in Prince Edward Island (P.E.I.) and British Columbia (B.C.).

## The Dynamics Between Separation Rate and Length of Stay

More information is needed to fully describe the service delivery dynamics between general and psychiatric hospitals. A look at days stay patterns in relation to separation rate is necessary to better understand the distribution of service delivery activity and add context to the interpretation of the data.

As an event-based database, the total days stay of inpatients in general and psychiatric hospitals for the treatment of mental illness/addiction is reported in the fiscal year of separation.

Typical patterns for inpatient days stay are as follows:



A, B, C, D = Inpatients  
 → = Days stay until separation

In the given fiscal year, the total length of stay of inpatients A and B, who are separated within the fiscal year, would be reported. Inpatient A may have been an inpatient for as little as a few days prior to the beginning of the fiscal year, or as much as many decades. Inpatient B had a stay that began and ended within the fiscal year. The days stay for neither inpatient C nor D will be reported in the fiscal year, despite the fact that they are using hospital services for all or part of the fiscal year. The days for inpatients C and D will be reported in the year they are separated. These patterns of length of stay have a significant impact when only one year of data are analyzed. When trend analysis is done using multiple years of data, the impact is reduced because the patterns are present in every year of data.

With an understanding of how length of stay is captured in the database, the next consideration is the distinction between the patterns of length of stay between psychiatric and general hospitals. Tables A and B show the years in which inpatients who were separated in fiscal year 2000–2001 were admitted to hospital.

There are differences in patterns of length of stay between psychiatric and general hospitals, and across provinces/territories. In the psychiatric hospitals, a higher proportion of inpatients separated in fiscal year 2000–2001 were admitted prior to the year of separation. The service delivery pattern for psychiatric hospitals includes fewer separations but longer lengths of stay. Provincial differences are attributable to differences in provincial/territorial health services administration such that in some provinces, some patients might be treated long-term in a psychiatric hospital whereas in other provinces they might receive treatment in other types of residential care facilities. In Table A, the results for Quebec are more striking because the results for other provinces had to be suppressed either because the cell size was smaller than 5 (less than 5 events reported)<sup>8</sup> or because the cell had to be suppressed to prevent residual disclosure (the ability to calculate the value of a cell using other data provided in the table).

<sup>8</sup> For more information about CIHI's privacy guidelines, please see the Methodological Notes and/or visit [www.cihi.ca](http://www.cihi.ca) to view the document entitled *Privacy and Confidentiality of Health Information at CIHI*.



**Table A Psychiatric Hospital Inpatient Admissions\* Involving Mental Illness/Addiction by Fiscal Year for Inpatients Separated in Fiscal Year 2000–2001**

	1920–1962	1963–1982	1983–1992	1993–1997	1998–1999	2000–2001	Total
N.L.			...	...	95	1,205	1,309
P.E.I.	...	...	...	...	21	178	207
N.S.			...	...	82	738	825
N.B.			...	...	20	124	151
Que.	30	46	55	44	561	3,816	4,552
Ont.	...	...	51	197	1,743	12,293	14,304
Man.	...	...	6	8	45	390	455
Sask.			...	...	22	142	173
Alta.	...		...	29	453	2,128	2,621
B.C.	...	...	15	48	186	357	612
<b>Total</b>	<b>41</b>	<b>74</b>	<b>152</b>	<b>343</b>	<b>3,228</b>	<b>21,371</b>	<b>25,209</b>

Small cell sizes have been suppressed.

\* ICD9 290-314

**Table B General Hospital Inpatient Admissions\* Involving Mental Illness/Addiction by Fiscal Year for Inpatients Separated in Fiscal Year 2000–2001**

	1920–1962	1963–1982	1983–1992	1993–1997	1998–1999	2000–2001	Total
N.L.		...	...	...	120	2,198	2,323
P.E.I.					45	1,359	1,404
N.S.			...	...	189	3,919	4,110
N.B.			...	...	250	5,515	5,771
Que.		...	...	64	2,359	39,755	42,291
Ont.					1,825	53,396	55,221
Man.			...	...	417	6,303	6,725
Sask.				...	...	6,595	6,838
Alta.					666	15,235	15,901
B.C.		...	...	324	1,772	26,192	28,327
Y.T./N.W.T./Nun.				...	...	824	845
<b>Total</b>	<b>0</b>	<b>24</b>	<b>134</b>	<b>403</b>	<b>7,904</b>	<b>161,291</b>	<b>169,756</b>

Small cell sizes have been suppressed.

\* ICD9 290-314

Tables C and D show the relationship between number of separations and total days stay between psychiatric and general hospitals.

**Table C Percentage of Separations\* and Days Stay Occurring Prior to the Year of Separation in Psychiatric Hospitals, 2000–2001**

	Number of separations* in FY 2000–2001	Number of Separations* admitted prior to FY 2000–2001	% of Separation* admitted Prior to FY 2000–2001	Total Days Stay*	Days Stay* Prior to FY 2000–2001	% of days stay* prior to FY 2000–2001
N.L.	1,309	104	7.9%	66,732	31,935	47.9%
P.E.I.	207	29	14.0%	69,421	62,021	89.3%
N.S.	825	87	10.5%	44,333	21,807	49.2%
N.B.	151	27	17.9%	30,265	23,393	77.3%
Que.	4,552	736	16.2%	1,447,215	1,258,362	87.0%
Ont.	14,304	2,011	14.1%	1,374,477	817,465	59.5%
Man.	455	65	14.3%	129,644	112,654	86.9%
Sask.	173	31	17.9%	29,619	22,282	75.2%
Alta.	2,621	493	18.8%	324,067	190,586	58.8%
B.C.	612	255	41.7%	283,009	227,916	80.5%
<b>Total</b>	<b>25,209</b>	<b>3,838</b>	<b>15.2%</b>	<b>3,798,782</b>	<b>2,768,421</b>	<b>72.9%</b>

\*ICD9 290-314

**Table D Percentage of Separations\* and Days Stay Occurring Prior to the Year of Separation in General Hospitals, 2000–2001**

	Number of separations* in FY 2000–2001	Number of Separations* admitted prior to FY 2000–2001	% of Separation* admitted Prior to FY 2000–2001	Total Days Stay*	Days Stay* Prior to FY 2000–2001	% of days stay* prior to FY 2000–2001
N.L.	2,323	125	5.4%	57,749	25,315	43.8%
P.E.I.	1,404	45	3.2%	17,393	1,199	6.9%
N.S.	4,110	191	4.6%	71,877	13,356	18.6%
N.B.	5,771	256	4.4%	100,205	16,359	16.3%
Que.	42,291	2,536	6.0%	1,631,543	788,104	48.3%
Ont.	55,221	1,825	3.3%	697,594	36,328	5.2%
Man.	6,725	422	6.3%	169,970	30,013	17.7%
Sask.	6,838	243	3.6%	90,034	8,557	9.5%
Alta.	15,901	666	4.2%	255,452	15,969	6.3%
B.C.	28,327	2,135	7.5%	1,363,545	798,702	58.6%
Y.T./N.W.T./Nun.	845	21	2.5%	6,529	1,182	18.1%
<b>Total</b>	<b>169,756</b>	<b>8,465</b>	<b>5.0%</b>	<b>4,461,891</b>	<b>1,735,084</b>	<b>38.9%</b>

\*ICD9 290-314

In psychiatric hospitals, at the Canadian level, 15.2% of separations in the fiscal year 2000–2001 were for inpatients admitted prior to the year of separation. Approximately 73% of the days stay reported in 2000–2001 occurred prior to the fiscal year. The general hospital inpatient figures were considerably lower with 5.0% of separations and 38.9% of the days stay attributable to inpatients admitted prior to the year of separation.

Also of note is the considerable variation between the results for each province and the territories. Variation may be associated by a wide range of policy, resource and service delivery influences. In future, much could be learned through the use of trend data (multiple fiscal years of data), and by looking beyond the silos of inpatient hospital mental health/addiction services to better understand the relationship with other service delivery areas such as long term care, home care, outpatient, and community-based health services.

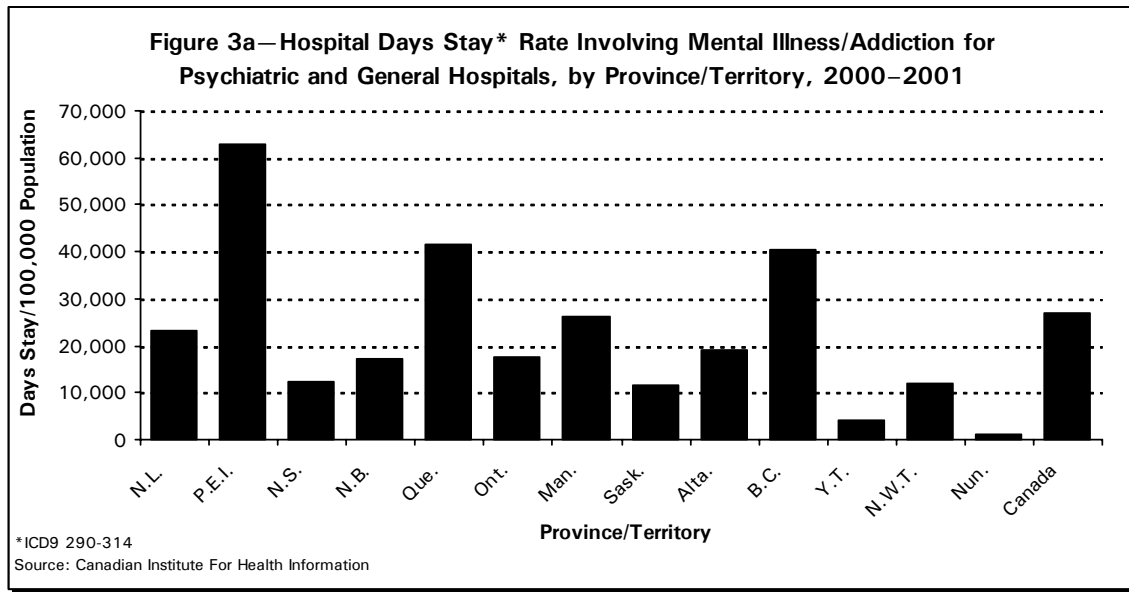
The database frame<sup>9</sup> also has an impact on indicator results. The HMHDB frame changes periodically due to hospital closures, reorganizations and re-designations. Administrative changes are usually dictated by provincial ministries of health. The collection of contextual information about administrative changes in each province/territory in each fiscal year is an important process that assists data users in making correct interpretations of the data. Information about frame changes affecting the HMHDB by fiscal year, by province, can be obtained from CIHI. The effect of administrative changes will be further discussed in the analysis of Indicator 5 (Percentage of General Hospital Total Days Stay Involving Mental Illness/Addiction).

### **3. Hospital Days Stay Rate Involving Mental Illness/Addiction by Province/Territory, 2000–2001**

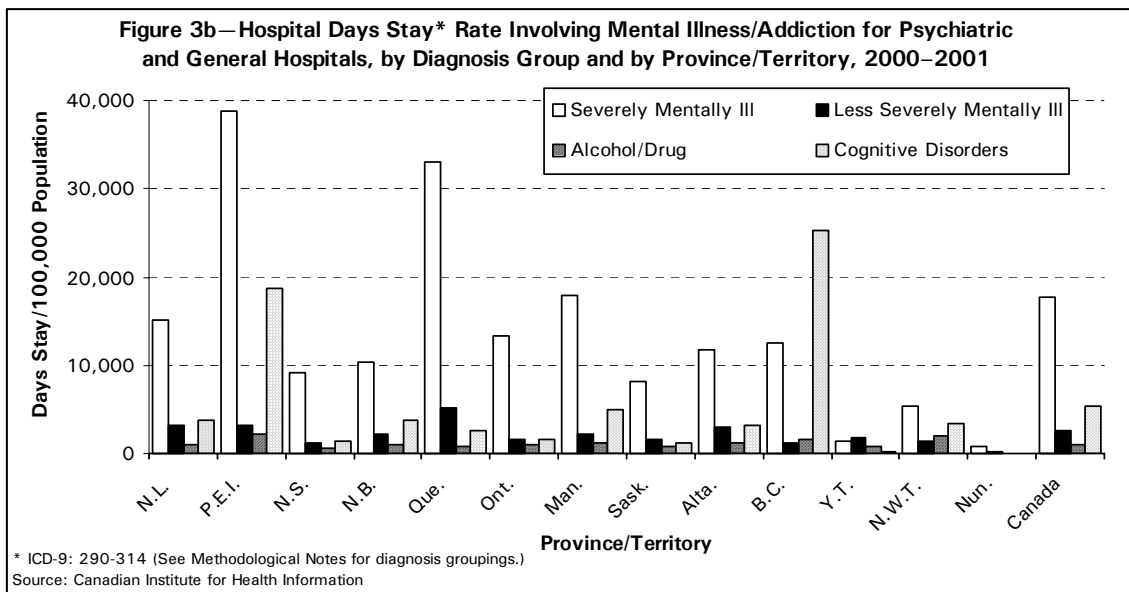
Hospital days stay rates provide a basis for inter-provincial/territorial comparisons of utilization of hospital inpatient services for treatment of mental illness/addiction. Any or all of the variables discussed earlier in the report can influence wide ranging provincial/territorial results for this indicator.

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<sup>9</sup> A frame is a list of entities that supply data. Generally speaking, the frame for the HMHDB includes Canadian publicly-funded general and psychiatric hospitals. For more information about the HMHDB frame, see the Methodological Notes.

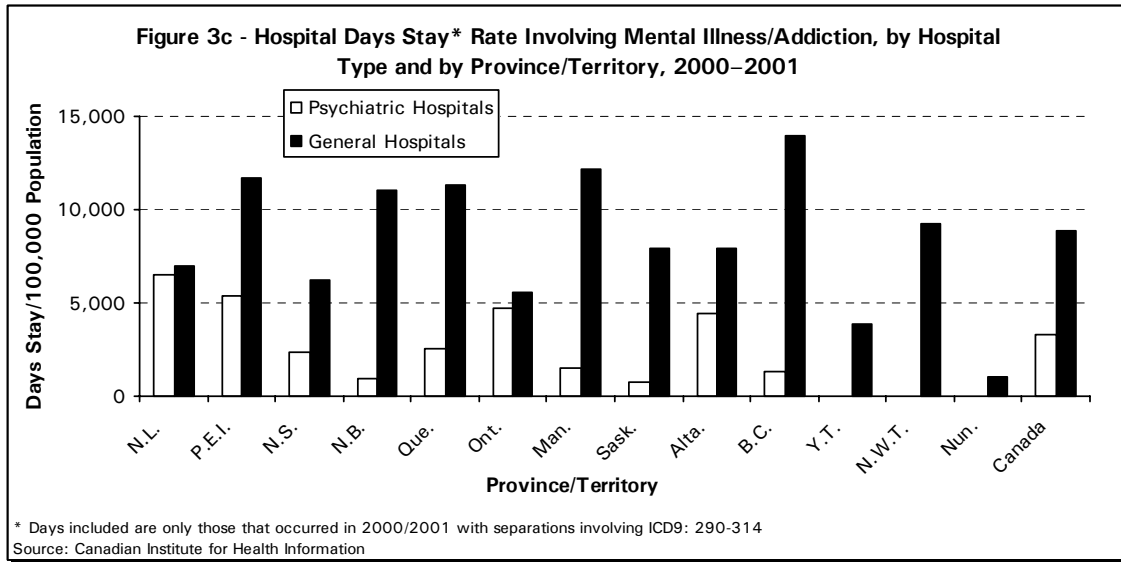


In 2000–2001, the hospital days stay rates varied between 1,045 days stay/100,000 population (Nunavut) to 62,858 days stay/100,000 population (Prince Edward Island) for the provinces/territories. The Canadian level was 26,769 days stay/100,000 population. The factors that affect ALOS, as discussed in Indicator 2, also apply to Hospital Days Stay Rate.



When days stay rate is broken down by diagnosis groupings in general and psychiatric hospitals, in the majority of provinces the days stay rate for mental illness/addiction was highest for severe mental illness.

Previously discussed was the impact on indicators, such as average length of stay and days stay rate, of the separation of one or more inpatients with extremely long lengths of stay. The impact of a few such separations is visible in the results for Prince Edward Island, Quebec and British Columbia.



Separations with associated days stay occurring prior to the beginning of the fiscal year have a significant effect on the data and was previously discussed. To more closely examine this effect, Figure 3c was developed to illustrate the days stay rate by hospital type when only the days stay occurring *within* the fiscal year are included.

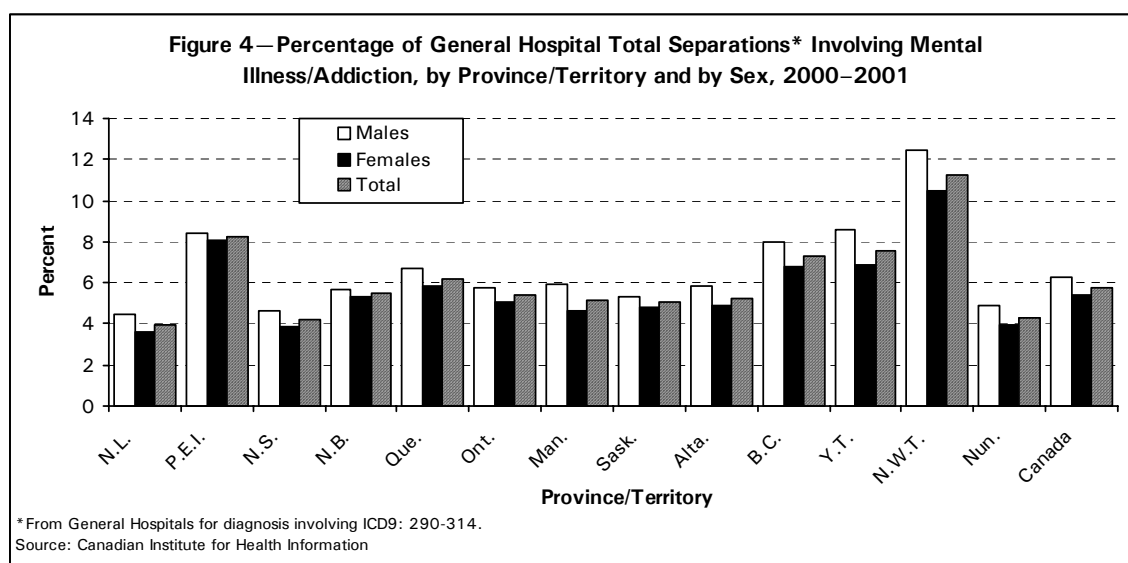
When only the days stay occurring *within* the fiscal year are included, the days stay rate in psychiatric hospitals is lower than that for general hospitals. This reflects the lower separation rates and the longer lengths of stay typical of psychiatric hospital services, and the fact that the majority of inpatients treated in general hospitals are separated in the same fiscal year in which they are admitted.

Retrospective analysis of historical data suggests that 99% of cases admitted in a given fiscal year are separated within 1 year for general hospital cases and within 2 years for psychiatric hospital cases.

#### 4. Percent of General Hospital Total Separations Involving Mental Illness/Addiction by Province/Territory, 2000–2001<sup>10</sup>

This indicator is calculated for general hospitals only. The assumption is made that for psychiatric hospitals, 100% of separations involve mental illness/addiction.

Although only a fraction of individuals suffering from mental illness/addiction are treated in hospitals as inpatients, the extent to which general hospital separations are associated with the treatment of mental illness/addiction can lead to questions about the existence of, and linkages with, outpatient and community-based mental health and addiction services. This indicator can also raise questions about population health such as the incidence and/or prevalence of disease in one geographic area versus another.



The percentage of general hospital separations for mental illness/addiction varies from 4.0% (Newfoundland and Labrador) to 11.3% (N.W.T.) across provinces/territories. In Canada, the percentage of general hospital separations for mental illness/addiction was 5.8% for 2000–2001.

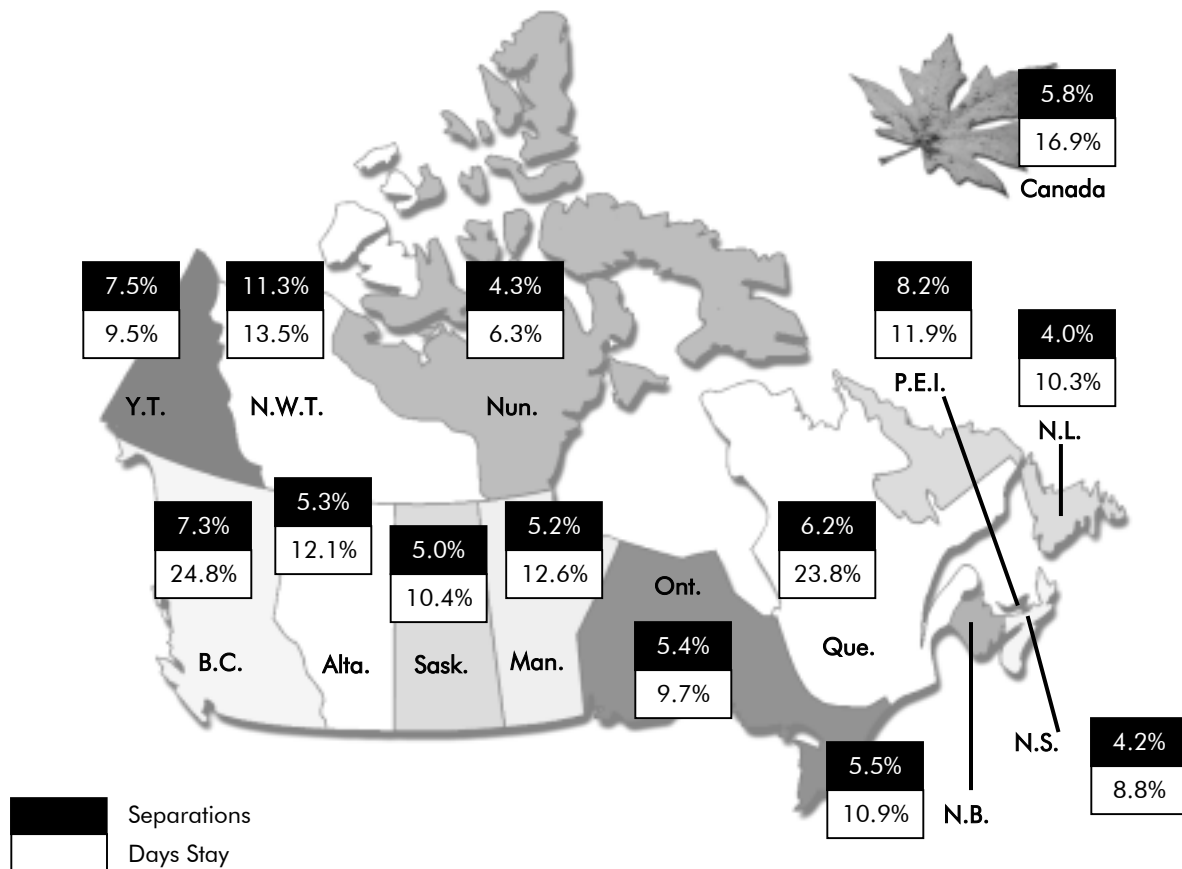
#### 5. Percentage of General Hospital Total Days Stay Involving Mental Illness/Addiction by Province/Territory, 2000–2001

This indicator is calculated for general hospitals only. The assumption is made that for psychiatric hospitals, 100% of days stay involve mental illness/addiction.

Information about the amount of general hospital inpatient services that are attributable to mental illness/addiction is useful for planning and managing health services.

<sup>10</sup> The results for Indicator 4 have not been age-standardized, as per CIHI and Statistics Canada practices. Age-standardized results are available from CIHI upon request.

**Figure 5. Percentage of Hospital Separations and Percentage of Hospital Days Stay for Mental Illness/Addiction in General Hospitals, by Province/Territory, 2000–2001**



As previously discussed, indicators of separation rates and length of stay inform each other. Similarly, viewed in conjunction, percent of general hospital separations and percent of general hospital total days stay provide an informative view of the relationship between the number of separations for mental illness/addiction and the relative utilization of general hospital resources.

As shown in Figure 5, in every province and territory, the percentage of total hospital days stay in general hospitals is greater than the percentage of general hospital separations involving mental illness/addiction. Treatment of mental illness/addiction can be associated with more days spent in hospital than other types of conditions that may be treated in general hospitals. This information has implications for planning and resource allocation. The results do not provide answers but they support the need for ongoing dialogue about the most effective and efficient ways of delivering health services to those suffering from mental illness/addiction.

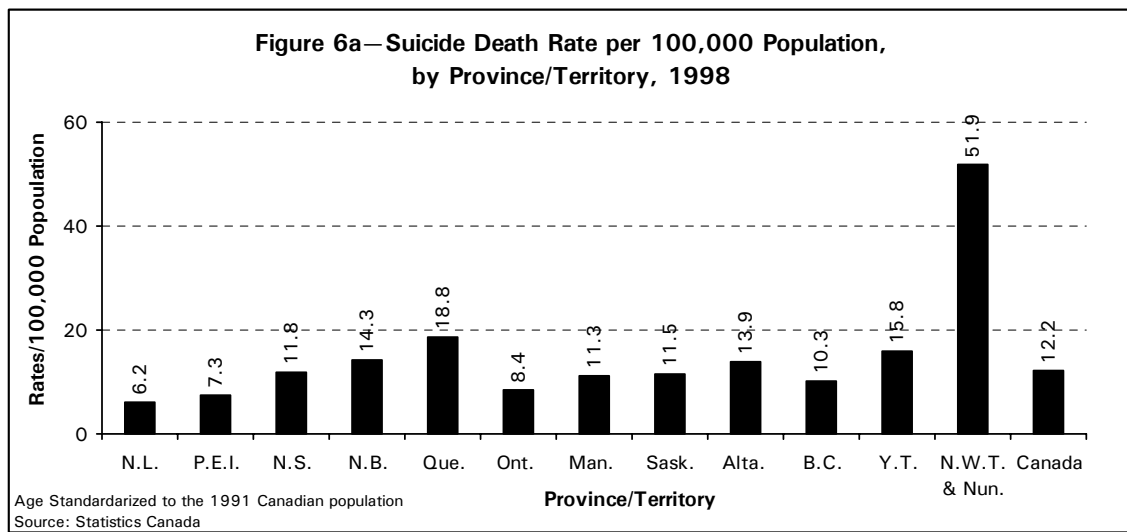
Hospital administrative changes may affect the data and therefore the comparability of the indicators. For instance, in 2000–2001 in Quebec, administrative changes took place in two hospitals such that all inpatients were separated on the same day in the fiscal year. In essence, nothing changed with respect to the health status of the patients or in clinical treatment practices; the only change was in administration, but the impact on the data was significant. If the Quebec data are adjusted such that the data from the two hospitals in question are removed, the percent of days stay for Quebec for 2000–2001 drops from 23.8% to 16.2%. These effects are visible from time to time in the data from other provinces as well. Factors such as administrative changes are particularly important to consider when doing trend analysis comparing multiple years of HMHDB data. The above example also illustrates the ongoing need to collect from the provinces/territories contextual information about administrative changes to hospital services.

### 6. Suicide Death Rate by Province/Territory for 1998

At the time this report was written, calendar year 1998 was the most current year of Suicide Death Rate data available from Statistics Canada.

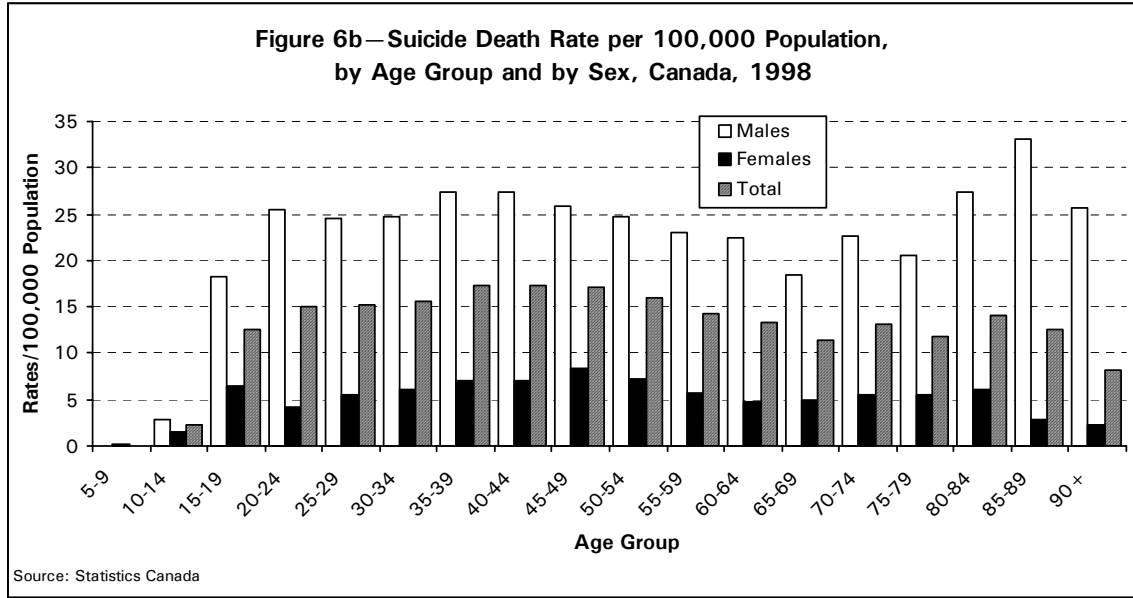
Suicide death rate can be interpreted as an indicator of multiple health and social processes and outcomes. As a health outcome, it can be used as an indicator of potential years of life lost or of population health. As a health system indicator, it can inform the degree of effectiveness of programs and services. Suicides are generally under-reported, resulting in conservative estimates of suicide death rate.

Suicide death rate is different in nature and usefulness from the other indicators included in the report. It was included as a CIHI Mental Health and Addiction Services indicator because it was identified as a meaningful outcome and/or health system indicator, and it could be calculated with existing Canadian data.





Provincial/territorial suicide death rates ranged from 6.2/100,000 population (Newfoundland) to 51.9/100,000 population (N.W.T./Nunavut)<sup>11</sup> with a Canadian rate of 12.2/100,000 population.



A breakdown of suicide death rate by 5-year age ranges and sex shows that males have a consistently higher rate of suicide than females. This, however, should not be confused with rates for attempted suicide, for which females in some age ranges have higher rates than males.<sup>12</sup> Suicides are most prevalent among males aged 20–49 years and 80+ years.

When the age ranges for suicide death rate are compared to the results for separation rates for selected diagnoses in Figure 1d, an association that warrants further analysis can be seen between the age ranges for suicide and the age ranges for peak separation rates for diagnoses such as schizophrenia and depression. Both schizophrenia and depression are strongly linked to suicide attempts and suicide.<sup>13</sup>

<sup>11</sup> N.W.T./Nunavut data is combined because, in 1998, the data was captured using the geographic boundaries as they were prior to the formation of Nunavut.

<sup>12</sup> Health Canada. A Report on Mental Illnesses in Canada. Ottawa, Canada 2002.

<sup>13</sup> Health Canada. A Report on Mental Illnesses in Canada. Ottawa, Canada 2002.

## Focus on Schizophrenia

This section, focussing on Schizophrenia, demonstrates how the results of the indicators can be used to confirm assumptions and raise questions about the delivery and use of hospital mental health services for the treatment of one form of severe mental illness.

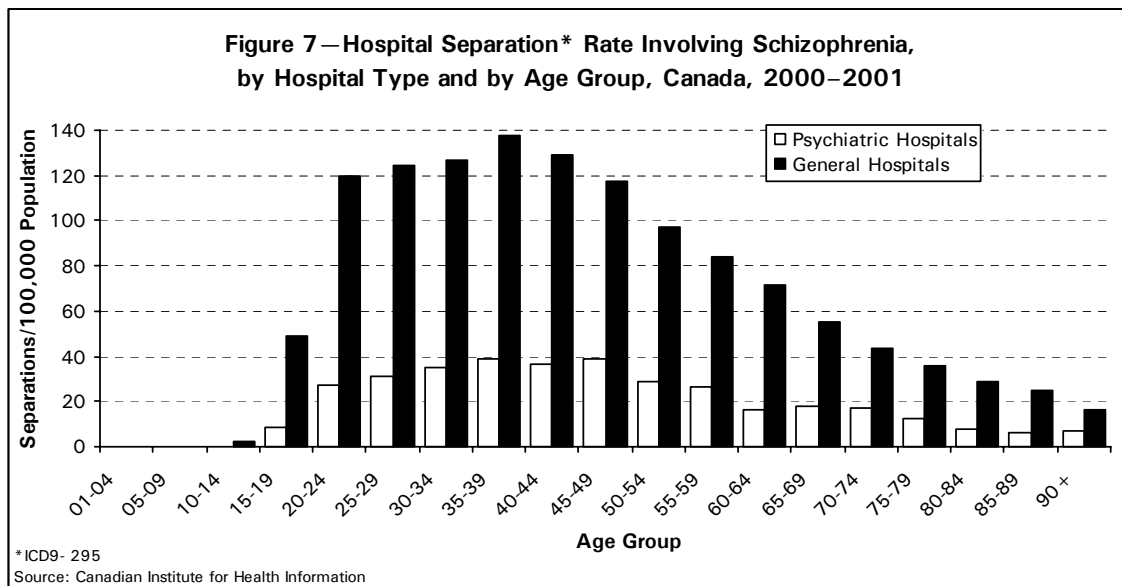
### Schizophrenia

Schizophrenia is a severe mental illness that affects approximately 1% of the Canadian population,<sup>14</sup> or about 1 in 100 people. This treatable disease usually develops in early to mid-adulthood and has serious health and social implications for affected individuals, their families and friends, communities, and the health care system. The treatment of schizophrenia involves a complex network of supports that can include institutional and community health, housing, education, employment and social services.

The following analysis is done through the calculation of the indicators using HMHDB data and variables such as hospital type, diagnosis, age, and sex.

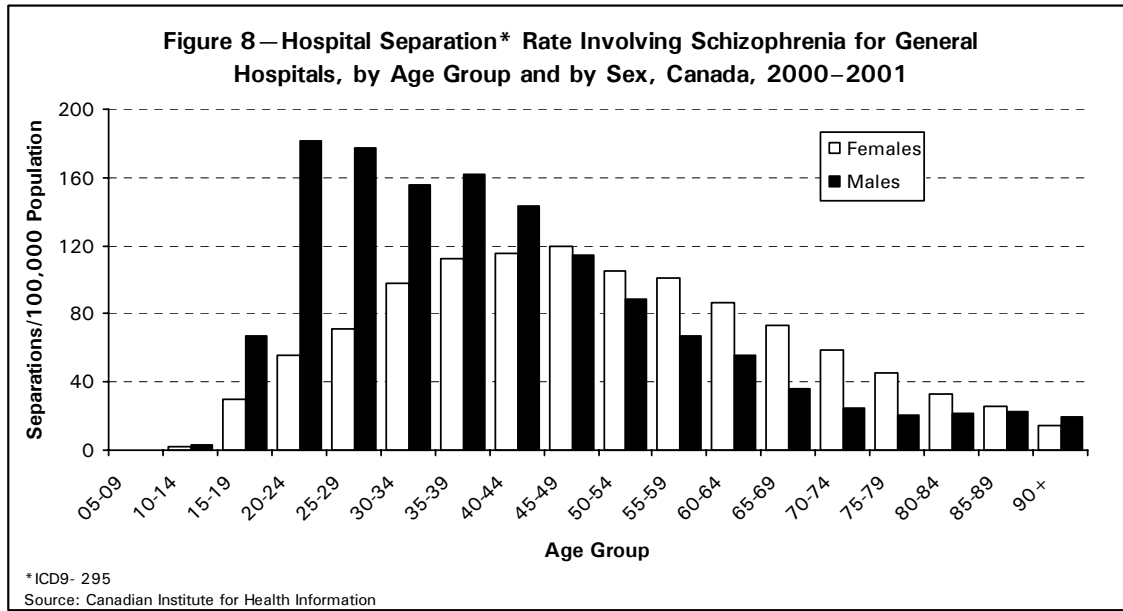
### Trends in Inpatient Health Service Use for the Treatment of Schizophrenia

Among provinces, the 2000/2001 separation rate involving schizophrenia ranged from 76.1 per 100,000 population (Nova Scotia) to 112.7 per 100,000 population (Saskatchewan).



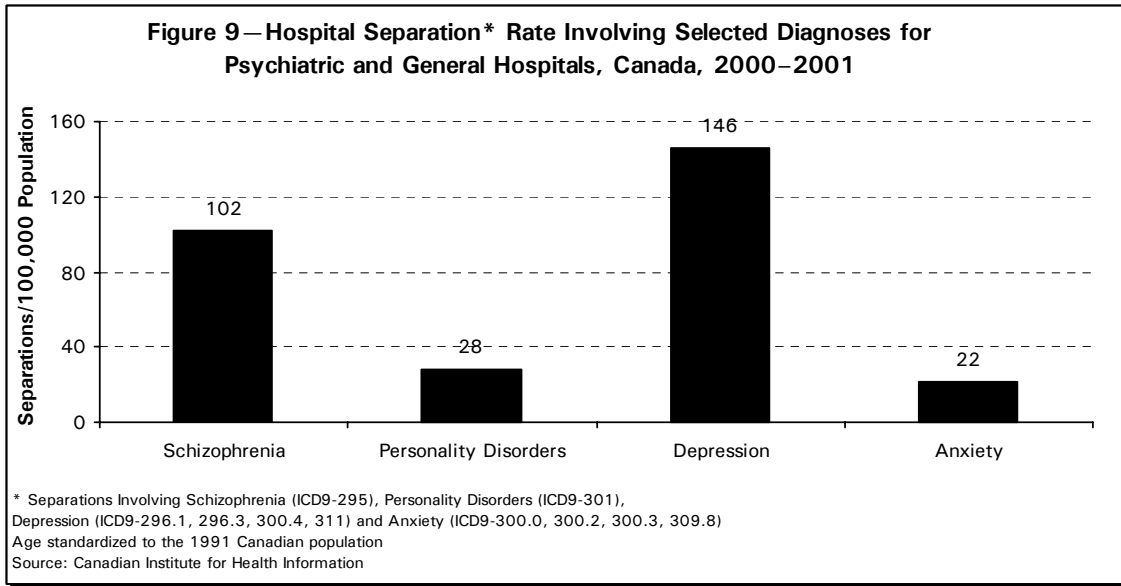
<sup>14</sup> From the World Wide Web at <http://www.schizophrenia.ca/> April, 2003.

The majority of separations for individuals with a primary diagnosis of schizophrenia occur in general hospitals. Individuals aged 20–49 are most frequently separated, which corresponds roughly with the age of onset of the disease. There is a similar distribution for separation rates and age ranges between general and psychiatric hospitals.

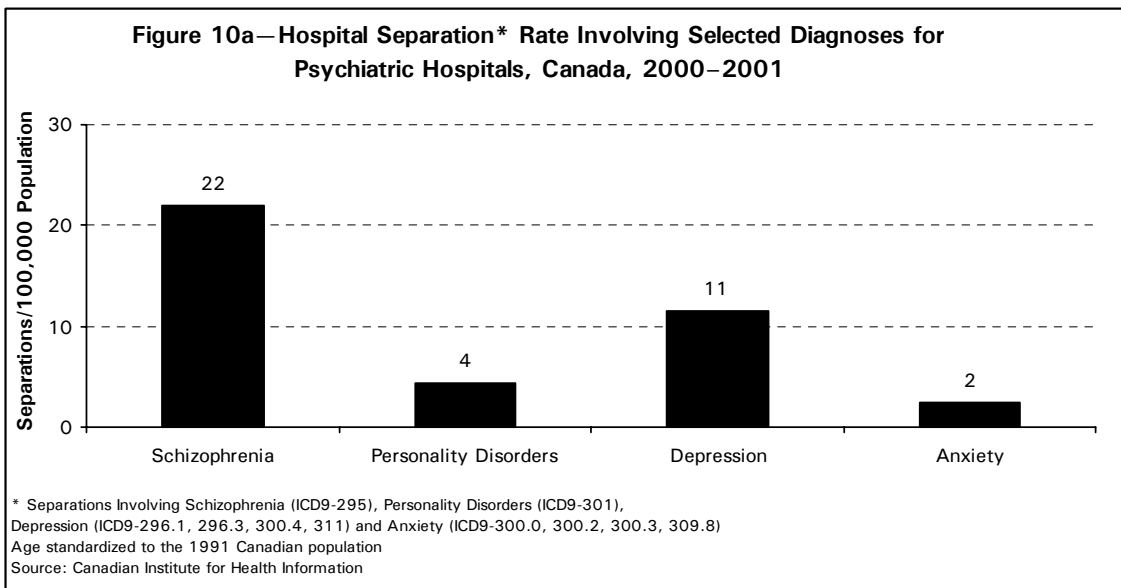


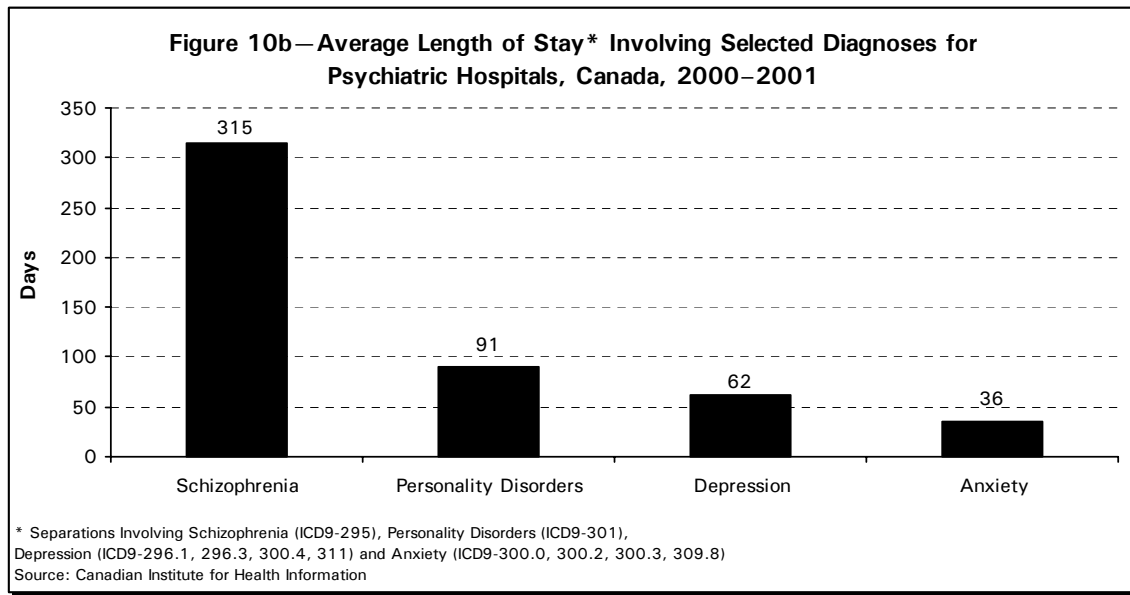
Both males and females are affected by schizophrenia but females tend to develop or are diagnosed with the disease later in life compared to males.<sup>15</sup> Analysis of general hospital separation data by sex reflects this recognized disease pattern with separations for males peaking between ages 20–29 and for females between the ages of 40–49.

<sup>15</sup> Health Canada. A Report on Mental Illnesses in Canada. Ottawa, Canada 2002



In 2000–2001 in general and psychiatric hospitals combined, schizophrenia accounted for 102 separations/100,000 population. Results for psychiatric hospitals, which are characterized by the provision of specialized treatment for mental illness and longer lengths of stay, are examined below.

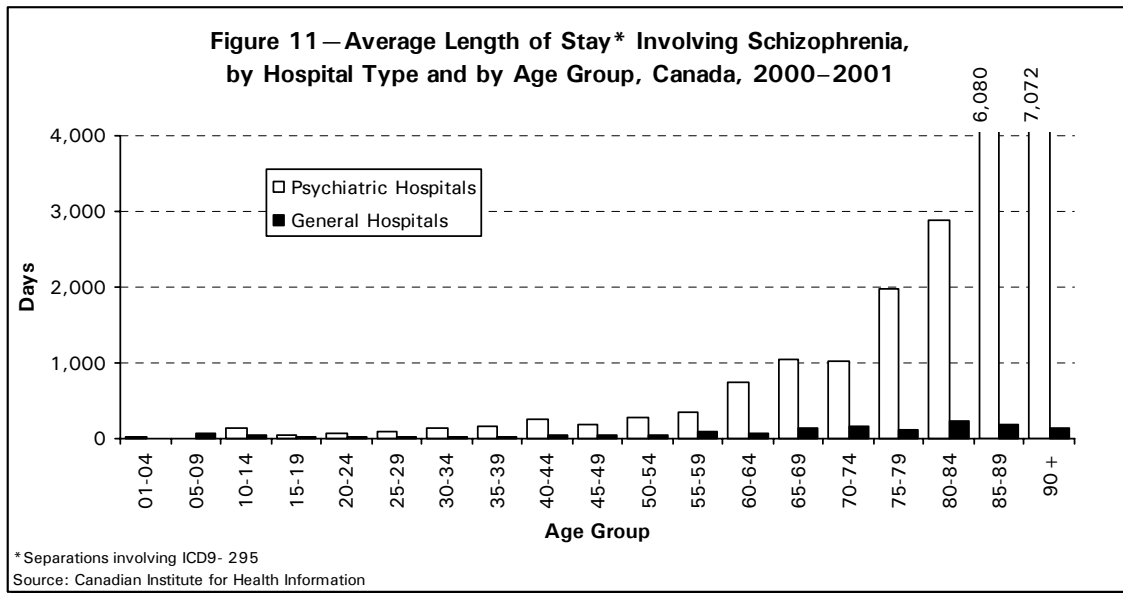




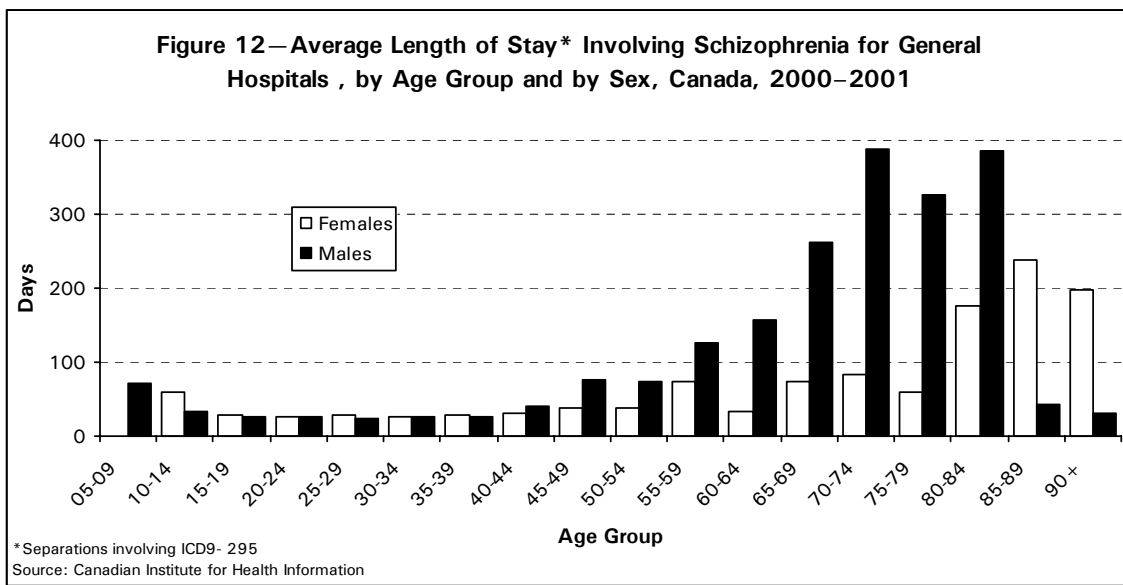
Whereas anxiety disorders and mood disorders such as depression affect up to 12% and 8% of the population respectively,<sup>16</sup> schizophrenia, which affects approximately 1% of the population, is associated with high separation rates and significantly longer hospital inpatient stays. In FY 2000–2001, the separation rate for schizophrenia in psychiatric hospitals was 22/100, 000 population, which was double that for depression. ALOS for inpatients with a primary diagnosis of schizophrenia was over six times that for depression and 33 times greater than for anxiety disorders. Health and social supports required by individuals suffering from schizophrenia can be extremely complex leading to the need for hospitalization and to longer ALOS while other forms of severe mental illness may be treated with less need for extended inpatient services.

<sup>16</sup> Health Canada. A Report on Mental Illnesses in Canada. Ottawa, Canada 2002

## Average Length of Stay for Schizophrenia by Hospital Type and by Sex

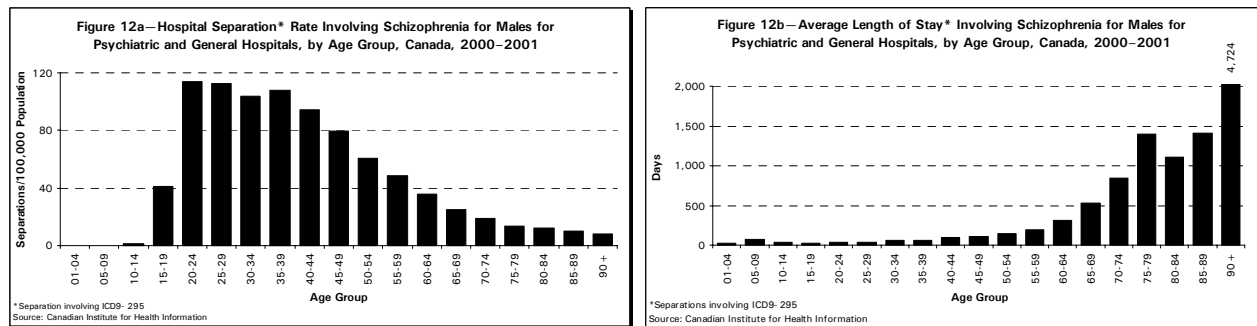


The high ALOS in psychiatric hospitals in upper age ranges (80–95+ years) are for patients who have spent extremely long periods as inpatients, and who were most likely separated from hospital due to death.



The ALOS in general hospitals of inpatients with a primary diagnosis of schizophrenia aged 15–44 years, which age range corresponds to the peak of separation rates for schizophrenia, was short at 27 days. Older inpatients represented fewer separations but longer lengths of stay. Further analysis and data from a broader range of health and social services could contribute to a more comprehensive interpretation of these patterns. Although not possible with existing data, the capacity to do analysis of readmission rates would further enhance our understanding of health service use for the treatment of schizophrenia.

## The Relationship Between Separation Rates, Average Length of Stay, and Age for Males



A look specifically at males being treated in psychiatric hospitals for a primary diagnosis of schizophrenia shows an inverse association between separation rates and ALOS. In the lower age ranges, where onset of the disease tends to occur, there are many separations with short ALOS. In higher age ranges, there are fewer separations with increasingly long ALOS. The longer stays shown in the higher age ranges may, in part, speak to the more extensive health care needs of older individuals, a decrease in available family and community supports as individuals age, and/or acuity of the disease. To correctly interpret the meaning of the data, more comprehensive data and more analysis is necessary.

## Conclusions of the Focus on Schizophrenia

The analysis of separation rate and ALOS data for schizophrenia include the following highlights:

- Most separations involving a primary diagnosis of schizophrenia occur in general hospitals.
- The separation rates are aligned with the clinical age of onset of the disease in both males and females.
- The treatment of schizophrenia can require longer stays in hospital compared to other, more prevalent severe mental illness.

- Separations for younger individuals suffering from schizophrenia are frequent, for shorter lengths of stay than for older individuals.
- Those suffering from schizophrenia may experience lengths of stay of years or even decades as inpatients.

The existing Canadian data from the HMDDB can be used to do similar analysis for other ICD-9 Chapter V diagnoses at regional, provincial and national levels, using age and sex variables. To do more comprehensive analysis, and to answer the questions that these indicators generate around outcomes and coordination of services, and access to and coordination of other social, housing, educational, and employment services for individuals suffering from mental illness, much health information development work is still to be done.



## Methodological Notes

### Comparability

Caution must be exercised when comparing multiple years of HMHDB data, or data across jurisdictions, because of regular and ongoing changes in the HMHDB frame. Frame changes result from events such as hospital closures, restructuring of the way mental health services are delivered, hospital mergers, etc. In Canada, the last two decades have seen ongoing changes in mental health service delivery, and as a result, there has been significant change, year over year, in the HMHDB frame.<sup>17</sup>

### Privacy and Confidentiality

The Privacy Secretariat at CIHI has developed a set of guidelines to safeguard the privacy and confidentiality of data received by CIHI. These guidelines govern the release of data in publications, media releases, the CIHI website and through ad hoc requests and special studies. In compliance with the guidelines, it is required that there be a minimum of five observations per cell. In situations where information may potentially identify an individual or an institution, directly or through the combination or linking of data, data must be taken to higher levels of aggregation to avoid disclosure. For more information on CIHI's Privacy and Confidentiality policies, see [www.cihi.ca](http://www.cihi.ca).

### Other Terms

The following terms are used regularly in the report and the following definitions apply:

#### *General Hospital*

A publicly-funded hospital which provides primarily for the diagnosis and treatment of inpatients and clients with a wide range of diseases or injuries. The services of a general hospital are not restricted to a specific age group or sex. Within the HMHDB frame, facility types such as non-teaching general hospitals with or without long-term care units, paediatric hospitals, teaching general hospitals, and specialty institutions (i.e. cancer, cardiology, maternity, extended and chronic care, rehabilitation hospitals, neurological institutes, orthopaedic hospitals, etc) are included. Contact CIHI for more information about the facilities included in the HMHDB frame.

#### *Average Length of Stay (ALOS)*

The average length of stay in hospital is calculated by taking the total number of inpatient days and dividing it by the associated total number of separations (departures from hospital whether alive or deceased). In the HMHDB, some separations have lengths of stay of years and, in some cases, decades. As a result, the ALOS for mental illness/addiction calculated using HMHDB data can be extremely high due to the separation of one or more patients with exceptionally long lengths of stay. See Days Stay.

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<sup>17</sup> A frame is a list of entities that supply data. Generally speaking, the frame for the HMHDB includes Canadian publicly-funded general and psychiatric hospitals. For more information about the HMHDB frame, see the Methodological Notes.

### *Fiscal year*

The fiscal year of the Hospital Mental Health Database is designated as the period April 1–March 31. For example, fiscal year 2000 implies the twelve months of April 1, 2000–March 31, 2001.

### *Days Stay*

Length of hospitalisation from date of admission to date of separation. See Average Length of Stay.

### *Hospital Separation*

A hospital separation is the departure of an inpatient from hospital, whether alive or dead. Hospital separation records are completed by the hospital for each patient who is discharged or who dies in hospital. Hospital separation records provide data on the relative frequency of the principal causes of hospitalization for those who leave hospital.

### *Hospital Separation Rate per 100,000 Population*

The hospital separation rate is a measure of hospital utilization. It is the total number of hospital separations for a particular subgroup (i.e. hospitalized for mental illness) that occur in an area over a specific time period divided by the population of the area during time frame, multiplied by a factor of 100,000.

### *Inpatient Psychiatric Services*

Psychiatric services provided on an inpatient basis within any general or psychiatric hospital.

### *International Classification of Diseases, 9th revision (ICD-9)*

A set of internationally accepted codes for classification of medical diagnoses and conditions; medical records staff use these codes when transcribing from physician written medical charts to the hospital database that is submitted to CIHI; charts may also be abstracted using ICD-9CM, that is, ICD-9 with clinical modifications. The Hospital Mental Health Database maps ICD-9CM coded diagnoses to ICD-9.

### *Patient Day*

Any day spent by an inpatient in a hospital. One patient day is equal to a stay of one day in hospital. The day of admission is counted as a patient day but the day of separation is not counted as a patient day. When the inpatient is admitted and separated on the same day, one patient day is counted.

### *Primary Diagnosis (Type 1)*

An ICD diagnosis describing important health conditions of the patient that usually have a significant influence on the patient's hospitalization (i.e. length of stay) and/or that significantly influences the management or treatment of the patient.

*Psychiatric Hospital*

In Canada, there is no standard definition of a psychiatric hospital. For the purposes of this report and CIHI data collection, psychiatric hospitals are medical hospitals that provide psychiatric services on an inpatient and/or outpatient basis, and that have been identified by the provinces as those that should participate in the CIHI Hospital Mental Health Survey.

*Separation Rate*

See Hospital Separation Rate per 100,000 population.

*Suicide*

The act of taking one's own life voluntarily and intentionally.

*Total Days Stay*

The accumulated patient days during the reporting period. Includes service recipients admitted in a previous reporting period.

## **Methods**

Data for fiscal year 2000–2001 were read into a Statistical Analysis Software (SAS) database. Only inpatients with a primary diagnosis of mental illness/addiction separated from psychiatric or general hospitals either through discharge or death were retained in the database. Preliminary data quality checks were performed to verify hospital participation and completeness of data. A number of derived variables were created in anticipation of calculating the indicators. These variables include age groupings, major diagnosis groupings, sex, length of stay, and hospital identification/address. The primary ICD-9 diagnosis field was used to classify separations into one of four major psychiatric/addiction categories.

The ICD-9 categories included the following:<sup>18</sup>

<b>Diagnosis Group Title</b>	<b>ICD Codes</b>	<b>Description</b>
Severely Mentally Ill	295	Schizophrenia Disorders
	296	Affective Psychosis
	297	Paranoid States
	298	Other nonorganic psychoses
	299	Psychoses with origin specific to childhood
	310	Specific nonpsychotic mental disorders due to organic brain damage
	311	Depressive disorder not elsewhere classified
Less Severely Mentally Ill	300	Neurotic disorders
	301	Personality disorders
	302	Sexual deviations and disorders
	306	Physiological malfunction arising from mental factors
	307	Special symptoms or syndromes not elsewhere classified
	308	Acute reaction to stress
	309	Adjustment reaction
	312	Disturbance of conduct not elsewhere classified
	313	Disturbance of emotions specific to childhood and adolescence
314	Hyperkinetic syndrome of childhood	
Alcohol and Drug	291	Alcoholic psychoses
	292	Drug psychoses
	303	Alcohol dependence syndrome
	304	Drug dependence
	305	Nondependent abuse of drugs
Cognitive Disorders	290	Senile and presenile organic psychotic conditions
	293	Transient organic psychotic conditions
	294	Other organic psychotic conditions (chronic)

<sup>18</sup> The diagnosis groups were determined based on those used in the following report:  
 Ministry of Health of British Columbia, Resource Utilization Management Report for Mental Health Reform in British Columbia. 2001.

## **Analysis**

### **Provincial Analysis**

The data were analyzed at the provincial level. All Canadian provinces/territories were included in the analysis. Hospital separation rates were age standardized to the 1991 Canadian population for the purpose of adjusting for varying provincial age distributions.

### **Regional Analysis**

The data were analyzed at the regional level. All regions with populations greater than 75,000 were included in the analysis. As Prince Edward Island, Manitoba, Saskatchewan, Alberta and British Columbia health region boundaries were re-drawn at various times in 2001 and 2002, the 2000 population estimates for health regions are based on boundary definitions as of April 1, 2003. Hospital separation rates were age standardized to the 1991 Canadian population to adjust for varying regional age distributions.

## Conclusion

The first report on *Hospital Mental Health Services in Canada* strives to achieve several goals. The report is intended to provide readers with an overview of the type of hospital mental illness/addiction data available at the national level, a sampling of the results of the provincial/territorial-level analysis of the CIHI mental health and addiction service indicators, and an introduction to the electronic data resources available through *Find A Statistic*. Through accomplishing these goals, CIHI hopes to raise awareness about current national mental health data, and generate interest in the data on the part of data users. It is hoped that increased awareness of, and interest in, the data will provide momentum for the development and collection of more comprehensive mental illness/addiction services data in the future.

CIHI will continue with annual reports on *Hospital Mental Health Services in Canada*. Future enhancements will include trend analysis using multiple years of data, and the expansion of the data available publicly through *Find A Statistic*.

More work needs to be done to further develop health information for mental health/addiction services at large. Future initiatives will focus on information that can be compiled from *new data sources*. New sources could include emerging CIHI databases, results of national surveys such as Statistics Canada's Canadian Community Health Survey, and data from standardized assessment instruments for institutional and eventually, community-based mental health and addiction services.

## For More Information

For additional information about hospital mental health data in Canada, please contact:

Consultant, Mental Health and Addiction Services  
Canadian Institute for Health Information  
200-377 Dalhousie Street  
Ottawa, Ontario K1N 9N8  
Tel: 613-241-7860  
Fax: 613-241-8120  
e-mail: [mentalhealth@cihi.ca](mailto:mentalhealth@cihi.ca)  
Web: [www.cihi.ca](http://www.cihi.ca)

## **Appendix A: Indicator Definitions**





# Mental Health and Addiction Services

## Indicator Definitions

### 1. Hospital separation rate involving mental illness/addiction, 2000–2001.

Numerator: Number of psychiatric/general hospital separations in province/territory/health region with primary diagnoses involving mental illness/addiction (ICD-9: 290–314) within fiscal year.

Denominator: Province/territory/health region population.

**Notes**: Hospital separation rates are age-standardized for October 1, 1991 Canadian population. Population estimates provided by Statistics Canada.

### 2. Average length of stay for diagnoses involving mental illness/addiction, 2000–2001.

Numerator: Total number of days stay for psychiatric/general hospital inpatients with primary diagnoses involving mental illness/addiction (ICD-9: 290-314) within a fiscal year.

Denominator: Total number of psychiatric/general hospital separations for primary diagnoses involving mental illness/addiction (ICD-9: 290-314) within a fiscal year.

### 3. Hospital days stay rate involving mental illness/addiction, 2000–2001.

Numerator: Total inpatient psychiatric/general hospitals days for primary diagnoses involving mental illness/addiction (ICD-9: 290-314) within fiscal year.

Denominator: Province/territory/health region population.

**Notes**: Population estimates provided by Statistics Canada.

### 4. Percentage of general hospital total separations involving mental illness/addiction, 2000–2001.

Numerator: Total number of general hospital separations with primary diagnoses involving mental illness/addiction (ICD-9: 290-314) within fiscal year.

Denominator: Total number of all general hospital separations within fiscal year.

**Notes**: Calculated for general hospitals only. An assumption is made that 100% of psychiatric hospital total separations involve mental illness/addiction.

**5. Percentage of general hospital total days stay involving mental illness/addiction, 2000–2001.**

Numerator: Total days stay in general hospitals for inpatients with primary diagnosis of mental illness/addiction (ICD-9: 290-314) within fiscal year.

Denominator: Total days stay for all inpatients in general hospitals within fiscal year.

**Notes**: Calculated for general hospitals only. An assumption is made that 100% of psychiatric hospital days stay involve mental illness/addiction.

**6. Suicide death rate, 1998.**

Numerator: The average number of suicides (ICD-9: E950-E959) in province/territory for three years of data (1997, 1998, 1999).

Denominator: Province/territory population estimates for 1998.

**Notes**: Age-standardized to the July 1, 1991 Canadian population. Suicide rates provided by Statistics Canada.

## **Appendix B: Advisory Group Members**



## **Advisory Group for the Report on *Hospital Mental Health Services in Canada***

**Kevin Barclay**

Senior Health Planner/Information  
Manager  
Champlain Health District

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## **Appendix C: Evaluation Form**







## Report on Hospital Mental Health Services

### Feedback Sheet

We welcome comments and suggestions on this report. Please complete this feedback sheet and return it to us at your earliest convenience.

**By Fax:** (613) 241-8120 Attention: Carolyn Pullen  
**By Mail:** Consultant, Mental Health and Addiction Services  
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#### 1. To what extent have you reviewed the report?

- Have browsed through the entire report
- Have browsed through the entire report and examined specific sections of the report
- Have examined the entire report

#### 2. How satisfied are you with the following aspects of the report?

- |                                  |                                     |                                      |                                   |                               |
|----------------------------------|-------------------------------------|--------------------------------------|-----------------------------------|-------------------------------|
| (a) Level of detail              | <input type="checkbox"/> Too Little | <input type="checkbox"/> About Right | <input type="checkbox"/> Too Much |                               |
| (b) Clarity/readability          | <input type="checkbox"/> Excellent  | <input type="checkbox"/> Good        | <input type="checkbox"/> Fair     | <input type="checkbox"/> Poor |
| (c) Organization/format          | <input type="checkbox"/> Excellent  | <input type="checkbox"/> Good        | <input type="checkbox"/> Fair     | <input type="checkbox"/> Poor |
| (d) Use of figures/graphs        | <input type="checkbox"/> Excellent  | <input type="checkbox"/> Good        | <input type="checkbox"/> Fair     | <input type="checkbox"/> Poor |
| (e) Quality of data and analysis | <input type="checkbox"/> Excellent  | <input type="checkbox"/> Good        | <input type="checkbox"/> Fair     | <input type="checkbox"/> Poor |
| (f) Appendix                     | <input type="checkbox"/> Excellent  | <input type="checkbox"/> Good        | <input type="checkbox"/> Fair     | <input type="checkbox"/> Poor |

#### 3. How useful did you find each section of the report?

1. Highlights of the Provincial/Territorial-Level Indicator Analysis  
 Very useful  Somewhat Useful  Not Useful  Did not review
2. Focus on Schizophrenia  
 Very useful  Somewhat Useful  Not Useful  Did not review
3. Methodological Notes  
 Very useful  Somewhat Useful  Not Useful  Did not review
4. Data Tables  
 Very useful  Somewhat Useful  Not Useful  Did not review
4. Find A Statistic at [www.cihi.ca](http://www.cihi.ca)  
 Very useful  Somewhat Useful  Not Useful  Did not review

#### 6. How have you, or are you likely to, use the information in this report?

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#### 7. How would you improve this report? What suggestions do you have for future reports?

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***Thank you for completing and returning this feedback form.***