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Current Issues in Mental Health in Canada: The Economic Impact of Mental Illness

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(In Brief)

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CURRENT ISSUES IN MENTAL HEALTH IN CANADA: THE ECONOMIC IMPACT OF MENTAL ILLNESS

1 INTRODUCTION

Mental illness¹ has direct, indirect and human costs that place a burden not only on those who are ill and their loved ones, but also on employers, governments and society as a whole. Forecasts indicate that the economic burden of mental illness will grow over the coming decades and could become increasingly difficult for Canadian society to bear.² Yet Canada spends less on mental health – both to promote mental health and prevent mental illness – than most developed nations.³

This document provides a brief overview of the three types of costs associated with illness in general and the results of three recent Canadian studies on the economic impact of mental illness. It then examines the consequences for public finances and some solutions to attempt to control costs.

2 TYPES OF COSTS

Assessing the economic impact of any illness, physical or mental, involves estimating three types of costs: direct, indirect and human.

2.1 DIRECT COSTS

Direct costs are those incurred to treat the illness and support and rehabilitate the individual. They include the costs of health care, community or school-based services, and income support. Direct costs are borne in large part by governments and to a lesser extent by private insurers and individuals.

2.2 INDIRECT COSTS

Unlike direct costs, indirect costs do not usually involve spending money. Instead, they consist of lost productivity – the value of what would have been produced in the absence of illness. Lost productivity results from absenteeism (work days missed because of illness), presenteeism (physical presence at work, but with lower productivity because of health problems) and withdrawals from the labour market owing to illness or premature death.

Since it is impossible to truly measure lost productivity, studies generally use two alternative methods: the human capital method and the friction cost method.

- Under the human capital method, the number of hours of work missed is multiplied by the hourly wage to determine the productivity lost because of short absences. For longer absences, where the lost productivity extends over several months or years, estimates of the present value of future wages are used.⁴

- The friction cost method limits the productivity lost to the friction period, which is the time the organization needs to replace an employee and re-establish the pre-illness level of productivity. As a result, this method provides markedly lower estimates than the human capital method. However, the friction period is difficult to estimate.

A large portion of indirect costs are borne by employers, but overall, these costs result in a lower gross domestic product and therefore amount to a loss for society as a whole.

2.3 HUMAN COSTS

Finally, the human costs of illness, such as pain, distress, anxiety and loss of the enjoyment of life, are often intangible and hence difficult to estimate. They are often determined using the years of life lost because of premature death and the loss of capabilities caused by illness.

2.4 COMMENTARY

Despite the usefulness of these categories, there does not seem to be a consensus on what belongs in each cost category. For example, something can be classified as a direct cost in one study but as an indirect cost in another. Likewise, human costs are sometimes incorporated into direct or indirect costs rather than making up their own category. This can lead to problems when comparing studies.

3 THREE RECENT CANADIAN STUDIES

The economic impact of mental illness was the subject of three recent studies conducted by RiskAnalytica (a group of researchers who specialize in quantitative studies), the Conference Board of Canada and the Institute of Health Economics. This section briefly reviews each of the studies, examines the differences in their figures and summarizes their conclusions.

3.1 RISKANALYTICA STUDY

3.1.1 PARAMETERS

The RiskAnalytica study⁵ looked at the Canadian population aged nine and over and the following mental illnesses: mood and anxiety disorders, depression, schizophrenia, substance use disorders, attention deficit hyperactivity disorder, oppositional defiant disorder, behaviour disorders and cognitive impairments.

The authors used RiskAnalytica's own economic simulation framework (Life at Risk®), which provides population health forecasts based on illness or disability type and frequency, and demographic variables (age, sex, etc.). They estimated the direct and indirect costs, but not the human costs.

Besides health care costs, the direct costs calculated in this study include the cost of income support and social and community services. The estimates are based on the prevalence and average cost of the services used.

3.1.2 RESULTS

The study estimated the direct costs of mental illness in 2011 at \$42.3 billion. The direct costs of cognitive impairments alone – including dementia – totalled \$19.7 billion, or about 47% of all direct costs. The direct costs of the other mental illnesses studied amounted to about \$22.6 billion. As shown in Table 1, the three main types of direct costs for these illnesses were, in descending order, community and social services, income support and hospital care.

Table 1 – Direct Costs of Mental Illnesses, Excluding Cognitive Impairments, in Canada, 2011

Cost Type	Cost (\$ millions)	Share of Total Cost (%)
Community and social services	6,109.6	27.0
Income support	5,158.0	22.9
Hospital care	3,587.6	15.9
Prescription medication	3,380.3	15.0
Other services	2,384.9	10.6
Medical care	1,941.0	8.6
Total	22,561.4	100.0

Source: Table prepared by the author using data from Paul Smetanin et al., [*The Life and Economic Impact of Major Mental Illnesses in Canada*](#), RiskAnalytica, Report commissioned by the Mental Health Commission of Canada, December 2011, p. 113.

The study assumes constant prevalence rates⁶ and predicts that the direct costs of mental illness will exceed \$290.9 billion by 2041 (in current dollars).⁷ It also forecasts that the portion of direct costs stemming from cognitive impairments will rise from 47% in 2011 to 64% in 2041. In other words, the direct costs of cognitive impairments will surpass the costs of all other mental illnesses combined, as the prevalence of dementia in Canada will grow in the decades ahead.

In addition, the authors used the friction cost method to calculate the indirect costs. These costs, which amounted to over \$6.4 billion in 2011, are based on a prevalence rate of two of every nine workers having a mental illness. Expressed in current dollars, the indirect costs could reach \$15 billion in 2041.

Therefore, the study shows that mental illness is costing the Canadian economy at least \$48.7 billion a year, or 2.8% of the 2011 gross domestic product. Direct costs make up 87% of this total; the remaining 13% is indirect costs.

3.2 CONFERENCE BOARD OF CANADA STUDY

3.2.1 PARAMETERS

The Conference Board of Canada study⁸ focuses on the prevalence of mental illness in the Canadian working population. It considers only the indirect costs of the mental illnesses most commonly cited by employees: depression, dysthymia (also called chronic depression), bipolar disorder, social phobia, panic disorder and agoraphobia.

The study first assesses the labour market participation that is lost through mental illness. Then, adopting the human capital method, which uses workers' wages, it estimates the productivity loss associated with inability to work.

3.2.2 RESULTS

The Conference Board estimates that nearly 452,000 more workers could have entered the labour market in 2012 (the figure could reach 507,000 in 2030), and thereby increased gross domestic product by 1.3%, had they not had a mental illness. Each year, the Canadian economy may be losing \$20.7 billion because of the reduction in labour force participation that can be attributed to mental illness.

The costs of absenteeism, presenteeism and lost productivity are forecast to grow at roughly 1.9% per year and could reach \$29.1 billion by 2030.

3.3 INSTITUTE OF HEALTH ECONOMICS STUDY

3.3.1 PARAMETERS

The Institute of Health Economics⁹ compiled the results of various Canadian studies on the direct, indirect and human costs of mental illness and adjusted these results for population growth and inflation in order to assess the overall economic impact of mental illness in 2006.

The results pertain to Canadians aged 18 years and older, various cost categories and the following illnesses: mood disorders, anxiety disorders, personality disorders, schizophrenia, substance use disorders and suicide.

3.3.2 RESULTS

The results of the study are presented in Table 2.

**Table 2 – Costs of Mental Illness in Canada, 2006
(\$ millions)**

Cost Type	Total
A. Direct costs (Mental health services)	7,694
Government payments	6,009
Private insurance and out-of-pocket costs	1,685
B. Indirect costs (Lost productivity and income)	23,625
Lost productivity	
Presenteeism/absenteeism	762
Short-term work loss	6,197
Long-term work loss	9,078
Premature mortality	3,717
Informal caregiver income loss	3,871
C. Human costs (Health-related quality of life loss)	20,298
Economic impact (A + B + C)	51,617

Source: Table prepared by the author using data from Kim-Lian Lim, Philip Jacobs and Carolyn Dewa, [How Much Should We Spend on Mental Health?](#), Institute of Health Economics, Alberta, September 2008, p. 15.

In 2006, direct costs, which include only health services, amounted to \$7.7 billion. This total comprised \$6 billion in costs covered by governments and \$1.7 billion in spending by private insurance companies and users for health services, including medication.

Indirect costs (assessed using the human capital method) totalled \$23.6 billion. Long-term work loss was the greatest source of indirect costs, followed by the cost of short-term work loss. Interestingly, these costs include the estimated income lost by informal caregivers, which was nearly \$3.9 billion in 2006.

As for the human costs of mental illness, the study put them at \$20.3 billion.

Taking all three cost types into account, the total economic impact of mental illness in 2006 was an estimated \$51.6 billion. Direct costs accounted for 15% of this total, indirect costs 46% and human costs 39%.

3.4 DIFFERENCES

Obviously, the different parameters used by the three studies – age groups considered, illnesses included, cost types estimated and methodologies employed – complicate comparisons.

The difference in the direct costs estimated by the Institute of Health Economics (\$7.7 billion in 2006) and RiskAnalytica (\$42.3 billion in 2011) are partly the result of differences in study populations and illnesses. In addition, unlike RiskAnalytica, the Institute of Health Economics did not include cognitive impairments in its study and limited its calculations to health care costs, leaving out the cost of income support and community services.

As for indirect costs, several factors explain the gap between the figures obtained by the Conference Board (\$20.7 billion in 2012) and RiskAnalytica (\$6.4 billion in 2011). The sample populations and the mental illnesses included were not the same, but the main reason for the gap is methodology (RiskAnalytica used the friction cost method, while the Conference Board used the human capital method). On the other hand, the Institute of Health Economics and the Conference Board both used the human capital method and produced relatively similar estimates.

3.5 SUMMARY

Despite their differences, these studies contain common observations and reveal general trends. In short, the economic impact of mental illness is far from trivial, whether one takes RiskAnalytica's \$48.7 billion figure for 2011, the Conference Board's \$20.7 billion in indirect costs alone for 2012 or the Institute of Health Economics result of \$51.6 billion for 2006. And the long-term projections made by RiskAnalytica and the Conference Board are troubling.

4 IMPACT ON PUBLIC FINANCES AND POTENTIAL SOLUTIONS

4.1 IMPACT ON PUBLIC FINANCES

The short- and long-term productivity losses caused by mental illness translate into lower government tax revenues. Any wages lost by people with an illness can result in lower income tax revenue and fewer taxes collected on consumer goods as people reduce their spending.

Moreover, like other employers, governments – major employers themselves – feel the impact of mental illness on productivity in their workplaces.

Government financial assistance to workers who are unable to support themselves must also be counted. This financial aid may take the form of Employment Insurance benefits or social assistance. Other public spending on health care and community support for people with illnesses must also be taken into account.

In short, mental illnesses have serious consequences for public finances, and the three studies described above illustrate some of them, but not all. Unfortunately, no study has determined the distribution of these effects among the federal, provincial and territorial governments.

4.2 POTENTIAL SOLUTIONS

In a 2013 report, the Mental Health Commission of Canada¹⁰ provided a review of studies showing that investment in appropriate programs helps to prevent mental illness or to delay its onset and reduce related health and disability problems. The programs mentioned in the report include the following:

- early intervention programs targeting children at the first sign of illness;
- programs that help people access treatment in a timely fashion and that provide community support; and
- workplace and employment support initiatives.

The Commission believes that such measures promote good mental health, reduce the need for hospitalization, keep people out of the criminal justice system¹¹ and limit productivity declines, all of which result in cost savings.

A report published by the Canadian Institute for Health Information¹² that reviews the literature on the return on investment in mental health promotion and mental illness prevention reaches similar conclusions. The authors report that the keys to making spending on mental illness viable are mental health promotion and mental illness prevention. Moreover, they emphasize that, to a large extent, the return on these initiatives typically goes to a sector other than the one in which the investment was originally made. Consequently, a school-based early intervention program can reduce costs in the health care sector or legal system.

The Mental Health Commission of Canada has proposed increasing the mental health component of public health care funding from 7% to 9% over the next 10 years and boosting the mental health portion of funding for social programs by 2% from current levels.¹³ However, it does not provide a breakdown of this increased spending across the federal, provincial and territorial governments.

5 CONCLUSION

Mental illness has a substantial impact on the economy, public finances and Canadian society as a whole. Mounting evidence shows that the cost of mental illness continues to grow for society. Moreover, studies indicate that direct and indirect costs will increase in the coming decades and may even become unsustainable if nothing is done to bring them under control. It is also important to remember that the cost estimates for mental illness in Canada are not the result of a full cost accounting and likely understate the actual costs.

One of the solutions experts propose is more funding for mental health promotion, mental illness prevention and early intervention. Such an investment would likely produce long-term savings.

NOTES

1. “Mental illness is a behavioural or psychological syndrome that significantly interferes with an individual’s thought processing abilities, social abilities, emotions and behaviour” (Paul Smetanin et al., [The Life and Economic Impact of Major Mental Illnesses in Canada](#), RiskAnalytica, Report commissioned by the Mental Health Commission of Canada, December 2011, p. 6).
2. Glen Roberts and Kelly Grimes, [Return on Investment: Mental Health Promotion and Mental Illness Prevention](#), Canadian Institute for Health Information, 31 March 2011.

3. Philip Jacobs et al., [*The Cost of Mental Health and Substance Abuse Services in Canada*](#), Institute of Health Economics, Alberta, June 2010. According to this study, 7% of Canadian government health expenditures go to mental health. By comparison, countries like New Zealand and the United Kingdom spend between 10% and 11% of their health budgets on mental health.
4. This discounting procedure consists of expressing future financial flows in current dollars.
5. Smetanin et al. (2011).
6. The study assumes that the increase in the number of people with mental illnesses over the coming decades will be due in large part to an aging and growing population, not necessarily to higher incidence rates.
7. Current dollars are not adjusted to take inflation into account.
8. Conference Board of Canada, [*Mental Health Issues in the Labour Force: Reducing the Economic Impact on Canada*](#), July 2012.
9. Kim-Lian Lim, Philip Jacobs and Carolyn Dewa, [*How Much Should We Spend on Mental Health?*](#), Institute of Health Economics, Alberta, September 2008.
10. Mental Health Commission of Canada, [*Making the Case for Investing in Mental Health in Canada*](#), 20 February 2013.
11. See Tanya Dupuis, Robin MacKay and Julia Nicol, [*Current Issues in Mental Health in Canada: Mental Health and the Criminal Justice System*](#), Publication no. 2013-88-E, Parliamentary Information and Research Service, Library of Parliament, Ottawa, 15 November 2013.
12. Roberts and Grimes (2011).
13. Mental Health Commission of Canada, [*Changing Directions, Changing Lives: The Mental Health Strategy for Canada*](#), Alberta, 2012.