A Report on Mental Illnesses in Canada

- The Mood Disorders Society of Canada
- Association of Chairs of Psychiatry in Canada
- Canadian Institute for Health Information
- Canadian Mental Health Association
- Canadian Psychological Association
- Canadian Psychiatric Association
- Canadian Institutes of Health Research, Institute for Neurosciences, Mental Health and Addiction
- National Network for Mental Health
- Schizophrenia Society of Canada
- Statistics Canada
- Health Canada

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"Our mission is to help the people of Canada
maintain and improve their health"

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FOREWORD

Mental illnesses touch the lives of all Canadians, exerting a major effect on relationships, education, productivity and overall quality of life. Approximately 20% of individuals will experience a mental illness during their lifetime, and the remaining 80% will be affected by an illness in family members, friends or colleagues. With sufficient attention and resources, much can be done to improve the lives of people living with mental illness.

A Report on Mental Illnesses in Canada is designed to raise the profile of mental illness among government and non-government organizations, and the industry, education, workplace, and academic sectors. It describes major mental illnesses and outlines their incidence and prevalence, causation, impact, stigma, and prevention and treatment. Policy makers will find the information contained in this report valuable for shaping policies and services aimed at improving the quality of life of people with mental illness.

Five mental illnesses and the phenomenon of suicidal behaviour have been selected for inclusion in this document by virtue of their high prevalence rates or because of the magnitude of their health, social and economic impact. Suicidal behaviour, while not in itself a mental illness, is highly correlated with mental illness and raises many similar issues. Future reports will address other mental illnesses as well as addictions.

A Report on Mental Illnesses in Canada responds to a recommendation from the Workshop on Mental Illnesses Surveillance, organized in September 1999 by the Canadian Alliance on Mental Illness and Mental Health (CAMIMH), with assistance from Health Canada. The workshop recommended the collation of existing data as the first step toward developing a surveillance system to monitor mental illnesses in Canada.

To study mental illnesses in Canada, this report uses the Canadian data that are currently available (hospitalizations in general hospitals and mortality data), as well as provincial studies. (See Appendix A - Data Sources.) Hospitalization data have limitations, however. Many factors other than the prevalence and severity of illness can influence hospital admissions and lengths of stay. Moreover, the majority of people with mental illnesses are treated in the community rather than in hospitals, and many may not be treated at all within the formal health care system. Data from provincial psychiatric hospitals would provide additional insight, but these data were unavailable by type of illness at the time of writing.

Future reports will benefit from more current and detailed population data from Statistics Canada's Canadian Community Health Survey (CCHS) - Mental Health and Well Being (to be completed in 2003) and the Development of Indicators for Mental Health and Addiction Services project at the Canadian Institute for Health Information (CIHI). These will only begin to fill the gaps in data, however. Each chapter of this report identifies additional information that would provide a more complete foundation on which to plan and evaluate policies, programs and services for mental illnesses.

If you would like more copies or have any comments on the report or suggestions for future reports please contact:

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SUMMARY

Mental illnesses are characterized by alterations in thinking, mood or behaviour (or some combination thereof) associated with significant distress and impaired functioning. The symptoms of mental illness vary from mild to severe, depending on the type of mental illness, the individual, the family and the socio-economic environment.

A health problem of the scope and importance of mental illness requires a comprehensive surveillance system to monitor progress in achieving policy and program goals. A workshop held in September, 1999, co-sponsored by Health Canada and the Canadian Alliance on Mental Illness and Mental Health (CAMIMH), developed a comprehensive indicator framework for a Mental Illnesses and Mental Health Surveillance System. This report responds to the recommendations from the workshop to collate existing data in order to begin the process of creating a picture of mental illnesses in Canada.

Highlights Chapter 1 - Overview

- Mental illnesses indirectly affect all Canadians through illness in a family member, friend or colleague.
- Twenty percent of Canadians will personally experience a mental illness during their lifetime.
- Mental illnesses affect people of all ages, educational and income levels, and cultures.
- The onset of most mental illnesses occurs during adolescence and young adulthood.
- A complex interplay of genetic, biological, personality and environmental factors causes mental illnesses.
- Mental illnesses can be treated effectively.
- Mental illnesses are costly to the individual, the family, the health care system and the community.
- The economic cost of mental illnesses in Canada was estimated to be at least $7.331 billion in 1993.
- Eight-six percent of hospitalizations for mental illness in Canada occur in general hospitals.
- In 1999, 3.8% of all admissions in general hospitals (1.5 million hospital days) were due to anxiety disorders, bipolar disorders, schizophrenia, major depression, personality disorders, eating disorders and suicidal behaviour.
- The stigma attached to mental illnesses presents a serious barrier not only to diagnosis and treatment but also to acceptance in the community.

Highlights Chapter 2 - Mood Disorders

- Mood disorders include major depression, bipolar disorder (combining episodes of both mania and depression) and dysthymia.
- Approximately 8% of adults will experience major depression at some time in their lives. Approximately 1% will experience bipolar disorder.
- The onset of mood disorders usually occurs during adolescence.
- Worldwide, major depression is the leading cause of years lived with disability, and the fourth cause of disability-adjusted life years (DALYs).
- Mood disorders have a major economic impact through associated health care costs as well as lost work productivity.
- Most individuals with a mood disorder can be treated effectively in the community. Unfortunately, many individuals delay seeking treatment.
- Hospitalizations for mood disorders in general hospitals are approximately one and a half times higher among women than men.
- The wide disparity among age groups in hospitalization rates for depression in general hospitals has narrowed in recent years, because of a greater decrease in hospitalization rates in older age groups.
- Hospitalization rates for bipolar disorder in general hospitals are increasing among women and men between 15 and 24 years of age.
- Individuals with mood disorders are at high risk of suicide.

Highlights Chapter 3 - Schizophrenia

- Schizophrenia affects 1% of the Canadian population.
- Onset is usually in early adulthood.
- Schizophrenia can be treated effectively with a combination of medication, education, primary care services, hospital-based services and community support, such as housing and employment.
- Fifty-two percent of hospitalizations for schizophrenia in general hospitals are among adults 25-44 years of age.
- Hospitalization rates for schizophrenia in general hospitals are increasing among young and middle-aged men.

Highlights Chapter 4 - Anxiety Disorders

- Anxiety disorders affect 12% of the population, causing mild to severe impairment.
- For a variety of reasons, many individuals may not seek treatment for their anxiety; they may consider the symptoms mild or normal, or the symptoms themselves may interfere with help-seeking.
- Anxiety disorders can be effectively treated in the community setting.
- Hospitalization rates for anxiety disorders in general hospitals are twice as high among women as men.
- The highest rates of hospitalization for anxiety disorders in general hospitals are among those aged 65 years and over.
- Since 1987, hospitalization rates for anxiety disorders in general hospitals have decreased by 49%.

Highlights Chapter 5 - Personality Disorders

- Based on US data, about 6% to 9% of the population has a personality disorder.
- Personality disorders exist in several forms. Their influence on interpersonal functioning varies from mild to serious.
- Onset usually occurs during adolescence or in early adulthood.
- Anti-social personality disorder is frequently found among prisoners (up to 50%).
- Of hospitalizations for personality disorders in general hospitals, 78% are among young adults between 15 and 44 years of age.

Highlights Chapter 6 - Eating Disorders

- Approximately 3% of women will be affected by an eating disorder during their lifetime.
- Eating disorders affect girls and women more than boys and men.
- Factors believed to contribute to eating disorders include biological and personal factors as well as society's promotion of the thin body image.
- Eating disorders carry with them a high risk of other mental and physical illnesses that can lead to death.
- Since 1987, hospitalizations for eating disorders in general hospitals have increased by 34% among young women under the age of 15 and by 29% among 15-24 year olds.

Highlights Chapter 7 - Suicidal Behaviour

- In 1998, 3,699 Canadians died as a result of suicide.
- Suicide accounts for 24% of all deaths among 15-24 year olds and 16% among 25-44 year olds.
- The mortality rate due to suicide among men is 4 times the rate among women.
- Individuals between 15-44 years of age account for 73% of hospital admissions for attempted suicide.
- Women are hospitalized in general hospitals for attempted suicide at 1.5 times the rate of men.

Future Surveillance Needs

Existing data provide a very limited profile of mental illnesses in Canada. The available hospitalization data need to be complemented with additional data to fully monitor these illnesses. Priority data needs include:

- Incidence and prevalence of each of the mental illnesses by age, sex and other key variables (for example, socio-economic status, education, and ethnicity)
- Co-morbidity of mental illnesses with other mental illnesses and/or with physical disorders
- Exposure to known or suspected risk and protective factors
- Impact of mental illnesses on the quality of life of the individual and family
- Access to and use of primary and specialist health care services
- Impact of mental illnesses on the workplace and the economy
- Stigma associated with mental illnesses
- Impact of mental illnesses on the legal and penal systems
- Access to and use of public and private mental health services
- Access to and use of mental health services in other systems, such as schools, criminal justice programs and facilities, and employee assistance programs
- Treatment outcomes

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CHAPTER 1

MENTAL ILLNESSES IN CANADA: AN OVERVIEW

Highlights

- **Mental illnesses indirectly affect all Canadians through illness in a family member, friend or colleague.**
- **Twenty percent of Canadians will personally experience a mental illness during their lifetime.**
- **Mental illnesses affect people of all ages, educational and income levels, and cultures.**
- **The onset of most mental illnesses occurs during adolescence and young adulthood.**
- **A complex interplay of genetic, biological, personality and environmental factors causes mental illnesses.**
- **Mental illnesses can be treated effectively.**
- **Mental illnesses are costly to the individual, the family, the health care system and the community.**
- **The economic cost of mental illnesses in Canada was estimated to be at least $7.331 billion in 1993.**
- **Eight-six percent of hospitalizations for mental illness in Canada occur in general hospitals.**
- **In 1999, 3.8% of all admissions in general hospitals (1.5 million hospital days) were due to anxiety disorders, bipolar disorders, schizophrenia, major depression, personality disorders, eating disorders and suicidal behaviour.**
- **The stigma attached to mental illnesses presents a serious barrier not only to diagnosis and treatment but also to acceptance in the community.**

What Is Mental Illness?

Mental illnesses are characterized by alterations in thinking, mood or behaviour (or some combination thereof) associated with significant distress and impaired functioning over an extended period of time. The symptoms of mental illness vary from mild to severe, depending on the type of mental illness, the individual, the family and the socio-economic environment.

In the course of a lifetime, every individual experiences feelings of isolation, loneliness, emotional distress or disconnection at times. These are usually normal, short-term reactions to difficult situations, rather than symptoms of mental illness. People learn to cope with difficult feelings just as they learn to cope with difficult situations. In some cases, however, the duration and intensity of painful feelings or disorienting patterns of thought may interfere seriously with everyday life. Ordinary coping skills are overwhelmed, and people may need help in regaining balance and restoring their fullest functioning.

Mental health is as important as physical health to daily living. In fact, the two are intertwined. Individuals with physical health problems often experience anxiety or depression that affects their response to the physical illness. Individuals with mental illnesses can develop physical symptoms and illnesses, such as weight loss and blood biochemical imbalances associated with eating disorders. Feelings, attitudes and patterns of thought strongly influence people's experience of physical health or illness, and may affect the course of illness and the effectiveness of treatment.

Mental illnesses may occur together. An individual can experience both depression and an anxiety disorder, for example. In addition, attempts to manage symptoms through alcohol or drugs may contribute to substance abuse for some individuals. In one US study, 54% of those with a lifetime history of at least one mental illness also had at least one other mental illness or addiction to substances.[1]

Mental illnesses take many forms. This report includes:

- Mood disorders
- Schizophrenia
- Anxiety disorders
- Personality disorders
- Eating disorders

A chapter on suicidal behaviour is also included because, while such behaviour is not in itself a mental illness, it is highly correlated with mental illness and raises many similar issues.

There are other significant mental illnesses (such as addictions) and issues surrounding special populations (such as children, the elderly and individuals with developmental delay). This report does not directly address these, but they will be the focus of future work. Nonetheless, the principles discussed in this overview apply to all mental illnesses.

How Common Are Mental Illnesses in Canada?

While in the past some regional population studies have investigated mental illness, recent national data on the prevalence of mental illnesses are lacking. Statistics Canada's Canadian Community Health Survey (CCHS), which is conducting a population-based study on some mental illnesses, is expected to provide prevalence data in the near future.

Previous Canadian studies[2,3] have estimated that nearly one in five Canadian adults will personally experience a mental illness during a 1-year period. Table 1-1 summarizes Canadian estimates of the prevalence of the mental illnesses included in this report. Based on estimates from the United States, personality disorders may affect 6% to 9% of the population.[5]

Table 1-1 Estimated One-Year Prevalence[a] of Mental Illnesses among Adults in Canada

Mental Illness	Estimates[2,3] of One-Year Prevalence
Mood Disorders	
Major (Unipolar) depression	4.1 – 4.6%
Bipolar disorder	0.2 - 0.6%
Dysthymia	0.8 - 3.1%
Schizophrenia	0.3%
Anxiety Disorders	12.2%
Personality Disorders	—
Eating Disorders[4] – Anorexia, Bulimia	Anorexia 0.7% women, 0.2% men Bulimia 1.5% women, 0.1% men
Deaths from Suicide (1998)	12.2 per 100,000 (1998) 2% of all deaths 24% of all deaths among those aged 15-24 years 16% of all deaths among those aged 25-44 years

[a] Estimated percentage of the population who have the disorder during any 1 year period

Impact of Mental Illnesses

Who Is Affected by Mental Illnesses?

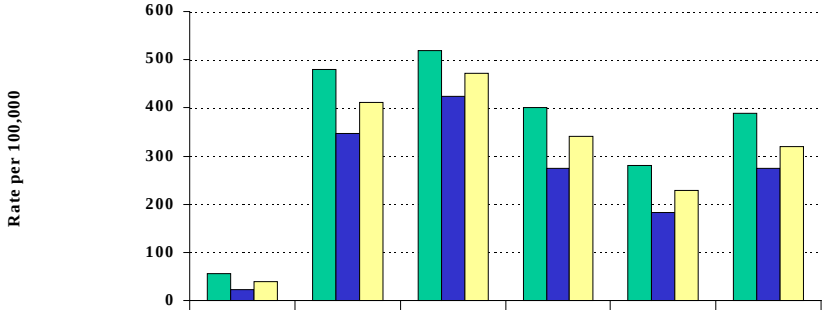
Mental illnesses affect people in all occupations, educational and income levels, and cultures. The distribution is not random or uniform; some mental illnesses are more prevalent in some population groups. However, no one is immune, and at some point in their lives, all Canadians are likely to be affected through a mental illness in a family member, friend or colleague.

Ideally, data from a population survey would provide information on the distribution of mental illnesses by age, sex and other characteristics. Statistics Canada's CCHS will provide some of these data in the future.

At the present time, hospitalization data provide the best available description of individuals with mental illness. These data have limitations, however, because most people with mental illness are treated in the community rather than in hospitals, and many do not receive treatment at all. Many factors other than the prevalence and severity of illness can influence hospital admissions and lengths of stay. These limitations must be kept in mind, then, when interpreting the data presented in this report.

According to hospitalization data, mental illnesses affect all ages. In 1999, rates among women were higher than among men in all age groups (Figure 1-1). Nearly one-half of all admissions for one of the seven most common mental illnesses involved individuals between the ages of 25 and 44 years. Canadians between 45 and 64 years accounted for one-quarter (24%) of hospitalizations. The high rates of hospitalization among young adults aged between 15 and 24 years attest to the impact of mental illnesses on young people.

Figure 1-1 Rates of hospitalization for one of seven mental illnesses* in general hospitals per 100,000 by age and sex, Canada, 1999/2000



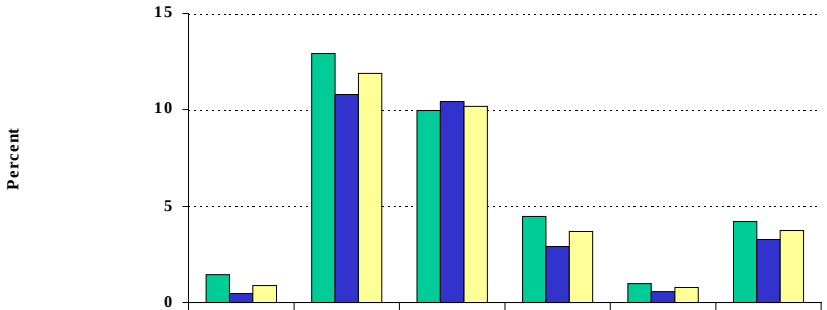
	<15 years	15-24 years	25-44 years	45-64 years	65+ years	All
Women	56.7	479.7	519.8	401.6	280.3	388.8
Men	22.1	346.5	424.4	273.9	183.2	273.2
Women & Men	38.9	411.5	471.7	339.7	229.2	319.3

*Most responsible diagnosis is one of anxiety disorders, bipolar disorders, schizophrenia, major depression, personality disorders, eating disorders and attempted suicide.

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Overall, the conditions discussed in this report accounted for 3.8% of all general hospital admissions in 1999 (as the primary or most responsible diagnosis). The proportion among both men and women in the 15-24 and 25-44 year age groups was much higher, however: over 10% (Figure 1-2).

Figure 1-2 The proportion of all hospitalizations that are due to one of seven mental illnesses* in general hospitals by age and sex, Canada, 1999/2000



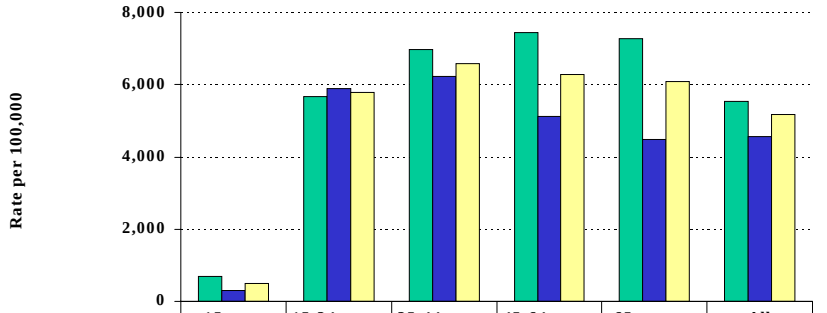
	<15 years	15-24 years	25-44 years	45-64 years	65+ years	All
Women	1.5	12.9	9.9	4.5	1.0	4.2
Men	0.5	10.8	10.4	2.9	0.6	3.3
Women & Men	0.9	11.9	10.2	3.7	0.8	3.8

* Most responsible diagnosis is one of anxiety disorders, bipolar disorders, schizophrenia, major depression, personality disorders, eating disorders, and attempted suicide.

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Although 1999 general hospital admission rates among women aged 65 years and over were much lower than among women aged 45 to 64 years, the days rate of hospitalization was almost the same (Figure 1–3). Hence, the older group stayed longer in hospital.

Figure 1-3 Days of hospitalization for one of seven mental illnesses* in general hospitals (number of days spent in hospital) per 100,000 by age and sex, Canada, 1999/2000



	<15 years	15-24 years	25-44 years	45-64 years	65+ years	All
Women	694	5,674	6,969	7,437	7,273	5,537
Men	299	5,891	6,235	5,129	4,489	4,555
Women & Men	492	5,785	6,599	6,292	6,085	5,170

* Most responsible diagnosis is one of anxiety disorders, bipolar disorders, schizophrenia, major depression, personality disorders, eating disorders and attempted suicide.

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

How Do Mental Illnesses Affect People?

The onset of most mental illnesses occurs during adolescence and young adulthood. This affects educational achievement, occupational or career opportunities and successes, and the formation and nature of personal relationships. The effect extends throughout an individual's life. The greater the number of episodes of illness that an individual experiences, the greater the degree of lasting disability. Receiving and complying with effective treatment and having the security of strong social supports, adequate income, housing and educational opportunities are essential elements in minimizing the impact of mental illness.

In developed countries, mental illnesses (major depression, bipolar disorder, schizophrenia, and obsessive-compulsive disorder) account for four of the 10 leading causes of disability.[6]

Suicide is a significant risk for individuals with some mental illnesses, such as major depression, bipolar disorder, schizophrenia and borderline personality disorder.

Mental illnesses have a significant impact on the family. To begin with, they may face difficult decisions about treatment, hospitalization, housing and contact with the family member with mental illness. The individuals and their families face the anxiety of an uncertain future and the stress of what can be a severe and limiting disability. The heavy demands of care may lead to burnout. Families sometimes fear that they caused the illness. The cost of medication, time off work, and extra support can create a severe financial burden for families. Both the care requirements and the stigma attached to mental illness often lead to isolation of family members from the community and their social support network and may even contribute to the suicide of a family member.

Economic Impact

Mental illnesses also have a major impact on the Canadian economy in terms of productivity losses and health care costs. Measuring the economic impact of mental illnesses in Canada faces the challenge of a lack of comprehensive data on not only the use and cost of services, but also the economic impact of lost productivity through, for example, absence from work.

A 1993 study by Health Canada used several types of administrative and survey data, including physician billing data, hospitalization data, and data on self-reported activity restriction to estimate the cost of mental illnesses at $7.331 billion in 1993 dollars.[7] Some costs, such as loss of productivity by those too ill to complete surveys, could not be captured through the available data.

A later Canadian study drew upon the same data as well as data from the 1996/97 NPHS questions regarding depression and distress and self-reported use of health services; the authors estimated that the annual economic impact of mental health problems in Canada is $14.4 billion.[8] The authors of this study also believe the figure to be an under-estimate due to the limitations of their dataset.

While estimates will vary widely depending on what costs are included, it is clear that the economic burden of mental illnesses is enormous.

Mental illnesses are a major contributor to hospital costs. According to the Canadian Institute for Health Information (CIHI), Canadian hospitals reported 199,308 separations related to mental illness in 1999/2000. General hospitals accounted for 86% and provincial psychiatric hospitals for 14%. In 1999/2000, 9,022,382 hospital days were utilized by individuals with mental illnesses. These were almost equally distributed between provincial psychiatric and general hospitals. The overall average length of stay was 45 days. The average length of stay in psychiatric hospitals was 160 days compared to 27 days in general hospitals.

Stigma and Discrimination Associated with Mental Illnesses

The serious stigma and discrimination attached to mental illnesses are among the most tragic realities facing people with mental illness in Canada. Arising from superstition, lack of knowledge and empathy, old belief systems, and a tendency to fear and exclude people who are perceived as different, stigma and discrimination have existed throughout history. They result in stereotyping, fear, embarrassment, anger and avoidance behaviours. They force people to remain quiet about their mental illnesses, often causing them to delay seeking health care, avoid following through with recommended treatment, and avoid sharing their concerns with family, friends, co-workers, employers, health service providers and others in the community.

The Canadian Alliance for Mental Illness and Mental Health (CAMIMH) has identified combating the stigma of mental illnesses and preventing discrimination against people with mental illnesses as one of the most pressing priorities for improving the mental health of Canadians. Educating the public and the media about mental illness is a first step toward reducing the stigma and encouraging greater acceptance and understanding of mental illness. Developing and enforcing policies that address discrimination and human rights violations provides incentives for change.

Causes of Mental Illnesses

Research suggests that mental illnesses are the result of a complex interaction of genetic, biological, personality and environmental factors; however, the brain is the final common pathway for the control of behaviour, cognition, mood and anxiety. At this time, the links between specific brain dysfunction and specific mental illnesses are not fully understood.[9] In the chapters that follow reference is frequently made to both genetic endowment (e.g. inherited dysfunctions affecting brain chemistry) and the environment (e.g. external physical and psychosocial factors) when discussing the causes, treatment and prevention of mental illnesses. It is important not to over-interpret the available evidence about the role of either genetic or environmental factors in causing mental illnesses as much more research is needed to fully understand the cause of mental illness.

Most mental illnesses are found to be more common in close family members of a person with a mental illness, suggesting a genetic basis to the disorders. In some instances there is research evidence suggesting that particular genetic factors affecting brain chemistry contribute to the onset and progression of mental illness. However, there is also increasing evidence that long-term changes in brain function can occur in response to factors in the environment such as stimulation, experiences of traumatic or chronic stress, or various kinds of deprivation. In other words, the interaction between brain biology and lived experience appears to work both ways.

For reasons that may be biological, psychosocial, or both, age and sex affect rates of mental illness. Environmental factors such as family situation, workplace pressures and the socio-economic status of the individual can precipitate the onset or recurrence of a mental illness. Lifestyle choices (e.g. substance abuse) and learned patterns of thought and behaviour can influence the onset, course and outcome of mental illness.

The interaction of physical and mental illness is similarly complex. There is evidence that mental illness can contribute to, result from, or share a common causal pathway with, physical illnesses such as cancer, heart disease and chronic obstructive pulmonary disease (COPD).

Since a great deal remains unknown about the respective roles and interactions of heredity and environment, brain dysfunction and lived experience, it is prudent to give them equal consideration.

Poverty and Mental Illnesses

The relationship between poverty and mental illnesses is complicated. Many studies have found that socio-economic status is inversely related to the development of mental illness. Two frameworks[10] have been proposed to explain this relationship.

Indirect Association: Selection and Drift

The concept of selection proposes that certain individuals may be predisposed both to a mental illness and to lower expectations and ambition. These in turn, result in lower levels of educational and occupational achievement. On the other hand, milder undiagnosed mental illness makes it difficult

for individuals to succeed in the complex post-industrial society. Poverty is associated with a lower level of achievement in formal education. In this situation, then, there is an indirect association between poverty and mental illness.

"Drift" refers to the likelihood that those with a mental illness may drift into poverty as they have difficulty achieving and maintaining regular employment. This indirect association between poverty and mental illness may be mitigated by the "class" effect, whereby the networks of support around people in higher socio-economic classes prevent their drift into poverty.

Direct Association: Social Causation

Direct association between poverty and mental illness implies that the social experience of individuals who are poor increases the likelihood that they may develop a mental illness. For example, living in poverty may lead to a lack of opportunity and consequently to hopelessness, anger and despair. Poverty may also increase the risk of exposure to chronic or traumatic stress. When combined with a genetic predisposition, such factors may contribute to the development of mental illnesses. However, it is important to note that most people who are poor do not have mental illnesses. This suggests that if there is social causation, it involves additional factors.

Prevention and Treatment

Addressing the psychological and social determinants of mental health can promote mental health and perhaps prevent some mental illnesses.

At the level of the individual, such factors as secure attachment, good parenting, friendship and social support, meaningful employment and social roles, adequate income, physical activity, and an internal locus of control will strengthen mental health and, indirectly, reduce the impact or incidence of some mental health problems.

At a system level, strategies that create supportive environments, strengthen community action, develop personal skills and reorient health services can help to ensure that the population has some control over the psychological and social determinants of mental health.

Primary prevention of most mental disorders is still in early stages of development. Given the very consistent evidence that a history of severe trauma (such as physical or sexual abuse) is correlated with various mental health problems (dissociative disorders, personality disorders, addictions, post traumatic stress disorder (PTSD))[11,12], it is reasonable to conclude that preventing such traumas would prevent mental health problems. There is promising evidence that early teaching of cognitive-behavioural strategies can prevent or reduce the impact of anxiety disorders.[13]

Most mental illnesses can be treated. Treatment must reflect the complex origins of mental illnesses. A variety of interventions, such as psychotherapy, cognitive behavioural therapy, medication, occupational therapy and social work, can improve an individual's functioning and quality of life. Since mental illnesses involve disorders of brain functioning, medication often forms an important part of treatment.

Making the correct diagnosis and tailoring effective treatment to the individual's needs are essential components of an overall management plan. The active involvement of the individual in the choice of therapy and his/her adherence to the chosen therapy are critical to successful treatment. Sometimes, protecting the health of the individual may require the involvement of alternative decision-makers.

Treatment requires a variety of health and social service providers and volunteers organized into a comprehensive system of services. Service providers need to work as a team to ensure continuity of care.

For maximal effectiveness, a treatment system should provide all individuals with access to services where needed. When adequately resourced, treatment in the community has many advantages. The reforms of the mental health system of the 1960s and 1970s reduced the number beds in psychiatric institutions. Many individuals with a mental illness moved from chronic care facilities back into the community. Communities have faced major challenges in helping not only these individuals, but also those newly diagnosed with severe mental illness, to create a reasonable quality of life in the community.[14]

Towards a Comprehensive System

There are many perspectives on what would constitute a comprehensive, effective mental health care system. The following are a number of elements that could be regarded as essential to such a system.

Education for Users of Services and Their Families

Individuals and families directly affected by mental illness need information about the signs and symptoms of these illnesses, sources of help, medications, therapy and early warning signs of relapse. Booklets, videotapes and family consultations can help to raise awareness. Outcomes may be improved by educating people in order to enhance their abilities to identify episodes in the earlier stages and to respond with appropriate actions.

Community Education

Dispelling the myths surrounding mental illness requires community education programs, including programs in schools. Such programs could help to reduce the stigma associated with mental illness and improve the early recognition of a problem. They may also be instrumental not only in encouraging people to seek care but also in creating a supportive environment for the individual.

Self-Help/Mutual Aid Network

Self-help (mutual aid) organizations and programs connect individuals to others facing similar challenges and provide support to both individuals and family members. Mutual aid groups have been found to empower individuals, in particular by providing

information, reducing isolation and teaching coping skills. They can work in effective partnerships with professional services if their strengths are recognized and the boundaries between formal health care and mutual aid are acknowledged.

Primary and Specialty Care

For most Canadians, the primary care physician is their first and often only contact with the health care system. Under-diagnosis, misdiagnosis and under-treatment of mental illness can result in poor outcomes. As a result, educating primary care physicians to properly recognize, diagnose and treat most mental illnesses, and to know when to refer the affected individuals to others, has a crucial role in maximizing the care that they provide. Training of family medicine residents in these topics is also essential. Creating and distributing consensus treatment guidelines is a first step to increase knowledge about mental illnesses, their diagnosis and treatment. Encouraging the use of these guidelines requires attention to the predisposing, enabling and reinforcing factors that exist in the clinical setting.

In the Shared Care Model of mental health care delivery,[15] psychiatrists and mental health professionals work with family physicians, providing support and counselling assistance in the daily clinic setting. Care providers and individuals requiring service have found this to be an effective model.

Other health professions, such as psychology and social work, also provide essential services to those with mental illness. An ideal primary care model would involve psychologists, social workers, family physicians, psychiatrists, nurses, pharmacists and others working in a collaborative and integrated system.

Hospitals

The hospital emergency department is a valuable resource for crisis interventions and may be an individual's first point of contact with the health care system. However, an ideal system would incorporate a more comprehensive crisis response system (see next section).

Hospitalization for a mental illness can assist in the diagnosis and can stabilize symptoms. It can provide a critical respite from the sometimes overwhelming challenges of daily living. The hospital also serves as a safe and supportive environment when the risk of suicide is high or judgement is severely compromised by the presence of mental illness. Ideally, multidisciplinary teams of physicians, nurses, occupational therapists, pharmacists, social workers and case managers work with the individual and family to identify and respond to the factors that influence symptoms. They also assist the individual and family in understanding and coping with their personal responses to the mental illness.

Although hospitalization provides important short-term respite and care, prolonged periods in hospital remove individuals from their normal environment and can weaken social connections, making re-integration into community living more challenging. Planning for the person's transition back into community living is an important role of the hospital team, which should be carried out in cooperation with care providers and service agencies in the community. An investment in community outreach programs, which support individuals in living productive, meaningful, and connected lives, is an essential cost-effective complement or alternative to hospital-based care.

Hospital-based programs targeted at

improving independent living skills can help individuals acquire social, communication and functional living skills that improve their ability to cope with the demands of living.

Crisis Response Systems/ Psychiatric Emergency Services

Many persons with severe mental illness are vulnerable to stress and face recurrent episodes of psychosis. Others experience crises due to poverty, recurrent unemployment, loss of housing or loss of support networks. Despite the differing origins and manifestations of these crises, hospital emergency rooms have been the primary venue for crisis management. Unfortunately, adequate follow-up has been difficult to ensure, and crisis prevention and early intervention are not addressed. Opportunities to link new users to appropriate resources, or to mobilize existing networks to help manage crisis situations, are missed.

Crisis response systems (CRS) have been proposed to provide a more effective approach. Rather than a single service response, a CRS encompasses a range of services integrated across various providers. With its expertise and range of options, a CRS is positioned to resolve crises using minimally intrusive options, particularly for non-compliant persons. A CRS offers backup to community providers, including mental health personnel, family practitioners and police; it provides an important community outreach mechanism by connecting first time users to appropriate services; and it serves as a valuable community relations tool by reassuring members of the community, such as landlords, that persons with severe mental illness will be supported during crises.

Crisis-specific functions include:

- Medical services, including inpatient services when other options have been exhausted;
- Short-term residential placements for crisis stabilization in protective and supportive settings;
- Mobile crisis outreach which brings assistance to virtually any site in the community where crisis is occurring;
- Walk-in crisis intervention services; and
- Telephone crisis services.[16]

Case Management/ Community Outreach Programs

Case management programs (sometimes referred to as community outreach) come in many forms, but generally consist of multidisciplinary teams that share the clinical responsibility for each individual receiving care in the community. A team aims to help individuals with mental illness to achieve the highest level of functioning possible in the least restrictive setting. To this end the team works to ensure compliance with treatment (particularly for those with schizophrenia and other psychotic illnesses) and, consequently, improve functioning in order to reduce the need for hospital readmission. The program also focuses on obtaining and coordinating needed services from a variety of health and social agencies; resolving problems with housing, employment, leisure, relationships and activities of daily living; and providing social skills training to improve social functioning.

Key features of good case management include:

- A caring, supportive relationship between the team and the individual; and
- Emphasis on flexibility and continuity of care - that is, supports provided as long as needed, across service and program settings, even when the person's needs change over time.

A model of case management that has been positively evaluated is Assertive Community Treatment (ACT). The ACT team has a high staff/patient ratio and provides the individual with access to support when and where needed - 24 hours a day, 7 days a week. An individual who is at high risk of relapse and hospitalization needs this type of support, especially when family or social support is limited.[17]

Workplace Supports

Aside from the home, the workplace is the primary location of adult life. As such, it plays an influential role in an individual's health and well-being. Much of the impact of mental illnesses in the workplace is reflected in poor productivity and increased use of sick leave. Stigma surrounds people with mental health difficulties, and the recovery process is often misunderstood. Employers need to demonstrate that they do not discriminate and are fair in their policies and procedures in dealing with mental health problems.[18]

The workplace has great potential to develop and maintain a healthy work environment by educating employers and employees in the area of mental health issues and providing supportive reintegration into the work environment for those experiencing mental illness. Vocational rehabilitation supports permanent competitive employment - that is, the ability to hold a regular job in the community.

It is important to address the high levels of unemployment and poverty found among people with mental illness and to support their desire for work. Consumer/survivor-run businesses have proven effective in restoring employment to individuals with mental illnesses.

Other Supports

A variety of other programs and services - such as long-term care residences, community rehabilitation, special needs groups, specialty services (sleep laboratory, psycho-pharmacological consultation), and community crisis centres - can contribute to the diagnosis, treatment and integration of individuals into the community and the improvement of their quality of life.

Other supports are required to ensure adequate income, safe housing and opportunities for regular education for these individuals with mental illnesses.

The Best Practices in Mental Health Reform documents produced under the aegis of the Federal/Provincial/Territorial Advisory Network on Mental Health provide more detailed information and recommendations about specific components of a comprehensive, effective mental health care and support system. They also discuss system-wide strategies that foster the widespread implementation of effective services and supports for people with serious and chronic mental illness. These documents are available on Health Canada's web site at: http://www.hc-sc.gc.ca/hppb/mentalhealth/service_systems.htm.

Future Directions

As a group, mental illnesses present an important public health challenge for Canada. All sectors of society and all levels of government have roles to play in responding adequately to this challenge. The Canadian Alliance for Mental Illness and Mental Health (CAMIMH), a coalition of non-governmental organizations that includes representation from the voluntary, professional, consumer and family sectors, has proposed a national action plan to guide the national response to mental illnesses. (See Appendix B.) CAMIMH views this as a blueprint that will be expanded upon and further developed in collaboration with other stakeholders.

A health problem of the scope and importance of mental illness requires a comprehensive surveillance system to monitor progress in achieving the goals of the national action plan. A workshop held in September 1999, co-sponsored by Health Canada and CAMIMH, developed a comprehensive indicator framework for a Mental Illnesses and Mental Health Surveillance System. This report responds to the recommendations from the workshop to collate existing data in order to begin the process of creating a picture of mental illness in Canada.

As will be seen in the following chapters, hospitalization and mortality data provide a partial picture of mental illness in Canada. Since most people do not die from mental illnesses and most care is provided outside of the hospital setting, however, the information that these data provide is limited. Concern also exists about the quality and the scope of the hospitalization and mortality data.

The CCHS-Cycle 2 – Mental Illnesses Survey, to be completed by Statistics Canada in 2003, will provide new data on mental illnesses, including prevalence, quality of life, stigma and the use of health services.

The Development of Indicators for Mental Health and Addiction Service project at the Canadian Institute for Health Information (CIHI) will provide a report on inpatient hospital indicators that could be calculated using existing data.

The linking of provincial databases, such as physician billing, hospitalization, pharamacare and mortality, would also provide valuable information for a mental illness surveillance system. In all steps to improve surveillance, the protection of private information is a critical concern.

While the future holds the promise of improved data for mental illness surveillance in Canada, much more needs to be done. Each chapter in this report focuses on a specific mental illness or group of disorders, using existing hospitalization data and identifying priority data needs for surveillance. The collection, analysis and dissemination of this data will then serve to guide decisions in policies and services aimed at improving the quality of life of people who live with mental illnesses.

Resources

A list of Web-sites of national organizations for mental illnesses.

- Alzheimer Society of Canada: www.alzheimer.ca
- Canadian Association for the Mentally Ill: www.cami.org
- Canadian Association of Social Workers: www.casw-acts.ca
- Canadian Health Network: www.canadian-health-network.ca/1mental_health.html
- Canadian Institute for Health Information: www.cihi.ca
- Canadian Institutes of Health Research - Institute of Neurosciences, Mental Health and Addiction: www.cihr-irsc.gc.ca/institutes/inmha
- Canadian Medical Association: www.cma.ca
- Canadian Mental Health Association: www.cmha.ca.
- Canadian Psychiatric Association: www.cpa-apc.org
- Canadian Psychiatric Research Foundation: www.cprf.ca
- Canadian Psychological Association: www.cpa.ca
- Centers for Disease Control and Prevention: www.cdc.gov
- Centre for Addiction and Mental Health: www.camh.net
- The College of Family Physicians of Canada: www.cfpc.ca
- Health Canada, Mental Health:
  www.hc-sc.gc.ca/hppb/mentalhealth/mhp/index.html
  and
  www.hc-sc.gc.ca/english/lifestyles/mental_health.html
- The Mood Disorders Society of Canada: www.mooddisorderscanada.ca
- The National Eating Disorder Information Centre: www.nedic.ca
- National Network for Mental Health: www.nnmh.ca
- Schizophrenia Society of Canada: www.schizophrenia.ca
- Statistics Canada: www.statscan.ca
- Canadian Association of Occupational Therapists: www.caot.ca/index.cfm

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[17] For more information about case management and ACT, see "Case management/assertive community treatment" in Review of Best Practices in Mental Health Reform, Federal/Provincial/Territorial Advisory Committee on Mental Health, 1997, available online at http://www.hc-sc.gc.ca/hppb/mentalhealth/pubs/bp_review/e_index.html.

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CHAPTER 2

MOOD DISORDERS

Highlights

- **Mood disorders include major depression, bipolar disorder (combining episodes of both mania and depression) and dysthymia.**
- **Approximately 8% of adults will experience major depression at some time in their lives. Approximately 1% will experience bipolar disorder.**
- **The onset of mood disorders usually occurs during adolescence.**
- **Worldwide, major depression is the leading cause of years lived with disability, and the fourth cause of disability-adjusted life years (DALYs).**
- **Mood disorders have a major economic impact through associated health care costs as well as lost work productivity.**
- **Most individuals with a mood disorder can be treated effectively in the community. Unfortunately, many individuals delay seeking treatment.**
- **Hospitalizations for mood disorders in general hospitals are approximately one and a half times higher among women than men.**
- **The wide disparity among age groups in hospitalization rates for depression in general hospitals has narrowed in recent years, because of a greater decrease in hospitalization rates in older age groups.**
- **Hospitalization rates for bipolar disorder in general hospitals are increasing among women and men between 15 and 24 years of age.**
- **Individuals with mood disorders are at high risk of suicide.**

What Are Mood Disorders?

Mood disorders may involve depression only (also referred to as "unipolar depression") or they may include manic episodes (as in bipolar disorder, which is classically known as "manic depressive illness"). Individuals with mood disorders suffer significant distress or impairment in social, occupational, educational or other important areas of functioning.

Individuals with depression feel worthless, sad and empty to the extent that these feelings impair effective functioning. They may also lose interest in their usual activities, experience a change in appetite, suffer from disturbed sleep or have decreased energy.

Individuals with mania are overly energetic and may do things that are out of character, such as spending very freely and acquiring debt, breaking the law or showing lack of judgement in sexual behaviour. These symptoms are severe and last for several weeks, interfering with relationships, social life, education and work. Some individuals may appear to function normally, but this requires markedly increased effort as time with the illness progresses.

Both depressive and manic episodes can change the way an individual thinks and behaves, and how his/her body functions.

Major depressive disorder is characterized by one or more major depressive episodes (at least 2 weeks of depressed mood or loss of interest in usual activities accompanied by at least four additional symptoms of depression).[1]

Bipolar disorder is characterized by at least one manic or mixed episode (mania and depression) with or without a history of major depression.[2]

Dysthymic disorder is essentially a chronically depressed mood that occurs for most of the day for more days than not over a period of at least two years,[1] without long, symptom-free periods. Symptom-free periods last no longer than 2 months. Adults with the disorder complain of feeling sad or depressed, while children may feel irritable. The required minimum duration of symptoms for diagnosis in children is 1 year.

Symptoms	
Depression	**Mania**
• **Feeling worthless, helpless or hopeless** • **Loss of interest or pleasure (including hobbies or sexual desire)** • **Change in appetite** • **Sleep disturbances** • **Decreased energy or fatigue (without significant physical exertion)** • **Sense of worthlessness or guilt** • **Poor concentration or difficulty making decisions**	• **Excessively high or elated mood** • **Unreasonable optimism or poor judgement** • **Hyperactivity or racing thoughts** • **Decreased sleep** • **Extremely short attention span** • **Rapid shifts to rage or sadness** • **Irritability**

How Common Are Mood Disorders?

As a group, mood disorders are one of the most common mental illnesses in the general population. Canadian studies looking at lifetime incidence of major depression found that 7.9% to 8.6% of adults over 18 years of age and living in the community met the criteria for a diagnosis of major depression at some time in their lives.[1] Other studies have reported that between 3% and 6% of adults will experience dysthymia during their lifetime,[3] and that between 0.6% and 1% of adults will have a manic episode during their lifetime.[4]

During any 12-month period, between 4% and 5% of the population will experience major depression.[1] According to the 1994/95 National Population Health Survey (NPHS), 6% of the Canadian population aged 12 years and over had symptoms consistent with depression at the time of the survey.[5]

Impact of Mood Disorders

Who Is Affected by Mood Disorders?

Mood disorders affect individuals of all ages, but usually appear in adolescence or young adulthood. However, late diagnosis is common: the average age of diagnosis of major depressive disorder is in the early twenties to early thirties.1

Studies have consistently documented higher rates of depression among women than among men: the female-to-male ratio averages 2:1.[3] Women are 2 to 3 times more likely than men to develop dysthymia.

Sex differences in the symptoms associated with depression may contribute to the differences in the prevalence of depression between men and women. For example, men are more likely to be irritable, angry and discouraged when depressed, whereas women express the more "classical" symptoms of feelings of worthlessness and helplessness, and persistent sad moods. As a result, depression may not be as easily recognized in a man. In addition, women are more likely than men to seek help from health professionals. Biological or social risk or protective factors may also differ between men and women.

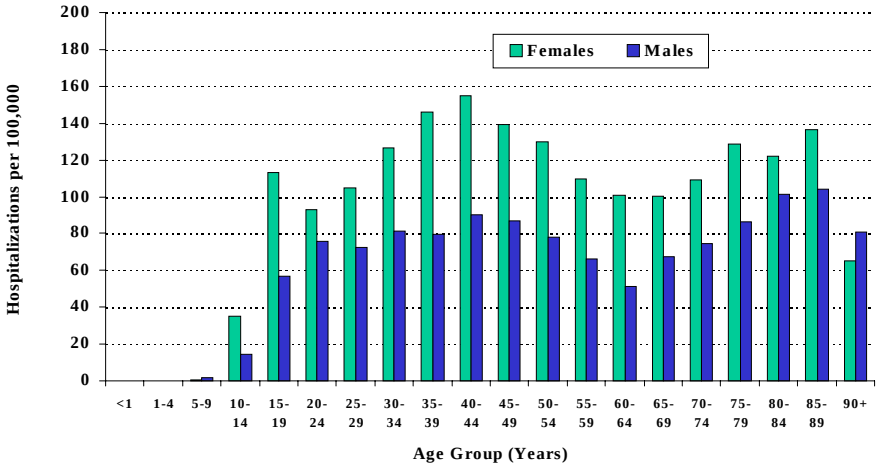
For bipolar disorder, it is generally accepted that the ratio between men and women is approximately equal.[6]

Ideally, data from a population survey would provide information on the age/sex distribution of individuals with mood disorders. Statistics Canada's Canadian Community Health Survey (CCHS) will provide this for 2002.

Although most individuals with mood disorders are treated in the community, hospitalization is sometimes necessary. At the present time, hospitalization data provide the best available, though limited, description of individuals with mood disorders. The results must be viewed with caution, however, since this is only a subset of those with mood disorders: most individuals with mood disorders are treated in the community rather than in hospitals, and many do not receive treatment at all.

In 1999, more women than men were hospitalized for major depressive disorder in every age group except 90+ years (Figure 2-1). Young women aged 15-19 years had much higher rates of hospitalization than the immediately adjacent age groups. Women between the ages of 40 and 44 years and men between the ages of 85 and 89 years had the highest rates of hospitalization for their sex.

Figure 2-1 Hospitalizations for major depressive disorder* in general hospitals per 100,000 by age group, Canada, 1999/2000

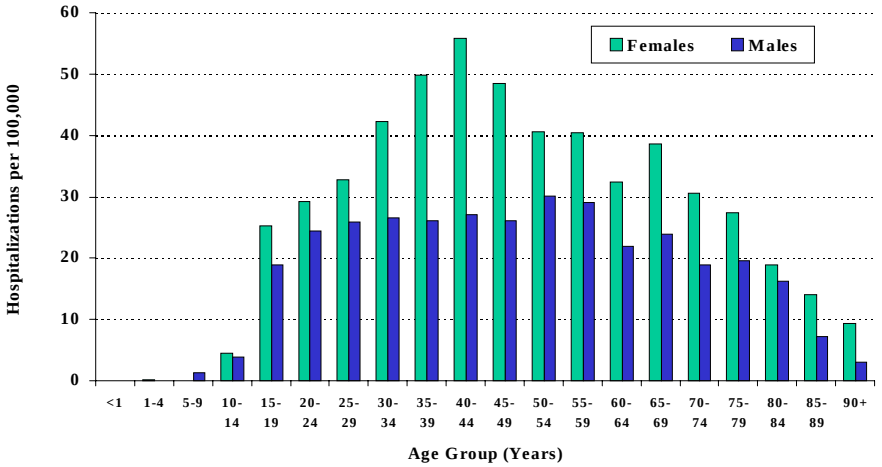


* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

In 1999, in all except the 5-9 year age group, women were hospitalized for bipolar disorder at significantly higher rates than men (Figure 2-2). This contrasts with the generally accepted equal ratio of prevalence of the disorder among men and women. Further research is needed to explain this distribution. Women were most frequently hospitalized for bipolar disorder between the ages of 40 and 44 years.

Figure 2-2 Hospitalizations for bipolar disorder* in general hospitals per 100,000 by age group, Canada, 1999/2000



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

How Do Mood Disorders Affect People?

Because of their high prevalence, economic cost, risk of suicide and loss of quality of life, mood disorders present a serious public health concern in Canada. Depression and mania cause significant distress and impairment in social, occupational, educational or other important areas of functioning.[7] According to the World Health Organization (WHO), major depression is the fourth leading cause of disability adjusted life years (DALYs) in the world.[8] Major depression is the leading cause of years of life lived with disability (YLD) and bipolar is the sixth leading cause.[8]

Major depressive disorder is a recurrent illness with frequent episode relapses and recurrences. The more severe and long-lasting the symptoms in the initial episode, due in some cases to a delay in receiving effective treatment, the less likely is a full recovery.

Unipolar major depressive disorder is identified as the fourth-ranked cause of disability and premature death worldwide.[8] Depression also has a major impact on the mental health of family members and caregivers, often with an increased presence of depression and anxiety symptoms.

Dysthymia, as a result of its protracted nature, can be very debilitating.[9] In spite of a high recovery rate, the risk of relapse is significant. Individuals with this disorder are also at high risk of experiencing an episode of major depression.[10]

Individuals with one episode of **bipolar disorder** tend to experience future episodes. Recovery rates vary among individuals. Those with purely manic episodes fare better than those with both mania and depression, who tend to take longer to recover and have more chronic course of illness.[6]

The mortality rate among individuals with bipolar disorder is 2 to 3 times greater than that of the general population, and includes higher rates of suicide.[6]

Child or spousal abuse or other violent behaviours may occur during severe manic episodes. Furthermore, individuals with bipolar disorder often show loss of insight, resulting in resistance to treatment, financial difficulties, illegal activities and substance abuse. Other associated problems include occupational or educational failure, financial difficulties, substance abuse, illegal activities and divorce.[2] Individuals with bipolar disorder may often have difficulty maintaining steady employment and, as a result, may suffer social and economic disadvantages.

Mood disorders frequently accompany other mental illnesses, such as anxiety disorders, personality disorders, and substance abuse and dependencies. The presence of another mental illness increases the severity of the illness and results in a poorer prognosis. Individuals with mood disorders are at high risk of suicide.

Economic Impact

Because of their high prevalence, mood disorders have a major effect on the Canadian economy. This effect is dual in nature - first, with the associated loss of productivity in the workplace due to absenteeism and diminished effectiveness; and second, with the high health care costs attributable to primary care visits, hospitalizations and medication.

At the individual and family level, the loss of income and cost of medication create a strain on the family financial resources.

Stigma Associated with Mood Disorders

The stigma against individuals with mood disorders has a major influence in determining whether an individual seeks treatment, takes prescribed medication or attends counselling. This effect is greater among men than women. The stigma also influences the successful re-integration of the individual into the family and community.

Employers may be concerned that the individual with a mood disorder will be unable to function at the level of other employees. When the illness goes untreated, this may be true. However, with treatment to reduce or manage symptoms, performance usually improves. Reducing the stigmatization of mental illness in the workplace will be helped by increased knowledge and an employer's willingness and ability to respond appropriately to an employee's needs.[11] Enforcement of human rights legislation can reinforce voluntary efforts.

Causes of Mood Disorders

Mood disorders have no single cause, but several factors, such as a biochemical imbalance in the brain, psychological factors and socio-economic factors, tend to make some individuals prone to such disorders.[9,12]

Genetic Influence

Studies have established that individuals with depression and bipolar disorder often find a history of these disorders in immediate family members.[6,13] Evidence suggests that many different genes may act together and in combination with other factors to cause a mood disorder. Although some studies have suggested a few interesting genes or genomic regions, the exact genetic factors that are involved in mood disorders remain unknown.

Previous Episode of Depression

One episode of major depression is a strong predictor of future episodes. More than 50% of individuals who have an episode of major depression experience a recurrence.[13]

Stress

Stress has traditionally been viewed as a major risk factor for depression. Recent research efforts have indicated, however, that stress may predispose individuals only for an initial episode and not for recurring episodes.[14] Responses to stress differ greatly among individuals: some are more susceptible than others to depression following life events, when they are in difficult relationships, or because of socio-economic factors such as inadequate income or housing, prejudice and workplace stress.

Physical Illness

A strong association exists between various chronic medical conditions and an elevated prevalence of major depression.[15,16] Several conditions, such as stroke and heart disease, Parkinson's disease, epilepsy, arthritis, cancer, AIDS and chronic obstructive pulmonary disease (COPD), may contribute to depression. Several factors associated with physical illness may contribute to the onset or worsening of depression. These include the psychological impact of disability, decline in quality of life, and the loss of valued social roles and relationships. Medication side effects may also be a contributing factor. Finally, it is possible that the physical disease itself may contribute directly to the onset of depression by affecting physiological mechanisms such as neurotransmitters, hormones and the immune system; for similar reasons, episodes of mania may occur following physical illness or use of medications.

Indirect factors also influence the relationship between physical conditions and depression. Such factors include disability and quality of life of individuals with chronic disease and the tendency for some medications used for treating physical illnesses to cause depression.Treating chronic physical illness effectively requires vigilance for the early detection and treatment of depression.

Treatment of Mood Disorders

Mood disorders are treatable. Many people with a mood disorder fail to seek treatment, however, and suffer needlessly. Of those who seek treatment, many remain undiagnosed or receive either incorrect medication or inadequate doses.[17] The delay in seeking and receiving a diagnosis and treatment may be due to a number of factors, such as stigma, lack of knowledge, a lack of human resources and availability or accessibility of services. Current initiatives to relieve the burden of mood disorders include not only improved recognition and use of effective treatments, but also education for individuals and families and for the community. Primary care settings play a critical role in both recognizing and treating these illnesses. Innovative practice models have shown that effective interventions can decrease symptoms and increase work days.[18] Effective early treatment of mood disorders can improve outcomes and decrease the risk of suicide.

Antidepressant medications and education in combination with various forms of psychotherapy, such as cognitive-behavioural therapy, have demonstrated their effectiveness in treating depression. A recent publication from the Canadian Psychiatric Association outlines the clinical guidelines for the treatment of depressive disorders.[1]

Educating family and primary care providers is essential not only to ensure the recognition of early warning signs of depression, mania and suicide and to implement appropriate treatment, but also to ensure adherence to treatment in order to minimize future relapses. Sound support networks are crucial during both the acute phase of the illness and the post-illness adjustment to daily life.

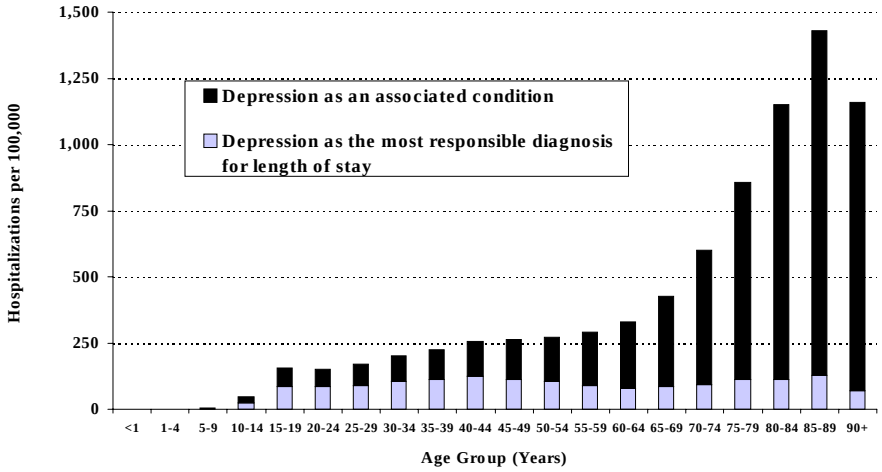
Major depression results in poor productivity and sick leave from the workplace. The workplace, therefore, is an important area for addressing mental health issues. Supporting the development of healthy work environments, educating employers and employees in the area of mental health issues, and providing supportive reintegration into the work environment for those experiencing mental illness would go a long way toward minimizing the effect of major depression on the workplace.

Individuals with mood disorders may require hospitalization to adjust medication, to stabilize the disorder or to ensure protection against self-destructive behaviour.

Major Depressive Disorder

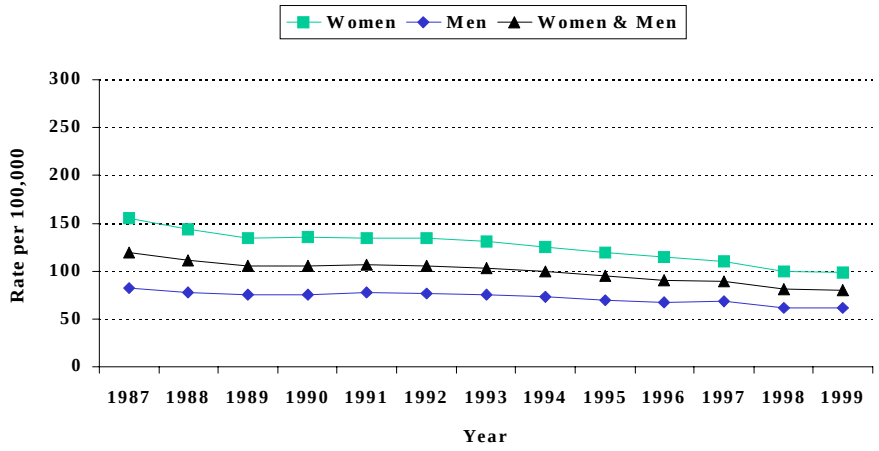
In 1999, among people under the age of 50 years with major depressive disorder who were hospitalized, the disorder was the main contributor to determining their length of stay (Figure 2-3). Among people with the disorder over the age of 50 years, depression was more likely to be an associated condition contributing to the length of stay. This is consistent with the association between physical illness and depression.

Figure 2-3 Hospitalizations for major depressive disorder in general hospitals per 100,000 by contribution to length of stay and age group, Canada, 1999/2000



Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Figure 2-4 Rates of hospitalization due to major depressive disorder* in general hospitals by sex, Canada, 1987/88-1999/2000 (age standardized to 1991 Canadian population)



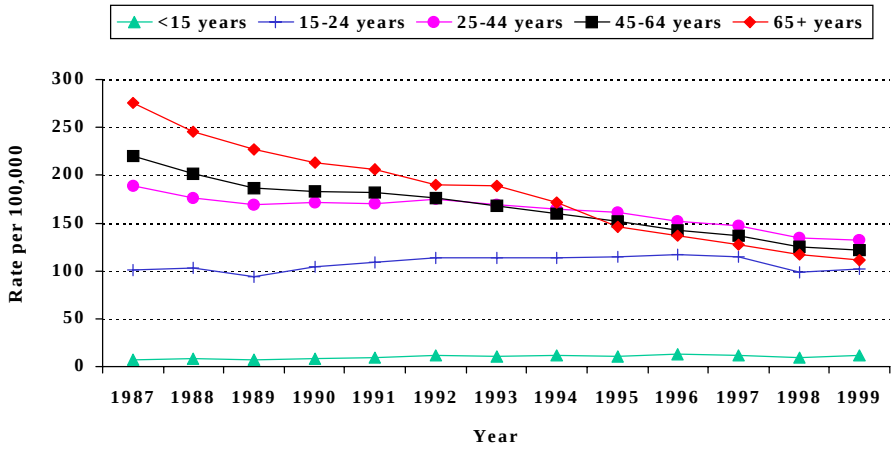
* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Overall, between 1987 and 1999, hospitalization rates for major depressive disorder decreased by 33% among both men and women (Figure 2-4).

Among women 25 years of age and over, rates of hospitalization due to major depressive disorder decreased between 1987 to 1997 while remaining fairly stable among women under the age of 25 years (Figure 2-5). Women over the age of 65 years showed the greatest rate of reduction.

Figure 2-5 Rates of hospitalization due to major depressive disorder* in general hospitals among women, Canada, 1987/88-1999/2000 (age standardized to 1991 Canadian population)



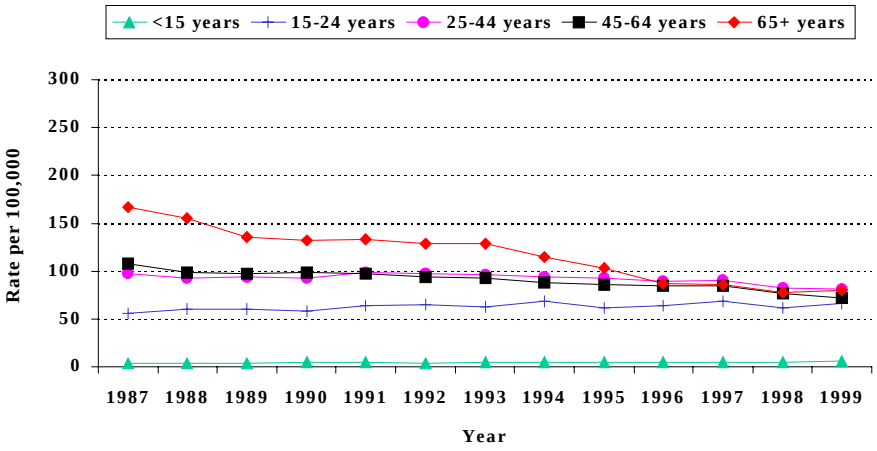
* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Among both men and women aged 15 years and over, the wide variations in hospitalization rates that were evident in 1987 had disappeared by 1999, mostly as a result of moderate decreases in the 25-64 year age groups and the large decrease among those aged 65 years and over.

Among men, hospitalization rates for major depressive disorder between 1987 and 1999 showed the greatest decrease in the 65+ age group (Figure 2-6). During this same time period, rates among young men aged between 15 and 24 years increased to a level similar to that of all older age groups.

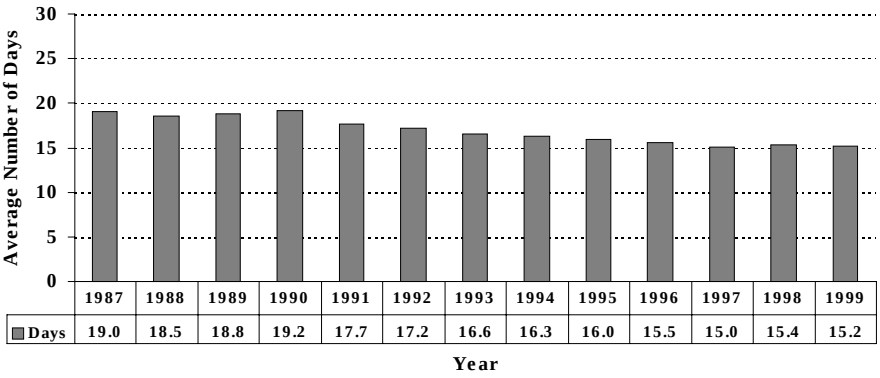
Figure 2-6 Rates of hospitalization due to major depressive disorder* in general hospitals among men, Canada, 1987/88-1999/2000 (age standardized to 1991 Canadian population)



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Figure 2-7 Average length of stay in general hospitals due to major depressive disorder*, Canada, 1987/88-1999/2000



* Using most responsible diagnosis only

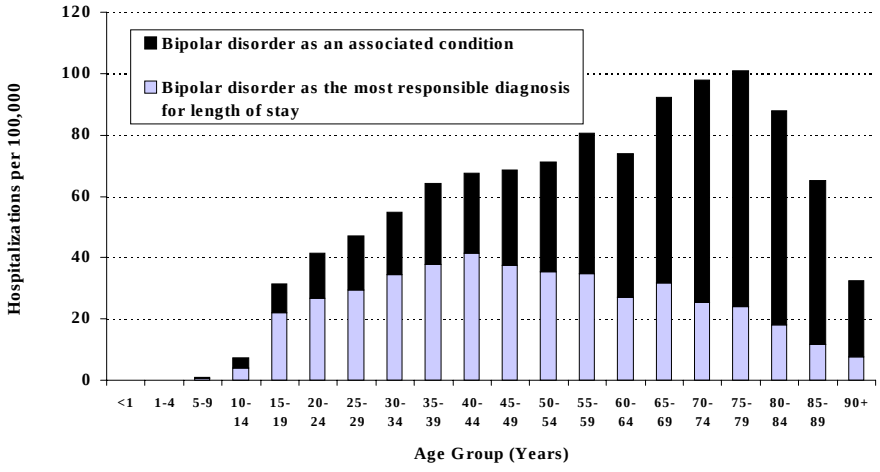
Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Between 1987 and 1999, the average length of stay in hospital in Canada due to major depressive disorder decreased by 20% (Figure 2-7).

Bipolar Disorder

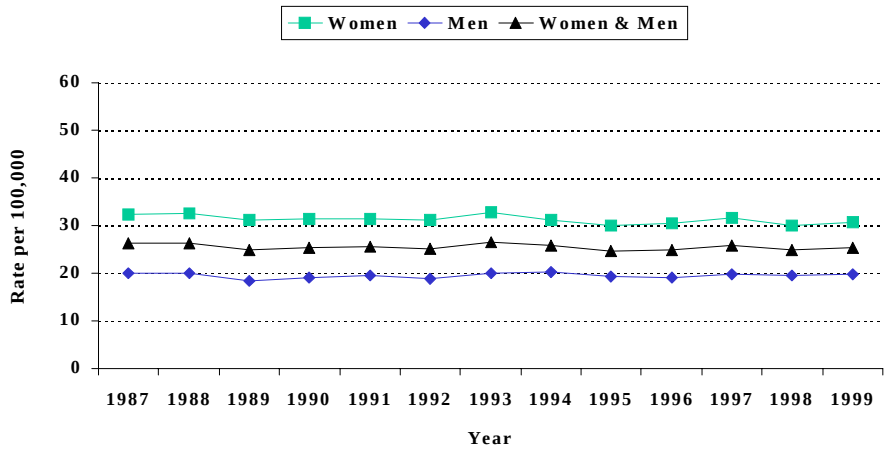
In 1999, bipolar disorder was the main contributor to the length of hospital stay among people with the disorder under the age of 50 years (Figure 2-8). Among older people, bipolar disorder was more likely to be an associated condition contributing to length of stay.

Figure 2-8 Hospitalizations for bipolar disorder in general hospitals per 100,000 by contribution to length of stay and age group, Canada, 1999/2000



Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Figure 2-9 Rates of hospitalization due to bipolar disorder* in general hospitals by sex, Canada, 1987/88-1999/2000 (age standardized to 1991 Canadian population)



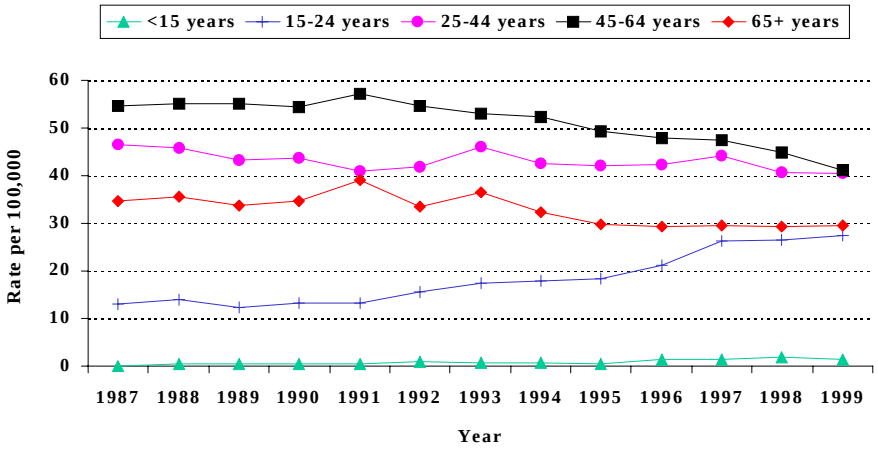
* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Overall, hospitalization rates for bipolar disorders remained fairly stable among both men and women between 1987 and 1999 (Figure 2-9).

Between 1987 and 1999, hospitalization rates for bipolar disorder among women under the age of 25 years more than doubled (Figure 2-10). During the same period, rates in the older age groups decreased.

Figure 2-10 Rates of hospitalization due to bipolar disorder* in general hospitals among women, Canada, 1987/88-1999/2000 (age standardized to 1991 Canadian population)

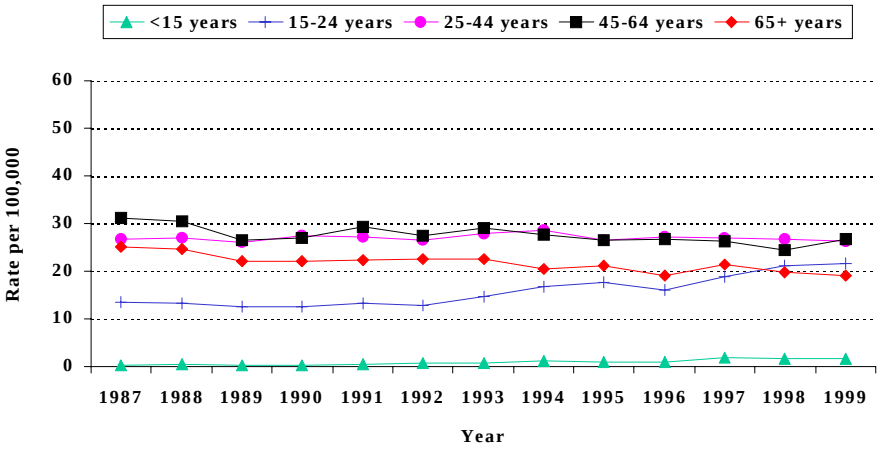


* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Between 1987 and 1999, hospitalization rates for bipolar disorder among men aged 15-24 increased by 61%. Rates among men aged 25-44 years remained stable (Figure 2-11). Rates decreased by 14% among men aged 45-64 years, and by 23% among men aged 65 years and over.

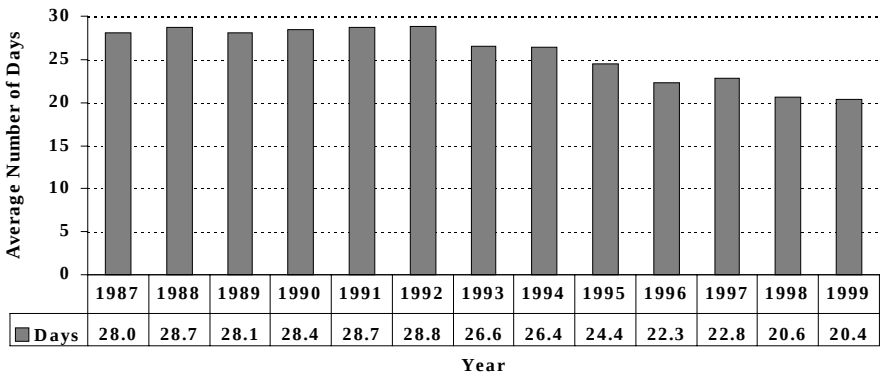
Figure 2-11 Rates of hospitalization due to bipolar disorder* in general hospitals among men, Canada, 1987/88-1999/2000 (age standardized to 1991 Canadian population)



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Figure 2-12 Average length of stay in general hospitals due to bipolar disorder*, Canada, 1987/88-1999/2000



	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Days	28.0	28.7	28.1	28.4	28.7	28.8	26.6	26.4	24.4	22.3	22.8	20.6	20.4

* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Between 1987 and 1999, the average length of stay in general hospital due to bipolar disorder decreased by 27% (Figure 2-12).

Discussion of Hospitalization Data

The higher hospitalization rates for depression among women than men support the clinical experience of higher rates of depression among women. Based on clinical research, rates of major depression among women are 2 times higher than among men. On the other hand, the hospitalization rates among women are only about 1.5 times higher than among men, suggesting that men may be hospitalized for major depression at higher rates than women. This requires further research for confirmation and explanation.

Rates of bipolar disorder have been estimated to be equal among men and women. However, hospitalization rates for women with the disorder are much higher than men. Further research is required to assess if, in fact, rates of the disease are higher among women, or if women with the disorder are hospitalized at a higher rate than men, why this occurs.

Hospitalization rates for both depression and bipolar disorder among women peak between the ages of 35-49 years. Research is required to assess the factors in women's lives that contribute to this phenomenon.

Since 1987, hospitalization rates for depression among older Canadians have decreased much more than rates among younger age groups. Further research is required to determine the reasons for this trend. Has it been the result of better clinical treatment, and have outcomes for this age group also improved over this time period?

Hospitalization rates for bipolar disorder among young women and men have increased since the early 1990s. Does this signify an increase in bipolar disorder in these age groups, earlier recognition of the disorder, or a change in treatment?

Future Surveillance Needs

Mood disorders, including major depression, bipolar disorder and dysthymia are common and contribute to major personal and family distress. They also have a significant impact on workplace and health care costs.

Existing data provide a very limited profile of mood disorders in Canada. The available hospitalization data needs to be complemented with additional data to fully monitor these disorders in Canada. Priority data needs include:

- Incidence and prevalence of major depression, bipolar disorder and dysthymia by age, sex and other key variables (for example, socio-economic status, education, and ethnicity).
- Prevalence of depression in people with chronic physical illness.
- Impact of mood disorders on the quality of life of the individual and family.
- Access to and use of primary and specialist health care services.
- Treatment outcomes.
- Rates of suicide among individuals with mood disorders.
- Access to and use of public and private mental health services.
- Access and use of mental health services in other systems, such as schools, criminal justice programs and facilities, and employee assistance programs.
- Impact of mood disorders on the workplace and the economy.
- Stigma associated with mood disorders.
- Exposure to known or suspected risk and protective factors.

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CHAPTER 3

SCHIZOPHRENIA

Highlights

- **Schizophrenia affects 1% of the Canadian population.**
- **Onset is usually in early adulthood.**
- **Schizophrenia can be treated effectively with a combination of medication, education, primary care services, hospital-based services and community support, such as housing and employment.**
- **Fifty-two percent of hospitalizations for schizophrenia in general hospitals are among adults 25-44 years of age.**
- **Hospitalization rates for schizophrenia in general hospitals are increasing among young and middle-aged men.**

What Is Schizophrenia?

Schizophrenia is a brain disease and one of the most serious mental illnesses in Canada. Common symptoms are mixed-up thoughts, delusions (false or irrational beliefs), hallucinations (seeing or hearing things that do not exist) and bizarre behaviour. People suffering from schizophrenia have difficulty performing tasks that require abstract memory and sustained attention.

All the signs and symptoms of schizophrenia vary greatly among individuals. There are no laboratory tests to diagnose schizophrenia. Diagnosis is based solely on clinical observation. For a diagnosis of schizophrenia to be made, symptoms must be present most of the time for a period of at least 1 month, with some signs of the disorder persisting for 6 months. These signs and symptoms are severe enough to cause marked social, educational or occupational dysfunction. The Canadian Psychiatric Association has developed guidelines for the assessment and diagnosis of schizophrenia.[1]

Symptoms
Schizophrenia
• **Delusions and/or hallucinations** • **Lack of motivation** • **Social withdrawal** • **Thought disorders**

How Common Is Schizophrenia?

The prevalence of schizophrenia in the general population is estimated to vary between 0.2% and 2%, depending upon the measures used. However, a prevalence rate of 1% is generally accepted as the best estimate.[2]

Impact of Schizophrenia

Who Is Affected by Schizophrenia?

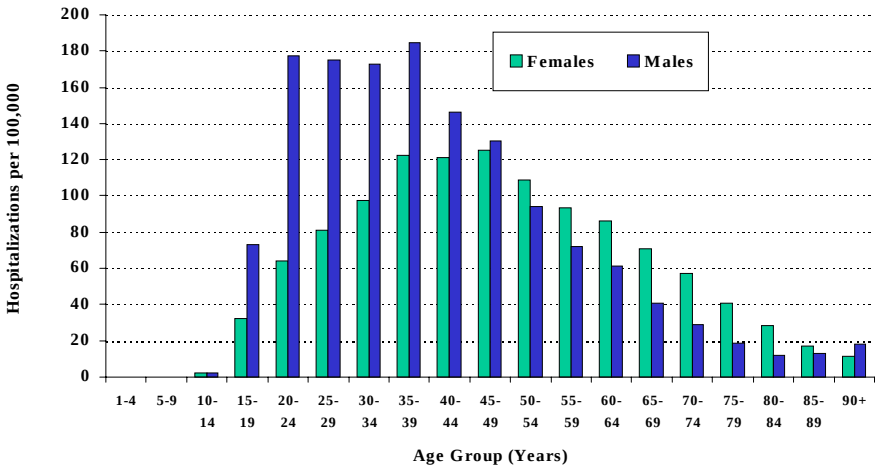
The onset of schizophrenia typically occurs between the late teens and mid-30s. Onset before adolescence is rare. Men and women are affected equally by schizophrenia, but men usually develop the illness earlier than women. If the illness develops after the age of 45, it tends to appear among women more than men, and they tend to display mood symptoms more prominently.

Ideally, data from a population survey would provide information on the age/sex distribution of individuals with schizophrenia. Statistics Canada's Canadian Community Health Survey (CCHS) will provide data on the prevalence of self-reported schizophrenia in the future. This will likely underestimate the true prevalence, however, since the survey team will not reach those individuals with schizophrenia who are homeless, in hospital or in supervised residential settings.

Although most individuals with schizophrenia are treated in the community, hospitalization is sometimes necessary to stabilize symptoms. At the present time, hospitalization data provide the best available, though limited, description of individuals with schizophrenia.

In 1999, rates of hospitalization for schizophrenia in general hospitals varied with age (Figure 3-1). Rates among men increased dramatically in the 20-24 year age group and remained high before beginning to decrease among 40-44 year olds. The pattern among women showed a gradual increase in hospitalizations to a peak between 35 and 49 years, after which it showed a steady decline. Men had much higher rates than women until the age of 50, after which rates among women were slightly higher.

Figure 3-1 Hospitalizations for schizophrenia* in general hospitals per 100,000 by age group, Canada, 1999/2000



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

How Does It Affect Them?

Schizophrenia has a profound effect on an individual's ability to function effectively in all aspects of life - self-care, family relationships, income, school, employment, housing, community and social life.[3]

The high rates of hospitalization among young and middle-aged men and women highlight the effect of schizophrenia on people who are in their most productive years - a time when most people are forming families, establishing careers, and generally "building equity" in their lives.

Early in the disease process, people with schizophrenia may lose their ability to relax, concentrate or sleep and they may withdraw from friends. Performance at work or school often suffers. With effective early treatment to control symptoms, individuals can prevent further symptoms and optimize their chance of leading full, productive lives.

The onset of schizophrenia in the early adulthood years usually leads to disruptions in an individual's education. Individuals with schizophrenia often find it difficult to maintain employment for a sustained period of time.

Although some individuals have healthy relationships, the majority with schizophrenia (60% to 70%) do not marry, and most have limited social contacts.[4] The chronic course of the disorder contributes to ongoing social problems. As a result, individuals with schizophrenia are greatly over-represented in prison and homeless populations.[4]

Up to 80% of individuals with schizophrenia will abuse substances during their lifetime. Substance abuse is associated with poor functional recovery, suicidal behaviour and violence.[1]

The responsibility for primary care of an individual with schizophrenia usually falls on the shoulders of the family. This has many implications. Not only are the family's normal activities disrupted, but family members must also cope with the unpredictability of the individual affected, the side effects of the medication, and the frustration and worry about the future of their loved one. In times of crisis, the decision whether to admit the individual to hospital involuntarily is one of the most difficult dilemmas that a family may face. The family often has to deal with the stigma attached to schizophrenia.

The mortality associated with schizophrenia is one of the most distressing consequences of the disorder. Approximately 40% to 60% of individuals with schizophrenia attempt suicide, and they are between 15 to 25 times more likely than the general population to die from a suicide attempt.[5] Approximately 10% will die from suicide.

Economic Impact

Schizophrenia places a substantial financial burden on individuals with the illness, the members of their family and the health care system. In 1996, the total direct cost of schizophrenia in Canada was estimated to be $2.35 billion, or 0.3% of the Canadian Gross Domestic Product.[6] This includes health care costs, administrative costs of income assistance plans, value of lost productivity, and incarceration costs attributable to schizophrenia. The indirect costs of schizophrenia are estimated to account for another $2 billion yearly. Globally, nearly 3% of the total burden of human disease is attributed to schizophrenia.[7]

Stigma Associated with Schizophrenia

Public misunderstanding and fear contribute to the serious stigma associated with schizophrenia. Contrary to popular opinion, most individuals with the disorder are withdrawn and not violent. Nonetheless, the stigma of violence interferes with an individual's ability to acquire housing, employment and treatment, and also compounds difficulties in social relationships. These stereotypes also increase the burden on families and care givers.

Causes of Schizophrenia

Historically, a number of psychological hypotheses were advanced to account for schizophrenia. Today medical science recognizes schizophrenia as a disease of the brain. Although the exact cause is unknown, it is likely that a functional abnormality in neurotransmitters produces the symptoms of the illness. This abnormality may be either the consequence or the cause of structural brain abnormalities.[8]

A combination of genetic and environmental factors is considered to be responsible for the development of this functional abnormality. These factors appear to affect the development of the brain at critical stages during gestation and after birth.

Genetic Influence

Immediate family members of individuals with schizophrenia are 10 times more likely than the general population to develop schizophrenia, and children of two parents with schizophrenia have a 40% chance of developing the disorder.[3]

Environmental Factors

Although the evidence to date is inconclusive, potential environmental contributions to the development of schizophrenia include prenatal or perinatal trauma, season and place of birth, and viral infections. While studies have established a link between severe social disadvantage and schizophrenia, the results suggest that social factors do not cause schizophrenia, but rather the reverse may be true: poor social circumstances are likely a result of the disorder.[2]

Treatment of Schizophrenia

Unfortunately, given our state of knowledge, methods for preventing schizophrenia remain unknown. Minimizing the impact of this serious illness depends mainly on early diagnosis, appropriate treatment and support.

Schizophrenia differs from other mental illnesses in the intensity of care that it requires. A comprehensive treatment program includes[1]:

1. Antipsychotic medication, which forms the cornerstone of treatment for schizophrenia
2. Education of the individual about his/her illness and treatment
3. Family education and support
4. Support groups and social skills training
5. Rehabilitation to improve the activities of daily living
6. Vocational and recreational support
7. Cognitive therapy[9]
8. Integrated addictions program[10]

The course of schizophrenia varies, but in most cases it involves recurrent episodes of symptoms. Although available pharmacological treatments can relieve many of the symptoms, most people with schizophrenia continue to suffer some symptoms throughout their lives.

Appropriate treatment early in the course of the disease and adherence to continued and adequate treatment are essential to avoiding relapses and preventing hospitalization.

During periods of remission, whether spontaneous or due to treatment, the individual may function well. Newer medications (and improved dosage guidelines for older medications) have substantially reduced the prevalence of severe neurological side effects that were once commonly associated with long-term pharmacological treatment of schizophrenia.

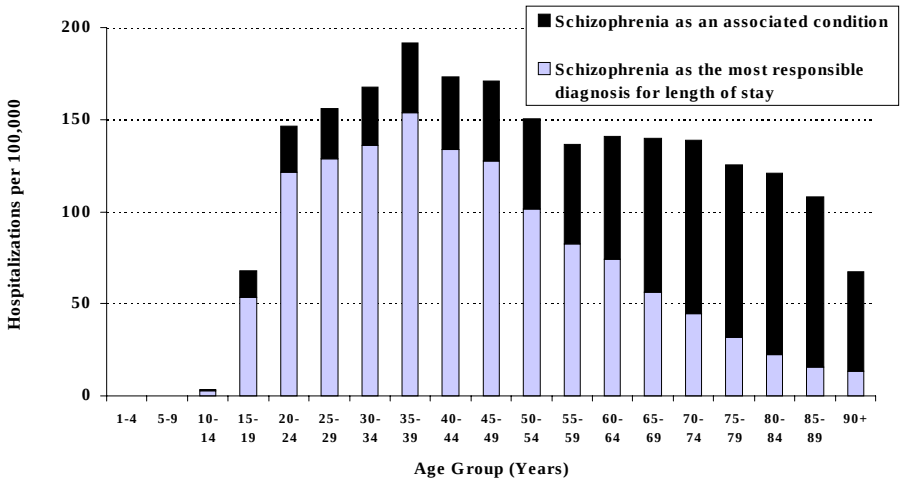
Optimizing the functional status and well-being of individuals with schizophrenia requires a supportive family and wide range of services, including institutional, community, social, employment and housing services. Ideally, multidisciplinary community treatment teams provide these services.

Social skills training strives to improve social functioning by working with individuals to resolve problems with employment, leisure, relationships and activities of daily life.

Occasionally, however, timely admission to hospital to control symptoms may prevent the development of more severe problems. Canadian hospitalization data provide insight into the use of hospital services as one of the treatment modalities.

In 1999, in the younger age groups with schizophrenia, the disorder was the diagnosis most responsible for determining their length of stay in hospital (Figure 3-2). In older age groups (65+ years), schizophrenia was more likely to be an associated condition.

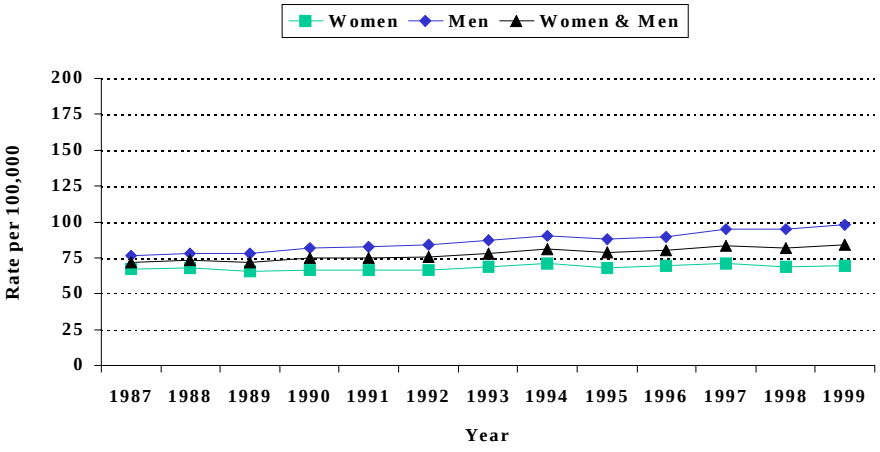
Figure 3-2 Hospitalizations for schizophrenia in general hospitals per 100,000 by contribution to length of stay and age group, Canada, 1999/2000



Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Between 1987 and 1999, hospitalizations for schizophrenia increased slightly among women (3%), but they increased dramatically among men (28%) (Figure 3-3).

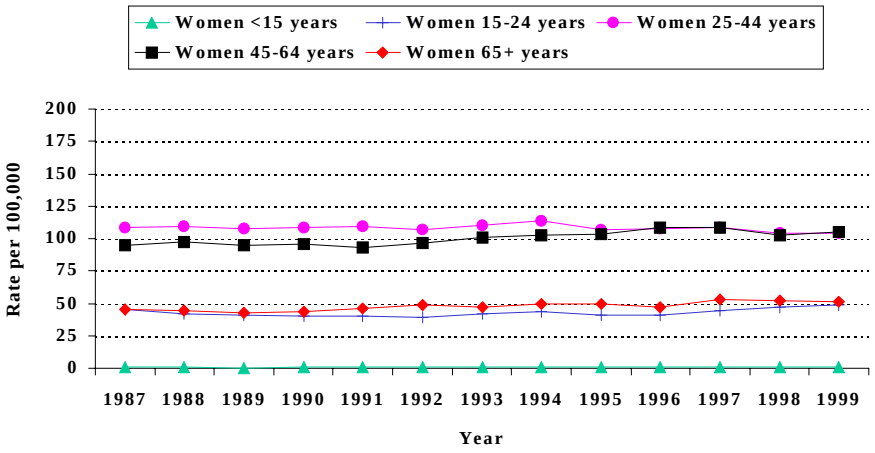
Figure 3-3 Rates of hospitalization for schizophrenia* in general hospitals by sex, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Figure 3-4 Rates of hospitalization for schizophrenia* among women in general hospitals, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)



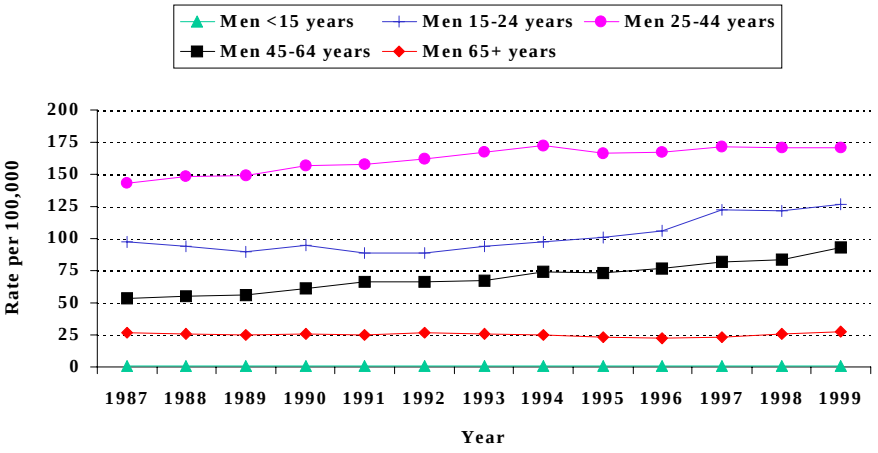
* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Hospitalization rates among women aged 45-64 and 65+ years demonstrated a slight increase between 1987 and 1999 (Figure 3-4). Rates among women aged between 25 and 44 years decreased during the same period.

Hospitalization rates for schizophrenia rose among men in all age groups from 15 to 64 years between 1987 and 1999 (Figure 3-5).

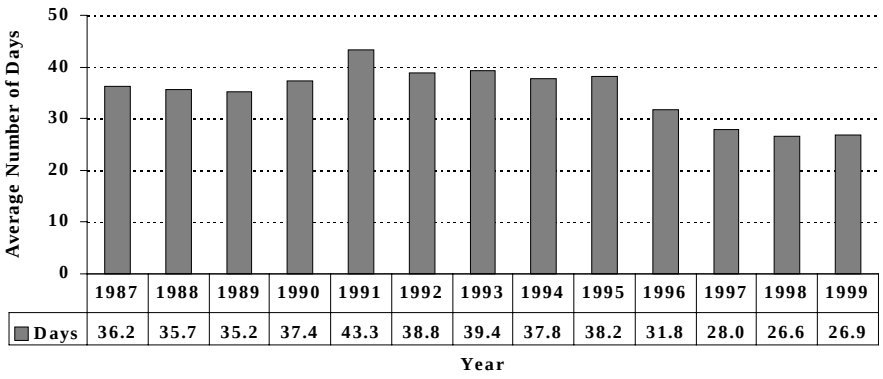
Figure 3-5 Rates of hospitalization for schizophrenia* among men in general hospitals, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Figure 3-6 Average length of stay in general hospitals due to schizophrenia*, Canada, 1987/88-1999/2000



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

In 1999, the average length of stay in general hospitals due to schizophrenia was 26.9 days - a decrease of 26% since 1987 (Figure 3-6).

Discussion of Hospitalization Data

The high hospitalization rates for schizophrenia among young adults support the clinical finding that the onset of schizophrenia typically occurs in adolescence and early adulthood. Higher rates among young men than young women agree with the observation that although schizophrenia affects both men and women, men develop it at an earlier age. Assessing whether the illness affects men differently than women in such a way that they require more hospitalization needs further research.

The increasing hospitalization rates for schizophrenia in general hospitals among young and middle-aged men may reflect, in part, the loss of psychiatric hospital beds that provided care for these men before de-institutionalization. This care has now shifted to general hospitals. More research is needed to determine whether this also reflects shortcomings in the community treatment of the disease requiring hospitalization in order to control symptoms.

The length of stay in hospital associated with schizophrenia has decreased since 1995. This may reflect either improved treatment or the effect of decreases in hospital funding, which put pressure on the institutions to discharge people earlier than in previous years. Discharging people too early could be contributing to the increase in hospitalization rates through the need for re-admissions. Further research is needed to understand both the reason for this trend and its impact on individuals.

Future Surveillance Needs

Schizophrenia is a very serious mental illness with major ramifications for individuals and families, causing not only a great deal of personal distress but also impairment of social and occupational functioning. Fortunately, schizophrenia can be treated effectively.

Existing data provide a very limited profile of schizophrenia in Canada. The available hospitalization data need to be complemented with additional data to fully monitor this illness in Canada. Priority data needs include:

- Incidence and prevalence of schizophrenia by age, sex and other key variables (for example, socio-economic status, education and ethnicity).
- Impact of schizophrenia on the quality of life of the individual and family.
- Access to and use of health care services and community-based programs.
- Treatment outcomes.
- Access to community supports, such as housing, employment and education.
- Impact of schizophrenia on the workplace and the economy.
- Stigma associated with schizophrenia.
- Exposure to known or suspected risk and protective factors.

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CHAPTER 4
ANXIETY DISORDERS

Highlights

- **Anxiety disorders affect 12% of the population, causing mild to severe impairment.**
- **For a variety of reasons, many individuals may not seek treatment for their anxiety; they may consider the symptoms mild or normal, or the symptoms themselves may interfere with help-seeking.**
- **Anxiety disorders can be effectively treated in the community setting.**
- **Hospitalization rates for anxiety disorders in general hospitals are twice as high among women as among men.**
- **The highest rates of hospitalization for anxiety disorders in general hospitals are among adults aged 65 years and over.**
- **Since 1987, hospitalization rates for anxiety disorders in general hospitals have decreased by 49%.**

What Are Anxiety Disorders?

Individuals with anxiety disorders experience excessive anxiety, fear or worry, causing them either to avoid situations that might precipitate the anxiety or to develop compulsive rituals that lessen the anxiety. Everyone feels anxious in response to specific events - but individuals with an anxiety disorder have excessive and unrealistic feelings that interfere with their lives in their relationships, school and work performance, social activities and recreation.

Symptoms
Anxiety Disorders
• **Intense and prolonged feelings of fear and distress that occur out of proportion to the actual threat or danger** • **Feelings of fear and distress that interfere with normal daily functioning**

Types of Anxiety Disorders[1]

Generalized Anxiety Disorder (GAD)

Excessive anxiety and worry about a number of events or activities occurring for more days than not over a period of at least 6 months with associated symptoms (such as fatigue and poor concentration).

Specific Phobia

Marked and persistent fear of clearly discernible objects or situations (such as flying, heights and animals).

Post Traumatic Stress Disorder

Flashbacks, persistent frightening thoughts and memories, anger or irritability in response to a terrifying experience in which physical harm occurred or was threatened (such as rape, child abuse, war or natural disaster).

Social Phobia, also known as Social Anxiety Disorder

Exposure to social or performance situations almost invariably provokes an immediate anxiety response that may include palpitations, tremors, sweating, gastrointestinal discomfort, diarrhoea, muscle tension, blushing or confusion, and which may meet criteria for the panic attack in severe cases.

Obsessive-Compulsive Disorder

Obsessions: Persistent thoughts, ideas, impulses or images that are intrusive and inappropriate and that cause marked anxiety or distress. Individuals with obsessions usually attempt to ignore or suppress such thoughts or impulses or to counteract them by other thoughts or actions (compulsions).

Compulsions: Repetitive behaviours (such as hand washing, ordering or checking) or mental acts (such as praying, counting or repeating words) that occur in response to an obsession or in a ritualistic way.

Panic Disorder

Presence of recurrent, unexpected panic attacks, followed by at least 1 month of persistent concern about having additional attacks, worry about the implication of the attack or its consequences, or a significant change in behaviour related to the attacks. There are three clusters of symptoms: re-experiencing, avoidance and numbing, and arousal.

Panic disorders are sometimes associated with agoraphobia - anxiety about, or the avoidance of, places or situations from which escape might be difficult or embarrassing, or in which help may not be available in the event of a panic attack or panic-like symptoms.

The essential feature of the panic attack is a discrete period of intense fear or discomfort that is accompanied by at least 4 of 13 physical symptoms, such as:

- Palpitations, increased heart rate or pounding heart
- Sweating
- Trembling or shaking
- Sensations of shortness of breath or smothering
- Feeling of choking
- Chest pain or discomfort
- Nausea or abdominal distress
- Dizziness, unsteadiness, light-headedness or fainting
- De-realization or de-personalization
- Fear of losing control or going crazy
- Fear of dying
- Paresthesias (numbness or tingling sensation)
- Chills or hot flashes

How Common Are Anxiety Disorders?

Combined anxiety disorders affect approximately 12% of Canadians: about 9% of men and 16% of women during a one-year period.[2] As a group, anxiety disorders represent the most common of all mental illnesses.

Table 4-1 One-Year Prevalence of Anxiety Disorders in Canada.

Type of Anxiety Disorder	Canada (Ages 15-64 years) % with anxiety disorder[2-4]
Generalized Anxiety Disorder	1.1
Specific Phobia	6.2 - 8.0
Post Traumatic Stress Disorder	---
Social Phobia	6.7
Obsessive Compulsive Disorder	1.8
Panic Disorder	0.7

Impact of Anxiety Disorders

Who Is Affected by Anxiety Disorders?

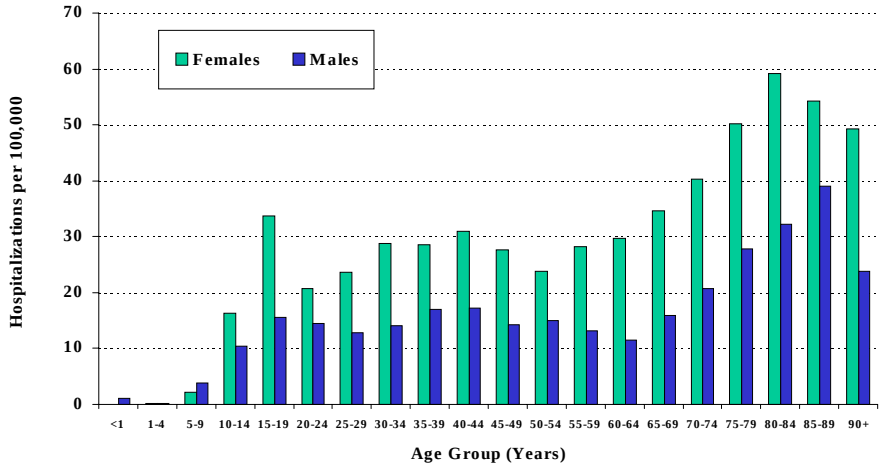
Women report and are diagnosed with some anxiety disorders more frequently than men. This may reflect the differences between men and women in their health-service-seeking behaviours, however, rather than true differences in prevalence.

Ideally, data from a population survey would provide information on the age/sex distribution of individuals with anxiety disorders. Statistics Canada's Canadian Community Health Survey (CCHS) will provide these data in the future.

At the present time, hospitalization data provide the best available description of individuals with anxiety disorders. These data have limitations, however, because most people with anxiety disorders are treated in the community rather than in hospitals, and many do not receive treatment at all. As a result, the data represents only a subset of all those with anxiety disorders, and the results must be interpreted with caution.

In 1999, women were hospitalized for anxiety disorders at higher rates than men in every age category (Figure 4-1). Young women aged between 15 and 19 years had much higher rates of hospitalization than the immediately adjacent age groups. Women and men over the age of 65 had the highest rates of hospitalization.

Figure 4-1 Hospitalizations for anxiety disorders* in general hospitals per 100,000 by age group, Canada, 1999/2000



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

How Does It Affect Them?

Symptoms of anxiety disorders often develop during early adulthood. Although the majority of people have mild or no impairment, anxiety disorders can seriously restrict an individual's education, work, recreation and social activities because he/she avoids situations that precipitate the symptoms.

Individuals severely affected by anxiety disorders are also more likely to have either another type of anxiety disorder, major depression or dysthymia, alcohol or substance abuse, or a personality disorder.[5] This compounds the impact of the anxiety disorder and presents challenges for effective treatment.

Economic Impact

Because they are so common, anxiety disorders have a major economic impact.[6] They contribute to lost productivity due to both time away from work and unemployment. Other associated costs include claims on disability insurance.

Heavy use of the emergency department and primary care system in reaction to physical symptoms also contributes to significant health care costs.

Stigma Associated with Anxiety Disorders

Because anxiety disorders are the extension of what most people perceive as normal worry and concern, those who experience them may fear that others would label their excessive worry and fear as simply a weakness. As a result, they may try to ignore the seriousness of their condition and deal with it themselves. They often avoid seeking help and suffer in silence.

Causes of Anxiety Disorders

The development of anxiety disorders appears to result from a complex interplay of genetic, biological, developmental and other factors such as socio-economic and workplace stress. A variety of theories have been proposed to explain how these factors contribute to the development of the disorder.[7]

The first is experiential: people may learn their fear from an initial experience, such as an embarrassing situation, physical or sexual abuse, or the witnessing of a violent act. Similar subsequent experiences serve to reinforce the fear.

A second theory relates to cognition or thinking, in that people believe or predict that the result of a specific situation will be embarrassing or harmful. This may occur, for example, if parents are over-protective and continually warn against potential problems.

A third theory focuses on a biological basis. Research suggests that the amygdala, a structure deep within the brain, serves as a communication hub that signals the presence of a threat and triggers a fear response or anxiety. It also stores emotional memories and may play a role in the development of anxiety disorders. The children of adults with anxiety disorders are at much greater risk of an anxiety disorder than is the general population,[4] which may imply a genetic factor, an effect of parenting practices, or both.

Treatment of Anxiety Disorders

Early recognition and appropriate management are imperative in order to enhance the quality of life of individuals with anxiety disorders. Proper recognition and management also help to prevent common secondary disorders, such as depression and abuse of drugs and alcohol.

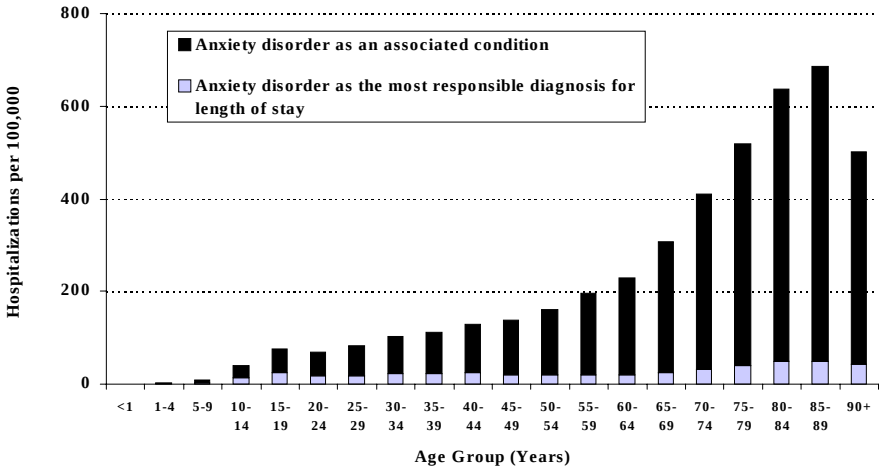
The delay in seeking and receiving a diagnosis and treatment may be due to a number of factors, such as stigma, a lack of human resources, restrictive government funding systems and lack of knowledge. In addition, family physicians may not always recognize the pattern in an individual's symptoms that would lead them to a correct diagnosis. Too often, the symptoms are not taken seriously and an individual with an anxiety disorder is labelled as being emotionally unstable. Education of both the public and family physicians would help to solve this problem.

A recent review of anxiety disorders suggests that effective treatments include drug therapy (with anti-depressants or anti-anxiety drugs) and cognitive-behavioural therapy, which helps people turn their anxious thoughts into more rational and less anxiety-producing ideas.[8] Support groups for individuals and families can also help develop the tools for minimizing and coping with the symptoms.

Anxiety disorders can be well managed in the primary care setting. Creating access to experts in cognitive-behaviour therapy through a shared-care model can help family physicians provide optimal care for the individuals they are treating.

When individuals with anxiety disorders are hospitalized, another associated condition is usually responsible for determining their length of stay (Figure 4-2).

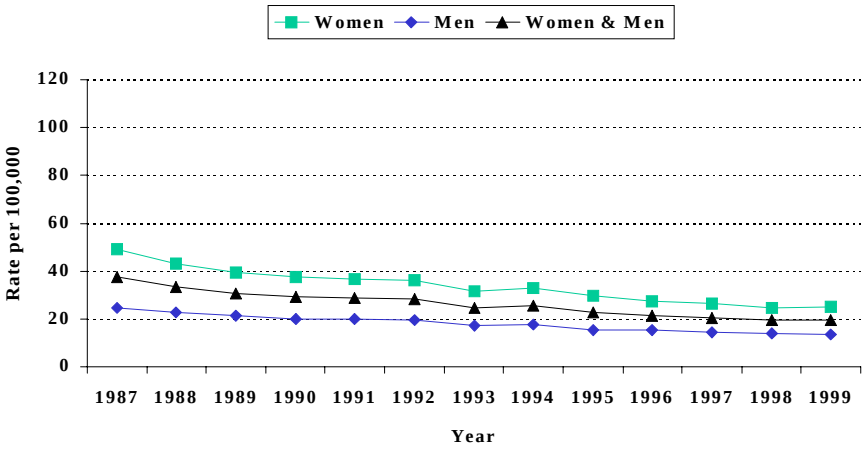
Figure 4-2 Hospitalizations for anxiety disorders in general hospitals per 100,000 by by contribution to length of stay and age group, Canada, 1999/2000



Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Overall, hospitalization rates for anxiety disorders decreased dramatically between 1987 and 1999, by 50% among women and 46% among men, with a combined reduction of 49% (Figure 4-3).

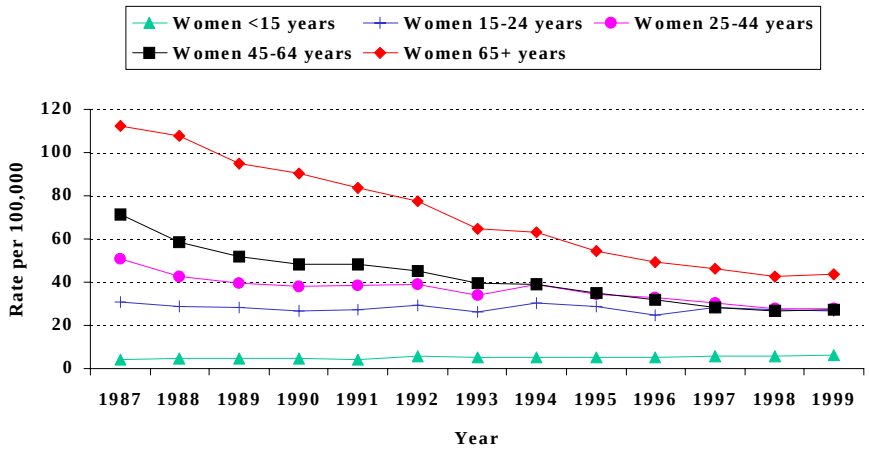
Figure 4-3 Rates of hospitalization per 100,000 for anxiety disorders* in general hospitals by sex, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Figure 4-4 Rates of hospitalization per 100,000 for anxiety disorders* in general hospitals among women by age, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)

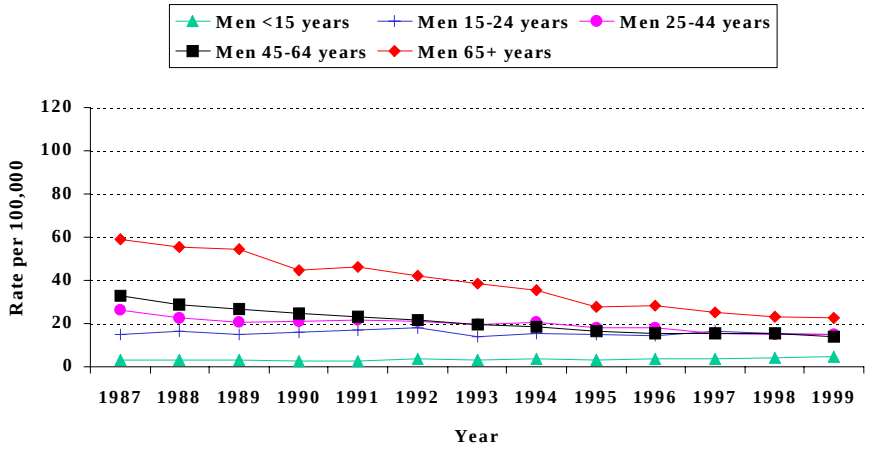


* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Between 1987 and 1999, hospitalization rates for anxiety disorders decreased by 45% among women aged 25-44 years, and by 62% in both the 45-64 and 65+ year age groups (Figure 4-4). Among girls under 15 years of age, even though hospitalization rates remained low, there was a 52% increase over the time period.

Figure 4-5 Rates of hospitalization per 100,000 for anxiety disorders* in general hospitals among men by age, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)

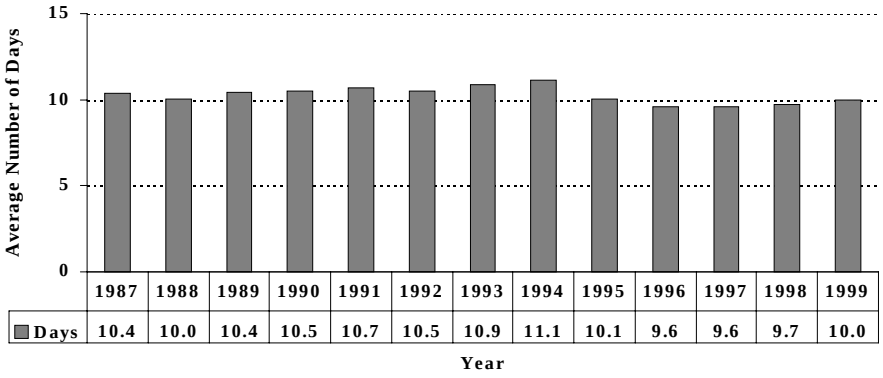


* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Among men, the reduction in hospitalization rates for anxiety disorder in each age group reflected the reduction reported by women: a reduction of 42% among men aged 25-44 years; 58% among men aged 45-64 years; and 61% among those 65+ years of age (Figure 4–5). For boys under the age of 15 years, rates increased by 49%.

Figure 4-6 Average length of stay in general hospitals due to anxiety disorders*, Canada, 1987/88-1999/2000



	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Days	10.4	10.0	10.4	10.5	10.7	10.5	10.9	11.1	10.1	9.6	9.6	9.7	10.0

* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

The average length of stay in general hospitals due to anxiety disorders changed very little between 1987 and 1999 (Figure 4-6).

Discussion of Hospitalization Data

Since most anxiety disorders are treated outside of hospitals, hospitalization data provide a very limited picture of these disorders in Canada. The data do support the view that anxiety disorders are associated with other health problems and it is usually these, rather than anxiety disorders, that lead to hospitalization.

The decrease in hospitalization rates for anxiety may be due to bed closures and a re-focusing of hospital services to ambulatory services. Hospitalizations for anxiety disorders in general hospitals among seniors have shown a dramatic decrease (much greater than any other age group) since 1987. This trend reflects the pattern for the same age group for major depression. Further research is needed to determine the reason for this trend: Is the prevalence of the disorders decreasing? Have treatment methods changed? Have outcomes improved?

The higher rates of hospitalization for anxiety disorders in general hospitals among women than men prompt several research questions: Are anxiety disorders really more common among women? Are women more likely to seek treatment than men? Are women treated differently than men, with greater use of hospitalization?

Hospitalization rates for anxiety disorders have a pronounced peak among women between 15 and 19 years of age. This peak is also found in hospitalization rates for depression and personality disorders. This suggests that women in this age group are vulnerable to mental illnesses. The reasons for this phenomenon require further clarification through research.

Future Surveillance Needs

Anxiety disorders are common among Canadians, causing not only a great deal of personal distress but also impairment of social and occupational functioning. Anxiety disorders can be effectively treated with a combination of medication and cognitive-behavioural therapy.

Existing data provide a very limited profile of anxiety disorders in Canada. The available hospitalization data need to be complemented with additional data to fully monitor these disorders in Canada. Priority data needs include:

- Incidence and prevalence of each of the anxiety disorders by age, sex and other key variables (for example, socio-economic status, education and ethnicity).
- Impact of anxiety disorders on the quality of life of the individual and family.
- Access to and use of primary and specialist health care services.
- Impact of anxiety disorders on the workplace and the economy.
- Stigma associated with anxiety disorders.
- Access to and use of public and private mental health services.
- Access to and use of mental health services in other systems, such as schools, criminal justice programs and facilities, and employee assistance programs.
- Treatment outcomes.
- Exposure to known or suspected risk and protective factors.

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[6] Adult Mental Health Division, British Columbia Ministry of Health. The Provincial Strategy Advisory Committee for Anxiety Disorders. A Provincial Anxiety Disorders Strategy, 2002.

[7] Millon T, Blaneyu PH, Davis R, ed. Oxford Textbook of Psychopathology. New York: Oxford University Press, 1999.

[8] Antony MM, Swinson RP. Anxiety disorders and their treatment: a critical review of the evidence-based literature. Ottawa: Health Canada, 1996.

CHAPTER 5

PERSONALITY DISORDERS

Highlights

- **Based on US data, about 6% to 9% of the population has a personality disorder.**
- **Personality disorders exist in several forms. Their influence on interpersonal functioning varies from mild to serious.**
- **Onset usually occurs during adolescence or in early adulthood.**
- **Anti-social personality disorder is frequently found among prisoners (up to 50%).**
- **Of hospitalizations for personality disorders in general hospitals, 78% are among young adults between 15 and 44 years of age.**

What Are Personality Disorders?

Personality disorders cause enduring patterns of inner experience and behaviour that deviate from the expectations of society, are pervasive, inflexible and stable over time, and lead to distress or impairment.[1]

> "Personality is seen today as a complex pattern of deeply imbedded psychological characteristics that are largely non-conscious and not easily altered, which express themselves automatically in almost every area of functioning."[2]

Personality characteristics or traits are expressed on a continuum of social functioning. Personality disorders reflect personality traits that are used inappropriately and become maladaptive.[2] To some degree, this classification is arbitrary.

Some deviations may be quite mild and interfere very little with the individual's home or work life; others may cause great disruption in both the family and society. Specific situations or events trigger the behaviours of a personality disorder. In general, individuals with personality disorders have difficulty getting along with others and may be irritable, demanding, hostile, fearful or manipulative.

Symptoms
Personality Disorders
• **Difficulty getting along with other people. May be irritable, demanding, hostile, fearful or manipulative.** • **Patterns of behaviour deviate markedly from society's expectations and remain consistent over time.** • **Disorder affects thought, emotion, interpersonal relationships and impulse control.** • **The pattern is inflexible and occurs across a broad range of situations.** • **Pattern is stable or of long duration, beginning in childhood or adolescence.**

Personality disorders exist in many forms.[1] Classification of personality disorders is arbitrary. Each person is unique, however, and can display mixtures of patterns.

Table 5-1 Types of Personality Disorders

Type	Patterns
Borderline Personality Disorder	Instability in interpersonal relationships, self-image and affects, and marked impulsivity.
Antisocial Personality Disorder	Disregard for, and violation of, the rights of others.
Histrionic Personality Disorder	Excessive emotionality and attention seeking.
Narcissistic Personality Disorder	Grandiosity, need for admiration, and lack of empathy.
Avoidant Personality Disorder	Social inhibition, feelings of inadequacy, and hypersensitivity to negative evaluation.
Dependent Personality Disorder	Submissive and clinging behaviour related to an excessive need to be taken care of.
Schizoid Personality Disorder	Detachment from social relationships and a restricted range of emotional expression.
Paranoid Personality Disorder	Distrust and suspiciousness in which others' motives are interpreted as malevolent.
Obsessive-Compulsive Personality Disorder	Preoccupation with orderliness, perfectionism and control.
Schizotypal Personality Disorder	Acute discomfort in close relationships, cognitive or perceptual distortions, and eccentricities of behaviour.

How Common Are Personality Disorders?

Canadian data on the prevalence of personality disorders are lacking. United States estimates of the prevalence of diagnosis of any personality disorder, however, range from 6% to 9%, depending upon the criteria used for definition.[3]

Epidemiological studies most often measure and report antisocial personality disorder. A 1991 Ontario survey estimated that the 1-year prevalence rate of antisocial personality disorder in the general population was 1.7%.[4] According to the Edmonton study in the 1980s, 1.8% of the population had an antisocial personality disorder in the 6-month period before the survey, and 3.7% reported a personality disorder at some point in their lives.[5,6] Estimates of the prevalence of other personality disorders range from 1% to 10% of the population.

Impact of Personality Disorders

Who Develops a Personality Disorder?

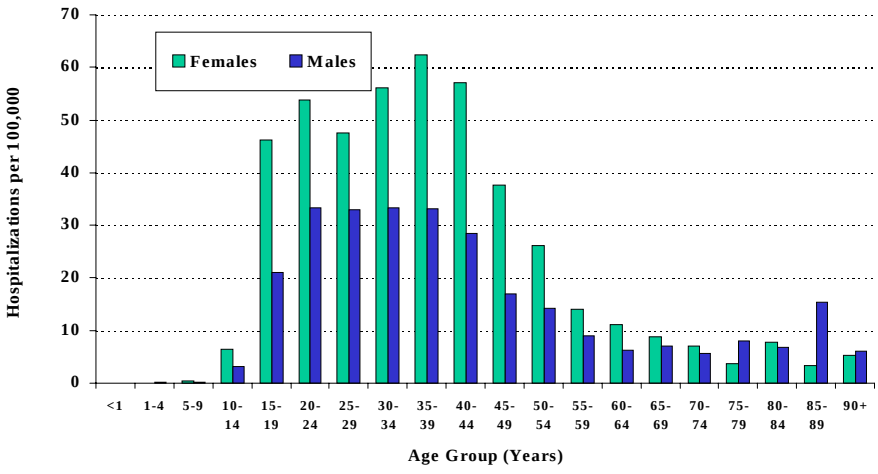
There is a sex difference in the personality disorder types. For example, antisocial personality disorder is more common among men, while borderline personality disorder is more common among women. The dependent and hysterical personality disorders are also more common among women. Labelling biases among health professionals may lead to some of the sex differences.

Ideally, data from a population survey would provide information on the age/sex distribution of individuals with personality disorders. Statistics Canada's Canadian Community Health Survey (CCHS) will provide prevalence of self-reported obsessive-compulsive personality disorder in the future.

At the present time, however, hospitalization data provide the best available description of individuals with personality disorders. These data have limitations, however, because most people with personality disorders, unless they show suicidal behaviour, are treated in the community rather than in hospitals. Many are never diagnosed or treated. Individuals with borderline personality disorder have higher rates of admission than individuals with other disorders because of their high rate of suicidal behaviour. These limitations must be kept in mind, then, when interpreting the data presented in this report.

Among both women and men, the highest rates of hospitalization for personality disorders were among individuals between the ages of 15 and 44 years (Figure 5-1). Over three-quarters (78%) of all admissions were between these ages and rates were higher among women than men.

Figure 5-1 Hospitalizations for personality disorders* in general hospitals per 100,000 by age group, Canada, 1999/2000



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

What Are the Effects of Personality Disorders?

Although the onset of personality disorders usually occurs in adolescence or early adulthood, they can also become apparent in mid-adulthood. To some extent, the timing depends on the type of personality disorder and the situation or events surrounding the individual. For example, borderline personality disorder usually peaks in adolescence and early adulthood, and then becomes less prominent by mid-adulthood. On the other hand, narcissistic personality disorder may not be identified until middle age when the individual experiences the sense of loss of opportunity or faces personal limitations.

Since personality disorders usually develop in adolescence or early adulthood, they occur at a time when most people develop adult relationship skills, obtain education, establish careers and generally "build equity" in their lives. The use of maladaptive behaviours during this life stage has implications that extend for a lifetime.

A history of alcohol abuse, drug abuse, sexual dysfunction, generalized anxiety disorder, bipolar disorder, obsessive-compulsive disorder, depressive disorder, eating disorder, and suicidal thoughts or attempts often accompany personality disorders.[3] Up to one-half of prisoners have antisocial personality disorder because its associated behavioural characteristics (such as substance abuse, violence and vagrancy) lead to criminal behaviour.[3] Other social consequences of personality disorders include

- Spousal violence
- Child maltreatment
- Poor work performance
- Suicide
- Gambling

Personality disorders have a major effect on the people who are close to the individual. The individual's fixed patterns make it difficult for them to adjust to various situations. As a result, other people adjust to them. This creates a major strain on all relationships among family and close friends and in the workplace. At the same time, when other people do not adjust, the individual with the personality disorder can become angry, frustrated, depressed or withdrawn. This establishes a vicious cycle of interaction, causing the individuals to persist in the maladaptive behaviour until their needs are met.

Stigma Associated with Personality Disorders

Since the behaviours shown in some personality disorders remain close to what is considered "normal", others often assume that the individuals can easily change their behaviour and solve the interpersonal problem. When the behaviour persists, however, it may be perceived as a lack of will or willingness to change. The fixed nature of the trait is not well understood by others.

Causes of Personality Disorders

Personality disorders likely result from the complex interplay of early life experience, genetic and environmental factors. In principle, genetic factors contribute to the biological basis of brain function and to basic personality structure. This structure then influences how individuals respond to and interact with life experiences and the social environment. Over time, each person develops distinctive patterns or ways of perceiving their world and of feeling, thinking, coping and behaving.

Although little is known to date about possible biological correlates of personality disorder, individuals with personality disorders may have impaired regulation of the brain circuits that control emotion. This difficulty, combined with psychological and social factors such as abuse, neglect or separation, puts an individual at higher risk of developing a personality disorder. Strong attachments within the family or a supportive network of people outside the family, in the school and in the community help an individual develop a strong sense of self-esteem and strong coping abilities. Opportunities for personal growth and for developing unique abilities can enhance a person's self-image. This supportive environment may provide some protection against the development of a personality disorder.

For biologically predisposed individuals, the major developmental challenges that are a normal part of adolescence and early adulthood - separation from family, self-identity, and independence - may be the precipitating factors for the development of the personality disorder. This may explain why personality disorders usually begin in these years.

Treatment of Personality Disorders

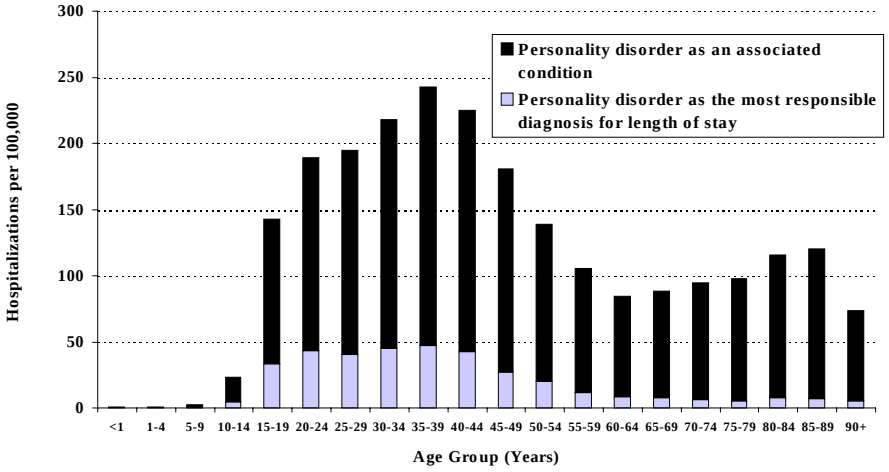
Personality disorders are difficult to treat because of self-denial about the presence of the problem and the pessimism of health professionals based on a lack of success in previous efforts.

Intensive individual and group psychotherapy, combined with anti-depressants and mood stabilizers, can be at least partially effective for some people. Difficulties arise from both the persistence of symptoms and the negative impact of these symptoms on the therapeutic relationship.

Individuals with borderline personality disorder have more frequent hospitalizations, use outpatient psychotherapy more often, and make more visits to emergency rooms than individuals with other personality disorders.[7]

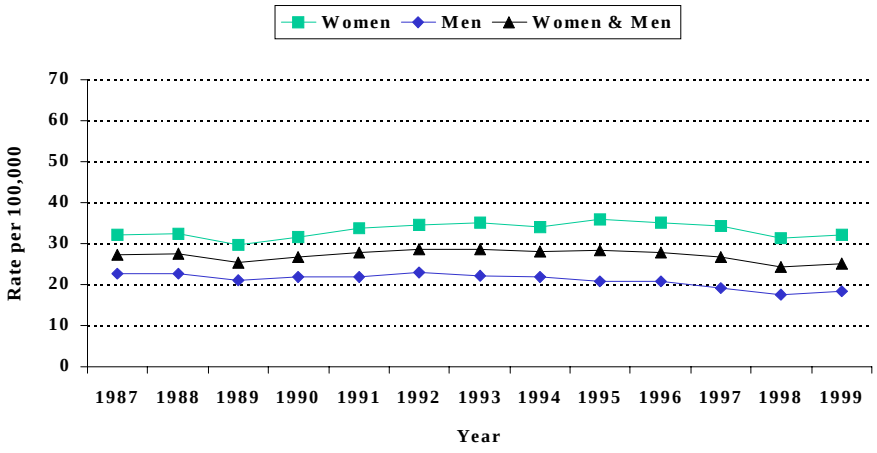
In 1999, in all age groups, personality disorders were more likely to be a contributing rather than the main factor determining length of stay in hospital (Figure 5-2). This reflects the fact that personality disorders are associated with other conditions, such as suicidal behaviour, that may need hospitalization.

Figure 5-2 Hospitalizations for personality disorders in general hospitals per 100,000 by by contribution to length of stay and age group, Canada, 1999/2000



Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Figure 5-3 Rates of hospitalization for personality disorders* in general hospitals by sex, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)



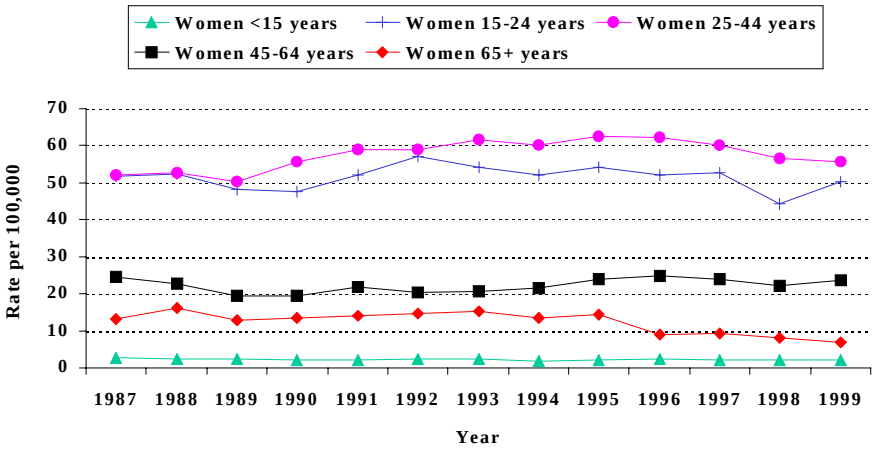
* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Rates of hospitalization for personality disorders among both men and women increased during the early 1990s and decreased in the later years of the decade (Figure 5-3).

The increase in hospitalization rates for personality disorders in the early 1990s was due to an increase among women in the 15-24 and 25-44 year age groups (Figure 5-4). These same age groups, along with those 65 years of age and older, showed a decline in the later 1990s.

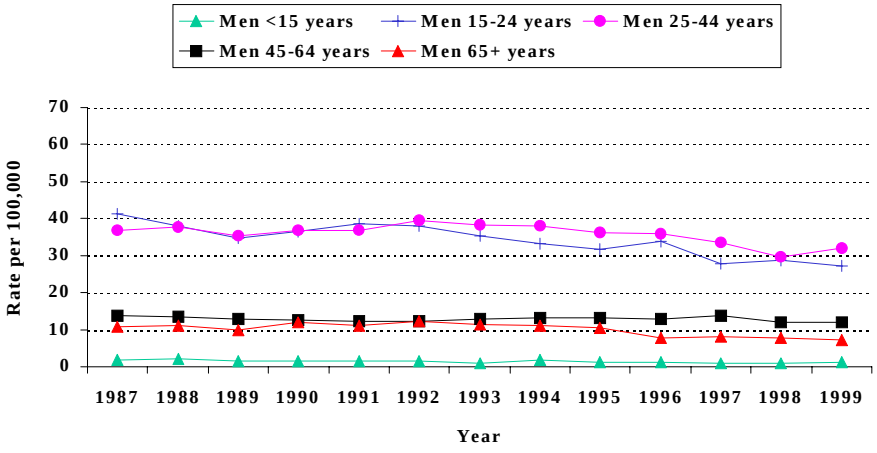
Figure 5-4 Rates of hospitalization for personality disorders* in general hospitals among women by age, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Figure 5-5 Rates of hospitalization for personality disorders* in general hospitals among men by age, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)

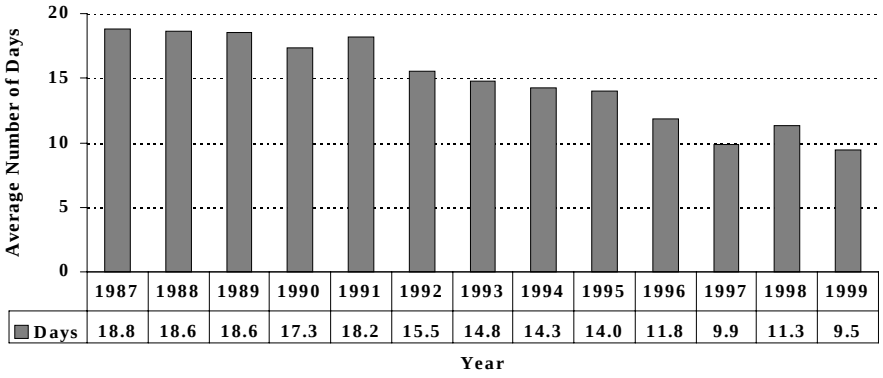


* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Between 1987 and 1999, men aged 15-24 years showed the greatest decrease in hospitalization rates for personality disorders (Figure 5-5). During the early 1990s, rates of hospitalization increased slightly among men aged 25-44 years, and this was followed by a slight decrease later in the decade.

Figure 5-6 Average length of stay in general hospitals due to personality disorders*, Canada, 1987/88-1999/2000



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

The average length of stay in general hospitals due to personality disorders was 9.5 days in 1999, a decrease of nearly 50% since 1991 (Figure 5-6).

Discussion of Hospitalization Data

Most personality disorders are treated outside of the hospital. Thus, the hospitalization data provide a very limited picture of personality disorders in Canada.

The higher rates of hospitalization for personality disorder in general hospitals among young women than men supports the clinical experience that women are more likely to have borderline personality disorder with its associated suicidal behaviour, leading to hospitalization.

High rates among adolescents and young adults support the negative impact of these disorders on young people at a critical time in their lives.

The length of stay in hospital associated with personality disorders decreased during the 1990s. Further research is needed to determine the reason for this trend: What has been the impact on hospital bed closures on length of stay and treatment outcome? Have treatment methods changed and have outcomes improved?

Future Surveillance Needs

Personality disorders are common in the general population, causing not only a great deal of personal and family distress but also impairment of social functioning.

Existing data provide a very limited profile of personality disorders in Canada. The available hospitalization data needs to be complemented with additional data to fully monitor these disorders in Canada. Priority data needs include:

- Incidence and prevalence of each of the personality disorders by age, sex and other key variables (for example, socio-economic status, education and ethnicity)
- Impact of personality disorders on the quality of life of the individual and family
- Access to and use of primary and specialist health care services
- Impact of personality disorders on the workplace and the economy
- Impact of personality disorders on the legal and penal systems
- Stigma associated with personality disorders
- Access to and use of public and private mental health services
- Access to and use of mental health services in other systems, such as schools, criminal justice programs and facilities, and employee assistance programs
- Treatment outcomes
- Exposure to known or suspected risk and protective factors

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CHAPTER 6

EATING DISORDERS

Highlights

- **Approximately 3% of women will be affected by an eating disorder during their lifetime.**
- **Eating disorders affect girls and women more than boys and men.**
- **Factors believed to contribute to eating disorders include biological and personal factors as well as society's promotion of the thin body image.**
- **Eating disorders carry with them a high risk of other mental and physical illnesses that can lead to death.**
- **Since 1987, hospitalizations for eating disorders in general hospitals have increased by 34% among young women under the age of 15 and by 29% among 15-24 year olds.**

What Are Eating Disorders?

Eating disorders involve a serious disturbance in eating behaviour - either eating too much or too little - in addition to great concern over body size and shape.[1] This chapter addresses anorexia nervosa, bulimia nervosa and binge eating disorder (BED).

Eating disorders are not a function of will but are, rather, unhealthy eating patterns that "take on a life of their own." The voluntary eating of smaller or larger portions of food than usual is common, but for some people this develops into a compulsion and the eating behaviours become extreme.

Individuals with **anorexia nervosa** refuse to maintain a minimally normal body weight, carry an intense fear of gaining weight and have a distorted perception of the shape or size of their bodies.[2]

Individuals with **bulimia nervosa** undertake binge eating and then use compensatory methods to prevent weight gain, such as induced vomiting, excessive exercise or laxative abuse. They also place excessive importance on body shape and weight. In order for a diagnosis of bulimia nervosa to be made, the binge eating and compensatory behaviours must occur, on average, at least twice a week for 3 months.[2]

A diagnosis of **binge eating disorder (BED)** is made if the binge eating is not followed by some compensatory behaviour, such as vomiting, excessive exercise or laxative abuse. This disorder is often associated with obesity.

Symptoms Eating Disorders		
General		
Distorted perception of the shape or size of one's own body		
Anorexia	**Bulimia**	**Binge Eating Disorder (BED)**
• **Resistance to maintaining body weight at or above a minimally normal weight for age and height with an intense fear of gaining weight or becoming fat, even though underweight.**	• **Recurrent episodes of binge eating, accompanied by inappropriate compensatory behaviour in order to prevent weight gain, such as self-induced vomiting, use of laxatives, or excessive exercise.**	• **Binge eating without compensatory behaviours, such as vomiting, excessive exercise or laxative abuse** • **Individuals are often obese.**

How Common Are Eating Disorders?

It is estimated that 3% of women will be affected by eating disorders in their lifetime.[3] Approximately 0.5% to 4% of women will develop anorexia nervosa during their lifetime, and about 1 to 4% will develop bulimia.[1] BED affects about 2% of the population.[4]

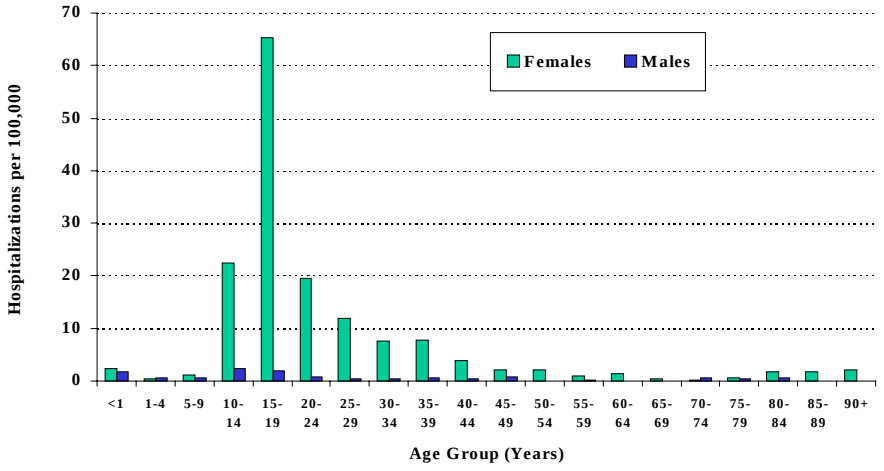
Impact of Eating Disorders

Who Is Affected by Eating Disorders?

Anorexia nervosa and bulimia predominantly affect young women. Some studies have found that young men represent only about 10% of individuals with the disorder.[1] An Ontario study found that 0.3% of men ages 15-64 and 2.1% of women had anorexia nervosa or bulimia.[5] In most cases, BED starts during adolescence or young adulthood. Men are more likely to be affected by BED than by other eating disorders.

Although most of the treatment of an eating disorder is provided in the community, occasionally hospitalization is needed. Hospitalization data provide a partial description of who is affected by severe eating disorders. The results must be viewed with caution, however, since this is only a subset of those with eating disorders.

Figure 6-1 Hospitalizations for eating disorders* in general hospitals per 100,000 by age group, Canada, 1999/2000.



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

In 1999, women in all age groups had higher rates of hospitalization than men for eating disorders (Figure 6-1). Females accounted for 94% of all hospital admissions for eating disorders. Adolescents of both sexes between the ages of 10 and 19 years had the highest rates of hospitalization.

How Do Eating Disorders Affect People?

Individuals with anorexia and bulimia may recover after a single episode of the disorder. Others may have a fluctuating pattern of weight gain and relapse. Still others will continue to have issues with food and weight throughout their lives. A lifetime history of substance use disorders, drug or alcohol problems at the time of diagnosis and longer duration of symptoms before diagnosis are associated with poorer long-term outcomes.[6]

Individuals with anorexia and bulimia may develop serious physical problems such as heart conditions, electrolyte imbalance and kidney failure that can lead to death. Eating disorders may cause long-term psychological, social and health problems even after the acute episode has been resolved.[7]

Anorexic individuals are more susceptible to major depression, alcohol dependence and anxiety disorders, either at the time of their illness or later in life.[8,9] Suicide is also a possible outcome.

An eating disorder causes young people to miss school, work and recreational activities. The physical weakness associated with the illness also seriously affects their social interaction with friends and their involvement in life in general. Friends also have difficulty knowing how to react and how to help.

Families of individuals with eating disorders also live under great stress. They may blame themselves, feel anxious about their loved one's future, worry that the family member will die, and face the stigma associated with having a child with a mental illness. Parents especially experience the tension between their natural protective instinct to force healthy behaviours on the child (which can often make the situation worse) and the child's need to take control over his/her illness and health.

Stigma Associated with Eating Disorders

Anorexia nervosa and bulimia nervosa do not have the same public manifestation as other mental illnesses. In general, public embarrassment due to unusual behaviour is not an issue. Essentially, these illnesses are a private family affair. As a result, the stigma associated with eating disorders comes from the mistaken impression that others (parents in particular) are to blame for the illness. The stigmatization isolates parents from their peers and other family members.

Individuals with BED who are obese must contend with negative societal attitudes toward obesity. These attitudes isolate them, and the loss of self-esteem exacerbates the illness.

Causes of Eating Disorders

Eating disorders are complex syndromes strongly associated with other mental illnesses, such as mood, personality and anxiety disorders. This suggests that the development of the disease results from a combination of biological, psychological and social factors. In addition, the secondary effects of the maladaptive eating practices themselves likely contribute to the disorder. Steiger and Séguin have written an excellent in-depth discussion of the etiology of eating disorders.[1]

Table 6-1 Summary of Possible Risk Factors for the Development of Eating Disorders

	Eating-Specific Factors (Direct Risk Factors)	Generalized Factors (Indirect Risk Factors)
Biological Factors	ED-specific genetic risk Physiognomy and body weight Appetite regulation Energy metabolism Gender	Genetic risk for associated disturbance Temperament Impulsivity Neurobiology (e.g., 5-HT mechanisms) Gender
Psychological Factors	Poor body image Maladaptive eating attitudes Maladaptive weight beliefs Specific values or meanings assigned to food, body Overvaluation of appearance	Poor self-image Inadequate coping mechanisms Self-regulation problems Unresolved conflicts, deficits, posttraumatic reactions Identity problems Autonomy problems
Developmental Factors	Identifications with body-concerned relatives, or peers Aversive mealtime experiences Trauma affecting bodily experience	Overprotection Neglect Felt rejection, criticism Traumata Object relationships (interpersonal experience)
Social Factors	Maladaptive family attitudes to eating, weight Peer-group weight concerns Pressures to be thin Body-relevant insults, teasing Specific pressures to control weight (e.g., through ballet, athletic pursuits) Maladaptive cultural values assigned to body	Family dysfunction Aversive peer experiences Social values detrimental to stable, positive self-image Destabilizing social change Values assigned to gender Social isolation Poor support network Impediments to means of self-definition

Treatment of Eating Disorders

Eating disorders can be treated and a healthy weight restored. Earlier diagnosis results in improved outcomes. Treatment is most effective if started in the early stages of the disorder. Therefore, routine assessment of teenaged girls for the early signs of an eating disorder can help identify those who would benefit from treatment.

Success of treatment depends on a comprehensive plan,[10] including the following:

- Monitoring of physical symptoms
- Behavioural therapy
- Cognitive therapy
- Body image therapy
- Nutritional counselling
- Education
- Medication, if necessary

Treatment has changed dramatically over time.[11] The previous emphasis on long-term psychotherapy and potentially harmful medications has been replaced with nutritional stabilization as the initial approach.

Once the nutritional status has improved, then a variety of psychotherapy methods (cognitive/analytical, family and cognitive/ behavioural) are used to improve functioning. Unfortunately, a recent review of psychological treatments of anorexia nervosa found that much more research needs to be done in this area.[12]

According to a recent review of the pharmacological treatment of eating disorders, numerous studies have shown that anti-depressants are useful in the treatment of bulimia nervosa.[3] Some medications are also useful in treating BED. Unfortunately, studies have not identified any effective drugs in treating anorexia nervosa.

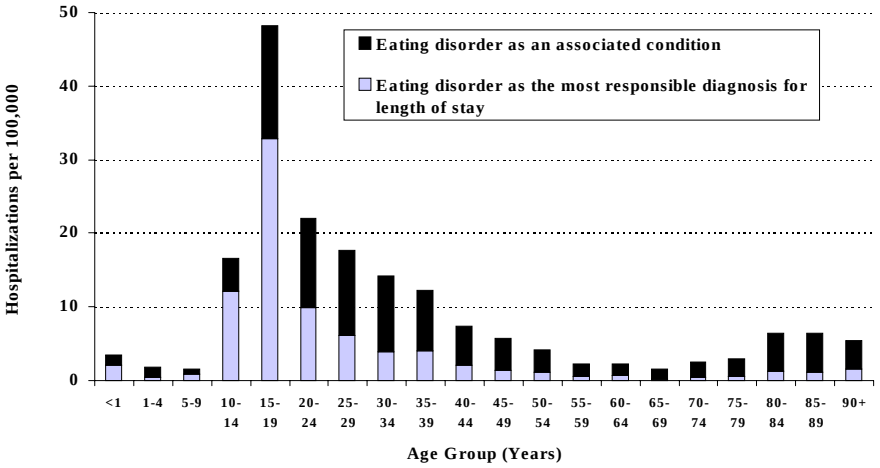
The treatment of coexisting mental illnesses, such as depression, anxiety and alcoholism, is essential.

For people who have been ill for many years with anorexia nervosa, brief time-limited admissions to hospital to stabilize weight loss and treat metabolic complications, combined with supportive psychotherapy, are more effective than coercive hospital treatment with overly ambitious goals.

Most treatment of eating disorders takes place in the community, but hospitalization data give some indication of serious disease in the population.

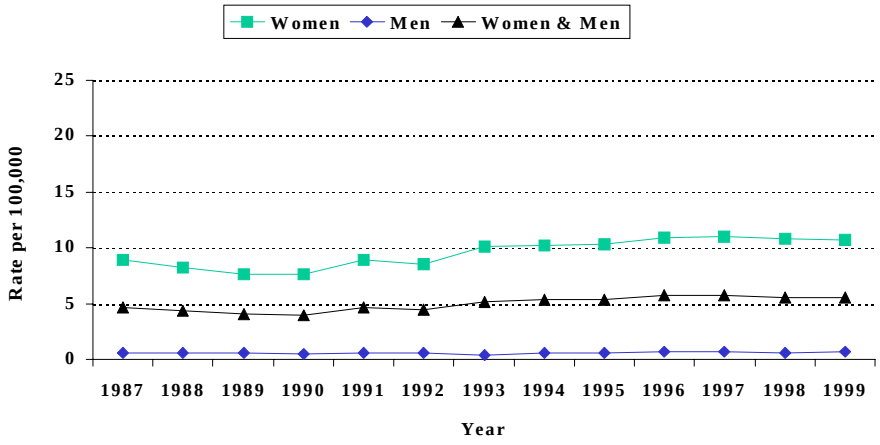
In 1999, among teenagers, an eating disorder was the diagnosis most responsible for determining the length of stay in hospital, likely associated with the life threatening biochemical changes in the body (Figure 6-2). Among older individuals, eating disorders were more likely to be an associated condition.

Figure 6-2 Hospitalizations for eating disorders in general hospitals per 100,000 by contribution to length of stay and age group, Canada, 1999/2000.



Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Figure 6-3 Rates of hospitalization per 100,000 for eating disorders* in general hospitals by sex, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)



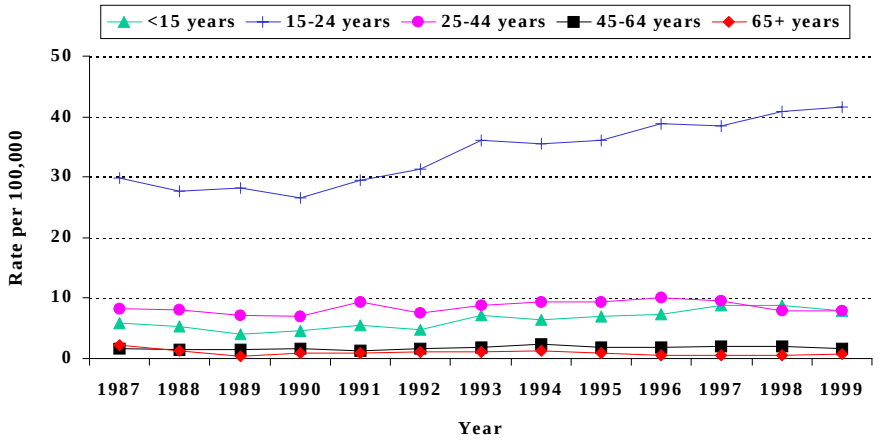
* Using most responsible diagnosis only Source:

Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Rates of hospitalization for eating disorders among women increased by 20% between 1987 and 1999 (Figure 6-3). Rates among men remained stable.

From 1987 to 1999, women aged <15 years and 15-24 years increased (34% and 39%, respectively) (Figure 6-4). Rates in all other age groups remained stable.

Figure 6-4 Rates of hospitalization per 100,000 for eating disorders* in general hospitals among women by age, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)

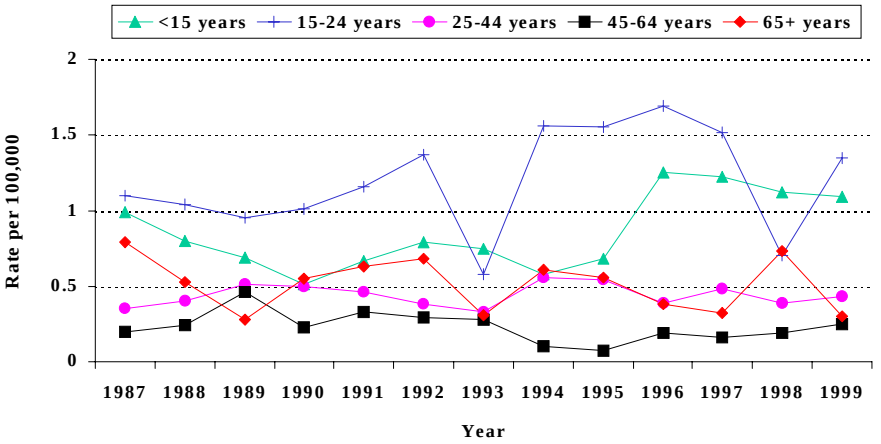


* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Rates of hospitalization for eating disorders among men between 1987 and 1999 were very unstable because of small numbers (Figure 6-5).

Figure 6-5 Rates of hospitalization per 100,000 for eating disorders* in general hospitals among men by age, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)

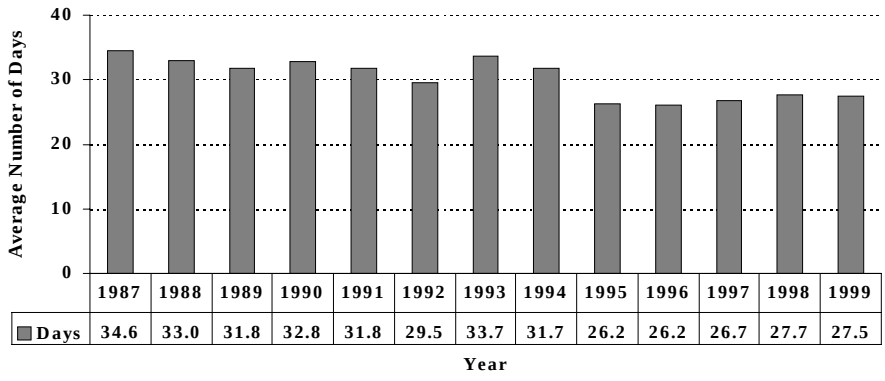


* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

The average length of stay in general hospitals due to eating disorders decreased in the mid-1990s and in 1999 was 27.5 days (Figure 6-6).

Figure 6-6 Average length of stay in general hospitals due to eating disorders*, Canada, 1987/88-1999/2000.



	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Days	34.6	33.0	31.8	32.8	31.8	29.5	33.7	31.7	26.2	26.2	26.7	27.7	27.5

* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Discussion of Hospitalization Data

The hospitalization data support clinical findings that more women than men are affected by eating disorders. In general hospitals, 93% of individuals hospitalized for eating disorders are women. Hospitalization rates are very high among adolescents, consistent with the onset of eating disorders in this age group.

Among older individuals, eating disorders are more likely to be an associated, rather than primary, condition as the reason for the length of stay in hospital. This may reflect the more severe complications associated with the condition that appear once the disease has been present for a period of time.

Rates of hospitalization for eating disorders in general hospital are increasing among young women. Whether this signals an increase in the disorder or rather an increase in the use of hospitalization in treating the disorder requires further research.

Future Surveillance Needs

Eating disorders are common among young women and they can lead to death. They are difficult to treat, but early diagnosis results in improved outcomes.

Existing data provide a very limited profile of eating disorders in Canada. The available hospitalization data needs to be complemented with additional data to fully monitor these disorders in Canada. Priority data needs include:

- Incidence and prevalence of each of the eating disorders by age, sex and other key variables (for example, socio-economic status, education and ethnicity).
- Impact of eating disorders on the quality of life of the individual and family.
- Access to and use of primary and specialist health care services and community programs.
- Stigma associated with eating disorders.
- Attitude toward body image in the general population.
- Access and use of public and private mental health services.
- Access and use of mental health services in other systems, such as schools.
- Treatment outcomes.
- Exposure to known or suspected risk and protective factors.

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CHAPTER 7

SUICIDAL BEHAVIOUR

Highlights

- **In 1998, 3,699 Canadians died as a result of suicide.**
- **Suicide accounts for 24% of all deaths among 15-24 year olds and 16% among 25-44 year olds.**
- **The mortality rate due to suicide among men is 4 times the rate among women.**
- **Individuals between 15-44 years of age account for 73% of hospital admissions for attempted suicide.**
- **Women are hospitalized in general hospitals for attempted suicide at 1.5 times the rate of men.**

What Is Suicidal Behaviour?

Suicidal behaviour is an important and preventable public health problem in Canada. While not in itself a mental illness, suicidal behaviour is highly correlated with mental illness and raises many similar issues. It usually marks the end of a long road of hopelessness, helplessness and despair. All people who consider suicide feel life to be unbearable.

Suicidal behaviour that does not result in death (attempted suicide) is a sign of serious distress and can be a turning point for the individual if he/she is given sufficient assistance to make the necessary life changes.[1] For some individuals, particularly those with borderline personality disorder, suicidal behaviour is one of the results of the illness.

Warning Signs
Suicidal behaviour
• **Repeated expressions of hopelessness, helplessness or desperation** • **Signs of depression (loss of interest in usual activities, changes in sleep pattern, loss of appetite, loss of energy, expressing negative comments about self)** • **Loss of interest in friends, hobbies or previously enjoyed activities** • **Giving away prized possessions or putting personal affairs in order** • **Telling final wishes to someone close** • **Expressing suicidal thoughts** • **Expressing intent to commit suicide and having a plan, such as taking pills or hanging oneself at a specific place and time**

How Common Is Suicidal Behaviour?

Suicide

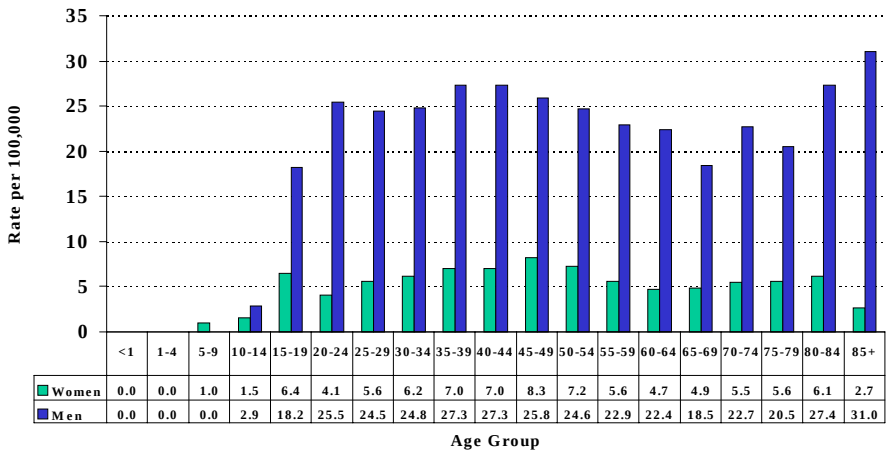
Early in 2002, Statistics Canada produced a detailed summary report on suicide deaths and attempted suicide in Canada.[2] According to the report, suicide is one of the leading causes of death in both men and women from adolescence to middle age.

In 1998, suicide caused the deaths of 3,699 Canadians (12.2 per 100,000): 46 individuals aged under 15 years; 562 aged 15-24 years; 1,596 aged 25-44 years; 1,038 aged 45-64 years; and 457 aged 65 years and over. This represented 2% of all deaths in Canada.

The actual number of suicide deaths may be considerably higher, however, either because information about the nature of the death may become available only after the original death certificate is completed, or because assessing whether the death was intentional may be difficult in some situations.[2] When a cause of death is uncertain, the coroner may initially code the death as "undetermined" and confirm the death as a suicide only after investigation. This additional information does not appear in the mortality database. The stigma about suicide also influences coding on the death certificate.

In 1998, as in most years, overall mortality rates due to suicide among men were nearly 4 times higher than among women (19.5 versus 5.1 per 1,000, respectively).

Figure 7-1 Mortality rates due to suicide per 100,000 by age and sex, Canada, 1998

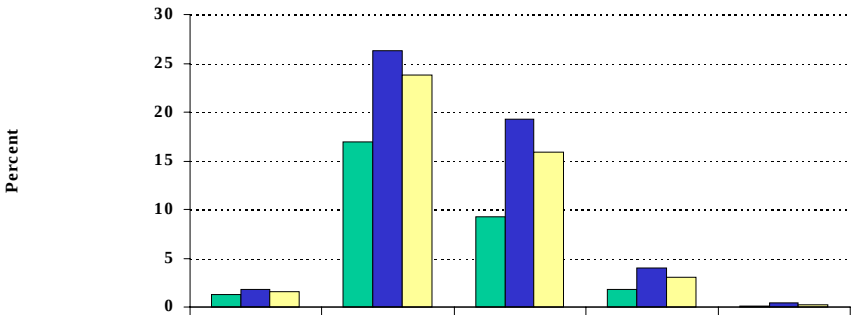


	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Women	0.0	0.0	1.0	1.5	6.4	4.1	5.6	6.2	7.0	7.0	8.3	7.2	5.6	4.7	4.9	5.5	5.6	6.1	2.7
Men	0.0	0.0	0.0	2.9	18.2	25.5	24.5	24.8	27.3	27.3	25.8	24.6	22.9	22.4	18.5	22.7	20.5	27.4	31.0

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from the Mortality File, Statistics Canada

Rates among women showed three peaks: in the late teens (15-19 years), in middle age (45-59 years) and among older seniors (80-84 years) (Figure 7-1). Mortality rates among men rose dramatically in the late teens (15-19 years) and early twenties (20-24 years,) and continued high until middle age (40-44 years), when they started to decrease. Rates started to increase among 70-74 year olds and were highest among men 80 years of age and over.

Figure 7-2 Proportion of all deaths due to suicide by age and sex, Canada, 1998



	<15 years	15-24 years	25-44 years	45-64 years	65+ years
Women	1.3	16.9	9.3	1.8	0.1
Men	1.8	26.3	19.3	4.0	0.4
Women & Men	1.6	23.8	15.9	3.1	0.2

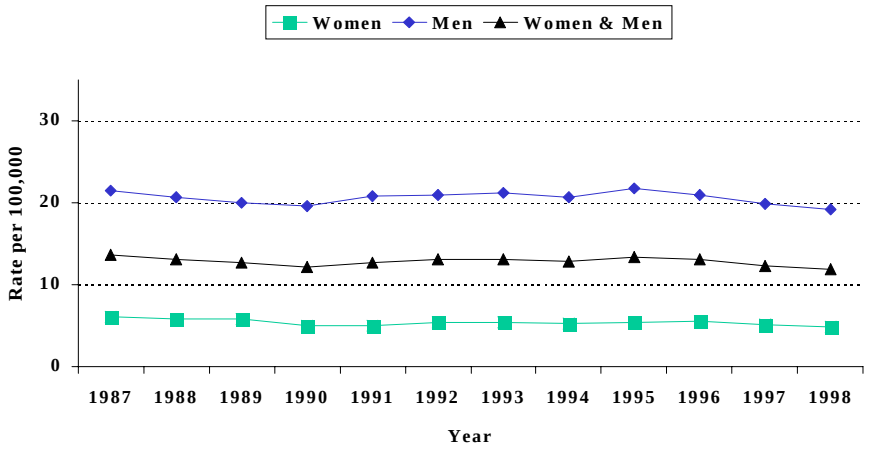
Age Group

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from the Mortality File, Statistics Canada

Suicide is a major cause of death in young people. Among individuals aged between 15 and 24 years, nearly one-quarter (23.8%) of all deaths in 1998 were due to suicide (Figure 7-2). Among young men (15-24 years), suicide accounted for 26.3% of all deaths. Among all 25-44 year-olds, the proportion of deaths due to suicide was 15.9% overall and 19.3% for men.

From the 1950s to the mid-1980s suicide rates increased dramatically among men.[3] This phenomenon was observed to a lesser degree among women. Between 1987 and 1998, however, mortality rates due to suicide changed very little, with perhaps a slight decrease among both men and women (Figure 7-3). Given minor variations in suicide rates from year to year, additional years' data will be required to determine whether suicide rates are, in fact, decreasing.

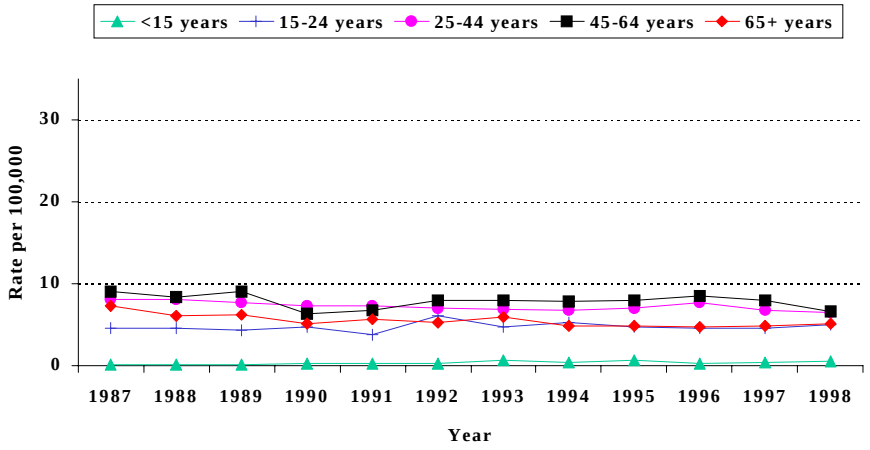
Figure 7-3 Mortality rate per 100,000 due to suicide by sex, Canada, 1987-98 (standardized to 1991 Canadian population)



Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from the Mortality File, Statistics Canada

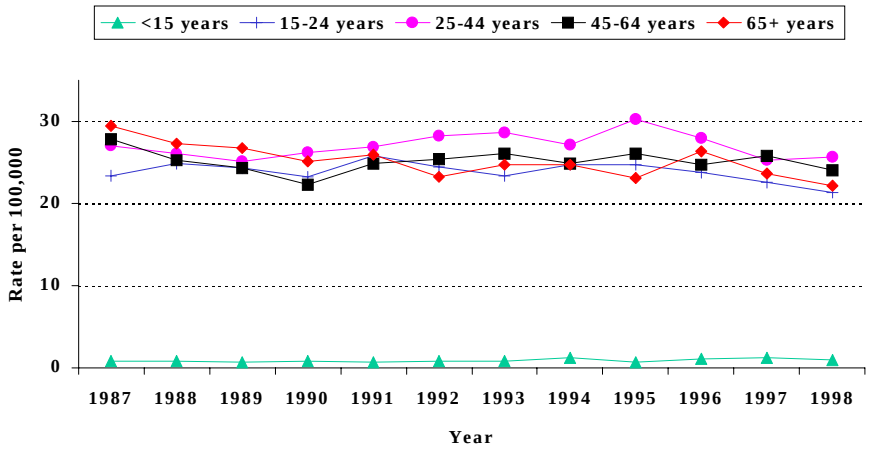
In the later 1990s, mortality rates due to suicide among women in the 45-64 year age group appear to have decreased (Figure 7-4). Rates may have increased among younger women aged 15-24 years. Between 1987 and 1998, there was no consistent pattern in mortality rates due to suicide in the various age groups of men (Figure 7-5). The small number of deaths results in instability of the rates, making it difficult to interpret differences in the age groups.

Figure 7-4 Mortality rate per 100,000 due to suicide among women by age, Canada, 1987-98 (standardized to 1991 Canadian population)



Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from the Mortality File, Statistics Canada

Figure 7-5 Mortality rate per 100,000 due to suicide among men by age, Canada, 1987-98 (standardized to 1991 Canadian population)



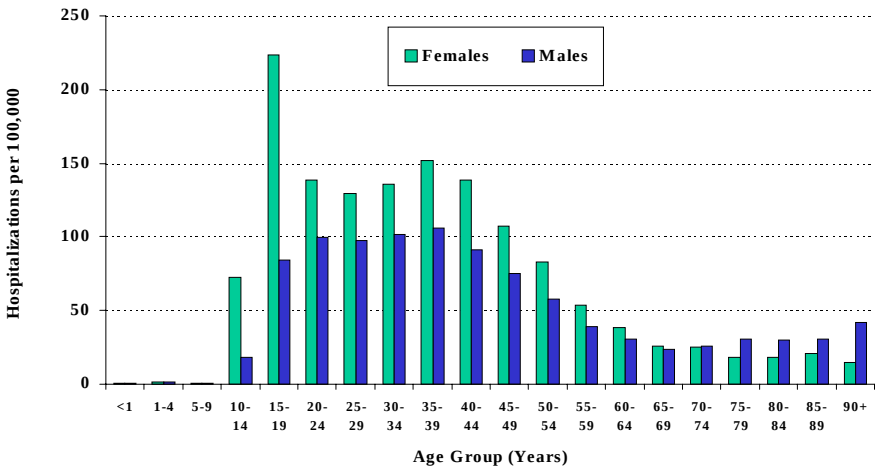
Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from the Mortality File, Statistics Canada

Attempted Suicide

Attempted suicide that does not result in serious injury is usually treated in the community. In fact, many individuals do not see health professionals, but are helped by family or friends, or perhaps by no one at all. Assessing the incidence of attempted suicide is, therefore, very difficult. Individuals are sometimes hospitalized for their own protection and to address the underlying factors that precipitated the crisis. Hospitalization data provide some insight into suicide attempts, but must be interpreted with caution because they only provide part of the picture.

In 1999, women were 1.5 times more likely than men to be hospitalized because of attempted suicide (Figure 7-6). This relationship was apparent in all except those 70 years of age and older, where men were hospitalized at higher rates than women. Young women between 15 and 19 years of age had much higher hospitalization rates than any other age group of either sex. After the age of 50, hospitalization rates decreased markedly among both men and women.

Figure 7-6 Hospitalizations for attempted suicide* in general hospitals per 100,000 by age group and sex, Canada, 1999/2000

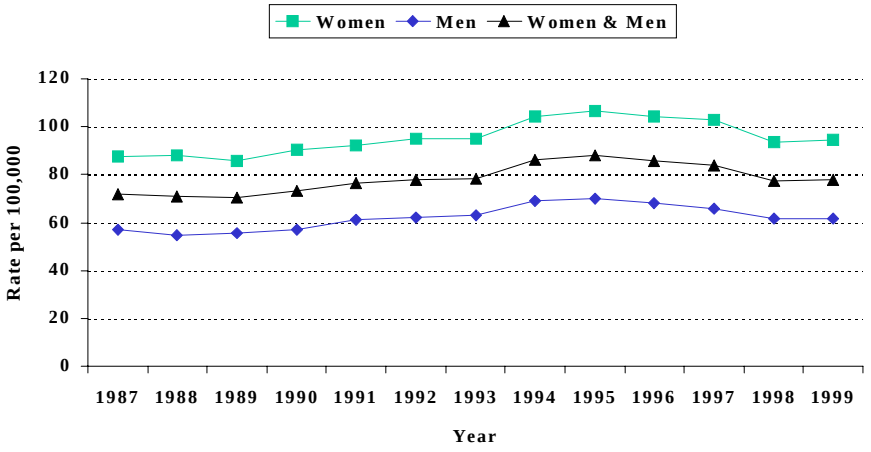


* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Between 1987 and 1999, rates of hospitalization for attempted suicide peaked in 1995 (Figure 7-7). Rates declined in the latter 1990s among both men and women.

Figure 7-7 Rates of hospitalization for attempted suicide* in general hospitals by sex, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)

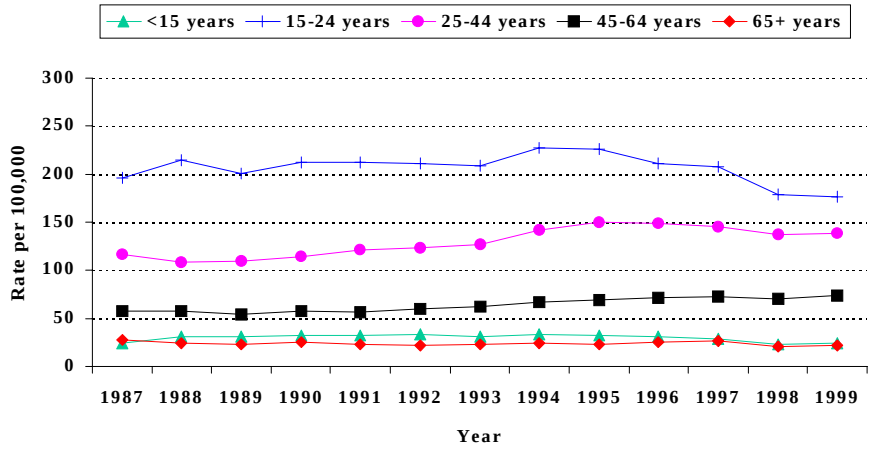


* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

In the two youngest age groups of women (<15 years and 15-24 years) hospitalization rates for attempted suicide increased between 1987 and 1995, then decreased (Figure 7-8). Although rates in the middle age groups (25-44 and 45-64) showed a similar increase up to 1995, they did not decrease in the same way in the later part of the decade.

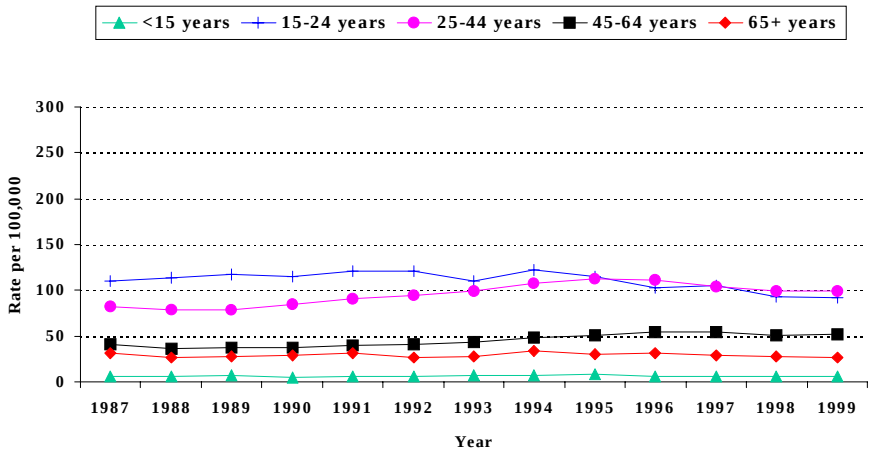
Figure 7-8 Rates of hospitalization for attempted suicide* in general hospitals among women by age, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

Figure 7-9 Rates of hospitalization for attempted suicide* in general hospitals among men by age, Canada, 1987/88-1999/2000 (standardized to 1991 Canadian population)



* Using most responsible diagnosis only

Source: Centre for Chronic Disease Prevention and Control, Health Canada using data from Hospital Morbidity File, Canadian Institute for Health Information

In the latter part of the 1990s, the pattern of hospitalization rates for attempted suicide in men was similar to that in women (Figure 7-9). Rates decreased markedly among men between 15 and 24 years of age, and the rates in the middle age groups remained steady.

Discussion

The difference in rates of suicide and attempted suicide among men and women has several possible explanations.[4] Although both men and women exhibit suicidal behaviour, men express their despair through fatal acts (by, for example, use of a firearm (26%) or hanging (40%)), and women are more likely to choose less lethal acts (such as an overdose of pills, from which they can be resuscitated).[2]

Youth suicide is a tragic event that relates, in part, to events associated with this life stage. Resolving the challenges that are part of youth development, such as identity formation, gaining acceptance and approval among peers, and gaining acceptance from families is a stressful time for teenagers.[5] For example, loss of a valued relationship, interpersonal conflict with family and friends, and the perceived pressure for high scholastic achievement can be overwhelming. For those who are vulnerable to suicide because of other factors, these developmental stresses can create a serious crisis for which suicide may seem to be the only solution. The impulsiveness of youth and their lack of experience in dealing with stressful issues also contribute to the higher risk of suicide.

Seniors face related challenges. They, too, experience the loss of relationships, but more through the death and chronic illness of their friends and life partners. They may also experience loss of their physical and mental abilities. Symptoms of depression may not be recognized and treated as such. In addition, being constantly faced with their own mortality, they may choose death on their own terms.

Suicide rates among the Aboriginal population are 3 to 6 times the rate of the national average, depending on the community.[6] Rates are particularly high among teenagers

and young adults. A recent Royal Commission stated that, historically, government and institutional policies toward the Aboriginal peoples have created a social environment that directly contributes to the higher incidence of suicidal behaviours.[7] Because of conflicting messages about the value of their own culture, many Aboriginal people do not have a strong sense of self. In addition, cultural instability has led to sexual abuse, family violence and substance abuse, which are associated with a high risk of suicide. Childhood separation, poverty and access to firearms also are contributing factors.

Impact of Suicide

'I feel as though I am in a crowded room, watching everyone around me dance, but I can't hear the music,' said Claire, a survivor who lost both her father and sister to suicide.[8]

When a loved one dies by suicide, family members in mourning are left alive, left behind, left alone.[8]

An individual's suicide affects everyone in his/her circle of family and friends. To begin with, those close to the individual feel a huge sense of loss. To some degree, they blame themselves for what has happened and second-guess whether they could have done something to prevent the tragedy. They experience a mixture of emotions, including both abandonment and anger toward the person who took his/her own life.

Family and close friends often feel isolated because the stigma associated with suicide makes it difficult to share their feelings with others: they find it hard to believe that anyone else could understand their feelings. Support groups can help survivors both to cope with the death and to adjust to life without the individual.

Stigma Associated with Suicide

> Stigma... is externally imposed by society for an unacceptable act and internally imposed by oneself for unacceptable feelings.[8]

In general, society does not condone suicide. This is, to some extent, a result of the influence of religion: some religious institutions refuse to bury a person on consecrated ground if he/she has committed suicide. Another factor is a traditional assumption in many societies that the state or the community has an economic and political interest in the life of its members, and that suicide is therefore an offence against the state. Life insurers may not pay benefits to survivors. Social and institutional judgments concerning suicide create a stigma that is felt intensely by family members. They may sense discussion among their friends, but because the subject is never broached directly they feel isolated and as though they are being blamed. If the individual also had a mental illness, the family and friends must cope with this stigma as well.

Within the family, each member may blame him or herself or others for the death or may feel anger toward the individual who has died. Because they judge these emotions as unacceptable, maintaining silence often seems to be the best solution.

The stigma against suicide operates, therefore, at two levels - social and personal. In either case, it acts as a major obstacle to frank discussion and emotional healing.

Causes of Suicidal Behaviour

The risk factors for suicidal behaviour are complex and the mechanisms of their interaction are not well understood. It is important to take an ecological perspective when considering the layers of influence on the individual. These layers include the self, family, peers, school, community, culture, society and the environment.[5]

A useful framework for categorizing the factors associated with suicidal behaviour includes four categories: predisposing factors, precipitating factors, contributing factors and protective factors.[5]

Predisposing Factors

Predisposing factors are enduring factors that make an individual vulnerable to suicidal behaviour. They include mental illness, abuse, early loss, family history of suicide and difficulty with peer relationships.

Research indicates that a very high proportion of people who kill themselves have a history of mental illness, such as depression, bipolar disorder, schizophrenia or borderline personality disorder. Of these, depression is the most common. This does not mean, however, that all people living with depression are suicidal.

Previous attempts at suicide serve as one of the strongest predictors of completed suicide.

Precipitating Factors

Precipitating factors are acute factors that create a crisis, such as interpersonal conflict or loss, pressure to succeed, conflict with the law, loss of stature in society, financial difficulties or rejection by society for some characteristic (such as ethnic origin or sexual orientation)

"The common stimulus in suicide is unendurable psychological pain.... The fear is that the trauma, the crisis, is bottomless - an eternal suffering. The person may feel boxed in, rejected, deprived, forlorn, distressed, and especially hopeless and helpless. It is the emotion of impotence, the feeling of being hopeless-helpless, that is so painful for many suicidal people. The situation is unbearable and the person desperately wants a way out of it."[9]

Contributing Factors

Contributing factors increase the exposure of the individual to either predisposing or precipitating factors. These include physical illness, sexual identity issues, unstable family, physical illness, risk-taking or self-destructive behaviour, suicide of a friend, isolation and substance abuse.

Protective Factors

Protective factors are those that decrease the risk of suicidal behaviour, such as personal resilience, tolerance for frustration, self-mastery, adaptive coping skills, positive expectations for the future, sense of humour and at least one positive healthy family relationship.

Prevention and Treatment

Using this framework of categories, suicide prevention programs must address the predisposing, precipitating, contributing and protective factors for suicidal behaviour:

- Early identification and treatment programs address the predisposing factors.
- Crisis intervention addresses the precipitating factors.
- Treatment programs address the contributing factors.
- Mental health promotion programs address the protective factors.

Many provinces, territories and communities have developed suicide prevention programs. Programs need to be both population-wide and targeted toward those who are at higher risk. A comprehensive program has a framework, goals and objectives and a commitment to adequate funding. Promotion of mental health of the entire Canadian population, reduction of risk factors and early recognition of those at risk of suicidal behaviour play essential roles in decreasing suicide and attempted suicide.

A comprehensive program has the following strategies.

1. Increase public awareness and decrease the stigma associated with suicidal behaviour.
2. Address determinants of health, including housing, income, education, employment and community attitudes.
3. Implement prevention programs for youth, for individuals at high risk for suicidal behaviour, and for family members post-suicide.
4. Provide and ensure equitable access to co-ordinated, integrated services, including crisis phone counselling and treatment of mental illnesses.
5. Reduce access to lethal means of suicide, particularly firearms and lethal doses of prescription drugs. Since suicidal behaviour is often crisis-oriented and impulsive, restricting access to lethal means can substantially reduce the risk of the completion of a suicide attempt.[10] This includes reducing access to firearms, bridges and dangerous sites, and medication.
6. Train service providers and educators in the early identification of predisposing factors and crisis management.
7. Conduct research and evaluation to inform the development of effective suicide prevention programs. These research efforts need to address the causes of suicidal behaviours, factors that increase risks for these behaviours, and factors that are protective and that may facilitate resiliency in vulnerable persons. Research must also evaluate the effectiveness of health and social services.

Future Surveillance Needs

Suicidal behaviour is a very serious manifestation of stress, hopelessness and despair.

Existing data provide a very limited profile of suicidal behaviour in Canada. The available hospitalization and mortality data need to be complemented with additional data to fully monitor suicidal behaviour in Canada. Priority data needs include

- Incidence and prevalence of suicidal behaviour by age, sex and other key variables (for example, socio-economic status, education and ethnicity)
- Prevalence of other mental illnesses in association with suicidal behaviour
- Impact of suicidal behaviour on the individual and family
- Access to and use of primary and specialist health care services
- Access to and use of public and private mental health services
- Access to and use of mental health services in other systems, such as schools, employee assistance programs, and criminal justice programs and facilities
- Stigma associated with suicidal behaviour
- Access to the means of suicide
- Treatment outcomes
- Exposure to known or suspected risk and protective factors

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APPENDIX A

DATA SOURCES

Population Surveys

Over the past two decades, the understanding of the incidence and prevalence of mental disorders has grown with the completion of a number of epidemiological studies in Canada. Using structured interviews based on diagnostic criteria for mental disorders, studies have assessed randomly sampled individuals for current and previous psychiatric symptoms. Researchers have then used the results to estimate the prevalence rates of mental disorders in the general population, and to examine factors that influence the development of mental disorders. Although the data show some variability due to differing assessment tools or methods, the various studies have produced generally similar results. The following summarizes the sources of information cited in this document.

Ontario Health Survey[1]

The Mental Health Supplement of the Ontario Health Survey was a province-wide, cross-sectional epidemiological survey of psychiatric disorders conducted between December 1990 and April 1991 among non-institutionalized Ontarians. The target population consisted of all individuals aged 15 years or older who were residents of private dwellings in Ontario, excluding foreign service personnel, the homeless, people in institutions (e.g., hospitals and correctional facilities), First Nations people living on reserves, and residents of extremely remote areas. A revised version of the Composite International Diagnostic Interview (UM-CIDI) was used to measure psychiatric disorder, providing prevalence data on 14 DSM-III-R disorders. This instrument was also used to collect data in the National Comorbidity Survey in the United States. The Mental Health Supplement of the Ontario Health Survey provides data on 8116 respondents 15 to 64 years of age.

Edmonton Survey of Psychiatric Disorders[2,3]

The Edmonton Survey of Psychiatric Disorders was conducted as a community-based survey in Edmonton, Alberta, between January 1983 and May 1986. Subjects were selected by means of a 2-stage sampling design: in the first stage, households were systematically sampled from a list of residential addresses; and in the second stage, one member from each household was selected using a respondent selection grid to ensure that the age and sex composition of the sample was representative of the participating households. Individuals 18 years of age and older were interviewed using Version III of the Diagnostic Interview Schedule (DIS), with a sample size of 3,258 non-institutionalized individuals.

National Population Health Survey (NPHS)

Statistics Canada conducts the National Population Health Survey (NPHS), a cross-sectional and longitudinal household-based survey, every 2 years. Designed to collect information about the health status of Canadians, the NPHS expands our knowledge of the determinants of health, including health behaviour, use of health services and socio-demographic information. The target population consists of household residents aged 15 years or older in all provinces, except for people living on Native reserves, on Canadian Forces bases, or in some remote areas. The survey has specific components for individuals living in institutions (long-term residents of hospitals and residential care facilities) and in the territories. The NPHS surveyed approximately 20,725 individuals in the first wave in 1994/1995, and 67,133 individuals in 1996/1997 (with longitudinal data on 12,628 individuals).

Hospitalization Data

The Canadian Institute for Health Information (CIHI) maintains the Hospital Morbidity Database (HMDB), which covers hospital separations in Canada. (A hospital separation is defined as the discharge or death of an inpatient and is based on counts of events, not patients. For example, a patient admitted and discharged three times during the reporting year would be counted as three separations. Excluded from the calculations are patients who were admitted to hospital in the previous or current year and were not discharged or died.) A record is completed by the hospital for each individual. In addition to demographic and administrative information, the database contains up to 16 diagnostic codes and some procedures codes.

The HMDB contains separation records from general and allied special hospitals, including acute care, convalescence, and chronic care facilities (except in Ontario). The tables presented exclude newborns, out of province admissions and a small number of records flagged as having serious errors. Records are not available for the Ontario Chronic Care Patient System which accounted for about 1% of admissions in fiscal 1996/97.

Mortality Database – Statistics Canada

Provincial and territorial offices of vital statistics submit information annually on all deaths from all provincial and territorial vital statistics registries in Canada. The personal information portion of the death registration form is completed by an informant, usually a relative of the deceased. The portion of the form comprising the medical certificate of death is completed by the medical practitioner last in attendance, or by a coroner if an inquest or enquiry was held. The database includes demographic information and the underlying cause of death as defined by the physician.

Epidemiological Terms

Age-standardized rate

An adjusted rate that represents what the crude rate would have been in the study population (such as a province or a census division) if that population had the same age distribution as the standard population, which in this report is the 1991 Canadian population. However, because standardization produces a summary measure, it may obscure important differences in the age-specific patterns. Also, standardized rates can be compared with each other only when the same standard population has been used to obtain the rate.

ICD Codes used in analysis

Anxiety: 300.0, 300.2, 300.3, 309.8
Bipolar/emotional disorders: 296.0, 296.4, 296.5, 296.6, 296.7
Depression: 296.2, 296.3, 300.4, 311
Eating disorders: 307.1, 307.5
Personality disorders: 301
Schizophrenia: 295
Suicide: E950 - E959

Incidence rate

The number of new cases per the population at risk of the disease during a specific period.

Prevalence rate

The number of individuals in the population with the disease at a specific point in time, or during a specific period of time.

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APPENDIX B

A CALL FOR ACTION: BUILDING CONSENSUS FOR A NATIONAL ACTION PLAN ON MENTAL ILLNESS AND MENTAL HEALTH

Prepared by

The Canadian Alliance for Mental Illness and Mental Health

(CAMIMH)

Created in October 1998, the core purpose of the Canadian Alliance for Mental Illness and Mental Health (CAMIMH) is to put mental illness and mental health on the national health and social policy agendas. It wishes to influence and advise on mental health policy at the national level as a unified voice of consumer, family, community and professional organizations. Its overriding commitment is to improving services and supports for persons facing mental illness and/or mental health obstacles, as well as to secure strategies that will enhance the potential for positive mental health among Canadians.

CAMIMH members are committed to working together to develop a strong national voice on mental illness and mental health in Canada and to bring other stakeholders to the table in generating ideas and consensus for a national vision and action plan for mental health and illness in Canada. Membership includes:

- Canadian Mental Health Association
- Canadian Psychiatric Association
- National Network for Mental Health
- Schizophrenia Society of Canada
- The Mood Disorder Society of Canada

The Federal/Provincial/Territorial Advisory Network on Mental Health (ANMH) provided financial assistance to CAMIMH for the development of "A Call for Action." However, the views expressed in the document are those of CAMIMH and do not necessarily represent those of the members of the ANMH.

A. Public Education and Awareness

Goal A1: Reduce the stigma associated with mental illnesses in Canadian society.

Goal A2: Increase public knowledge and awareness about effective practices in the fields of mental illness and mental health.

B. National Policy Framework

Goal B1: Legislative/Policy Initiatives - Ensure that the impact on mental illness and mental health is considered in the development and implementation of every federal policy and legislative initiative.

Goal B2: National Guidelines, Benchmarks and Accountability - Establish and adopt national guidelines or benchmarks for key outcome areas of a desired mental health system and for mental health promotion.

Goal B3: Integration and Collaboration - Develop collaborative and cooperative partnerships that will enhance systems of care and mental health promotion opportunities.

Goal B4: Consumer and Family Participation - Strengthen consumer and family participation in national policy development affecting mental illness services and supports as well as mental health promotion.

Goal B5: Promotion of Self-Help - The federal government recognizes consumer and family self-help as a significant and vital mental health resource.

Goal B6: Innovative Models of Service Delivery - Encourage and facilitate the piloting, testing and dissemination of information about new and innovative models of delivering mental illness/health services based on effective practices.

Goal B7: Human Resource - Develop a national mental illness and mental health human resource plan to the year 2005.

C. Research

Goal C1: Establish and support a national research agenda.

Goal C2: Establish and implement a public education and awareness strategy to support comprehensive and sufficient research funding and value research.

Goal C3: Strengthen the voluntary fundraising sector so that it demonstrates a unified commitment and enhanced support for mental illness/health research.

Goal C4: Increase the cadres of new mental illness and mental health researchers.

Goal C5: Create a more supportive environment for Canadian researchers in mental illness and mental health research.

Goal C6: Ensure that mental illness and mental health research informs policy development in all areas of health.

Goal C7: Increase the involvement of consumers, other stakeholders and their organizations and the voluntary sector in the development, implementation and dissemination of the knowledge acquired through enhanced mental illness and mental health research.

D. National Data/Information System

Goal D1: Create a national public[1] health surveillance and reporting program in collaboration with other stakeholders, including the Laboratory Centre for Disease Control (LCDC) [now called the *Centre for Chronic Disease Prevention and Control* of Health Canada].

[1] Mental health/mental illness