



The Conference Board  
of Canada

Le Conference Board  
du Canada

# Healthy Brains at Work.

Estimating the Impact of Workplace Mental Health Benefits  
and Programs

## At a Glance

- This third briefing in the Healthy Brains at Work research series explores the potential impact of improving outcomes for working Canadians living with a mental illness.
- We estimate that improved treatment of depression among employed Canadians could potentially boost Canada's economy by up to \$32.3 billion a year, while improved treatment of anxiety could boost the economy by up to \$17.3 billion a year.
- These findings indicate that much more could be done to ensure that Canadians are supported by effective workplace policies, programs, and benefits that foster good mental health and address mental illness when it is present.

## HEALTHY BRAINS AT WORK

### Estimating the Impact of Workplace Mental Health Benefits and Programs

## Executive Summary

**Regardless of age, mental illnesses can affect anyone and can negatively impact an individual's health, well-being, and productivity (absenteeism and presenteeism at work). Organizations that pay attention to the mental health and wellness of their employees are likely to realize significant benefits through a healthier, more productive workforce.**

The Healthy Brains at Work research series has explored the prevalence of mental health disorders within the Canadian workforce and examined how Canadian employers are supporting the mental health of their employees. Findings from this work, to date, reaffirm the need to address poor mental health among working Canadians, and a snapshot of larger employers suggests many are taking action. However, much more needs to be done, particularly for certain industries and population groups.

In this third briefing of the series, we present an estimate of the potential impact on the economy if the use of effective mental health benefits and workplace programs were optimized in Canada. For the analysis, we leverage the methodology from the Conference Board's past report, *Mental Health Issues in the Labour Force: Reducing the Economic Impact on Canada*, to explore the potential impact of improving outcomes for working Canadians living with a mental illness. We estimate that improved treatment of depression among employed Canadians could boost Canada's economy by up to \$32.3 billion a year. In addition, improved treatment of anxiety among Canadians could boost Canada's economy by up to \$17.3 billion a year. If all employees living with depression and/or anxiety had access to treatments allowing them to be fully functional at work, Canada's economy could gain somewhere between 228,000 and 352,000 jobs per year until 2035.

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Organizations that pay attention to the mental well-being of their employees stand to reap the benefits of a healthier, more productive workforce.

A significant proportion of Canadian workers have unmet mental health care needs. Thus, the benefits of meeting the needs of those living with depression and/or anxiety are large. Given the size of the wholesale and retail trade sector and the health care and social assistance sector (15 and 12.5 per cent of the total workforce, respectively), these industries would benefit significantly if all employees with a mental illness received optimal treatment. As the 12-month prevalence of depression is highest in the arts, entertainment, and recreation sector, it would benefit the most from a scenario where evidence-based, employer-sponsored benefits and programs are available and accessed.

These estimates illustrate the significant benefits to be realized for individuals, businesses, society, and the economy by addressing mental health and illness among working Canadians. While there have been considerable efforts in recent years, much more needs to be done to ensure that Canadians with mental illness are supported by workplace policies, programs, and benefits that help improve their health and productivity. In the final briefing of this research series, we will explore a number of factors that could help create the conditions for reaching this optimal state.

## Healthy Brains at Work: Introduction

Workplace mental health and wellness has received tremendous attention over the past decade in Canada, and with good reason. Mental illnesses affect an individual's health, well-being, and productivity—both absenteeism (absence from work) and presenteeism (coming to work while sick and performing with reduced productivity). Organizations that pay attention to the mental well-being of their employees stand to reap the benefits through a healthier, more productive workforce.

#### HEALTHY BRAINS AT WORK

#### Estimating the Impact of Workplace Mental Health Benefits and Programs

The Healthy Brains at Work research series explores the importance of addressing mental health and mental illnesses<sup>1</sup> in Canadian workplaces. Its objectives are to:

- explore what is known, and not known, about the profile of mental health and mental illness among working Canadians (including by industry/occupation);
- understand what is being done in the workplace to address mental health and mental illness and how this compares with evidence-based guidelines, recommendations, and standards;
- estimate the potential impacts from greater uptake of effective workplace programs and benefits as they relate to mental illness—particularly depression.

The series comprises four briefings:

**Briefing 1: *The Footprint of Mental Health Conditions*.** This first briefing explored data on mental health conditions in the employed population. The prevalence of mental health disorders was found to be significant among employed Canadians, with workers in the services industries experiencing the highest occurrence of mental illness over their lifetime.

**Briefing 2: *Healthy Brains at Work: Employer-Sponsored Benefits and Programs*.** The second briefing explored findings from the Conference Board's survey of Canadian employers on the mental health supports currently offered in the workplace. It also highlighted leading workplace mental health strategies, programs, and benefits through employer case studies.

**Briefing 3: *Estimating the Impact of Workplace Mental Health Benefits and Programs*.** The third briefing of the series builds on the Conference Board's economic modelling expertise to estimate

<sup>1</sup> Refers to the DSM-IV classification of mental illnesses. These classifications are found in the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition.

the potential impact if the use of effective mental health benefits and workplace programs were optimized in Canada. Insights from the results for businesses, health, and policy stakeholders are included.

**Briefing 4: *Creating Conditions That Support Healthy Brains at Work.***

The final briefing will examine emerging workplace programs, practices, therapies, and treatments that are under development. The briefing will present results from a scenario exercise that considers the potential impact of innovative programs and treatments on workplaces.

To begin this third briefing, we present a short summary of the findings from the previous briefings in the series and a discussion of additional research estimating the economic impact of mental illness in the workplace. This is followed by a presentation of the results from a modelling exercise that estimates the economic impact if effective workplace mental health benefits and programs were optimized in Canada. The briefing concludes with some thoughts on the conditions needed to move Canada to this optimal state.

## **Mental Health in Canada and Employer Programs and Benefits**

As highlighted in Briefing 1, *The Footprint of Mental Health Conditions*, mental illness can affect anyone, regardless of age. Younger people are particularly vulnerable, with roughly 7.1 per cent of those between 15 and 24 years of age reporting they have lived with a depressive episode in the last year.<sup>2</sup> Among employed Canadians, rates are higher in the services sector than in other industries. Research has shown that a significant amount of the population with a major depressive disorder is of working age.<sup>3</sup>

2 Sutherland and Stonebridge, *The Footprint of Mental Health Conditions*, 15.

3 Rizvi and others, "Depression and Employment."

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Furthermore, in terms of disability benefits, mental illness is a significant cost to employers. It accounts for about 30 per cent of all short- and long-term disability claims, and estimations indicate that the value of these claims ranges from \$15 billion to \$33 billion annually.<sup>4</sup> (For more on mental health and insurance claims, see “The Insurance Costs of Mental Illness.”)

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## The Insurance Costs of Mental Illness

Mental disorders represent 14.2 per cent of all open claims and 21.1 per cent of all paid short-term disability claims. Similarly, they represent 28.1 per cent of open claims and 31 per cent of all paid long-term disability claims. For both short- and long-term disability, the majority of claims are for those employed in professional and management occupations and sales and service occupations.<sup>5</sup>

The majority of long-term disability claims are for those aged 40 to 54. According to Sun Life Financial, the average age of an extended duration claimant is three years younger for mental health claimants than for all other claimants.<sup>6</sup>

The average duration of a long-term mental disorder claim is 35 months. As expected, duration is much higher in occupations where mental disorders are more prevalent.<sup>7</sup>

For those who have had their long-term mental disability claim terminated, 50 per cent were because the claimant returned to work, while 25 per cent were the result of the claimant no longer satisfying the definition of disability. Still, 15 per cent of long-term mental disability claims were terminated because the claimants reached their maximum benefits.<sup>8</sup>

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4 Sroujian, “Mental Health Is the Number One Cause of Disability in Canada.”

5 Great-West Life, *Group Disability Results*.

6 Sun Life Financial, *Group Benefits Extended Duration*.

7 Great-West Life, *Group Disability Results*.

8 Ibid.

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As the awareness of mental health in the workplace has grown, so too has research into effective workplace practices and programs.

Many evidence-based policies, programs, benefits, and tools exist to help employers promote positive mental health, and to help employees who experience mental illness. What is considered an optimal approach for mental health and mental illness within the workplace setting? As highlighted in Briefing 2 of the Healthy Brains at Work series, *Employer-Sponsored Benefits and Programs*, there are a number of mechanisms that help foster an optimal approach to mental health and mental illness among the employed population. These include the following two mechanisms:

1. **Adopting a comprehensive mental health strategy** (a detailed and integrated plan of action) and/or a mental health policy. The latter can be either stand-alone or be integrated into an overall policy that addresses both the physical and mental health of employees. Consistent application of the policy is critical and can be achieved through management training and regular communication with employees.
2. **Providing employer-sponsored benefits** that can include prescription drug coverage, Employee Assistance/Employee and Family Assistance programs (EAP/EFAP), and paramedical services. Although the approach to clinical care is decided between an individual and his/her primary care provider, therapies offered as part of an employer-sponsored benefit plan should align with the evidence-based guidelines mental health professionals use to treat mental illnesses. The guidelines developed by The Canadian Network for Mood and Anxiety Treatments (CANMAT)<sup>9</sup> are an example. Employers should consider their ability to provide coverage that is timely and sufficient enough to enable an employee experiencing a mental health issue to receive appropriate treatment and get better.

As the awareness of mental health in the workplace has grown, so too has research into effective workplace practices and programs. This research, including systematic reviews and meta-analyses, provides crucial insights into the type of workplace interventions that can help prevent mental health issues and effectively support employees

9 Lam and others, "Clinical Guidelines for the Management of Adults."

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experiencing a mental illness.<sup>10</sup> Employers can also access tools such as the *National Standard of Canada for Psychological Health and Safety in the Workplace*,<sup>11</sup> which was created to promote psychological health at work and to prevent psychological harm due to workplace factors.

The extent to which individual employers have the capacity, ability, and interest in implementing some or all of these mechanisms varies, as evidenced by the findings of Briefing 2. This briefing provided a snapshot of what some Canadian employers—predominantly medium- and large -sized organizations—are doing to address mental health and mental illness in their workplaces. Among the findings:

- About 39 per cent of survey respondents had implemented a mental health strategy in their organization.
- Employers in the health, education, finance, insurance, real estate, public administration, and utilities industries were more likely to have implemented a mental health strategy.
- All of those who said they had implemented a mental health strategy reported they had used guidelines or tools during the process.
- Resources from external consultants and EAP/EFAP programs were reported to be particularly effective; internally developed and tailored tools (typically created with external providers) were found to be the most effective.
- Around 42 per cent of employers reported they had a policy to address mental health in the workplace. And 39 per cent had integrated their mental health policy into an overarching strategy that addresses physical and mental health.
- The majority of survey respondents report that they offer benefits (drug coverage, EAP, and paramedical services) to full time, permanent employees. However, coverage may be insufficient for some employees depending on the trajectory of their condition. Conference Board survey results found that only 6 per cent of employers provide benefits to non-permanent employees.

10 Dewa, Trojanowski, Joosen, and Bonato, “Employer Best Practice Guidelines.”

11 Mental Health Commission of Canada, *National Standard*.



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## What are the possible impacts if there was broad uptake of successful programs and practices in all Canadian workplaces?

Interestingly, just over half of Canadian employers responding to the survey believe their workplace programs and policies allow them to effectively promote and maintain the mental health of their employees. The majority of employers (72 per cent) believe their organization can effectively support an employee who is experiencing a mental health issue at work. Obviously, there is room for improvement (for example, only 56 per cent believed their programs proactively help employees maintain their mental health). However, these findings are encouraging and suggest that these employers are increasingly aware, informed, and motivated to take action on mental health in their workplace.

What are the possible impacts if there was broad uptake of successful programs and practices in all Canadian workplaces? The remainder of this current briefing considers this question by estimating the impact on the economy if the use of effective mental health benefits and workplace programs were optimized in Canada. To do this, The Conference Board of Canada will draw on its existing modelling expertise.

## Overview of the Modelling Approach

To inform the modelling approach in this briefing, the Conference Board makes use of the methodology published in *Mental Health Issues in the Labour Force: Reducing the Economic Impact on Canada*.<sup>12</sup> This report provides an estimate of the cost to the Canadian economy of mental illness among working-age Canadians. The report highlights the overarching case for action by employers and governments in mitigating lost participation in the labour force resulting from mental illness. The methodology outlines the extent to which people with mental illness are unable to work; able to work part time; able to work, but with reduced functioning; or fully able to function at work as a result of their symptoms.

12 The Conference Board of Canada, *Mental Health Issues in the Labour Force*.

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Patients with more severe symptoms of mental illness will encounter greater issues with workplace functionality.

Indeed, literature exists on the workplace impairment among people with depression,<sup>13</sup> and patients with more severe symptoms of mental illness will encounter greater issues with workplace functionality.<sup>14</sup>

To complete the analysis, the Conference Board accessed data from Statistic Canada's 2012 Canadian Community Health Survey (CCHS)—specifically, the Mental Health Profile. The profile includes data on mood disorders (with a specific breakdown for major depressive episodes and bipolar disorders) and generalized anxiety disorders.<sup>15</sup> The CCHS also publishes the approximate point in time when the episode occurred—either in the person's lifetime, or in the past 12 months. From the workplace perspective, it is helpful to focus on the population that has lived with a mental illness in the past year. Using these data, the Conference Board applied weights to the CCHS data for each of the following categories of debilitation:

- A 100-per cent weight was applied to the category of people considered “unable to work.” This suggests that, should the debilitating effects of illness be fully mitigated, these individuals would make their full contribution to the labour force.
- A 50-per cent weight was applied to the category of people considered “able to work part time.” This suggests that, because of their symptoms, the population in this category is only working at half its capacity. If the effects of the illness were fully mitigated, these individuals would be able to contribute an additional 50 per cent.
- A 25-per cent weight was applied to the category of people considered “able to work but with reduced functioning.” This weighting suggests that because of their symptoms, the population in this category is only working at three-quarters of its capacity. There is the potential for an additional 25 per cent contribution to the labour force if the effects of the illness were fully mitigated.

13 Woo and others, “Cognitive Deficits as a Mediator of Poor Occupational Function.”

14 Kim and others, “A Cross-Sectional Study of Functional Disabilities.”

15 Statistics Canada, CANSIM table 105-1101.

- A weight of zero was applied to the category of people considered “fully functioning at work.” In effect, there is no impact as this population is at work and contributing at full capacity.

This approach allows the Conference Board to estimate the impact of mental illness on the economy while taking into account the different levels of functioning that are evident among the population of Canadians living with poor mental health. These levels of functioning are independent of the treatment needed—some patients currently on medication can exhibit functional difficulties for an extended period.<sup>16,17</sup> For the purposes of this briefing, the weights for each level of functionality were revalidated, based on the expert opinion of the Healthy Brains Advisory Committee. Although the weights were not updated, the advisory committee pointed out that several limitations to the methodology exist. (See “Methodological Limitations.”)

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## Methodological Limitations

Despite our best efforts, it is difficult to take into account every nuance at play with mental disorders. Therefore, we outline possible shortcomings with our classification of mental illness.

For instance, our methodology does not factor co-occurrence (comorbidity). Each mental illness is not necessarily independent of the others. Any person living with a major depressive disorder, for example, may also possess symptoms of dysthymia (or persistent depressive disorder). Some sources even say that the co-occurrence of depression and anxiety is around 50 per cent.<sup>18,19</sup> Therefore, it is difficult to separate the effects of each condition. Multiple diagnoses were more likely to result in patients unable to work or not returning to full time work.

16 Nil, Lutolf, and Seifritz, “Residual Symptoms and Functionality.”

17 IsHak, and others, “Patient-Reported Functioning in Major Depressive Disorder.”

18 Hirschfeld, “The Comorbidity of Major Depression and Anxiety Disorders.”

19 Cameron, “Understanding Comorbid Depression and Anxiety.”

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Optimal treatment is defined as any pharmaceutical or therapeutic treatment, or a combination of both, that enables someone with depression/anxiety to work full time and be fully functional while at work.

For the purposes of our study, full time work with reduced functioning includes those who are working full time hours, but with accommodation or in a different role/job description. This is presumed to include those who have just recently returned to work from a disability leave. It also includes those affected by presenteeism. By the same token, fully functional equates with returning to the same or similar pre-illness position and hours.

Our methodology supposes that there is no comorbidity with physical illness. Depression is common for those with a chronic physical illness.<sup>20,21,22</sup> As well, reduced functioning due to physical illness could also be related to a mental illness, contributing to depression's growing economic impact.<sup>23</sup>

Our methodology also presumes that there is no comorbidity with substance use, which is common in individuals with co-occurring mental disorders.

Research shows that mental illness is the most important risk factor for suicide; more than 90 per cent of people who commit suicide have a mental or addictive disorder.<sup>24</sup> Despite this, the direct economic costs of premature mortality due to suicide are not measured.

The data included in this briefing suggest that mental illnesses are more common in women. Although they are treated more often, it is not clear if they suffer more than men. Indeed, the rate of suicide is much higher in men.

Finally, our methodology does not consider the age of the patient living with a mental illness. With prevalence on the rise among young people, many are living with symptoms even before they enter the workforce. In fact, bipolar, social anxiety, and panic disorder are more common in youth and can even prevent people from working in the first place.<sup>25</sup>

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20 Ruttle and Reid, "Depression in Physical Illness."

21 Olver and Hopwood, "Depression and Physical Illness."

22 Smyth, "Depression and Physical Illness."

23 Rubin, "Mental Disorders Linked With Chronic Disease."

24 Navaneelan, *Suicide Rates: An Overview*.

25 Wilkerson, *Mental Health in the Workplace*; Bill Wilkerson, interview, January 6, 2016.

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While we look at the benefits of optimizing mental illness programs, we acknowledge that current workplace programs had some positive effect.

The next step calculates the economic activity that could be gained if the negative impacts of poor mental health on working Canadians were fully mitigated. The Conference Board's standard estimate of long-term economic performance contains analysis and assumptions regarding demographic realities and health trends—including the effects of poor mental health. The analysis intends to take this existing base-case scenario and compare it with a simulated scenario that increases both employment and workplace functionality. The increase would be the result of the successful implementation of effective workplace benefits and programs dealing with mental illness. The difference between the base-case scenario and the simulation becomes an estimate of the benefit of addressing mental illness in the workplace. A forecast is then provided detailing the long-term effects of optimizing mental illness benefits and programs on the Canadian economy.

While we look at the benefits of optimizing mental illness programs in the workplace, we acknowledge that current workplace programs had at least some positive effect on addressing mental illness. And without these current programs, things could be worse. As a result, the difference between the existing scenario and a scenario without any programs becomes an estimate of how far we have come in addressing mental illness in the workplace.

To estimate the economic impact of mental illness in the workplace, The Conference Board of Canada combines its own economic data with data from the Mental Health Profile published by Statistic Canada's Canadian Community Health Survey. (For an explanation of mental disorders in the CCHS, see "The Classification of Mental Disorders.") For each scenario, the weights associated with workplace functionality are adjusted to reflect the improvement/reduction in functionality of workers who are living with a mental disorder.

Although it is estimated that employment will increase in the scenario exercise, keep in mind that this is not to be seen as a "job creation program." It is merely an estimate of the number of Canadians who could potentially enter the workforce if their symptoms are treated optimally.

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## The Classification of Mental Disorders

The new edition of *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5<sup>26</sup>) defines and classifies mental disorders in order to improve diagnoses, treatment, and research. Used by clinicians and researchers to diagnose and classify mental disorders, the handbook is intended to facilitate an objective assessment of symptom presentations in a variety of clinical settings—inpatient, outpatient, partial hospital, consultation-liaison, clinical, private practice, and primary care.

However, the Mental Health Survey portion of the CCHS is partially based on a modified World Health Organization Composite International Diagnostic Interview (WHO-CIDI). The WHO-CIDI is a standardized instrument for the assessment of mental disorders and conditions according to an operationalization of the definitions and criteria of the DSM-IV, which pre-dates the DSM-5 version, updated in 2013. Therefore, throughout this briefing, the Conference Board refers to the DSM-IV classification of mental illnesses. Regardless of the version, the *Diagnostic and Statistical Manual of Mental Disorders* is used by the American Psychiatric Association, and is an internationally recognized classification of mental disorders. Mental conditions or problems are derived from a set of questions pertaining to the feelings, symptoms, severity, intensity, and impact—relative to each of the measured disorders.

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## Estimates of the Burden of Mental Illness

Evidence consistently indicates that depression adversely affects work productivity. However, estimates of the impact of lost work time and its effect on the overall economy are scarce. Indeed, in a review of peer-reviewed publications from 2001 to 2011 (along with grey literature), there was generally a greater emphasis on effectiveness interventions than on economic evaluations.<sup>27</sup> It has been established that mental illness can contribute to absenteeism and presenteeism. One study estimated that

26 American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*.

27 Roberts and Grimes, *Return on Investment*.

For patients with a major depressive disorder, an improvement in work functioning can be as important as remission.

presenteeism from major depression can affect work productivity by as much as one-quarter of a worker's time, leading to about 487 hours of presenteeism in a given year (or 60 days).<sup>28</sup> In like manner, the number of hours lost to absenteeism totaled 205 per year (or 25 days).<sup>29</sup> This lost productivity comes from difficulty in completing work and in avoiding distractions.<sup>30</sup>

For this briefing, the term “reduced functioning” is equivalent to presenteeism, and generally refers to anything that affects an employee's ability to perform regular work duties. Indeed, cognitive difficulties are a principal reason for reduced work performance as a result of depression.<sup>31</sup> But for patients with a major depressive disorder, an improvement in work functioning can be as important as remission.<sup>32</sup> This functional impairment may also lead to additional symptoms of insomnia, fatigue, bodily pain, and further cognition difficulties.<sup>33</sup>

There are studies that attempt to estimate the economic impact of mental illness. In 2000, the economic burden of depression in the United States—including major depressive disorder, bipolar disorder, and dysthymia—was estimated at US\$83.1 billion.<sup>34</sup> The bulk of the burden (62 per cent) came from direct economic costs (most notably absenteeism and presenteeism). Subsequent studies have tried to quantify specific components of the cost of depression. For instance, national expenditures for the outpatient treatment of depression was US\$12.5 billion in 2007, made up entirely of direct health care costs relating to pharmacological and psychological treatment.<sup>35</sup> Another study looking only at direct economic costs (i.e., lost productivity due to absenteeism/presenteeism) suggests that U.S. workers with depression

28 Executive Agency for Health and Consumers, *Matrix Report*.

29 Ibid.

30 Ibid.

31 McIntyre and others, “Cognitive Deficits and Functional Outcomes.”

32 Lam, and others, “The Effects of Desvenlafaxine on Neurocognitive.”

33 Greer, Kurian, and Trivedi, “Defining and Measuring Functional Recovery.”

34 Greenberg and others, “The Economic Burden of Depression in the United States.”

35 Marcus and Olfson, “National Trends in the Treatment for Depression.”

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cost employers an estimated US\$44 billion dollars per year in lost productive time.<sup>36</sup> Indeed, a recent Gallup poll in the U.S. estimated that depressed workers cost the American economy about US\$23 billion more in lost productivity than non-depressed workers did.<sup>37</sup> Broken down on a monthly basis, depression-related worker productivity losses had human capital costs of nearly US\$2 billion.<sup>38</sup>

While the studies mentioned focus on mental illness in the United States, there has also been some substantial research on the effects of mental illness in Europe. Moreover, these studies have focused on more than just depression. In one landmark study, it was estimated that the annual cost of 12 major groups of disorders of the brain in Europe was an admittedly conservative €386 billion for the year 2004. An update of that study, which included an expansion to the methodology, estimated that the total cost of disorders of the brain was €798 billion in 2010. Mood and anxiety disorders accounted for €113.4 billion and €74.4 billion, respectively.<sup>39</sup> About 40 per cent of the total was direct economic costs associated with patients' reduced productivity. Additional estimates from Europe indicate that the total costs of work-related depression in the EU27 are nearly €620 billion per annum, with more than 80 per cent (€510 billion) attributable to absenteeism, and presenteeism, and lost output.<sup>40</sup> Taking things one step further, it was estimated that, in the United Kingdom, the costs of depression and anxiety were £7.5 billion and £8.9 billion in 2007. The costs are expected to rise to £12.2 billion and £14.2 billion (respectively) by 2026 if treatment and support arrangements remain unchanged.<sup>41</sup>

36 Stewart and others, "Cost of Lost Productive Work Time."

37 Witters, Liu, and Agrawale, *Depression Costs U.S. Workplaces \$23 Billion*.

38 Birnbaum, and others, "Employer Burden of Mild, Moderate, and Severe Depressive Disorder."

39 Gustavsson and others, "Cost of Disorders of the Brain in Europe 2010."

40 Executive Agency for Health and Consumers, *Matrix Report*.

41 Knapp, McDaid, and Parsonage, *Mental Health Promotion and Mental Illness Prevention*.



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It has been estimated that the burden of mental illness cost the Canadian economy about \$51 billion in 2003.

Worth mentioning is a U.S. study estimating that the economic burden of adults with major depressive disorder was US\$210.5 billion more than adults without the illness.<sup>42</sup> This figure takes into account the added burden from physical and psychiatric comorbidities, which is not included in most studies attempting to quantify the economic burden. Also noteworthy is a recently published study measuring treatment costs and health outcomes in 36 countries between 2016 and 2030. A simulation estimated the economic returns (or productivity gains) of a modest improvement of 5 per cent in both the ability to work and productivity at work as a result of treatment. In the 10 high-income countries, the results revealed that the economic returns are US\$157 billion for depression and US\$130 billion for anxiety over that time horizon.<sup>43</sup>

Closer to home, it has been estimated that the burden of mental illness cost the Canadian economy about \$51 billion in 2003.<sup>44</sup> This includes health care costs, lost productivity, and reductions in health-related quality of life. As well, in the *Mental Health Issues in the Labour Force* report, the Conference Board estimated that mental illness costs Canada \$20.7 billion annually due to lost labour force participation represented by absenteeism and presenteeism.<sup>45</sup>

Put into perspective, each estimate of the impact of mental illness ranges from 0.4 per cent and 5 per cent of GDP.<sup>46</sup> (See Table 1.) The varying results stem from the unique methodology of each study. For instance, some studies include all types of mental illness, while others focus on depression only. As well, some studies provide estimates of both the direct health care and direct economic costs of mental illness, while others concentrate on lost productivity.

42 Greenberg and others, "The Economic Burden of Depression in the United States."

43 Chisholm, and others, "Scaling-Up Treatment of Depression and Anxiety."

44 Dewa and others, "A New Population-Based Measure."

45 The Conference Board of Canada, *Mental Health Issues in the Labour Force*.

46 Calculated by The Conference Board of Canada.

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Table 1

**The Burden of Mental Illness**

(per cent)

Authors	Impact of mental illness as a share of GDP	Methodology
Executive Agency for Health and Consumers, <i>Matrix</i> .	4.9	Measures absenteeism, presenteeism, and lost output; role of workplace programs.
Gustavsson, “Cost of Disorders of the Brain.”	0.9	Direct and indirect costs of 19 major disorders (excludes indirect costs due to mortality).
Greenberg and others, “The Economic Burden of Adults.”	1.4	Direct, suicide, and workplace costs of major depressive disorder.
Knapp, McDaid, and Parsonage, <i>Mental Health Promotion</i> .	0.5	Benefits of mental health—15 interventions.
Stewart, and others, “Cost of Lost Productive Work Time.”	0.4	Measured lost productive time among those with depression vs. those without depression.
OECD, <i>Fit Mind, Fit Job</i> .	4.0	Direct, indirect, and intangible costs for all mental illnesses.
Chisholm, and others, “Scaling-Up Treatment of Depression and Anxiety.”	n.a.	Measured investment needed to scale-up effective treatment.
The Conference Board of Canada, <i>Mental Health Issues in the Labour Force</i> .	1.2	Lost labour force participation represented by absenteeism and presenteeism of six mental disorders.
Dewa, and others, “A New Population-Based Measure.”	3.6	Health care costs, lost productivity, and reductions in health-related quality of life.

Source: The Conference Board of Canada.

Despite the varying methodologies of these studies, the research indicates that the economic cost of mental illness is substantial, and that the bulk of the measured cost in the workplace is a result of lost productivity. With additional focus on the causes of mental illness and the role of comorbid symptoms, these estimates are most likely conservative. Indeed, the Great Depression Matrix outlines the links between mental illness and other chronic physical disorders.<sup>47</sup> The general idea of the matrix is that the extra costs of these physical problems become worse in people living with the symptoms of a mental

47 Wilkerson, *Mental Health in the Workplace*.

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Any number of factors can affect mental health.

illness—especially those not operating at full functionality.<sup>48</sup> If these chronic physical disorders are taken into account, then the burden of mental illness would be higher.

## Realizing the Economic Benefits

According to the World Health Organization, mental health is defined as a “state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.” Any number of factors can affect mental health, including increased levels of stress, low self-esteem, and even loss of a family member. Mental illnesses are characterized by alterations in thinking, mood, or behaviour associated with significant distress and impaired functioning. Examples of mental illness are depressive disorder, bipolar disorder, schizophrenia, and substance dependency, among others.

Mental illness can have a significant impact on workplace performance. Mental illness can contribute to absenteeism and presenteeism. In 2011, The Conference Board of Canada released *Building Mentally Healthy Workplaces*, based on a survey of more than 1,000 employees nationwide. Of the survey respondents, 12 per cent said they were currently experiencing a mental health issue, while 32 per cent reported that they had experienced one in the past. Taken together, almost half the employees surveyed reported experiencing a mental health issue at some point in their life.<sup>49</sup> Indeed, the first briefing of the Healthy Brains series noted that mental health disorder prevalence rates among working Canadians are significant.

The purpose of this section is to present the results of an economic modelling exercise that explores the potential impact of improving outcomes for working Canadians living with a mental illness. To do this, the Conference Board replicates the method used in *Mental Health Issues*

48 The Depression Matrix does not provide an estimate of the cost of these other physical problems. It only draws a link between physical illness and mental illness.

49 The Conference Board of Canada, *Building Mentally Healthy Workplaces*.

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*in the Labour Force: Reducing the Economic Impact on Canada*, with focus placed on the two most common forms of mental illness in the workplace: depression and anxiety. (See “Mental Disorders of Interest.”) The modelling exercise measures the extent to which people with depression and anxiety are unable to work; able to work part time; able to work, but with reduced functioning; and are fully able to function at work.

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## Mental Disorders of Interest

The Canadian Community Health Survey does not specify the number of Canadians living with a mental illness. Although it outlines specific types of mental illness, a limitation is that each specific case is not mutually exclusive—i.e., some Canadians may have symptoms that are consistent with more than one mental illness. Furthermore, cases of bipolar disorder, major depressive episode, and generalized social anxiety are self-reported, rather than diagnosed.

Both the Centre for Addiction and Mental Health and the Canadian Mental Health Association suggest that 20 per cent of all Canadians will personally experience a mental illness in their lifetime. This 1-in-5 figure is generally considered to be the benchmark prevalence of mental illness in Canada. However, it remains difficult to place a precise measure on the prevalence of mental illness. And with more symptoms of mental illness being identified, it will only get more challenging in the future. The Canadian Community Health Survey does not make available the data on all mental illnesses, especially in the workplace. As a result, the focus in this briefing will be placed on the two most common categories prevalent in the workplace: depression and anxiety.

Sources: Statistics Canada; Canadian Mental Health Association; Centre for Addiction and Mental Health; Sun Life.

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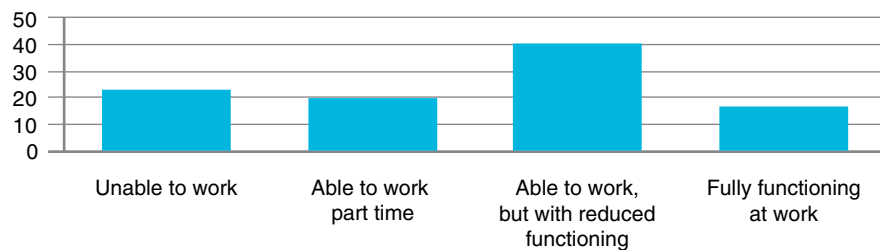
It is estimated that only 17 per cent of those with depression and/or anxiety are working full time and are fully functioning at work. Meanwhile, 40 per cent are working full time, but at a reduced level of functioning; while 20 per cent work part time because their illness prevents them from working full time. The remaining 23 per cent are unable to work. (See Chart 1.)

The Conference Board of Canada

**Chart 1**

**Clinicians' Opinions on Capacity to Work, 2010**

(per cent)



Source: The Conference Board of Canada.

Using these results, our base-case scenario suggests that just over one million employed Canadians worked during a depressive episode in the past year, while another 310,000 are unable to work due to their depressive symptoms. Similarly, there are about 550,000 employed Canadians that worked with an anxiety episode in the past year, with just under 170,000 unable to work due to their anxiety symptoms. (See Table 2.)

By 2035, the base-case scenario suggests that more than 1.3 million employed Canadians will work while depressed, with another 406,000 unable to work due to their symptoms. Likewise, roughly 740,000 employed Canadians will be working with an anxiety disorder, and an expected 225,000 will be unable to work because of their symptoms. These estimates were calculated presuming that the 12-month prevalence of depression and anxiety and the degree of workplace functionality remain constant over time, and the increase in mental illness largely reflects population and employment growth. (See Table 2.)

## HEALTHY BRAINS AT WORK

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Table 2

**Mental Illness and Workplace Performance, Base-Case Scenario, 2012 and 2035**

(number of employees with a mental illness, past 12 months; 000s)

	Depression		Anxiety	
	2012	2035 <sup>f</sup>	2012	2035 <sup>f</sup>
Unable to work	310.0	406.4	168.1	224.8
Work part time	266.1	348.8	144.3	193.0
Work full time, but with reduced functioning	532.2	697.7	288.7	385.9
Work full time, fully functioning	222.2	291.3	120.5	161.1
Total employed population with a mental illness	1,020.5	1,337.8	553.5	740.0
Total population with a mental illness	1,330.5	1,744.1	721.7	964.8

f = forecast

Sources: Statistics Canada; The Conference Board of Canada.

To get a sense of the effects of mental illness in the workplace, average productivity estimates are created to measure each employee's contribution to gross domestic product (the value of goods and services produced by Canadians). For the Canadian economy as a whole, average productivity is about \$66,100.<sup>50</sup> In our model, it is presumed that the productivity of fully functional employees with depression/anxiety is a little higher at \$67,200—the same level of productivity as those not living with a mental illness. Meanwhile, the productivity of those at reduced functionality (75 per cent) is \$50,400, and those that are working part time because of their symptoms (50 per cent) is \$33,600.

Keeping this in mind, the base-case (or status quo) scenario is generated to take a conventional look at mental illness in the Canadian workplace. This scenario utilizes Canada's existing population and employment profile. The scenario also uses the level of workplace functionality to determine the number of employed Canadians living with depression and anxiety by age, sex, and industry. This scenario also creates a forecast, from 2013 to 2035, of employed Canadians living with depression and anxiety. This forecast is based on the Conference Board's most

50 Calculated using Conference Board data and labour's share of income detailed in Macdonald, *An Examination of Public Capital's Role in Production*.

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If better programs existed, then work functioning would be significantly better.

up-to-date economic and demographic projections. Basically, it is what can be expected by maintaining our current path, supposing the current levels of functionality are the result of current mental health treatments available in the workplace.

If no mental health programs were available in the workplace, then work functioning would be significantly worse. Conversely, if better programs existed, then work functioning would be significantly better. To measure this, two alternative scenarios are presented. The first scenario (Scenario A) measures the impact of improving outcomes for working Canadians diagnosed with depression or anxiety, receiving the optimal treatment to ensure that they will be fully functioning at work. To do this, the levels of functionality are adjusted and applied to the current population and employment profile to estimate the economic impact of optimizing treatment for mental illness.

The second scenario (Scenario B) measures the impact of employees receiving no workplace treatment at all. To do this, the levels of functionality are adjusted to reflect how far we have come in dealing with mental illness in the workplace. (See “The Perceived Need for Mental Health Care,” which appears later in this briefing.) The adjusted results are then applied to the current population and employment profile to estimate the economic impact of current workplace programs dealing with mental illness. The sections that follow present results for depression and anxiety separately. This is because some patients exhibit the symptoms of both conditions simultaneously.

Admittedly, caution must be taken with Scenario A. It might be too optimistic to presume that optimum treatment will make everyone fully functional at work. Similarly, it might be even more optimistic to presume that those unable to work due to their symptoms will be able to return to work, and operate at full functionality. Realistically, that is highly unlikely to occur within the forecasted time period in this briefing. However, it is expected that outcomes will improve over time. Even so, Scenario A supposes that treatments exist to make this possible.

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##### Estimating the Impact of Workplace Mental Health Benefits and Programs

Considering this, the sections that follow present a simulation exercise based on improved workplace functionality. The economic gains associated with improved functionality are twofold. The first is a result of improved productivity for those who are working at reduced functionality because of their symptoms. In this case, boosting the productivity of these workers will have an impact on GDP, but no impact on the size of the workforce. The second gain is entering the workforce for those who were unable to work because of their symptoms. In this case, boosting the productivity of these workers will have an impact on both GDP and employment.

We are not postulating that addressing depression/anxiety in the workplace will lead to significant job growth. We are, however, expecting that a segment of the population that was unemployed is now able to work. In order to quantify the benefits of that segment returning to work, we are presuming they will be fully absorbed into the job market.

## Depression

According to the Canadian Community Health Survey, about 1.3 million Canadians lived with a depressive episode in the past year. Our methodology suggests that around 1 million of this total are employed, sometimes experiencing depressive symptoms while at work. Indeed, only 222,000 of the 1 million employed are working full time and are functioning at full capacity while at work. The others are either functioning below full capacity, or are unable to work full time because of their symptoms. On top of that, roughly 310,000 are unable to work at all because of their symptoms.

If all Canadians living with depression received the optimal treatment to be fully functional at work (which includes treatment to remission without residual symptoms), Scenario A implies that more than 1.2 million Canadians living with depression would be working full time and be fully functioning at their jobs. (See Chart 2.) This includes those who used to work at reduced functioning or work part time. It would also mean that a portion of the 310,000 who were unable to work would now enter



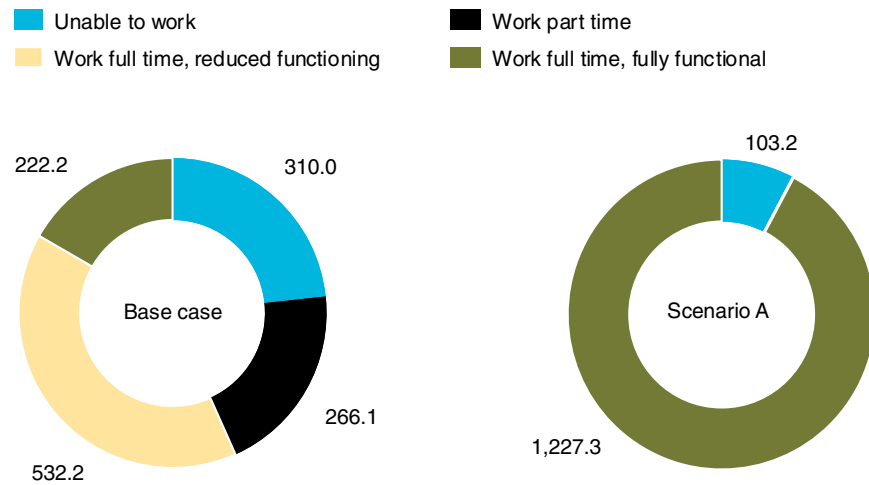
The Conference Board of Canada

the workforce. At the 2012 participation rate of 66.5 per cent, more than 207,000 Canadians who were unable to work could potentially enter the workforce.

Chart 2

**Depression: Base Case and Scenario A, 2012**

(population between 15 and 65 years of age; 000s; past 12 months)



Sources: Statistics Canada; The Conference Board of Canada.

As a result, each employed Canadian living with depression will now be fully functional while at work. This has a significant impact on the Canadian economy. For instance, average productivity for the Canadian worker would have risen from \$66,100 to \$67,200. (See Table 3.) With this higher level of productivity, Canada's GDP would have been \$32.3 billion higher—a gain of 1.8 per cent. Extending the analysis over the forecast period reveals that GDP in Scenario A would be more than \$50 billion higher in 2035 than in the base-case scenario.

A closer look at the results reveals that roughly 57 per cent of this gain is attributed to currently employed Canadians now being fully functional at work. The remaining 43 per cent is attributed to those, who previously were unable to work because of their symptoms, now

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entering the workforce and being fully functional. With the potential of 206,000 Canadians with depression entering the workforce, employment may increase by 1.2 per cent. This is generally in line with the GDP gains, but deviates slightly because of the GDP gains stemming from the improved functionality of those already in the workforce.

Table 3

**Economic Impact of Depression, 2012 and 2035**

(employed population)

	Depression			
	Base case		Scenario A	
	2012	2035 <sup>f</sup>	2012	2035 <sup>f</sup>
GDP (\$ billions)	1,672	2,649	1,704	2,700
Employment (millions)	17.4	20.8	17.7	21.0
Productivity (\$ 000s)	66.1	87.9	67.2	89.3

f = forecast

Sources: Statistics Canada; The Conference Board of Canada.

The breakdown by sex of Scenario A is outlined in Table 4. Women stand to benefit more from receiving appropriate treatment, as the number of employed women who report experiencing a depressive episode in the past year is more than 60 per cent higher than males. Indeed, the number of women who have symptoms of depression but are fully functional at work increases to nearly 720,000, while the number of women unable to work because of their symptoms falls from 182,000 to 60,500 in this scenario. Similarly, optimal treatment of depression symptoms in men implies that only 36,600 would be unable to work (down from 110,000 in the base-case scenario), while more than 435,000 would be fully functioning at work.

**Table 4**

**Depression, Breakdown by Sex, 2012**

(population between 15 and 65 years of age; 000s; past 12 months)

		<b>Depression</b>	
		<b>Base case</b>	<b>Scenario A</b>
Unable to work	Male	110.0	36.6
	Female	181.8	60.5
Work part time	Male	94.4	–
	Female	156.0	–
Work full time, but with reduced functioning	Male	188.8	–
	Female	312.1	–
Work full time, fully functioning	Male	78.8	435.3
	Female	130.3	719.7
Total employed population with depression	Male	362.0	435.3
	Female	598.4	719.7
Total population with depression	Male	471.9	471.9
	Female	780.2	780.2

Sources: Statistics Canada; The Conference Board of Canada.

The age breakdown of Scenario A is even more striking. In the base-case scenario, slightly more than 1 million employed Canadians, aged 15 to 64, are either unable to work or work below full capacity as a result of their symptoms of depression. (See Table 5.) If workers receive the optimal treatment to be fully functional at work, another 195,000 employed Canadians would now be part of the workforce. This includes 49,100 in the 15–24 age group, 78,200 in the 25–44 age group, and 67,300 in the 45–64 age group. Since workers in the 65 and over age group make up only 3 per cent of the workforce, they were not included in the base-case scenario.

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Table 5

**Depression, Breakdown by Age, 2012**

(employed population; 000s; 15–64 years of age)

		Depression	
		Base Case	Scenario A
Unable to work	15–24	73.6	24.5
	25–44	117.2	39.0
	45–64	100.9	33.6
Work part time	15–24	63.2	–
	25–44	100.6	–
	45–64	86.6	–
Work full time, but with reduced functioning	15–24	126.4	–
	25–44	201.2	–
	45–64	173.3	–
Work full time, fully– functioning	15–24	52.8	291.4
	25–44	84.0	464.0
	45–64	72.3	399.6
Total employed population with depression	15–24	242.3	291.4
	25–44	385.8	464.0
	45–64	332.3	399.6
Total population with depression	15–24	315.9	315.9
	25–44	503.0	503.0
	45–64	433.2	433.2

Sources: Statistics Canada; The Conference Board of Canada.

**Anxiety**

According to the Canadian Community Health Survey, nearly 722,000 Canadians lived with generalized anxiety disorder in the past year. Approximately 170,000 were unable to work because of their symptoms, while 433,000 were working either part time or full time

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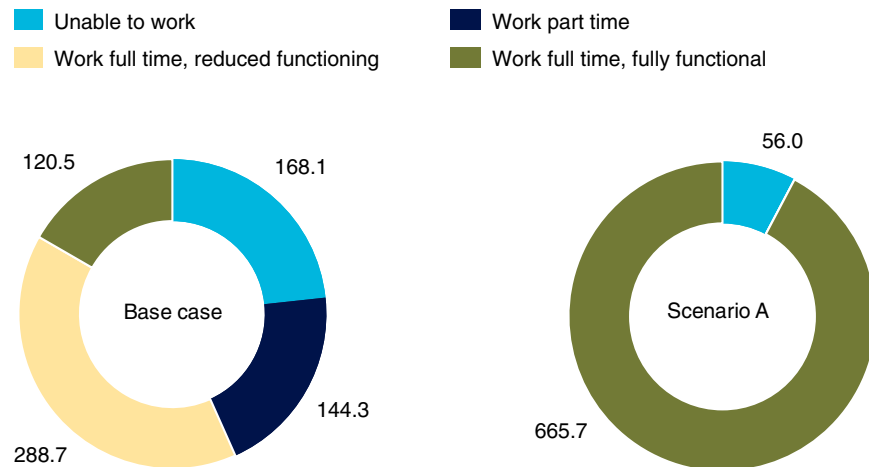
at reduced capacity due to their anxiety symptoms. Only 121,000 of the 722,000 employed Canadians with anxiety were functioning at full capacity while at work. (See Table 1.)

Scenario A estimated that, in 2012, if all employees living with anxiety received the optimal treatment it would mean that an additional 545,000 Canadians would be fully functioning at their jobs. (See Chart 3.)

### Chart 3

#### Anxiety: Base Case and Scenario A, 2012

(population between 15 and 65 years of age; 000s; past 12 months)



Sources: Statistics Canada; The Conference Board of Canada.

In addition, it also means that a significant number of Canadians with anxiety, who were previously unable to work, will be able to enter the workforce. This will have a significant impact on the Canadian economy, as average productivity for the Canadian worker would rise to \$66,700. At this higher level of productivity, Canada's GDP would be \$17.3 billion higher, a gain of 1 per cent. Extending the analysis over the forecast period reveals that GDP would be more than \$27 billion higher in 2035 than in the base-case scenario. (See Table 6.)

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## Estimating the Impact of Workplace Mental Health Benefits and Programs

Similar to depression, roughly 57 per cent of this gain is attributed to currently employed Canadians now being fully functional at work. The remaining 43 per cent is attributed to those, who previously were unable to work because of their symptoms, now entering the workforce and being fully functional. With the potential of 112,000 Canadians with anxiety entering the workforce, employment might increase by 0.6 per cent.

Table 6

**Economic Impact of Anxiety, 2012 and 2035**

(employed population)

	Anxiety			
	Base case		Scenario A—All employees receive proper treatment	
	2012	2035 <sup>f</sup>	2012	2035 <sup>f</sup>
GDP (\$ billions)	1,672	2,649	1,689	2,676
Employment (millions)	17.4	20.8	17.6	20.9
Productivity (\$ 000s)	66.1	87.9	66.7	88.6

f = forecast

Sources: Statistics Canada; The Conference Board of Canada.

The sex breakdown of this scenario is outlined in Table 7. Similar to depression, women would benefit most from programs that successfully deal with symptoms of anxiety. In fact, the number of women unable to work because of their symptoms would fall to 32,300 from 97,000 in this scenario. Further, the number of employed women with anxiety who are now fully functioning at work would increase to nearly 385,000. Similarly, optimal treatment for men living with anxiety means that almost 228,500 would be fully functioning at work, including an additional 38,500 who were unable to work prior to treatment.

**Table 7**

**Anxiety, Breakdown by Sex, 2012**

(population between 15 and 65 years of age; 000s; past 12 months)

		<b>Anxiety</b>	
		<b>Base case</b>	<b>Scenario A</b>
Unable to work	Male	57.7	19.2
	Female	97.1	32.3
Work part time	Male	49.5	–
	Female	83.3	–
Work full time, but with reduced functioning	Male	99.1	–
	Female	166.6	–
Work full time, fully functioning	Male	41.4	228.4
	Female	69.6	384.2
Total employed population with anxiety	Male	190.0	228.4
	Female	319.5	384.2
Total population with anxiety	Male	247.7	247.7
	Female	416.6	416.6

Sources: Statistics Canada; The Conference Board of Canada.

The age breakdown of Scenario A is presented in Table 8. After receiving optimal treatment, just under 613,000 workers living with anxiety will be fully functioning at work. Of these, about 99,300 are in the 15 to 24 age group; 247,000 workers are in the 25 to 44 age group; and roughly 266,000 workers are in the 45 to 64 age group. Once again, the 65 and over age group was not included.

## HEALTHY BRAINS AT WORK

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Table 8

**Anxiety, Breakdown by Age, 2012**

(employed population; 000s; 15–64 years of age)

		<b>Anxiety</b>	
		<b>Base case</b>	<b>Scenario A</b>
Unable to work	15–24	25.1	8.4
	25–44	62.5	20.8
	45–64	67.2	22.4
Work part time	15–24	21.5	–
	25–44	53.6	–
	45–64	57.7	–
Work full time, but with reduced functioning	15–24	43.1	–
	25–44	107.3	–
	45–64	115.4	–
Work full time, fully functioning	15–24	18.0	99.3
	25–44	44.8	247.4
	45–64	48.2	266.0
Total employed population with anxiety	15–24	82.6	99.3
	25–44	205.7	247.4
	45–64	221.2	266.0
Total population with anxiety	15–24	107.7	107.7
	25–44	268.2	268.2
	45–64	288.4	288.4

Sources: Statistics Canada; The Conference Board of Canada.

**Conclusion**

In total, it is estimated that optimal treatment of depression among employed Canadians could boost Canada's economy by up to \$32.3 billion. Likewise, it is estimated that optimal treatment of anxiety among employed Canadians could boost Canada's economy by up to \$17.3 billion. Realistically, the total benefit to Canada's economy will depend on how successful treatment is for employees living with

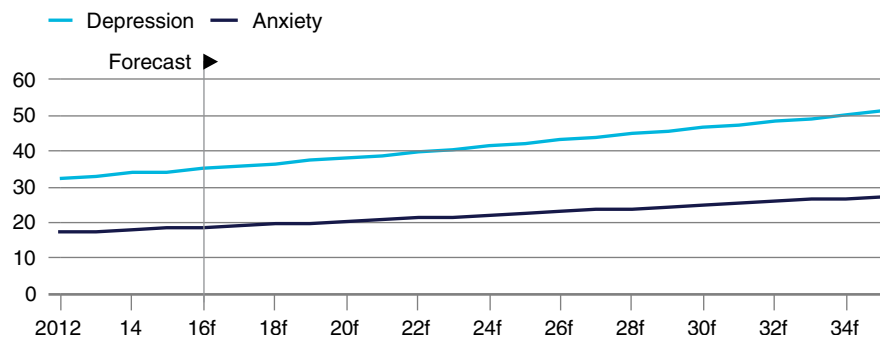


symptoms of mental illness, and the degree to which employees can be fully functioning at work. As well, it will depend on whether treatment can bring those unable to work back into the workforce. Ultimately, Canada's economy would see maximum benefit if all those living with a mental disorder can be fully functional at work. And the forecast shows that these benefits would last well into the future. (See Chart 4.) Indeed, if all employees living with depression and/or anxiety had access to treatments allowing them to be fully functional at work, the economy would see somewhere between 228,000 and 352,000 Canadians with depression/anxiety enter the workforce as fully functional employees each year until 2035.

**Chart 4**

**Depression and Anxiety, Economic Impact of Scenario A**

(gain in GDP, 2007 \$ millions)



f = forecast

Sources: Statistics Canada; The Conference Board of Canada.

How does this compare with the measures outlined earlier in this briefing? Our analysis shows that the direct economic costs are 1.8 per cent of GDP for depression and 1 per cent for anxiety. This is consistent with the results outlined in the Estimates of the Burden of Mental Illness section of this briefing, where published literature suggests that the impact of mental illness ranges between 0.4 and 5 per cent of GDP, depending on the methodology. The literature suggests that the direct

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Without current programs, many more Canadians living with a mental illness would have reduced functionality while at work, or simply be unable to work.

economic costs of mental illness are normally greater than 50 per cent of the total costs,<sup>51</sup> placing our result near the midpoint of the range outlined above.

## How Far Have We Come?

We understand that current workplace programs have at least some positive effect on addressing mental illness in the workplace. And without current programs, things might be worse. As a result, the following section calculates how far we have come in addressing mental illness in the workplace. To do this, the weights associated with each level of functionality are adjusted to reflect the fact that current programs are having an effect. Without these programs, many more Canadians living with a mental illness would have reduced functionality while at work, or simply be unable to work.

By using the Canadian Community Health Survey, it was estimated that current mental illness programs have helped approximately one-third of the population living with a mental illness. (See “The Perceived Need for Mental Health Care.”)

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## The Perceived Need for Mental Health Care

The CCHS focuses on Canadians’ own perceived need for mental health care. Indeed, according to CCHS’s survey, about 4.9 million Canadians felt they required mental health care in 2012. Nearly two-thirds (approximately 3.3 million) of those respondents believed that the mental health care they received fully met their needs. That leaves the other third, roughly 1.6 million Canadians, as having their needs only partially met or not met at all.

51 Greenberg and others, “The Economic Burden of Adults”; OECD, Fit Mind, Fit Job; Gustavsson and others, “Cost of Disorders of the Brain in Europe 2010.”

However, existing literature indicates that roughly 75 per cent of those with a mental illness do not seek care.<sup>52</sup> Therefore, the number of Canadians who may require mental health care could be higher than the 4.9 million listed above. Somewhere between 2.5 million and 3.5 million Canadians are living with a mood disorder and/or anxiety. Consequently, the number of Canadians needing mental health care could be much higher. For instance, with the co-occurrence of depression and anxiety at about 50 per cent,<sup>53</sup> the number of Canadians needing mental health care may be as high as 8.5 million. Since 3.3 million thought that the mental health care they received fully met their needs, it would mean that only about one-third of those that require mental health care are getting their needs fully met.

Source: Statistics Canada.

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Although progress has been made, there is still a long way to go to ensure that all Canadians living with a mental disorder receive optimal treatment. Similarly for employed Canadians, there is still far to go to ensure they could be fully functional while at work. Adjusting the weights associated with each level of functionality to reflect the fact that current workplace programs have helped about one-third of the population living with a mental disorder would mean that 15 per cent of those with depression and/or anxiety are working full time and are fully functioning at work. Meanwhile, 36 per cent are working full time but at a reduced level of functioning, while 18 per cent work part time because their illness prevents them from working full time. The remaining 31 per cent are unable to work. Using these results for depression, it is estimated that about 104,000 additional Canadians would have been unable to work because of their symptoms. And the reduced functionality of those Canadians suggests that GDP would be about \$5.1 billion lower. For anxiety, about 56,000 additional Canadians would have been unable to work because of their symptoms, and the reduced functionality of those employed with anxiety implies that GDP would be roughly \$2.8 billion lower. (See Table 9.)

52 Clement and others, "What Is the Impact of Mental Health-Related Stigma?"

53 Hirschfeld, "The Comorbidity of Major Depression and Anxiety Disorders."

## HEALTHY BRAINS AT WORK

## Estimating the Impact of Workplace Mental Health Benefits and Programs

Table 9

**Economic Impact of Depression and Anxiety, 2012 and 2035**

(employed population)

	Scenario B—No workplace programs existed			
	Depression		Anxiety	
	2012	2035f	2012	2035f
GDP (\$ billions)	1,666	2,641	1,669	2,644
Employment (millions)	17.3	20.7	17.4	20.7
Productivity (\$ 000s)	66.2	88.0	66.2	88.0

f = forecast

Sources: Statistics Canada; The Conference Board of Canada.

## Are Employees in Certain Occupations or Industries a Concern?

A profile of the Canadian workforce reveals that the prevalence of mental illness in a worker's lifetime is highest in the public administration, the information, culture, and recreation, and the accommodation and food services sectors. This is consistent with the occupational breakdown, as prevalence rates are highest in occupations that are most closely linked to these industries: social science, education, government services, and art, culture, and recreation. In contrast, occupations specific to the primary industry (i.e., agriculture, forestry, and mining) had the lowest prevalence of mental illness.

Basically the same story can be told when looking at prevalence in the past year. As mentioned in Briefing 1, industries with the highest rates of depression tend to be those that require frequent or difficult interactions with the public or clients. Indeed, when it comes to depression, 12-month prevalence is highest in the arts, entertainment, and recreation sector (8.6 per cent), and the accommodation and food services (5.6 per cent). (See Table 10.) At the other end of the spectrum, rates are lowest among goods-producing industries (construction and manufacturing). Although

not as prominent as depression, generalized anxiety disorder is also affecting significant proportions of the working population, reaching a high of 3.6 per cent in the wholesale and retail trade sector.

**Table 10**

**Prevalence of Mental Illness in Canada by Industry, 2012**

(percentage of population 15 years and over; by type; past 12 months)

	Depression	Anxiety
Agriculture, forestry, fishing, and hunting	–	–
Mining and oil and gas extraction	–	–
Utilities	–	–
Construction	3.0	0.8
Manufacturing	3.4	1.9
Wholesale and retail trade	5.2	3.6
Transportation and warehousing	–	–
Information, culture, and recreation	–	–
Finance, insurance, and real estate	2.0	–
Professional, scientific, and technical	3.1	–
Administrative support, waste management, and remediation	3.8	1.8
Education	4.3	2.2
Health care and social assistance	5.2	3.1
Arts, entertainment, and recreation	8.6	
Accommodation and food services	5.6	2.4
Other services	3.1	–
Public administration	4.1	3.0

Sources: Statistics Canada; The Conference Board of Canada.

Employees in services-producing industries feel they have the greatest need for mental health care. According to Table 11, about 2.5 million employees in the services sector perceive that some sort of mental health care is required. And it is interesting to note the industries where mental health care needs are not being met. Just under 290,000 workers

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in the wholesale and retail trade sector, and the health care and social assistance sector, feel that their mental health needs have not fully been met. Moreover, in the administrative support, waste management, and remediation services, the proportion of employees with unmet needs is at 44.4 per cent. This is slightly higher than professional, scientific, and technical services at 42.9 per cent and accommodation and food services at 43.8 per cent. Indeed, the first briefing in this series outlined the challenges of addressing mental disorders in the accommodation and food services sector.

Table 11

**Perceived Need for Mental Health Care in the Past 12 Months, by Industry, 2012**

	Number of employees that required mental health care (000s)	Number of employees whose mental health care needs were not fully met (000s)	Percentage with unmet needs
Agriculture, forestry, fishing, and hunting	20.7	—	—
Mining and oil and gas extraction	19.4	—	—
Utilities	—	—	—
Construction	122.9	47.7	38.8
Manufacturing	214.7	76.5	35.6
Wholesale and retail trade	465.1	154.4	33.2
Transportation and warehousing	130.9	27.9	21.3
Information, culture, and recreation	178.1	36.1	20.2
Finance, insurance, and real estate	122.9	22.1	17.9
Professional, scientific, and technical	214.7	92.1	42.9
Administrative support, waste management, and remediation	131.8	58.5	44.4
Education	287.5	80.3	27.9
Health care and social assistance	407.7	134.0	32.9
Accommodation and food services	222.4	97.4	43.8
Other services	131.3	20.8	15.9
Public administration	230.6	47.0	20.4

Source: Statistics Canada, *Canadian Community Health Survey*.

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Even though fewer Canadian workers live with anxiety, the benefits of receiving optimal treatment are still substantial.

With the high proportion of Canadian workers having unmet mental health care needs, the benefits of meeting the needs of all employees, living with either depression or anxiety, are large. Due to their size, the wholesale and retail trade sector, and the health care and social assistance sector, will benefit the most from all employees with a mental illness receiving optimum treatment. Indeed, these industries comprise 15 per cent and 12.5 per cent of the total workforce, respectively, and therefore see a larger benefit in absolute terms. For employees living with depression, receiving the optimal treatment will lead to just over 160,000 fully functional workers in the wholesale and retail trade sector, and more than 131,000 fully functional workers in the health care and social assistance sector. Even industries with a lower prevalence of employee depression will see significant gains. For instance, an additional 20,000 workers in the finance, insurance, and real estate sector will be fully functional. But, relatively speaking, given that the 12-month prevalence of depression is highest in the accommodation and food services sector, in relative terms it would benefit most from optimal treatment of depression—about 1.3 times the benefit in the wholesale and retail trade and the health care and social assistance sectors.

Even though fewer Canadian workers live with anxiety, the benefits of receiving optimal treatment are still substantial. Indeed, since 12-month prevalence rates are highest, the wholesale and retail trade sector will see the most employees becoming fully functional in both absolute and relative terms. (See Table 12.) Overall, more than 365,000 employees living with anxiety would be fully functional at work if they received the optimal treatment.

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Table 12

**Number of Fully Functioning Employees With a Mental Illness, by Condition and by Industry**  
(000s)

	Depression		Generalized anxiety disorder	
	Base case	Scenario A	Base case	Scenario A
Agriculture, forestry, fishing, and hunting	—	—	—	—
Mining and oil and gas extraction	—	—	—	—
Utilities	—	—	—	—
Construction	9.8	54.1	2.7	14.8
Manufacturing	13.5	74.4	7.2	39.9
Wholesale and retail trade	29.0	160.3	20.5	113.2
Transportation and warehousing	—	—	—	—
Information, culture, and recreation	8.4	46.6	—	—
Finance, insurance, and real estate	3.6	19.6	—	—
Professional, scientific, and technical	8.4	46.6	—	—
Administrative support, waste management, and remediation	5.6	32.9	2.8	15.7
Education	11.8	65.1	6.0	33.3
Health care and social assistance	23.7	131.1	13.9	77.0
Accommodation and food services	16.0	88.2	6.9	38.0
Other services	6.2	34.2	—	—
Public administration	8.3	46.1	6.1	33.8

Sources: Statistics Canada; The Conference Board of Canada.

## Conclusion: Closing the Gap

The information presented in this briefing illustrates that there are significant benefits to be realized—for individuals, society, and the economy—by addressing mental health and illness among working Canadians. Considerable efforts have been unfolding over recent years among the many stakeholders in the mental health field and, in particular, within workplaces. But the results of the three briefings in this series suggest that we are far from an optimal state where Canadians



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Service industries were more likely than other sectors to have implemented a mental health strategy.

with mental illness are supported by the type of policies, programs, and benefits that help them to function and contribute fully within the workplace.

Specifically, the findings from Briefing 1, *The Footprint of Mental Health Conditions*, highlight the need to address mental illness among the working population and, in particular, certain segments of this population. The analysis determined that mental illness among the working population is significant. And 6.6 per cent of employed Canadians living with a mental illness also experience a mental disability—represented as those whose daily activities are limited due to a long-term mental condition.<sup>54</sup> Workers in service industries such as public administration; information, culture, and recreation; and accommodation and food services have the highest prevalence of lifetime mental illness compared with other sectors.

The hallmarks of good practice for employers were featured in Briefing 2, *Employer-Sponsored Mental Health Benefits and Programs*. They include:

- a comprehensive mental health strategy;
- a mental health policy;
- benefits, such as coverage for evidence-based prescription drugs and paramedical services;
- EAP/EFAP access for short-term help;
- leave options;
- supportive programs, such as modified work schedules or flexible work arrangements to attend medical appointments.

The survey findings from Briefing 2 revealed a mix in the provision of these supports by some mid- and large-size organizations in Canada. Service industries—such as health, education, finance, insurance, real estate, and public administration and utilities—were more likely than other sectors to have implemented a mental health strategy: i.e., a detailed and integrated plan of action. Employers in

54 Statistics Canada, Canadian Survey on Disability.

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Nearly three-quarters of survey respondents felt their organization can effectively support an employee experiencing a mental health issue at work.

male-dominated industries were less likely to have taken this step. For some organizations, adopting a mental health policy (which signals the organization's commitment to the mental health of their employees but requires less involvement) may be more approachable. However, 52 per cent of respondents had not done so. Again, organizations in male-dominated industries—natural resources, manufacturing, transport, warehousing, and construction—lagged in this area.

Nearly three-quarters of survey respondents felt their organization can effectively support an employee experiencing a mental health issue at work. And, at least for those surveyed, the foundational pieces seem to be in place for many to do so. However, many working Canadians—e.g., employees in precarious work arrangements such as contract, casual, or part time work; those who work in smaller organizations; or those who are self-employed—do not always have access to these types of supports. Young Canadians, a population with a higher prevalence of mental illness, are particularly vulnerable. The survey also highlighted that coverage limits on employer-sponsored benefit plans may present a barrier for some employees as out-of-pocket costs for supports, such as medications and psychotherapy, can be significant.

Dewa and Hochs' research into the barriers of mental health services use among depressed workers suggests there are structural (such as service cost and availability) and attitudinal (desire to manage independently, stigma) barriers to treatment. But, the greatest barrier is related to the individual's recognition of the need for treatment and services.<sup>55</sup> Each barrier needs to be addressed in the effort to optimize mental health and workplace productivity. Employers, employees, and health and social service sector stakeholders have a collective role in these efforts.<sup>56</sup>

In Briefing 4 of the Healthy Brains at Work series, we will explore a number of factors that help to ensure that Canadians with mental illnesses are supported by effective treatments and workplace policies,

<sup>55</sup> Dewa and Hoch, "Barriers to Mental Health Service Use."

<sup>56</sup> Ibid.

programs, and benefits that help improve their mental well-being and productivity. Our work on this series to date suggests some of the areas that could potentially be explored. For example:

## **1. Improved Treatments**

Despite abundant research into effective treatments for many mental illnesses, and particularly depression, the translation of this promise to real-world settings has been challenging. A recent examination of two decades of survey results suggests that the burden of major depressive episodes in the Canadian population has not changed, despite the increasing provision of treatments, such as medications and psychotherapies.<sup>57</sup> Researchers advocate that the reasons could include issues such as insufficient access or delivery. They have called for a re-examination of existing approaches to, and consideration of, additional strategies to reduce the burden of this illness among Canadians. Suggestions include more effective ways to prevent new onset and recurrent cases, or ways to provide better quality or volume of treatment for major depression. This could include, for example, new modes of delivery, such as through the use of digital “apps” to support psychological treatments;<sup>58</sup> new and innovative medications; or personalized approaches to treatments. The development of research evidence to inform new evidence-based treatments and improved delivery of existing treatments is a critical enabler.

## **2. Improved Workplace Programs**

While the survey findings from Briefing 2 of this series show promise, the modelling results suggest there is significant room for employers, particularly in the services sector, to take action to address the prevalence of mental illnesses within their workforce. Sector- and occupation-specific initiatives are needed, along with increased efforts to help smaller organizations find workable and sustainable tools that

57 Patten and others, “Why Is Major Depression Prevalence Not Changing?”

58 Glauser, Tepper, and Nolan, *The Future Of Mental Health Care?*

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will have an impact. Strategies for the adoption of evidence-based guidelines for the workplace<sup>59</sup> are needed. Also needed is addressing unmet needs by improving access to mental health treatments (such as psychotherapies and medications) through employer-sponsored benefit plans. Ways of addressing access issues for vulnerable populations—those at higher risk of experiencing both mental illness and barriers to treatment (e.g., lack of, or insufficient employer-sponsored benefit plans)—are also important considerations. Improved prevention strategies for new and recurrent onset of mental illness are needed, along with effective return to work programs.

### **3. Initiatives to Better Integrate Those Unable to Work**

As noted in our modelling, an estimated 23 per cent of Canadians with depression and/or anxiety are unable to work. Many people with serious mental illness are unemployed and existing supports are ineffective.<sup>60</sup> The Mental Health Commission of Canada has examined this issue through its report, *The Aspiring Workplace—Employment and Income for People With Serious Mental Illness*. The Commission has developed a number of recommendations for action on this important issue, such as supported employment programs.

### **4. Improved Integration of Services and Care**

Mental health care and services are delivered through multiple agents in the community, institutions, and workplace. Coordination and integration is not always optimal, and better integration is needed so that workplace programs and benefits are complementary to clinical care provided in primary care settings. Canada could learn from other jurisdictions that have undertaken initiatives to improve the labour market participation of people with mental illness through better integration of education, health, social, and employment sectors.<sup>61</sup>

59 Dewa, and others, “Employer Best Practice Guidelines.”

60 Mental Health Commission of Canada, *The Aspiring Workforce*.

61 Arends and others, *Mental Health and Work*.

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