REVISED 2007

MENTAL HEALTH

ECONOMIC STATISTICS

IN YOUR POCKET

AMHB
ALBERTA MENTAL HEALTH BOARD
. . . Advancing Mental Health

IHE
INSTITUTE OF HEALTH ECONOMICS
ALBERTA CANADA

The Alberta Mental Health Board is a provincial health authority that oversees and advances Alberta's mental health system, serves in an advisory capacity to the Minister of Health and Wellness, and works with health regions and others to address system-wide mental health priority issues that span national, provincial, regional and organizational boundaries.

The Institute of Health Economics (IHE) generates evidence-based knowledge from economic research and health technology assessments to provide policy and decision makers with the information they need to create effective health policies to address complex health care issues.

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FOREWORD

It is estimated that one in three Canadians will have a mental health problem at some point in their life. Many Canadians do not realize the impact that poor mental health has on families, communities, health systems and the economy.

Mental health is as important as physical health to a person's well-being, but understanding and awareness of mental illness is lagging far behind other health conditions such as cancer, diabetes or heart disease. In part, this is because the information available about mental health is fractured, and in part it is because people do not want to talk about mental illness. For these reasons it is difficult to see the full impact that poor mental health is having on Canada.

This *Mental Health Economic Statistics* booklet brings together information that demonstrates the burden of mental illness and where Canada's mental health system ranks among other developed countries. In order to improve the system and address its needs, we need to understand the prevalence of mental health problems and where mental health resources are currently being used. We need to see the national picture and put policies and systems in place to address the gaps and reduce the social and economic burden of mental illness.

Mental Health Economic Statistics provides important consolidated information on key indicators that depict the state of our mental health system. We hope that the information in this booklet will prompt discussion and move people to take action to give mental health the same attention as other health conditions. In doing so, we can reduce the impact of mental illness on Canadians.

Ray Block
President and CEO
Alberta Mental Health Board

Egon Jonsson
Executive Director and CEO
Institute of Health Economics

The revised edition of *Mental Health Economic Statistics* is much the same as the original version, except for correction to several charts. Most changes are based on recalculations of psychiatric inpatient days, which is a key indicator of mental health economic activity. The new method of calculation of inpatient days corrects for very long stay patients who were discharged in 2003/04.

We would like to thank all persons who sent us comments on the document.

Mental Health Economic Statistics is a compendium of economic statistics about mental health in Canada. A large amount of information is available on the topic, but much is in raw form or is scattered and difficult to locate. The Alberta Mental Health Board and the Institute of Health Economics (IHE) have brought that information together.

By piecing together the numerous threads that comprise resource allocation in mental health care, we produced a booklet that we hope will help policy makers, planners and managers to gain a broad economic perspective of the current mental health system. It is comprehensive and logically organized, but at the same time we have limited the amount of material, focusing on highlights, so that the information that is provided can fit into your mind, as well as your pocket.

We hope that you will find this volume to be useful. We would appreciate suggestions about the booklet as well as any data that we may have overlooked. Please send us your comments and suggestions by emailing us at info@ihe.ca, by faxing us at 780-448-0018 or by calling us at 780-448-4881.

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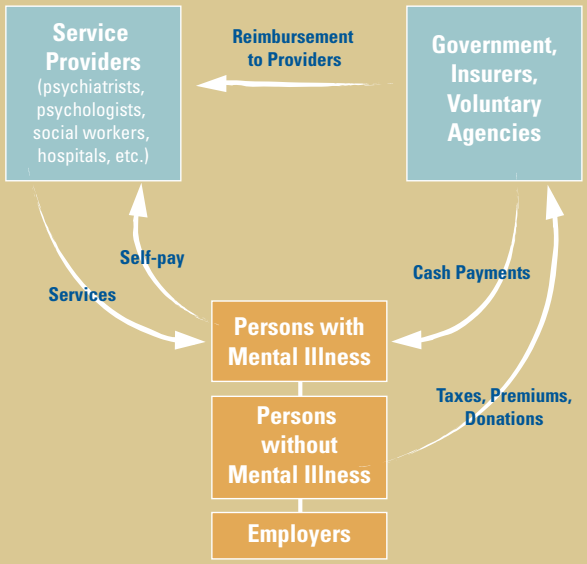
ACKNOWLEDGEMENTS

We would like to thank the large number of people who helped us to formulate our analysis and obtain data. We received advice on contents of the document from Revekka Kakoullis (Capital Health), Nawaf Madi (Canadian Institute for Health Information), Bruce McKee (Saskatchewan Health), Brenda Waye Perry (Alberta Mental Health Board), Donald Schopflocher (Alberta Health and Wellness) and Mel Slomp (Alberta Mental Health Board). We received help in obtaining data from Mike Doyle and Ed Hunt (Newfoundland Department of Health and Community Services), Nadine MacLean (PEI Department of Health), Patrick Crawford (PEI Department of Social Services and Seniors), David Elliott, Linda Smith, Mike Joyce, John Campbell and Emily Somers (NS Department of Health), Kenneth Ross, John Estey, Leanne Jardine and James Ayles (New Brunswick Department of Health), Jacques Legroulx, Jacques Rheaume, Andre Delorme and Carole Hince (Quebec Sante et Services Sociaux), Val Barnby and Tom Czycko (Manitoba Health), Donna Edhart (Alberta Seniors and Community Supports), Sandy Patterson (Alberta Mental Health Board), and David Scott (BC Ministry of Health). George Lambert (Health Canada) kindly guided us through the federal bureaucracy. Other information was obtained from Jeremy Beach (University of Alberta), Anyk Glussich (CIHI), Irene Klatt (Canadian Life & Health Insurance Association), Nancy Lawand (Canada Pension Plan), Gerald Thomas (Canadian Centre on Substance Abuse), Bill Wilkerson (Global Business and Economic Roundtable), Pat Martens (University of Manitoba), Chad Mitchell (Alberta Health and Wellness). James Butler helped us track down data from Australia.

We would like to thank Lisa Bergerman, Greg Finlayson and Yvonne Block for suggestions on the revision.

FIGURE 1

FLOWS OF FUNDS AND SERVICES IN MENTAL HEALTH



HOW TO USE THIS BOOKLET

Mental Health Economic Statistics synthesizes a large amount of data into indicators on the various economic aspects of the mental health system. Readers can scan material in a comparative light and make their own assessments on how specific jurisdictions are performing, provincially and internationally. Information is also provided for population subgroups so that equity can be assessed. And in those instances where only scant data is available, readers can use what is available to gain an impression of the order of magnitude of the indicator.

Notes found either under the graphs or at the back of the booklet give detailed sources, definitions and comments regarding any data quality issues.

HOW THIS BOOKLET IS ORGANIZED

Mental Health Economic Statistics is organized around three fundamental questions:

- What is the **burden** of mental illness?
- What **resources** do we as a society commit to address this burden?
- How does the system **perform** in allocating resources to the mentally ill population?

Our view of the Canadian mental health system is shown graphically in Figure 1. The three basic groups in this figure are consumers and businesses (who provide and receive funds and receive services), financial intermediaries (governments, insurers, and voluntary agencies) and service providers. *Mental Health Economic Statistics* tracks data on the status of the mentally ill and available resources, and the flow of money and services between the groups.

HOW DATA WAS COLLECTED

Data for this compendium came from a wide variety of sources. Where possible we used data on mental health that has been routinely collected and reported by public agencies both in Canada and abroad. In addition, we used information from one-time studies in government reports or scientific publications. We also collected and organized unpublished data from health ministries and from the national community health surveys; in these instances we are reporting new results. Finally, in a few instances, we could only find rough estimates from a single source. We included this information where we felt that is was important to address these areas.

International comparisons are of importance in this booklet. We selected the following countries for comparison purposes, because they are at a level of economic development similar to Canada's: Australia, New Zealand, England (or the United Kingdom), the United States, Finland, Sweden, Germany, France, Netherlands, Switzerland and Japan. In many cases, data on national and international sources may not be the same, because they come from different sources or they come from different years.

TABLE OF CONTENTS

SECTION 1

BURDEN

ADULT MENTAL HEALTH DISORDER PREVALENCE

CANADA, 2001

		Estimates of One-Year Prevalence	
Conditions		**Percentage of Adult Population (Age 18+)**	**Number**
Mood Disorders			
Major (Unipolar) depression		4.1 - 4.8%	944,679 - 1,105,966
Bipolar disorder		0.2 - 0.6%	46,082 - 138,246
Dysthymia		0.8 - 3.7%	184,328 - 852,516
Schizophrenia		0.3%	69,123
Anxiety Disorders		12.2%	2,810,997
Personality Disorders		Not available	
Eating Disorders -			
Anorexia, Bulimia	Anorexia	0.7% women	83,318
		0.2% men	22,277
	Bulimia	1.5% women	178,538
		0.1% men	11,138

Source: Health Canada. Table 1-1 Estimated one year prevalence of mental illness among adults in Canada. Report on mental illness in Canada. Ottawa, ON: Health Canada; 2002. Available at: **www.phac-aspc.gc.ca/publicat/miic-mmac/**. Accessed June 5, 2006.

CHILD MENTAL HEALTH DISORDER PREVALENCE

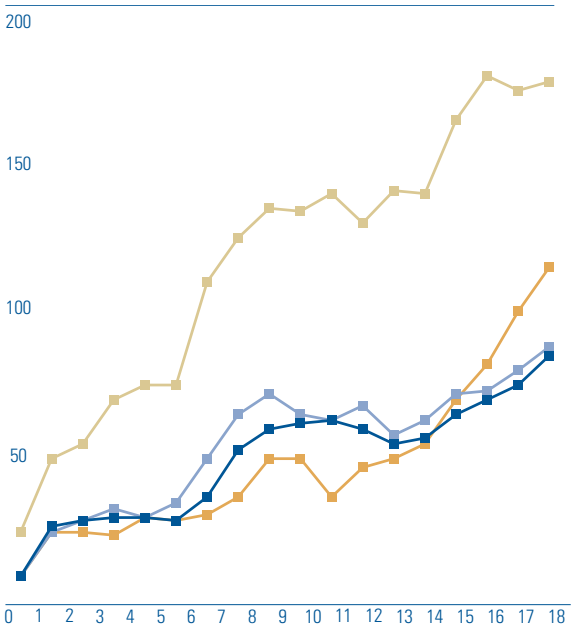
CANADA, 2001

Disorder	Estimated Prevalence(%)	Approximate Number in Canada
Any anxiety disorder	6.4	507,000
Attention deficit hyperactivity disorder	4.8	380,000
Conduct disorder	4.2	333,000
Any depressive disorder	3.5	277,000
Substance abuse	0.8	63,000
Pervasive developmental disorder	0.3	24,000
Obsessive-compulsive disorder	0.2	16,000
Any eating disorder	0.1	8,000
Tourette syndrome	0.1	8,000
Schizophrenia	0.1	8,000
Bipolar disorder	<0.1	<8,000
Any disorder	14.3	134,000

Source: Waddell C, Offord D, Shepherd C, Hua J, McEwan K. Child psychiatric epidemiology and Canadian public policy making: the state of the science and the art of the possible. Can J Psychiatry 2002;47(9): 825-32.
Note: Children aged 0 to 19 are in the sample.

CHILDHOOD PREVALENCE OF MENTAL DISORDERS ACCORDING TO SOCIOECONOMIC STATUS

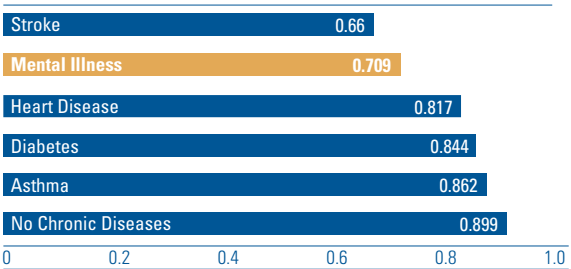
ALBERTA, 1995/96



Source: Spady D, Schopflocher D, Svenson L, Thompson A. Prevalence of mental disorders in children living in Alberta, Canada, as determined by physician billing data. Arch Pediatr Adolesc Med 2001;155:1153-9.
Note: Subsidy refers to a provincial health premium subsidy for low income wage earners. Treaty status refers to Aboriginal status. Welfare refers to those who received social assistance payments. Children in sample were between age ranges 0 and 17.

QUALITY ADJUSTED LIFE YEARS (QALY) SCORE FOR PERSONS WITH SELECTED HEALTH STATES

CANADA

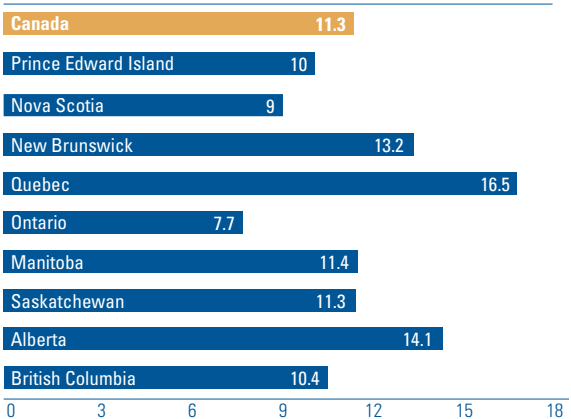


Source: Canadian community health survey. Cycle 2.1 [CD-ROM]; 2003.

Note: Mental illness (MI) is excluded from other comorbidities. QALY score varies from 0 (death) to 1 (healthy).

SUICIDE RATES PER 100 000 POPULATION

PROVINCES, 2001



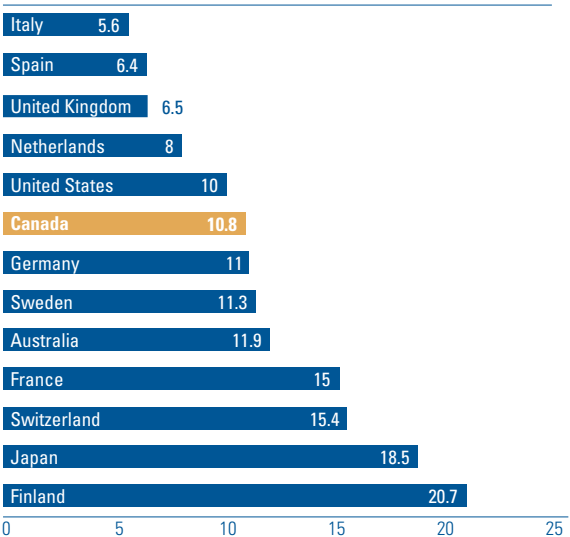
RATE PER 100,000 POPULATION

Source: Suicide (ICD-10 X60-X84, Y87.0), age standardized rate per 100,000 population and confidence interval, by sex, three year average, Canada, provinces, health regions and peer groups, 2001, Catalogue no 82-211, vol 2005 no. 1. Ottawa ON: Statistics Canada; 2005. Available at: http://www.statcan.ca/english/freepub/82-221-XIE/2005001/tables/pdf/14193_01.pdf Accessed August 2, 2006.

Note: rates for NWT 20.8, YK 18.5 and Nunavut 80.2 per 100 000.

SUICIDE RATES PER 100 000 POPULATION

SELECTED COUNTRIES, 2001



Source: OECD health data, 2005.

CONSUMER OUT-OF-POCKET COSTS

CANADA, 2003

Of the entire population age >20,

1.9 per cent (484,000) indicated they had ever seen a psychologist.

Of these, the source of payment:

Per cent who had insurance (Public or Private) to pay any portion of costs	70.3%
Per cent who paid entirely Out-of-Pocket (i.e., no insurance coverage)	29.7%

Source: Canadian community health survey. Cycle 2.1 [CD-ROM]; 2003

MENTAL ILLNESS-RELATED DISABILITY SETTLEMENTS FROM PRIVATE INSURANCE

CANADA

Total direct private insurance claims, Canada (2004), for all causes

- Short term income loss $461 million
- Long term income loss $2.2 billion

Source: Canadian life and health insurance facts. Canadian Life and Health Insurance Association, Inc.; 2004.

30 per cent of disability claims are related to mental illness

(Great West Life)

Source: An agenda for progress. Global Business and Economic Round Table on Mental Health. 2006 Business and economic plan for mental health and productivity. Toronto, ON: Global Business and Economic Round Table on Addiction and Mental Health; 2006. Available at: **www.mentalhealthroundtable.ca**. Accessed: July 12, 2006.
Note: All figures are approximate.

MENTAL DISORDER CLAIMS ACCEPTED BY WORKERS' COMPENSATION

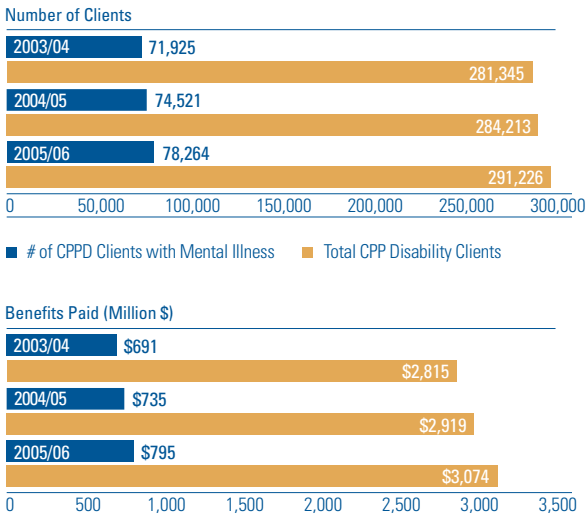
PROVINCES, 2004

Province	Mental Disorder Claims (#)	% of Total Claims in Province
Newfoundland	4	0.08%
Nova Scotia	33	0.36%
New Brunswick	15	0.36%
Quebec	1,187	1.14%
Ontario	334	0.37%
Manitoba	46	0.27%
Saskatchewan	59	0.43%
Alberta	107	0.30%
British Columbia	277	0.53%
Northwest Territories/Nunavut	2	0.24%
Total	2,064	

Source: National work injury and disease statistics, 2002-2004. Mississauga, ON: Association of Workers' Compensation Boards of Canada.
AWCBC – National work injury/disease and fatality statistics program (NWISP). Mississauga, ON: Association of Workers' Compensation Boards of Canada. Available at: **http://awcbc.org/english/NWISP_Stats.asp.200**6 Accessed: August 2, 2006.
Note: Data for Prince Edward Island and Yukon are unavailable.

CANADA PENSION PLAN – NUMBER RECEIVING DISABILITY PAYMENTS FOR MENTAL ILLNESS AND DOLLAR AMOUNTS

CANADA, BY YEAR

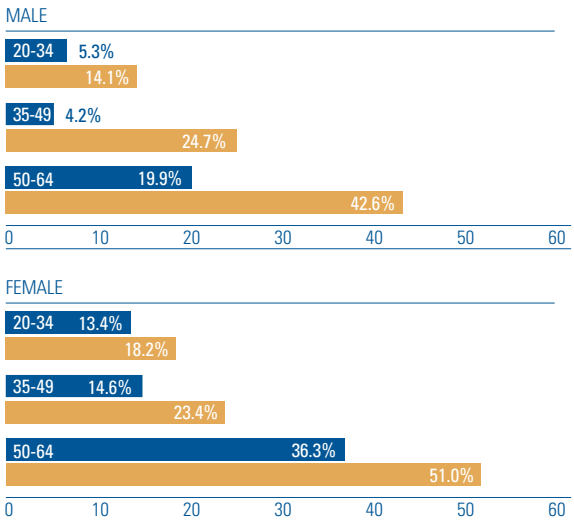


Source: Personal communication. Lawand N. Data on CPPD clients with mental illness. Forecasting, information and analysis – Human Resources and Social Development Canada [email] to Philip Jacobs July 19, 2006.

Note: Data does not include CSC and International Agreements numbers.

PER CENT OF CANADIAN POPULATION AGE 20-64 WHO ARE NOT WORKING, BY MENTAL HEALTH STATUS

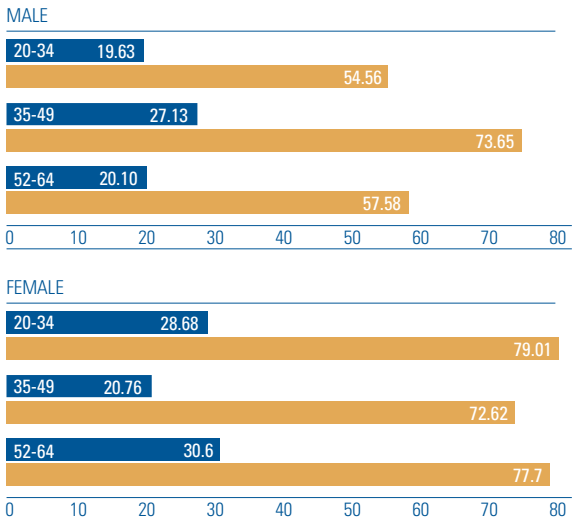
CANADA, 2003



Source: Canadian community health survey. Cycle 2.1 [CD-ROM]; 2003.
See Note at end of book.

WORK - ABSENTEEISM DAYS PER YEAR, BY MENTAL HEALTH STATUS

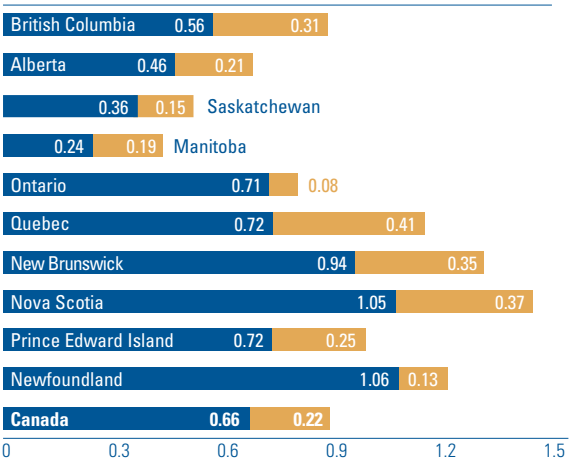
CANADA, 2003



Source: Canadian community health survey. Cycle 2.1 [CD-ROM]; 2003.
Note: Mental illness refers to a condition diagnosed. See Note at end of book.

LOST WAGES DUE TO MENTAL ILLNESS AS A PERCENTAGE OF GROSS PROVINCIAL PRODUCT (GPP)

PROVINCES, 2003

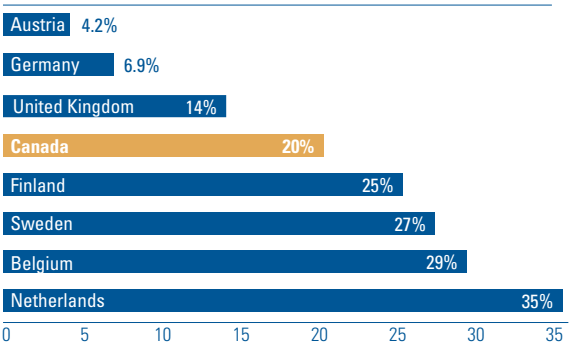


Source: See Note at end of book.

Note: GPP is the total value of production of all final goods and services in the province.

PER CENT OF MENTAL ILLNESS RELATED SICK LEAVES OF ALL SICK LEAVES

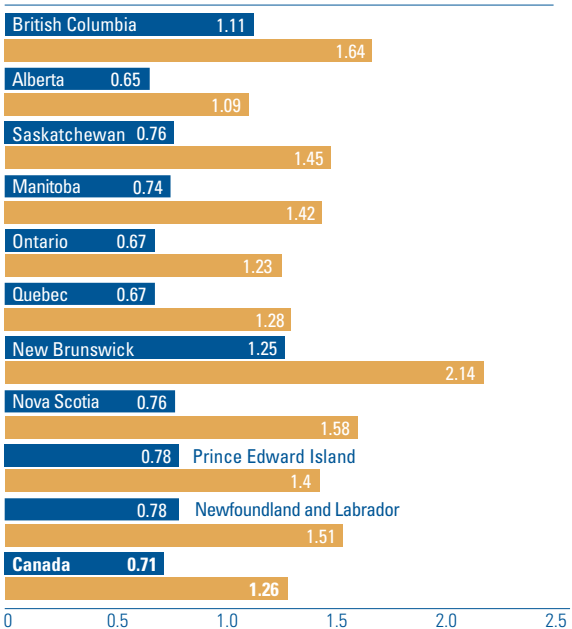
SELECTED COUNTRIES



Source: See Note at end of book.

SOCIAL COSTS OF ALCOHOL AND ILLEGAL DRUGS (PER CENT OF GPP)

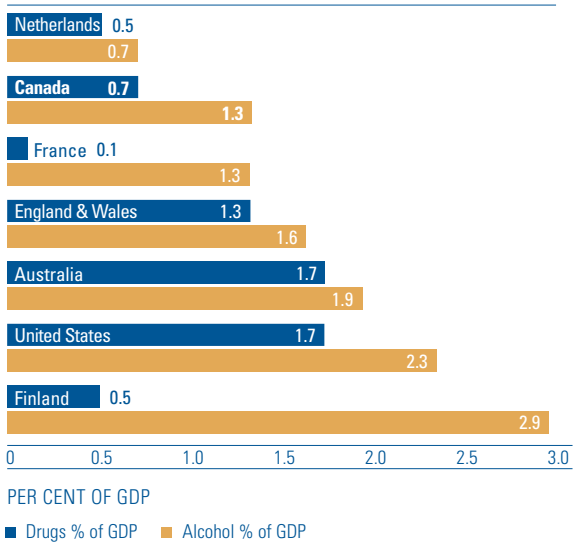
PROVINCES



Reference: Rehm J, Baliunas D, Brochu S. The cost of substance abuse in Canada, 2002 [CD-ROM]. Ottawa, ON: Canadian Centre on Substance Abuse; 2006.
Note: Social costs include: direct health care costs, direct law enforcement costs, direct costs for research and prevention, other direct costs (e.g. fire, accidents), and indirect costs (lost productivity due to disability and premature mortality).

SOCIAL COSTS OF ALCOHOL AND ILLEGAL DRUGS

SELECTED COUNTRIES

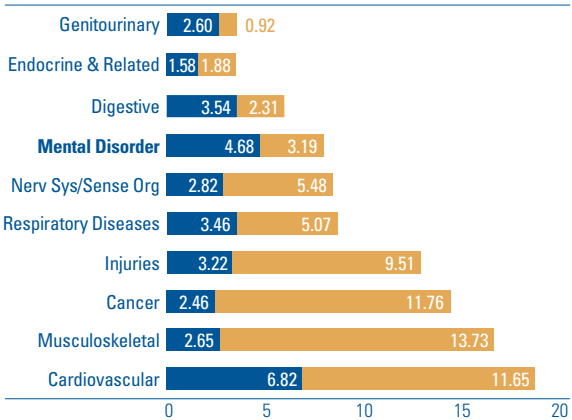


Source: See Notes at end of book.

Note: Social costs include: direct health care costs, direct law enforcement costs, direct costs for research and prevention, other direct costs (e.g. fire, accidents), and indirect costs (lost productivity due to disability and premature mortality). Different countries have some differences in the categories included and criteria used to calculate the costs.

ECONOMIC BURDEN OF ILLNESS FOR SELECTED DIAGNOSES BY COST COMPONENT

CANADA,1998



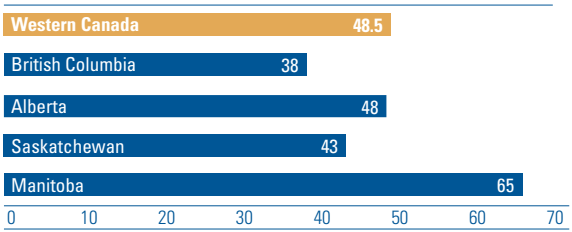
Source: Moore R, Dejardins S. Table 2: Summary – Economic burden of illness in Canada by diagnostic category, 1998. Economic burden of illness in Canada, 1998. Ottawa, ON: Health Canada; 2002. Available at: **http://www.phac-aspc.gc.ca/publicat/ebic-femc98/pdf/ebic1998.pdf**. Accessed July 5, 2006
Note: Direct costs refer to medical expenses. Indirect costs refer to the value of lost time. Total amounts for all conditions are $83.95 billion direct costs and $75.48 billion indirect costs.

SECTION 2

RESOURCES

PSYCHIATRIC BEDS (MENTAL AND GENERAL HOSPITALS) PER 100 000 POPULATION

WESTERN CANADIAN PROVINCES

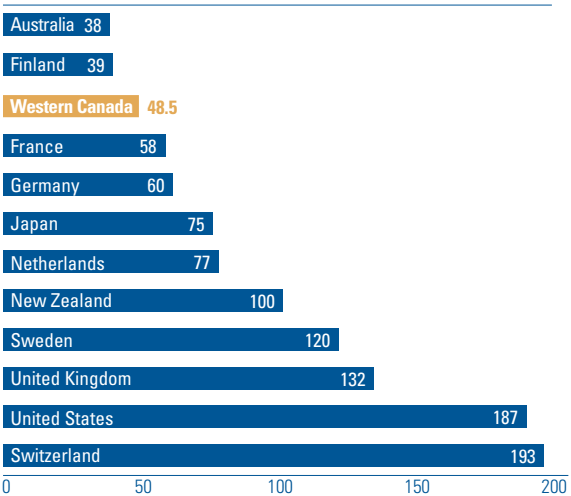


BEDS PER 100,000 POPULATION

Source: Personal communication: McKee B (Mental Health Inpatient Services Saskatchewan). Mental health inpatient services Saskatchewan: current situation and trends, 2002-2003 [power point presentation sent via email to Philip Jacobs July 28, 2006].
Note: Ratios are estimated. The Canadian Psychiatric Association recommends a ratio of 50 beds per 100 000.

TOTAL PSYCHIATRIC BEDS (PSYCHIATRIC AND GENERAL HOSPITALS) PER 100 000 POPULATION

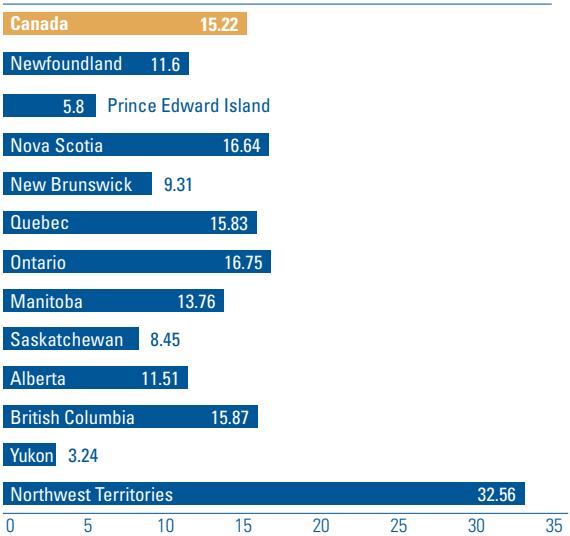
SELECTED COUNTRIES



Source: Mental health atlas. Singapore: World Health Organization; 2005.
Source for Canada: B. McKee, Saskatchewan Health, 2005.

PSYCHIATRISTS PER 100 000 POPULATION

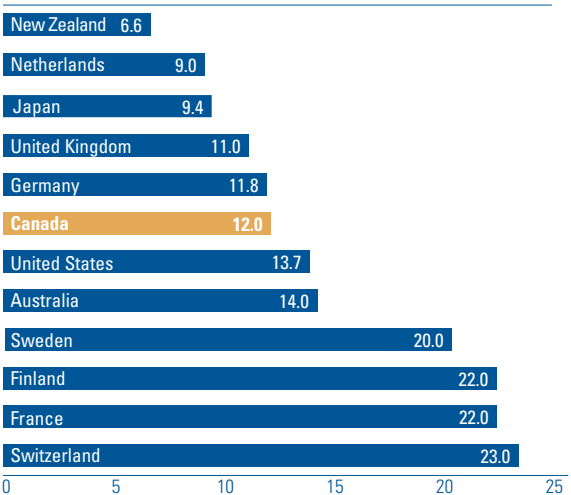
PROVINCES, 1999



Source: See Notes at end of book.

PSYCHIATRISTS PER 100 000 POPULATION

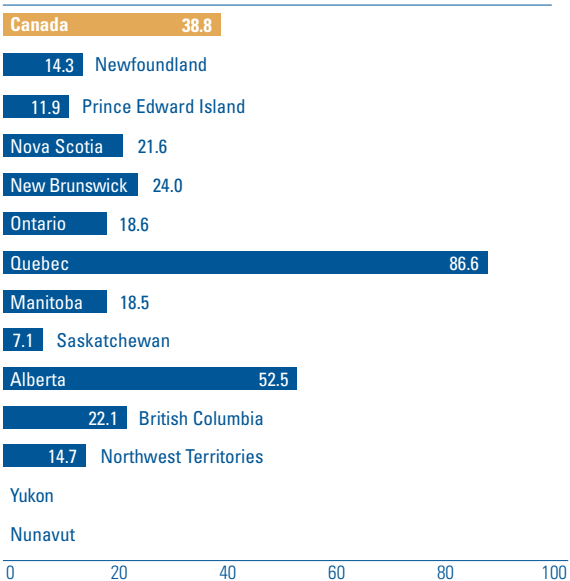
SELECTED COUNTRIES



Source: Mental health atlas. Singapore: World Health Organization; 2005.

PSYCHOLOGISTS PER 100 000 POPULATION

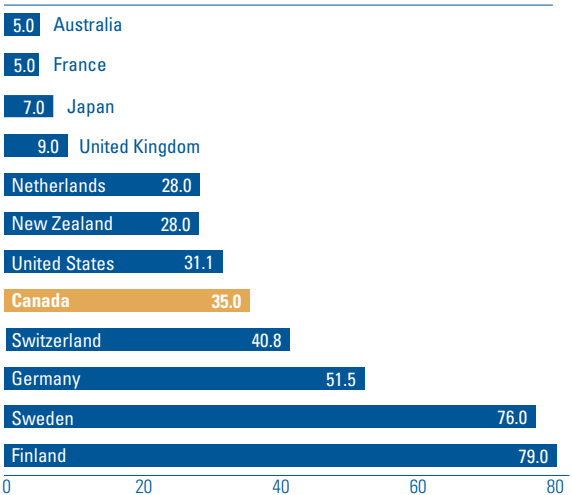
PROVINCES, 1999



Source: Table 1: Provincial and territorial total (urban and rural) populations, total number of psychologists and psychiatrists, and ratio of population to health professionals. Geographic locations survey of clinical psychologists in Canada. Canadian Psychological Association; 1999. Available at: **www.cpa.ca/documents/geographic_survey.html**. Accessed March 8, 2006.

PSYCHOLOGISTS PER 100 000 POPULATION

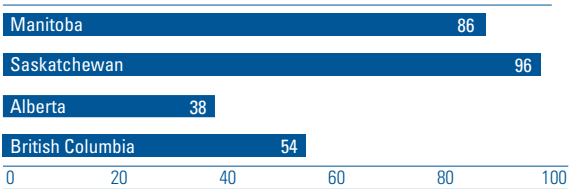
SELECTED COUNTRIES



Source: Mental health atlas. Singapore: World Health Organization; 2005.

PSYCHIATRIC NURSES PER 100 000 POPULATION

SELECTED PROVINCES, 2004

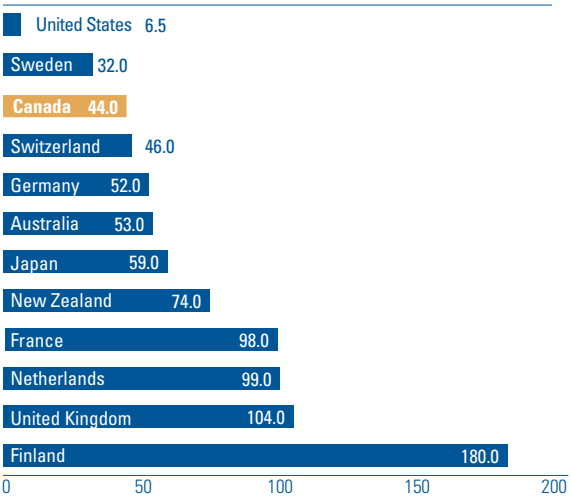


NURSES PER 100,000 POPULATION

Source: Workforce trends of registered psychiatric nurses in Canada, 2004. Ottawa ON: Canadian Institute for Health Information; 2005. Available at: http://dsp-psd.pwgsc.gc.ca/Collection/H115-10-2004E.pdf. Accessed May 25, 2006.
Note: Registered Psychiatric Nurses are educated and regulated as distinct professions in the above provinces.

PSYCHIATRIC NURSES PER 100 000 POPULATION

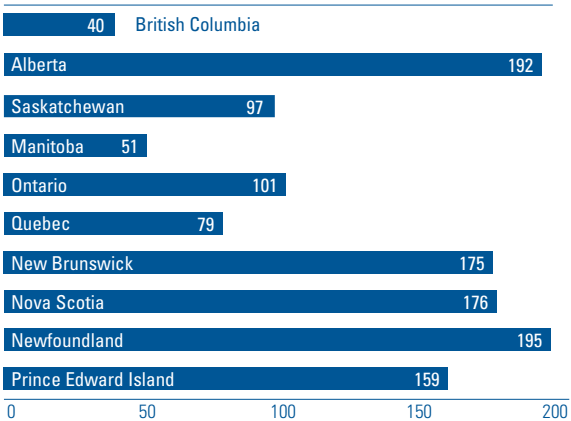
SELECTED COUNTRIES



Source: Mental health atlas. Singapore: World Health Organization; 2005.

SOCIAL WORKERS PER 100 000 POPULATION

PROVINCES, 2005

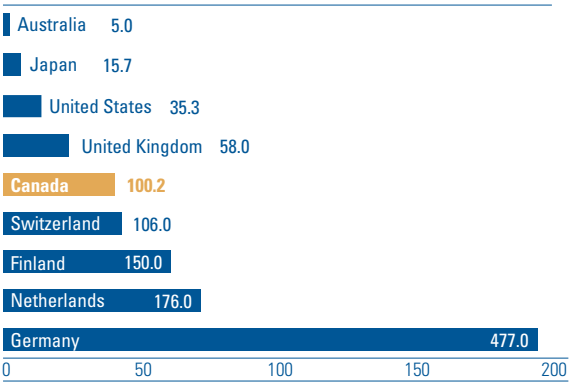


SOCIAL WORKERS PER 100,000 POPULATION

Source: Personal communication: Adachi R (Executive Director & Registrar for the Alberta College of Social Workers). Social work. Email to Phil Jacobs 2006 May 18.
Note: Social workers work in areas other than mental health.

SOCIAL WORKERS PER 100 000 POPULATION

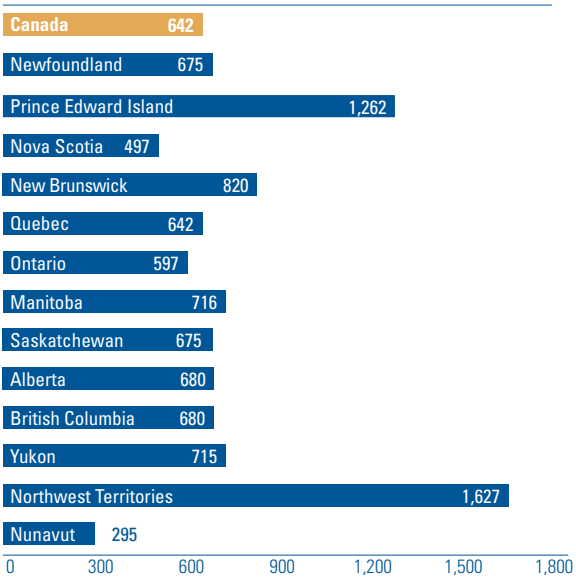
SELECTED COUNTRIES



Source: Mental health atlas. Singapore: World Health Organization; 2005.

PSYCHIATRIC HOSPITAL SEPARATIONS PER 100 000 POPULATION

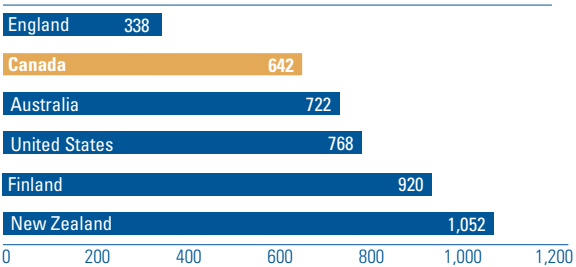
PROVINCES, 2003/04



Source: Personal communication. Li J. Mental health hospital services in Canada 2003/4. (email) to Phil Jacobs May 26, 2006.
Canadian Institute for Health Information. Hospital mental health services in Canada. 2003 – 2004. Ottawa, ON: Canadian Institute for Health Information; 2006.

PSYCHIATRIC HOSPITAL SEPARATIONS PER 100 000 POPULATION

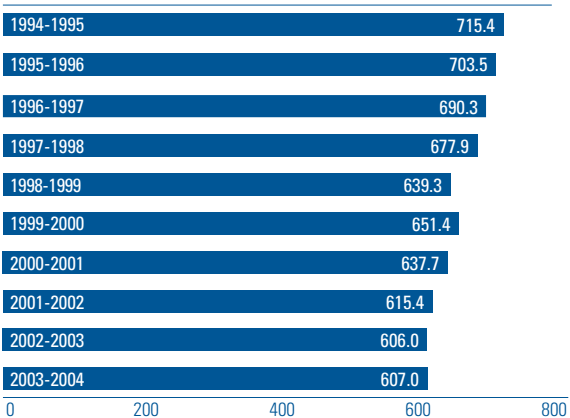
SELECTED COUNTRIES



Source: See Note at end of booklet.
Note: Years for each country are different. Australia 2002-03, US 2000, England 2004, NZ 2002, Canada 2003-04, Finland 2004.

HOSPITAL SEPARATION RATE FOR MENTAL ILLNESS

CANADA, 1994/95 TO 2002/03



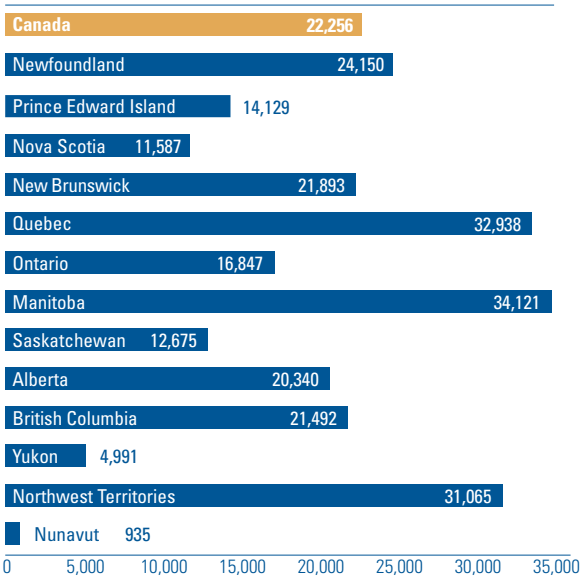
SEPARATIONS PER 100 000 POPULATION

Source : Figure 1: Hospital separation rate for mental illness by type of hospital, 1994-1995 to 2002-2003 (figure i in report). Hospital mental health database. Ottawa, ON: Canadian Institute for Health Information, 2005. Available at: **www.cihi.ca/cihiweb/en/media_12oct2005_fig1_e.html**. Accessed August 4, 2006.

Note: Crude rates based on the number of separations per 100,000 population. Population counts based on Statistics Canada's population estimates for 2002. Hospital types include psychiatric and general hospitals.

MENTAL ILLNESS HOSPITAL DAYS PER 100 000 POPULATION

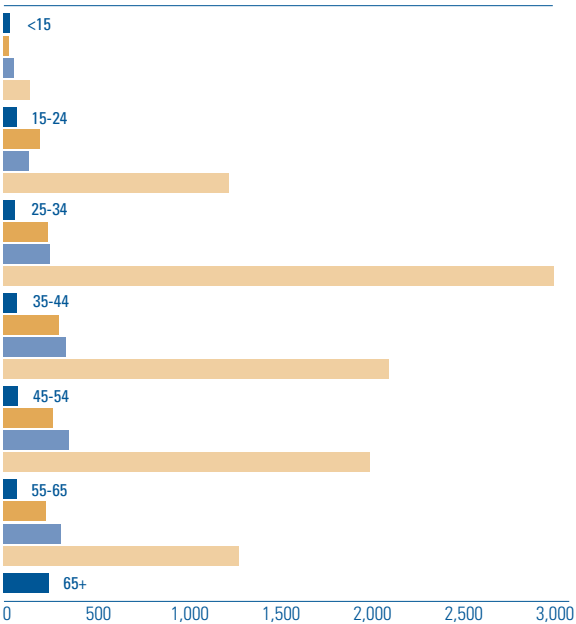
BY PROVINCE, 2003/04



Source: Canadian Institute for Health Information. Hospital mental health services in Canada. 2003 – 2004. Ottawa, ON: Canadian Institute for Health Information; 2006.

COST PER PERSON OF MENTAL HEALTH SERVICES BY AGE AND SOCIOECONOMIC STATUS

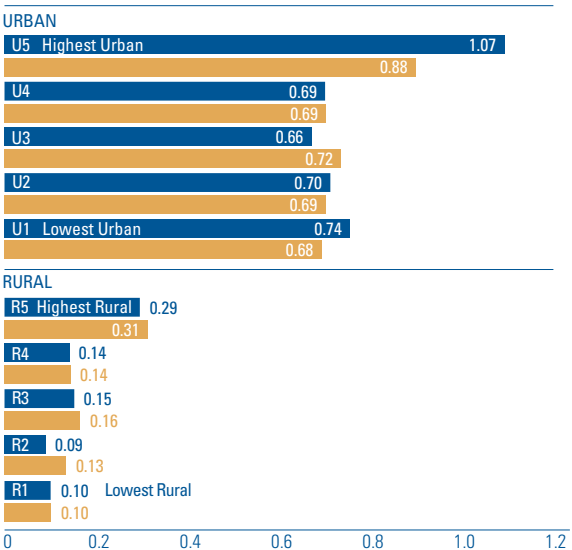
ALBERTA, 2002/03



Source: Based on data from Alberta Health and Wellness and Alberta Mental Health Board. Personal communication: Wang C (Alberta Mental Health Board). MH compendium – information from RAG study. (email) to Arto Ohinmaa August 1, 2006.
Note: Subsidy refers to a provincial health premium subsidy for low income wage earners. Aboriginal refers to treaty status. Welfare refers to those who received social assistance payments. The 65+ category includes all socioeconomic groups.

POPULATION VISIT RATES TO PSYCHIATRISTS FOR THOSE WITH MENTAL DISORDERS BY REGIONAL INCOME LEVELS

MANITOBA, 1997/98-2001/02

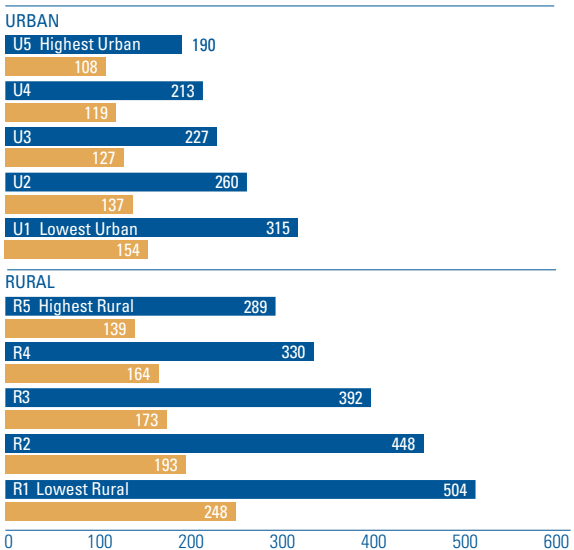


Source: Martens P, Fransoo R, McKeen N, Burland E, Jebamani L, Burchill C, et al. Figure 4.4.4 Visit rates to psychiatrists for mental illness disorders for those with cumulative disorders by income quintile. Patterns of regional mental illness disorder diagnoses and services use in Manitoba: a population-based study. Winnipeg, MB: Manitoba Centre for Health Policy, 2004. p. 148.

Notes: Subjects are those with cumulative disorders, i.e. persons with any utiization for mental illness during the entire observation period. Utilization is measured by age-adjusted annual rate of visits per resident aged 10 years + during the entire observation period. Urban and rural areas are ordered from lowest to highest income levels, e.g. U_5 is highest and U_1 is lowest. Rates are on a per person basis.

POPULATION ALL-CAUSE HOSPITAL SEPARATION RATES FOR FEMALES WITH / WITHOUT MENTAL DISORDERS, BY REGIONAL INCOME LEVELS

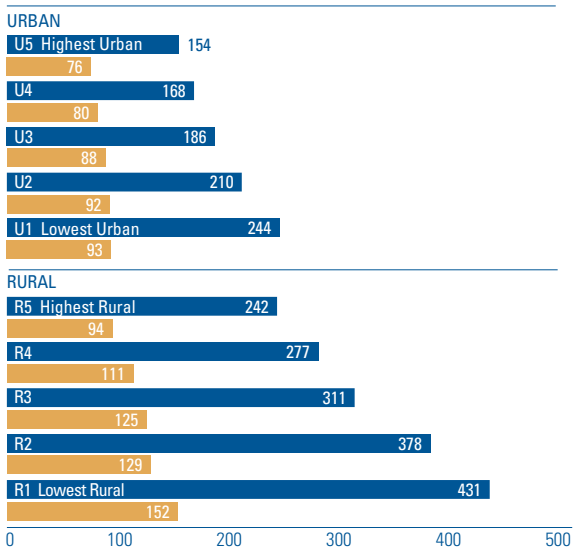
MANITOBA, 1997/98-2001/02



Source: Martens P, Fransoo R, McKeen N, Burland E, Jebamani L, Burchill C, et al. Figure 5.2.8 All-case hospital separations for females with and without cumulative disorders by income quintile, 1997/98 – 2001/02. Patterns of regional mental illness disorder diagnoses and services use in Manitoba: a population-based study. Winnipeg, MB: Manitoba Centre for Health Policy, 2004. p. 164.
Note: Subjects are those with cumulative disorders, i.e. persons with any utilization for mental illness during the entire observation period. Utilization measured as age – adjusted annual rate of separations per 1,000 residents aged ten years and over during the entire observation period Urban and rural areas are ordered from lowest to highest income levels. Urban and rural areas are ordered from lowest to highest income levels.

ALL-CAUSE HOSPITAL SEPARATIONS FOR MALES WITH AND WITHOUT CUMULATIVE MENTAL DISORDERS BY INCOME QUINTILE

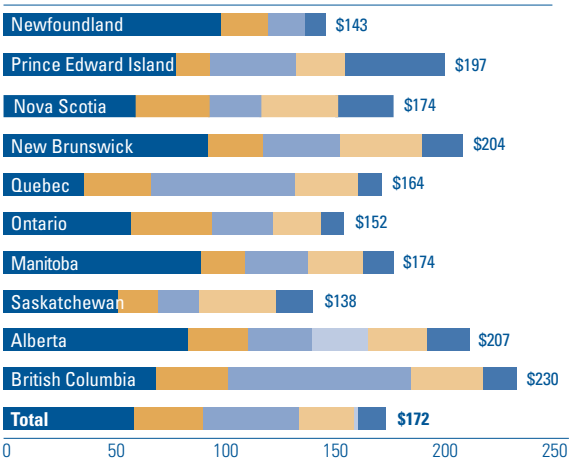
MANITOBA, 1997/98-2001/02



Source: Martens P, Fransoo R, McKeen N, Burland E, Jebamani L, Burchill C, et al. Figure 5.2.4 All-case hospital separations for males with and without cumulative disorders by income quintile, 1997/98 – 2001/02. Patterns of regional mental illness disorder diagnoses and services use in Manitoba: a population-based study. Winnipeg, MB: Manitoba Centre for Health Policy, 2004. p. 160.
Note: Utilization measured by age-adjusted annual rate of separations per 1000 residents aged 10 years +.

PROVINCIAL GOVERNMENT MENTAL HEALTH EXPENDITURES PER CAPITA

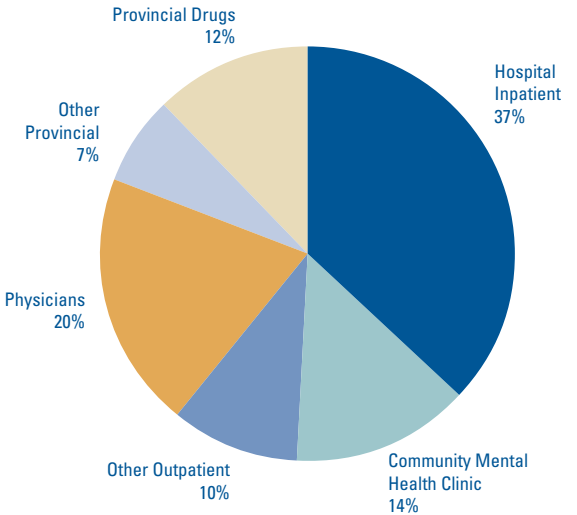
2003/04



Source: Jacobs P, Dewa C, Bland R et al. Expenditures on mental health for Canadian provinces, 2003-2004. Edmonton: AB: Institute of Health Economics, August, 2007.
Note: Quebec community expenditures have a wider definition than those of other provinces.

DISTRIBUTION OF PROVINCIAL MENTAL HEALTH EXPENDITURES

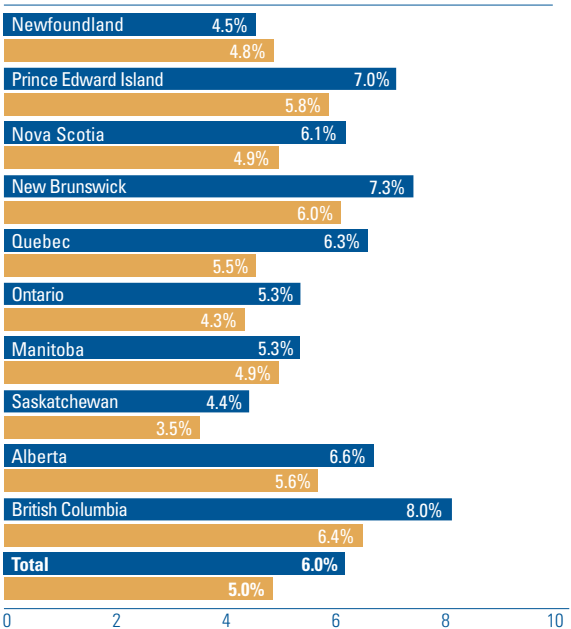
ALBERTA, 2002



Source: Block R, Slomp M, Jacobs P, Ohinmaa A. The direct public-sector costs for mental health in Alberta. Health Management Forum 2005;18(3):25-8.
Table 4.8 Alberta Blue Cross non-group membership average gross cost per prescription by broad drug category (direct bill and reimbursement claims) for recipients in all groups for the year ending March 31, 2003. Alberta Health Care Insurance Plan Statistical Supplement 2002/2003. Edmonton, AB: Alberta Health and Wellness; 2003. p. 81. Available at: **www.health.gov.ab.ca/resources/publications/ahcip-statsup_02_03.pdf** Accessed June 5, 2006.
Note: "Other Outpatient" includes emergency department.

RATIO OF MENTAL HEALTH SPENDING TO TOTAL HEALTH SPENDING

BY PROVINCE, 2003/04

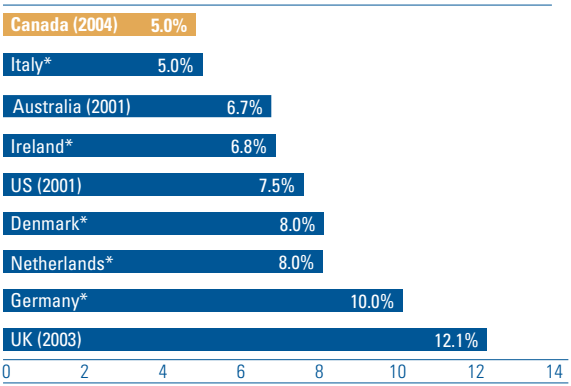


Source: Jacobs P, Dewa C, Bland R et al. Expenditure on mental health for Canadian provinces, 2003-2004. Edmonton: AB: Institute of Health Economics, August, 2007.

Note: Public spending ratio refers to total public mental health spending divided by all provincial health spending. Total spending ratio refers to total mental health spending from public and private sources divided by total health expenditures (public and private).

NATIONAL MENTAL HEALTH EXPENDITURES AS A PERCENTAGE OF TOTAL HEALTH EXPENDITURES

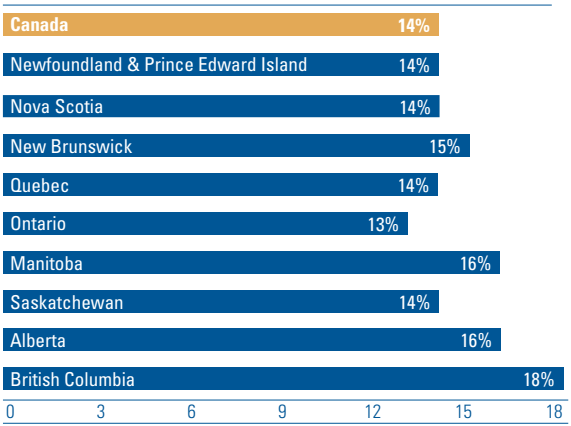
SELECTED COUNTRIES



Source: See Notes at end of book.
Note: *signifies that year of data not known.

PRESCRIPTION PSYCHOTHERAPEUTIC DRUGS AS A PERCENTAGE OF TOTAL DRUG EXPENDITURES

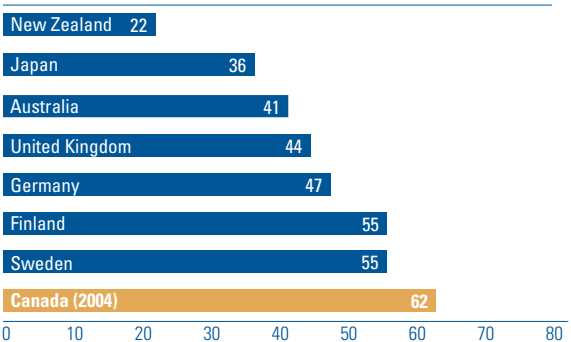
PROVINCES



Source: Morgan S, McMahon M, Lam J, Mooney D, Raymond C. The Canadian Rx atlas. Vancouver, BC: Centre for Health Services and Policy Research; 2005. Available at: **www.chspr.ubc.ca/rxatlas/canada**. Accessed July 5, 2006.

SALES OF CENTRAL NERVOUS SYSTEM DRUGS IN SELECTED COUNTRIES

(US DOLLARS, PPP) IN 2003



Source: OECD health data 2005.

Source: Morgan S, McMahon M, Lam J, Mooney D, Raymond C. The Canadian Rx atlas. Vancouver, BC: Centre for Health Services and Policy Research; 2005. Available at: **www.chspr.ubc.ca/rxatlas/canada**. Accessed July 5, 2006.

Note: Nervous system drugs includes analgesics, anxiolytics, hypnotics and sedatives, and antidepressants. PPP refers to Purchasing Power Parity, an international unit of costs. PPP converts to a common currency and equalize the purchasing power of different currencies.

UNIT COSTS FOR SPECIFIC MENTAL HEALTH SERVICES

ALBERTA

Item	Cost
Family Doctor consultation Fee code 08.19F	$26.42
Psychiatrist consultation Fee code 08.11A	$143.89
Psychologist visit	$150.00
Inpatient hospitalization	
Schizophrenia CMG 777	Average stay: 24.9 days $13,080 per case $525 per day
Adjustment disorder CMG 792	Average stay: 3.9 days $2,765 per case $707 per day
Depressive mood disorder CMG 766	Average stay: 20 days $9,553 per case $478 per day
Daily cost for psychiatric drugs (schizophrenia and bipolar disorder) with highest provincial cost	
Zyprexa (schizophrenia)	$7.25 per day
Risperdal (bipolar)	$9.97 per day
Seroquel (schizophrenia)	$7.90 per day

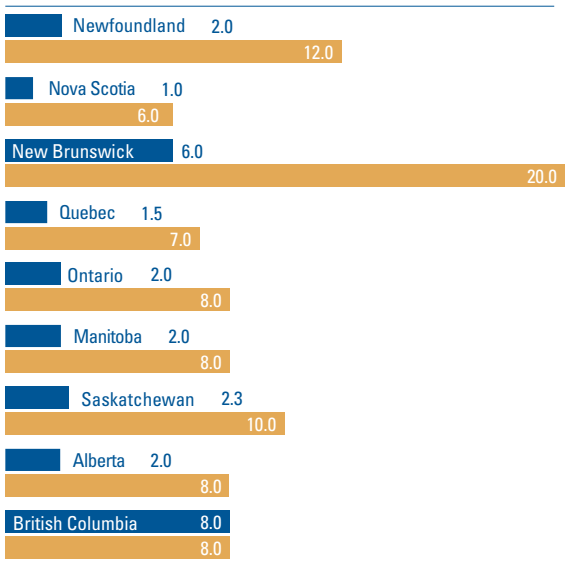
Source: See Notes at end of book.

SECTION 3

PERFORMANCE

MEDIAN WAIT TIME TO SEE A PSYCHIATRIST AFTER REFERRAL FROM A GENERAL PRACTITIONER

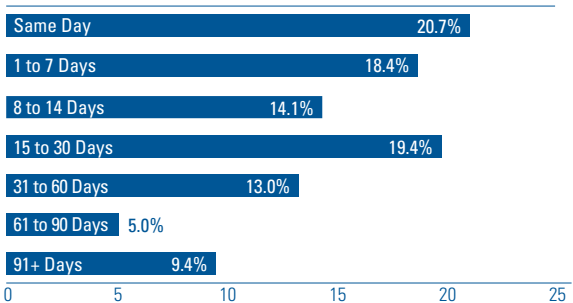
PROVINCES, 2005



Source: Esmail N, Walker M. Waiting your turn. Hospital waiting lists in Canada. 15 ed. Vancouver, BC: Fraser Institute; 2005.
Note: Response rates are: BC=14%, AB=21%, SK=35%, MB=14%, ON=17%, QC=14%, NB=16%, NS=26%, PEI=NA, Nfld=17%.

DISTRIBUTION OF AVERAGE WAITING TIME BETWEEN REFERRAL AND SERVICE FOR CHILDREN ENROLLED IN A MENTAL HEALTH CLINIC/ PROGRAM

ALBERTA, 2005

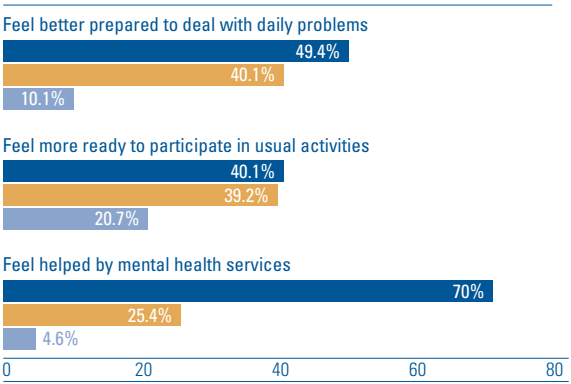


TIME FROM REFERRAL TO SERVICE

Source: Information Management. Chart 3: Frequency distribution of wait-time. Children's mental health access standards project: report on data results fiscal year 2004/5. Version 2.4. Edmonton, AB: Alberta Mental Health Board; 2005. p. 6.

PATIENT-PERCEIVED OUTCOMES FOR USERS OF MENTAL HEALTH SERVICES

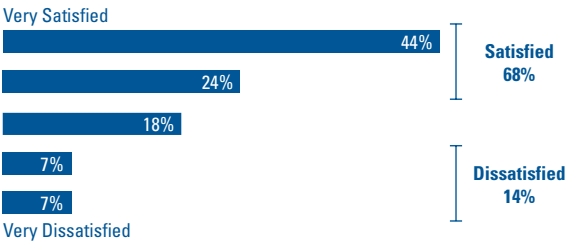
ONTARIO, 2004



Source: Lin E, Durbin J, Koegl C, Murray M, Tucker T, Daniel I, et al. Hospital report, 2004. Toronto, ON: Hospital Report Research Collaborative, University of Toronto; 2005. Available at: **www.hospitalreport.ca**
Note: Sample consists of 102 inpatients and 251 outpatients.

SATISFACTION WITH MENTAL HEALTH SERVICES

ALBERTA, 2004



Source: Satisfaction with health care services: a survey of Albertans 2004: final report. Edmonton, AB: Health Quality Council of Alberta; 2004.
Note: Responses to question: "How satisfied are you with the mental health services you most recently received?"
Base: Persons who received mental health services within the past year (n-269).

NOTES

TO THE CHARTS

PER CENT OF CANADIAN POPULATION AGE 20-64 WHO ARE NOT WORKING, BY MENTAL HEALTH STATUS, CANADA 2003

Calculations were conducted using the public use Canadian Community Health Survey database. The population with mental illness is defined as those who self-reported that they were diagnosed by a health professional. The state of employment was defined as having had a job during the past year.

WORK – ABSENTEEISM DAYS PER YEAR, BY MENTAL HEALTH STATUS, CANADA, 2003

Calculations were conducted using the public use Canadian Community Health Survey database. Work absenteeism is obtained from self-reported data on the number of disability days experienced during the previous two weeks by employed persons, adjusted by 5/7 to allow for week-ends. The state of employment was defined as having had a job during the past year.

LOST WAGES DUE TO MENTAL ILLNESS AS A PERCENTAGE OF GROSS PROVINCIAL PRODUCT

Calculations were conducted using the public use Canadian Community Health Survey 2003 database. Lost work was based on the excess unemployment and excess absenteeism of employed people, as compared between those persons with and without mental illness. The population with mental illness was defined as those who self-reported that they were diagnosed by a health professional. The state of employment was defined as having had a job during the past year. Work absenteeism is obtained from self-reported data on the number of disability days experienced during the previous two weeks by employed persons, adjusted by 5/7 to allow for week-ends. The value of unemployment and absenteeism time was based on provincial data from Statistics Canada. We estimated daily wage rates from the report, Labor Force Survey Estimates[1]. Weekly wages for all employees in the province, over all occupations, for both sexes, and for ages 15 and over, were obtained for June, 2003, and were divided by 5 to obtain a daily wage statistic[2]. Annual wages were obtained from provincial annual earnings for all workers from the 2001 census. These were updated to 2003 using the general Canada-wide Consumer Price Index[3].

(1) Adapted from: Average earnings of the population 15 years and over by highest level of schooling , by province and territory, 2001 Census. Ottawa, ON: Statistics Canada; 2001.

(2) Adapted from Table 282-0069 Labor force survey estimates, wages of employees by type of work. National Occupational Classification for Statistics, sex and age group, unadjusted for seasonality, monthly (dollars). Ottawa. ON: Statistics Canada.

(3) Adapted from Consumer price index historical summary, by province and territory (2001-2005). Ottawa ON, Statistics Canada.

PER CENT OF MENTAL ILLNESS RELATED SICK LEAVES FROM ALL SICK LEAVES – SELECTED COUNTRIES

Sources:

SWEDEN, NETHERLANDS, BELGIUM, GERMANY, AUSTRIA

- Curran C, Knapp M, McDaid D, Tomasson K, MHEEN Group. Mental health and employment: an overview of patterns and policies across 17 MHEEN countries. J Ment Health 2006 (forthcoming).

FINLAND

- Kelan sairausvakuutustilasto. Official Statistics of Finland. Social benefits; 2004. Available at: **www.kela.fi/tilasto** >Verkkotilastot > Vuositilastot. Accessed June 28, 2006.

UNITED KINGDOM

- United Kingdom part 1 page 4. Mental health in the workplace: International Labour Organization. Available at: **http://www.ilo.org/public/english/employment/skills/disability/papers/ukcover/ukpart14.htm**. Accessed August 2, 2006.

CANADA

- Canadian community health survey. Cycle 2.1 [CD-ROM]; 2003.
    - Ratio is days off work for working persons with diagnosed mental illness to days off work for working persons without diagnosed mental illness.

SOCIAL COST OF ILLEGAL DRUGS AND ALCOHOL – SELECTED COUNTRIES

Sources:

AUSTRALIA

- Collins D, Lapsley H. Counting the cost: estimates of the social costs of drug abuse in Australia in 1998-9. Monograph series no. 49. Canberra: Commonwealth of Australia; 2002.

CANADA

- Rehm J, Baliunas D, Brochu S. The cost of substance abuse in Canada, 2002 – full report and tables [CD-ROM]. Ottawa, ON: Canadian Centre on Substance Abuse; 2006.

ENGLAND & WALES

- Godfrey C, Eaton G, McDougall C, Culyer A. The economic and social costs of class A drug use in England and Wales, 2000. Home Office Research Study 249. London: Home Office Research; 2002.
- Leontaridi R. Alcohol misuse: how much does it cost? London: Cabinet Office; 2003. Available at: http://www.number10.gov.uk/files/pdf/econ.pdf Accessed: July 19, 2006.

FINLAND

- Hein R, Virtanene S, Wahlforsh. Yearbook of alcohol and drug statistics, 2005. Helsinki, Finland: Stakes; 2005.

FRANCE

- Reitox National Focal Point. 2004 National report to the EMCDDA: France: New development trends and in-depth information on selected issues. Lopez D, editor. Observatoire Français des Drogues et des Toxicomanes; 2004. Available at: www.emcdda.europa.eu Accessed: July 19, 2006.
- Reynaud M, Gaudin-Colombel A, Le Pen C. Two methods of estimating health costs linked to alcoholism in France. Alcohol Alcohol 2001;36(1):89-95.

NETHERLANDS

- KPMG Economic Consulting. Excessive alcohol consumption in the Netherlands: trends and social costs. Hoofddorp: KPMG Economic Consulting; 2001. Available at: **http://www.eurocare.org/pdf/profiles/netherlands/nl2.pdf** Accessed July 19, 2006.
- Van Laar M, van Gageldonk A, Ketelaars T, van Ooyen M, Cruts G, van Gelder P. Report to the EMCDDA by Reitox national focal point – The Netherlands: Drug situation, 2004: final version. Utrecht, The Netherlands: Netherlands Focal Point; 2005. Available at: **www.emcdda.europa.eu** Accessed: July 19, 2006.

UNITED STATES OF AMERICA

- US Office of National Drug Control Policy. The economic costs of drug abuse in the United States, 1992-2002. (Publication No. 207303). Washington, DC: Executive Office of the President; 2004. Available at: **http://www.whitehousedrugpolicy.gov/publications/economic_costs/economic_costs.pdf** Accessed July 19, 2006.
- Harwood H, Fountain D, Livermoore G. The economic cost of alcohol and drug abuse in the United States, 1992. Report prepared for the National Institute on drug Abuse (NIDA) and the National Institute of Alcohol Abuse and Alcoholism (NIAAA). NIH publication no. 98-4327. Rockville, MD: National Institute of Health; 2000.

NATIONAL MENTAL HEALTH EXPENDITURES AS A PERCENTAGE OF TOTAL HEALTH EXPENDITURES—SELECTED COUNTRIES

Sources:

UNITED STATES

- Mark T, Coffey R, McKuskick D, Harwood H, King E, Bouchery E, et al. National expenditures for mental health services and substance abuse treatment, 1991-2001. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2005.
  - Note: mental health expenditure: $85.4 billion; substance abuse: $18.2 billion; total health expenditures $1,372 billion; excludes dementia

UNITED KINGDOM

- Sainsbury Centre for Mental Health. Economic and social costs of mental illness. Policy Paper 3. London: Sainsbury Centre for Mental Health; 2003.
  - Note: total expenditure by National Health Service (NHS) £6,539, million; estimate includes substance abuse, possibly excludes dementia.
- Department of Health. Departmental report, 2004 (summary report). London: Department of Health; 2004.
  - Note: total NHS spending of health: £54,241 million.

AUSTRALIA

- Australian Institute of Health and Welfare. Health system expenditure on disease and injury in Australia, 2000-01. Canberra, Australia: Australian Institute of Health and Welfare; 2005.
  - Note: estimates exclude dementia and long term residential care.
- Australian Institute of Health and Welfare. Australian expenditure on mental disorders in comparison with expenditures in other countries. Canberra: Australian Institute of Health and Welfare; 2003. Available at: http://www.aihw.gov.au/publications/workingpapers/rwp01.pdf. Accessed: July 19, 2006.

CANADA

- Jacobs P, Dewa C, Bland R et al. Expenditure on mental health for Canadian provinces, 2003-2004. Edmonton: AB: Institute of Health Economics, August 2007.

DENMARK, GERMANY, ICELAND, IRELAND, ITALY, NETHERLANDS

- Knapp M, McDaid D, Amaddeo F, et al. Financing mental health in Europe. J Ment Health 2006 (forthcoming).

UNIT COST FOR SPECIFIC MENTAL HEALTH SERVICES IN ALBERTA

- Consultation with family doctor or psychiatrist
  - Alberta Medical Association Practice Management Program. Alberta health care insurance plan schedule of medical benefits. Edmonton, AB: Alberta Medical Association.
- Psychologist visit
  - Fee schedule. Edmonton, AB: Psychologists' Association of Alberta. Available at: **http://www.psychologistsassociation.ab.ca/**. Accessed July 7, 2006.
- Inpatient hospitalization
  - Health Authority Reporting and Costing Branch. Schedule 1 Inpatient cost results. Health costing in Alberta 2005 Annual report. Edmonton, AB: Alberta Health and Wellness; 2005. Available at: **www.health.gov.ab.ca.**
- Drugs
  - Alberta Health and Wellness. Drug benefit list. Rev. ed. July 1, 2006. Edmonton, AB; Alberta Health and Wellness; 2006. Available at: **http://www.ab.bluecross.ca/dbl/publications.html**. Accessed July 14, 2006.

TOTAL PSYCHIATRIC BEDS (PSYCHIATRIC AND GENERAL HOSPITALS) PER 100,000 POPULATION – SELECTED COUNTRIES

Note: The WHO estimate for Canada, 284 beds per 100,000 population cannot be verified. We have used a Western Canada estimate as no consistent national estimates now exist.

PSYCHIATRIC HOSPITAL SEPARATIONS PER 100 000 POPULATION – SELECTED COUNTRIES

UNITED STATES

Manderscheid R, Henderson M. Mental health, United States, 2002. Washington: United States Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. Available at: http://www.mentalhealth.samhsa.gov/publications/allpubs/SMA04-3938/default.asp. Accessed August 1, 2006.

ENGLAND

Hospital Episode Statistics Online. London: National Health Service. December, 2005. Available at: www.hesonline.nhs.uk. Accessed August 4, 2006.

FINLAND

Stakes, Suomen virallinen tilasto, Terveys 2005 (Finland official statistics, Health 2005), Tilastotiedote 29/2005, 13.12.2005. Available at: http://www.stakes.fi/FI/Tilastot/Aiheittain/Mielenterveys/index.htm. Accessed July 30, 2006.

See the appendix: http://www.stakes.fi/NR/rdonlyres/B0D145C0-2B73-4EAD-933C-AECDEB4E3EB8/0/0529taulut.pdf.

AUSTRALIA

Australian Institute of Health and Welfare. Table S35: Separation statistics by principal diagnosis, grouped into ICD-10-AM chapters, private hospitals, 2001-02. Australia's health 2004: The ninth biennial health report of the Australian Institute of Health and Welfare. AIWH Cat. No. AUS 44. Canberra: Australian Institute of Health and Welfare; 2004. Available at: http://www.aihw.gov.au/publications/index.cfm/title/10014. Accessed June 27, 2006.

CANADA

Canadian Institute for Health Information. Hospital mental health services in Canada. 2003 – 2004. Ottawa, ON: Canadian Institute for Health Information; 2006.

NEW ZEALAND

New Zealand Health Information Service. Health statistics. Publicly funded hospital discharges 2002/3. Available at: http://www.nzhis.govt.nz/stats/index.html. Accessed: August 1, 2006.

PSYCHIATRISTS PER 100 000 POPULATION, PROVINCES

General Source:

Provincial Medical Regulatory (Licensing) Authorities. The Royal College of Physicians and Surgeons. Available at: http://rcpsc.medical.org/links/provli_e.php.

NEWFOUNDLAND

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