MENTAL HEALTH IN THE LABOUR FORCE:

LITERATURE REVIEW AND RESEARCH GAP ANALYSIS

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EXECUTIVE SUMMARY

Mental health and alcohol abuse disorders are the sleeping giant of health care in modern society. These disorders create immense problems for the individuals with these conditions and for the companies who employ them. There is now a substantial research base that informs this important health challenge. This project was undertaken to synthesize the current research literature from North America in order to take stock of what is known today and to identify gaps in this knowledge. These gaps form the basis for recommendations for future research and for employer action.

Objective 1. What is known about Mental Health in the Workplace.

We now know that mental health disorders are common among working age populations. Most of the people with mental illness are not diagnosed and are not treated appropriately. This combination of a high prevalence rate paired with a low treatment rate results in cost burdens in the billions of dollars to the Canadian economy. When considering all of the workplace and health care costs, mental health disorders are more costly than many physical health conditions. Mental health disorders are caused or exacerbated by many factors, including those within the person, the worksite and larger societal issues. Fortunately, most individual and workplace-based interventions for mental illness are effective at reducing clinical symptoms and returning employees to a higher level of work function. Workplace mental illness prevention and intervention programs are also cost-effective.

Objective 2. What are Gaps in what is known about Mental Health in the Workplace.

We organized the gaps in knowledge into the four main areas of inquiry relevant to workplace mental health: epidemiologic factors, economic factors, etiologic factors and efficacy factors. Simply put – these are the counts, costs, causes and cures.

Gaps in the ***epidemiologic area*** of mental illness prevalence and use of services include the following:

(1) insufficient current information on the prevalence and co-occurrence of various mental health and alcohol/drug disorders and their association with employee work performance outcomes (absence, productivity, turnover) and health care services use and cost; (2) lack of knowledge regarding prevalence of workplace mental health prevention and intervention programs sponsored or encouraged by the employers; (3) absence of validated assessment and screening items for depression and alcohol as a co-morbidity factor in major population based surveys of general health and company specific assessments; (4) limited understanding of the scope of stigma and discrimination, their determinants and their consequences in the Canadian work setting; (5) insufficient follow-up research on the above cross-sectional employer studies of the prevalence and burden study to test for change in outcomes over time for those with mental health and addiction disorders who use treatment services vs. those employees who do not; 6) additional items required to enhance existing national panel community interview surveys of health that include mental health and alcohol/drug prevalence assessments that assess workplace functioning and human capital performance measures, and stigma; and

(7) a need to develop integrated database with standardized data on mental health disability and physical health disability cases at national level in Canada to compare the impact of mental health claims across many employers.

The gaps in knowledge of ***economic factors*** in workplace mental health include the following issues:

(8) limited research on claims data across many insurance providers to document across employers the financial impact of mental health and addiction disorders in STD and LTD disability claims; (9) unknown impact of government and corporate policies for disability and return to work on short-term and long-term individual outcomes and workplace outcomes; (10) lack of standardized measures and larger datasets from Canadian companies to study the contextual variations in the general association between mental health workplace problems and impaired work capacity of employees (human capital outcomes of absenteeism, productivity, disability, accidents, reduced occupational attainment, turnover); (11) lack of direction and authority on measures suggests the need for expert panel recommendations for specific self-report research measurement tools for researchers to use to assess within-person risk factors and outcomes and also to measure within-work risk factors; (12) absence of a multi-stakeholder group to propose a conceptual model and practical methodology for employers to use to measure the business case for mental health in the workplace; (13) need for methods for ongoing collection of information on the cost burden associated with all direct and indirect aspects of mental health and addictions in Canada; (14) lack of an effective economic model for provider reimbursement for mental health care assessment and treatment from the medical care system at the family physician level so that this common access point is more effective at providing optimal treatment for mental health and addictions.

The gaps in knowledge in the ***etiologic area*** of mental health in the workplace include:

(15) insufficient research on the working population to confirm in descriptive prevalence data the overlap of workplace specific problems of stress and burnout with more psychiatric problems of mood disorders, anxiety disorders, and substance abuse and adjustment related disorders; (16) lack of an integrated bio-psycho-social model for defining and treating mental health disorders in the workplace that includes workplace performance outcomes as well as personal clinical outcomes; (17) limited use of existing comprehensive assessment tools for work-life issues as they affect workers and which factors are most appropriate to workplace-based interventions; (18) lack of attention to organizational and systems-level approaches to prevention, assessment and treatment that include work-factors as well as person factors and aspects of the health care system; (19) lack of longitudinal follow-up research on the nature of workplace culture, management style, workplace social relations and other work-factors as they contribute to employee mental health.

The gaps in the knowledge of ***efficacy factors*** for mental health in the workplace include:

(20) insufficient evidence to determine whether primary care doctor contact opportunities in the traditional health care system can be improved to use mental health and addictions brief screening tools and referrals to psychological or psychiatric providers; (21) little evidence of sufficient training techniques for educating the medical provider community on the importance of determining if mental health and addictions are possible co-morbidity factors that affect the care planning for patients with other health conditions; (22) little research on factors that drive the engagement, use and effectiveness of EAPs for response to workplace mental health and addictions issues of workers; (23) unexplored best practices at Canadian companies with EAPs that have resulted in high utilization of EAPs by the employee workforce; (24) weak evidence for the effectiveness of telehealth treatment for mental illness in the workplace; (25) lack of longitudinal prospective controlled studies (quasi-experimental or experimental) that assess mental health workplace interventions on both clinical outcomes and workplace economic outcomes; (26) insufficient known regarding the factors related to why workplace mental health issues are under-identified and also under-treated; and (27) limited understanding of the complicated

and poorly integrated mental health delivery system model in Canada and role of employer benefit design and employer-provide services.

These 27 gaps identified by the Literature Review and Research Gap Analysis offer a road map for future investigations into the counts, costs, causes and cures of workplace mental health. In addition to gaps in knowledge, we also identified several gaps in knowledge making tools and technology. These include gaps in knowledge transfer and sharing what is known, how to use administrative claims data, self-report measures, data management and data warehousing, and conducting research in applied employer settings.

Objective 3. Research recommendations to address Gaps

Our recommendations for studies that can address these gaps and can be accomplished in the ***short-term*** include the following research projects:

(1) Expert Panel on Workplace Mental Health Measurement Tools; (2) National Survey Study of Canadian Employers; (3) National Survey Study of Employees in Canada; (4) Disability Insurance Providers Integrated Dataset Study of Costs and Best Practices; (5) EAP Best Practices Study of Canadian Employers; (6) Physician Primary Care Study of Best Practices in Workplace Mental Health; and (7) Intervention Modality Effectiveness Study for Workplace Mental Health.

Our recommendations for ***long-term*** research projects include the following:

(1) Future Waves of Canadian National Community Health Surveys; (2) Follow-up on Employee Study of Those with Workplace Mental Health Disorders; (3) Follow-up on Employer Best Practices Study to Create Quasi-Experimental Tests of Interventions for Employers; (4) Follow-up on Primary Care Studies; (5) New Quasi-Experimental Tests of Interventions for Employers; (6) Overcoming Stigma and Encouraging Use of Mental Health Workplace Services; and (7) Build a National Data Warehouse for Workplace Mental Health. The results of the Gap Analysis are offered to the scientific community for consideration in the planning of future research in this area.

Objective 4. Implications for Business.

The paper also offers pragmatic suggestions for how employers can use this knowledge to take action to improve the mental health of their workforce and to encourage their participation in creating new knowledge through funding of and collaboration with new research projects. Indeed, the simplest course of action for employers is to just recognize the problem.

Action Step One: Employers can do a lot to champion the importance of positive mental health within their company. This can be done in many ways, such as offering more prevention oriented educational programs and services, participation from leadership in health management and wellness activities, partnerships with government, science and business organizations in Canada who offer information on mental health and addictions.

Action Step Two: Employers can also offer increased access to mental health and substance abuse services through an integrated EAP that provides immediate assessment, counseling sessions and appropriate referrals to other needed services. Employers can also ask for increased collaboration between disability insurance providers and mental health and workplace EAP providers. Employers can ask how the medical providers can do a better job of recognizing mental heath disorders among their patients who come to them with complaints of physical health problems and co-morbid health conditions.

Action Step Three: Employers can play a major role in advancing the science of workplace mental health by simply making it a company priority to collect better data on the extent and nature of mental health and physical health problems that are experienced by their employees and to also collect data on a regular basis on the workplace performance of employees.

Action Step Four: Employers can work together to share aggregated and standardized health care data.

Action Step Five: Employer can actively support and participate in research projects.

These five areas are general opportunities for employers to get more involved in this area.

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> *"Two main factors make mental illness and addiction a critical workplace issue. First, mental disorders usually strike younger workers and second, many mental illnesses are both chronic and cyclical in nature, requiring treatment on and off for many years. Given the economic costs associated with these disorders – primarily those of absenteeism and lost productivity – it is essential that employers and governments join forces to address this issue on an urgent basis."*
>
> (Standing Senate Committee on Social Affairs, Science and Technology, Honourable Michael Kirby Chair, 2004, Report 3, Chapter 3, page 19)

Part 1 – Introduction

1.1 Significance of Mental Health in the Labour Force

Mental illness is common. According to recent survey, half of adults in Canada either know someone who is affected by mental illness or are affected by it themselves (Desjardins, 2006). Mental illness also has a tremendous total cost to society and to employers in particular (World Health Organization, 1996; 2006). Of course, in addition to dollar value costs, there is also the incalculable personal losses disability, suicide, and death from untreated severe mental health problems.

The Global Business and Economic Roundtable on Addiction and Mental Health (2006) has championed the concept that much of the workforce of the modern world functions in an "economy of mental performance." Given this circumstance, it makes good business sense for employers to be proactive in taking action to reduce the factors that impact employee mental health. Toward this goal, it is important to consider the following key research findings that support the role of business in addressing mental health in the workplace:

1. Mental illness is driving disability rates and overall health care costs within the North American labour force. This represents a significant business cost and deterrent to productivity.

2. Depression is the leading source of disability in the world and as a percentage of the burden of disease, it is growing faster in the global population than cardiovascular disorders yet it remains under researched, under diagnosed, and under treated.

3. The global information economy is, by definition, an economy of mental performance. This underscores mental health in the labor force as a critical determinant of output much like physical health was in the old industrial economy.

4. Mental illness is tied closely to a variety of physical health disorders – heart disease in particular – yet this information is neither widely known nor used to foster employee and executive mental health.

These findings are indicative of a looming crisis in health care and worker productivity that will result in severe economic consequences. And yet these issues are only beginning to be understood by many in the business world.

1.2 Project Scope

Researchers in many countries are active in identifying interventions that assist organizations and their workforce to control health care costs, improve at-work productivity, reduce absences and overcome barriers for effective return to work that are associated with employee mental illness. The scope of the project is to synthesize the best research to take stock of what is known today and to then identify gaps in knowledge and make recommendations for practice and future research. This review of the literature includes peer-reviewed critical review papers and significant original research studies completed within the scientific community. It also includes major papers in the "grey literature", or reports that are made available to the public but which are not published in scientific journals. These include governmental reports and white papers and studies from the business and provider communities concerned with mental health in the workplace.

This project is an effort to create knowledge – to bring together the diverse sources of information on workplace mental health issues and then to identify the gap between that which we know and that which we don't know. Understanding the past work in this area is needed to shape the path for future research on workplace mental health. Discovering the gaps in the scientific knowledge base allows us to formulate a strategic research agenda.

We anticipate a two phased approach for making a plan for new applied research studies. One phase that includes new studies that will fill in the small but significant gaps with projects that can be completed in the immediate future. And a second phase planned jointly by the U.S. and Canada to address bigger and more important gaps that will involve longer term projects and ongoing resources.

Part 2 – The Social Context of Workplace Mental Health

In order to appreciate the current heightened interest in workplace mental health that has led to this report, one must first have an understanding of the social landscape. The growing concern for workplace mental health is examined from the perspectives of business organizations, the national governments and the scientific community. We start with a profile of the Canadian situation. For a brief overview of the Canadian and the U.S. mental health systems and how they cover health care costs for workers, the reader is directed to Appendix A.

2.1 Concern with Workplace Mental Health in Canada

2.1.1 CANADIAN BUSINESS

The last decade has seen a surge of interest from Canadian business on the impact of workplace mental illness and on the importance of taking action as employers to help address these problems (Parent, 2004). The realization that worker productivity is closely linked to positive mental health is becoming more accepted among business leaders (Allen, 2004). Canada has a universal (publicly funded) health care system which essentially covers "medically necessary" (Canada Health Act) physician and hospital services. Canadian employers have more opportunity to focus on aspects of the workplace as contributors to health, and to the role of mental health in particular, when they do not have to spend the time American companies do on managing the basic logistical aspects of arranging for employee health care from private sector providers.

One of the most influential organizations concerned with workplace mental health issues is the **Global Business and Economic Roundtable on Addiction and Mental Health**. This organization has produced a series of widely read white papers on these issues. In 2000, the roundtable released the report The Unheralded Business Crisis in Canada: Depression At Work and also the accompanying report 12 Steps to a Business Plan to Defeat Depression (Wilson, Joffe & Wilkerson, 2000). In the ensuing years the roundtable produced several reports, including Depression and Heart Disease: A Dynamic Workplace Health Risk and the second a Roadmap to Mental Health and Excellence at Work in Canada. This was followed by the 2006 Business and Economic Plan for Mental Health and Productivity.

Their most recent contribution has been a survey on public opinion of depression and the workplace. A random sample survey of 1,000 Canadians and 1,000 Americans was conducted in 2007 (Ipsos Reid, 2007). This survey found that 14% of Canadians and 20% of Americans had been diagnosed with depression by a doctor. Depression was associated with gender, lower income and lower education. Among those in the workplace, the percentage with depression was slightly higher in the United States than in Canada (15% vs. 11%). All of these findings on the prevalence of depression are consistent with prior studies.

The survey also found that the majority of both Canadians and Americans believe that depression is a life-threatening disease (81% and 79%, respectively), believe that it is caused by a chemical imbalance in the brain (87% and 93%), and generally understand what depression is (72% and 76%). Yet, most people also believe that depression is stigmatized in the workplace. This study found that many people believe that someone with depression would not disclose it to others in the workplace "for fear of hurting their future opportunities." (79% and 77%) and that if someone was missing work due to depression that they could get in trouble or even be fired for it (52% and 42%).

About two-thirds of people reported that their workplace provided access to counseling for a worker with depression (66% and 64%). In addition, the vast majority of adults felt that company leadership should make helping employees with depression "a key human resources priority" (88% vs 80%).

There is also a research plan called the "Research and Return on Investment Initiative". The purpose of this project will be to survey Canadian and American companies and gather and share information about successes in managing mental illness and facilitating the return-to-work of individuals with mental illness and addiction.

Several major white papers on the significance of addressing mental illness in the workplace issues have been circulated by other leading organizations representing the business and employer community. Some of these include the following:

- *Depression & Work Function: Bridging the Gap Between Mental Health Care & the Workplace*, by the **Depression in the Workplace Collaborative** (Bilsker, Gilbert, Myette, & Stewart-Patterson, 2004).
- A Call for Action: *Building Consensus for a National Action Plan on Mental Illness and Mental Health.* Appendix B from A Report on Mental Illness in Canada, by the **Canadian Alliance for Mental Illness and Mental Health** (2002).

Recent surveys of businesses by the consulting company Watson Wyatt, have found that more workplaces are tackling health care cost controls as a top priority and that mental illness is recognized as a key driver of overall costs (2006). The Stay@Work Survey 2005 Canada report found that disability management for mental illness was increasing in importance as a benefits strategy for Canadian companies (Watson Wyatt Canada, 2005).

Taken together, there has been significant attention given to workplace mental health issues by many different Canadian business organizations.

2.1.2 MENTAL HEALTH COMMISSION OF CANADA

A federal *Commission on Mental Health for Canada* has recently been formed. In March of 2007, the federal Finance Minister announced the creation and initial funding of the Canadian Mental Health Commission to be led by retired Senator Michael Kirby, who is chairman of the Global Business and Economic Roundtable on Addiction and Mental Health. Among its five key priorities, the Commission specifically included mental health in the workplace. This last point is a culmination of the tremendous strides that the Canadian government has made to seriously address mental health issues for the entire population. A major outcome of this work is a much greater awareness of mental health among policy makers and the public and to formulate a shared vision and plan of action to make the major changes needed to transform how mental health, mental illness and addictions are supported by governmental policies and practices.

In 2006, the final report of the *Standing Senate Committee on Social Affairs, Science and Technology* was released. This was titled *OUT OF THE SHADOWS AT LAST: Transforming Mental Health, Mental Illness and Addiction Services in Canada*. It had two parts. The first was over 300 pages and covered many topics, including the human face of mental illness and addiction, an overview of the vision and legal aspects of improving mental health, service organization and delivery, research information and technology, and federal leadership (Kirby, 2006a). The second part of the report featured over 250 pages of in-depth recommendations for how the Canadian federal government should improve specific aspects of the mental health care system (Kirby, 2006b).

Highlights from this report relevant to workplace mental health include the suggestions for creating a national anti-stigma campaign and creating a Knowledge Exchange Centre for disseminating information and research about mental health, mental illness and addictions. The *Canadian Health Network*, already one of the premier websites in the world, will be leveraged to feature more mental health related material. The report also called for dramatic increases in funding for new research managed by the Canadian Institutes of Health Research (CIHR), to include an additional $25 million per year for research into the clinical, health services and population health aspects of mental health, mental illness and addiction.

2.1.3 CANADIAN SCIENCE

The scientific community in Canada also reflects an interest in issues about workplace mental health topics. The reader is directed to Appendix B – Parts 3 and 4, which profile the most active Canadian universities and the key individual researchers in the field. Most recently, CIHR launched a (long term) research initiative on mental health in the workplace.

Based on this start up, the CIHR is now looking at a second RFA and this gap analysis will contribute to the articulation and refinement of areas of priority concern to science and employers for purposes of knowledge transfer and the development of new knowledge.

2.1.4 SUMMARY

In Canada, there has been an upswing in the past decade in the concern for mental health and workplace mental illness issues from business, government and scientific communities.

2.2 Concern with Workplace Mental Health in the United States

In the past decade there has also been a growing concern in the United States on mental health issues in general and their impact on the workplace. This section highlights some of the key events and reports in this area from business organizations, from government agencies and from the scientific community.

2.2.1 UNITED STATES EMPLOYERS

Ample research, reports and summaries exist describing those institutions and individuals in Canada leading the way in the development of workplace strategies around mental health and mental health strategies in the workforce. There is no need to revisit the substantial record of these achievements and activities in this in this report. Nonetheless, the brand new U.S. Canada forum on mental health and productivity launched last February by the Global Business and Economic Roundtable on Addiction and Mental Health and the Canadian Ambassador to the U.S., his Excellency Michael Wilson, has opened the door to opportunities for cooperation and leadership between science and business in both countries.

Therefore, to complement the information available on Canadian initiatives in this field, available on many websites, and noted above, this report provides an opportunity to summarize some of the initiatives taking place in the U.S. which may merit the attention of the forum. At the request of the Roundtable, this report delves at some length on the U.S. experience to balance the information available to Canadian researchers and employers.

As the cost of paying for the health care bills of employees and their dependent family members resides with employers in the United States, there has always been great interest in understanding and proactively managing the rising costs of health care. As the data has shown an increasing contribution of mental health care issues among the alarming rise in total costs of health care, there has been a corresponding increase in interest from benefits managers and leadership at many companies on the topic of mental illness.

Depression in particular has become a key issue for many businesses. This heightened awareness has come from the research knowledge transfer function provided by the many scientists and researchers who have contributed to writing papers with evidence-based facts and figures on the costs and consequences of mental health and publishing these papers in general business magazines. For example, Dr. Ron Goetzel and his colleagues from Cornell University presented a pair of papers in *Business and Health* magazine in 2002 on the role of depression in health care and workplace performance. One paper focused on the costs and consequences of unmanaged depression and the companion article focuses on the how treatment for depression is effective and available and thus offers a cost-benefit for employers.

There has also been an increasing acceptance of the concept of how mental health disorders and work/life concerns can cause workplace performance problems. The at-work deficits in productivity have been called "presenteeism" losses. This term and its understanding are now common in business among human resource and management staff. It has helped that articles on presenteeism have appeared in senior leadership magazines for business, such as the *Harvard Business Review* (Hemp, 2003).

There are several organizations that provide services and information to employers that address the role of mental health in employee productivity and performance. For example, the **Institute of Health and Productivity Management** (IHPM) is an organization of employers, health providers, researchers, and pharmaceutical companies that is dedicated to establishing the value of employee health as a business asset and an investment in corporate success. It holds a number of specialized conferences each year that have become increasingly popular with business leaders and health providers. IHPM also began publishing a useful magazine for its members, called *Health and Productivity Management*. This is aimed at senior level business executive audiences. They recently added a peer-review research journal for health and productivity studies. IHPM has produced several major white papers, including the *Economic analysis of health and productivity: An integrated approach to health* (Johnson, 2001). It also has pulled together several compilations of research survey tools for measuring health and productivity factors. IHPM also offers the Academy for Health and Productivity Management, directed by Dr. Joe Leutzinger, as the teaching arm of the institute. At the Institute, many business leaders and health care industry staff are trained on the concepts, research evidence and measurement practices of workplace health and productivity.

One U.S. organization that has contributed to the workplace mental health field is the **Integrated Benefits Institute** (IBI). IBI focuses on collecting benchmark data from medical claims as well as from disability, workers compensation, absence management and productivity areas. The data is then linked together at the individual employee level and analyzed to reveal opportunities for identification of high-cost/high-risk employees and thus for more coordinated health interventions. IBI has participated in a number of high-profile case studies of companies that have saved millions of dollars (compared to projected trend increases) after adopting more integrated health management practices. Their survey of chief financial officers (CFOs) is a good example of demonstrating how business leaders are taking health care, and mental health in particular, more seriously than in the past (see IBI, 2002).

Another organization that is evidence-based and represents large employers in the United States, is the **Health Enhancement Research Organization** (HERO). HERO is a national, not-for-profit, coalition of organizations with common interests in health promotion, disease management, and health related productivity research. The HERO mission is to facilitate research that will impact health care by shifting the paradigm from a system dependent almost exclusively on diagnosis and treatment toward one with major emphasis on prevention and a more healthy and productive population. In support of this mission, HERO facilitates interaction among Research and Associate Partners and others that have a common desire to collaborate on specific research projects. HERO then coordinates and manages a variety of research projects supported by HERO, private and public sector financial grants. HERO has facilitated the creation of a large, retrospective, multi-employer health promotion research database. They have published six papers from this dataset many of them authored by Dr. Ron Goetzel. A theme in these studies has been the relatively large slice of total health care costs of employees that are accounted for by mental illness, depression in particular.

The **National Business Group on Health**, (NBGH) formerly the Washington Business Group on Health, is a non-profit organization devoted to representing the perspective of large employers and providing practical solutions for health care problems. The over 200 Business Group members are primarily Fortune 500 companies who provide health coverage for more than 45 million United States workers, retirees, and their families. The Business Group fosters the development of a quality health care delivery system and treatments based on scientific evidence of effectiveness. The NBGH 2005 publication, *An Employer's Guide to Behavioral Health Services*, is a helpful resource for businesses to understand the role of mental health in the workplace and how to work more effectively with health care providers.

The **Employee Assistance Professionals Association** (EAPA), based in Washington, DC, hosts an annual conference, publishes the *Journal of Employee Assistance*, and offers training and other resources to enhance the skills and success of its over 4,000 members worldwide.

In sum, there are many business groups in the United States with an interest in workplace health and assisting in raising awareness and providing tools to employers to help measure and manage workplace outcomes and mental illness among employees.

2.2.2 UNITED STATES GOVERNMENT

In the past decade there have been several major reports on mental health from the United States government. The U.S. Surgeon Generals Report on Mental Health (DHHS, 1999) provides over 500 pages of summarized information on many aspects of mental health and the components of the delivery system in that country. This landmark report was valuable not only for the tremendous amount of research that it synthesized but also for the political import that it generated coming from the medical community at the highest level.

In 2003, the President's New Freedom Commission on Mental Health was created. This was the first presidential mental health commission in over two decades. Building on the U.S. Surgeon Generals Report, this report identified five major barriers to care: Fragmentation and gaps in care for children, fragmentation and gaps in care for adults with serious mental illnesses, high unemployment and disability for people with serious mental illnesses, lack of care for older adults with mental illnesses, and lack of national priority for mental health and suicide prevention. In addition, this report decried the many deficiencies in the overall mental health care system.

More recently a follow-up report was released that examined the progress made on achieving these goals by each of the different states with the United States (SAMHSA, 2006). Since the 2003 presidential commission report there have been gains made in many of the above goals, with some states being able to make more progress than others.

Assisting with this progress has been the work of several major U.S. government sponsored research agencies charged with different aspects of mental health. The two largest agencies include the **National Institutes of Mental Health** (NIMH) and the **Substance Abuse and Mental Health Services Administration** (SAMSA). Both maintain large websites and coordinate many large-scale research projects on mental health. One important program from SAMHSA is the **National Registry of Evidence-based Programs and Practices** (NREPP) is a searchable online registry of mental health and substance abuse interventions that have been reviewed and rated by independent reviewers. The purpose of this registry is to assist the public in identifying approaches to preventing and treating mental and/or substance use disorders that have been scientifically tested and that can be readily disseminated to the field. NREPP is one way that SAMHSA is working to improve access to information on tested interventions and thereby reduce the lag time between the creation of scientific knowledge and its practical application in the field.

The **National Institutes of Occupational Safety and Health** (NIOSH) also plays a key role in many aspects of increasing cross-disciplinary research on health care and mental health. NIOSH maintains a large website called *Mental Health: The Cornerstone of Health*, that features mental health information related to U.S. Department of Health and Human Services (HHS) research, programs, policies, and media campaigns and highlights the latest research findings and policy efforts. It combines information and research from the U.S. Department of Health and Human Services, SAMHSA, National Institutes of Mental Health and the Office of the Surgeon General. This website is similar in some aspects to the national health information website in Canada, the *Canadian Health Network*.

Thus, similar to Canada, in the United States there has been a series of major government reports on mental health and there are major research facilities and care delivery channels that focus on mental health disorders.

2.2.3 UNITED STATES SCIENCE

Among the scientific community in the United States there has also been recognition of the increased importance of mental health issues to the workplace and to developing resources to assist employers in responding to these problems. Several major academic and science-based organizations have recently created educational tools, white papers, and action plans that inform the general public, policy makers, and business about mental health issues and how they affect the workplace. Three of these organizations are profiled below.

The *Partnership for Workplace Mental Health* advances effective employer approaches to mental health by combining the knowledge and experience of the **American Psychiatric Association** and employer partners. The partnership delivers educational materials and provides a forum to explore mental health issues and share innovative solutions. It promotes the business case for quality mental health care, including early recognition, access to care and effective treatment. This organization also produces a free quarterly newsletter – called Mental Healthy Works – that includes summaries of key scientific studies and also profiles companies with successful case study examples of effective ways to address Mental Health in the Workplace. Some of these employers who have been profiled in the newsletter include: Dow, Florida Power and Light, Ford, Hughes Electronics, IBM, Johnson & Johnson, Pitney Bowes, Pittsburg Paint and Glass (PPG), and Sprint.

The **American Psychological Association** (APA) has an *Initiative on Workplace Health*. Part of this initiative involves a jointly sponsored (with NIOSH) bi-annual international conference series, called "Work, Stress, and Health." This conference was designed to address the constantly changing nature of work, and the implications of these changes for the health, safety, and well-being of workers. The APA also recently began to offer recognition awards to employers of various sizes in the United States who have "healthy workplaces."

The **American Psychological Society** has produced a series of detailed white papers for its *Human Capital Initiative*. This academic-based organization has pulled together a great deal of theory and high-quality empirical research findings on how psychological processes and services can help individuals cope with a variety of basic issues, including aging, health, literacy, productivity, substance abuse, and violence.

There are also several university-based centres that conduct research on workplace health, with many of the projects including mental health issues.

One of the most productive and influential centres of research has been the **Harvard Medical School**, and specifically, the department of Health Policy. Dr. Ron Kessler, perhaps the world's leading workplace health epidemiologist has led a wide range of research projects focusing on the economic impact and workplace determinants on mental health in the labour force. Dr. Kessler's seminal "co morbidity" studies broke new ground by linking the compounded effects of co-occurring disorders on workplace disability.

In addition, the Harvard School of Public Health made research history through its 1996 burden of disease study (updated in 2003) by demonstrating the impact of disability as a growing factor in the global burden of disease and, further, psychiatric illness as a leading cause of disability.

These findings positioned mental illnesses as a source of disability – particularly depression – as a bone-fide business issue in that depression occurs principally among men and women in the workforce.

The university has collaborated on many projects that focus on psychosocial determinants and consequences of mental health problems. Harvard has collaborated with the World Health Organization (WHO) on several seminal papers in the area of workplace mental health.

The *Institute for Health and Productivity Studies* at **Cornell University** provides research on the relationship between employees' health and well being and their work-related productivity. It includes, for example, analyses of the impact of chronic disease and risk behaviors on the corporate bottom line, health promotion program evaluations, and strategies for effective health and productivity management. Dr. Ron Goetzel is one of the institute's most active researchers.

Ensuring Solutions, a program at the **George Washington University Medical Center**, directed by Dr. Eric Goplerud, provides research-based information on effective alcohol treatment and the barriers many people face when they seek help for a drinking problem. By publishing a variety of publicly available resources, by working with major corporations, government agencies and leading organizations like the National Business Coalition on Health, and by drawing on the actual experiences of employers and ordinary people, Ensuring Solutions shows how successful efforts to increase access to alcohol treatment have improved the lives of many individuals and their families, increased productivity in the workplace and made our communities safer.

The *Program on Health, Work and Productivity* at **Tufts University**, directed by Dr. Deb Lerner, has produced many innovative research studies in collaboration with employers to assess the impact of worksite intervention programs.

In summary, the scientific community in the United States has been very active in studying workplace health and mental health in particular as it relates to employee performance at work. There are several major educational initiatives from large associations affiliated with the mental health field. There are also several universities with research programs and centres that focus on mental health in the workplace.

2.2.4 SUMMARY

The United States has seen the past ten years explode with a growing concern for mental illness and for how it impacts the workplace. The business community in particular has been quick to take up the findings from scientists and has created several influential organizations and forums for sharing this information and driving change in the area of how employee benefits are managed by large employers. The U.S. government has been active in releasing several major research-based reports on general aspects of the mental health care system and how it can be improved. The government has also funded several large agencies with specific research and knowledge transfer agendas on mental health and on workplace aspects of mental health. Dr. Ron Kessler continues to lead in this subject globally.

2.3 Part 2 Conclusions

The social context in North America over the past ten years includes tremendous growth in the acceptance and understanding of mental health issues and how they are critical to the healthy functioning of workers and thus to the overall success of business. Both countries have active employer participation and business community leadership that is driving change and advances in the delivery side of mental health care services. Both countries created national commissions to develop government agendas to understand and better address mental health issues and within that framework to promote better mental health in the workplace. Both countries contributed significant federal budgets to establish and grow agencies that conduct research on mental health issues. The scientific communities in both countries also have a number of well-respected programs at major universities that are producing valuable original research on many aspects of workplace mental health. The combined output in research studies in this area from the government research agencies, academic centres and business projects has been substantial and forms the basis of the literature review for this paper. In summary, there are many parallels between Canada and the United States in how the two countries are responding to the crisis of mental health in the workplace.

Part 3 – Research Literature Review

3.1 Methodology for the Review

This part of the report presents the methodology for the literature review. It includes a review of the search criteria and methods used to find the articles and reports included in the review. Also presented is a brief statistical summary of the articles in the review with a comparison of Canada and United States based contributions. Of particular note is a report on the production of research articles on workplace mental health by Canadian authors Archambault, Cote and Gingras (2004). Key findings from this study are also presented.

3.1.1 LITERATURE SEARCH PROCESS

This report has a selective view of the literature, with a focus primarily on works produced in the last decade. Review of papers published in scientific journals (publications with peer-review editorial process) that provided reviews or meta-analyses were given first priority, followed by scientific studies with data, and finally reports of research studies produced by research scientists at government health agencies.

There were a total of 266 papers included in this review (see the Appendix C – Literature References and Additional Reading). There were 125 (47%) from Canadian authors or with Canadian data represented in the analysis. The rest were from the United States (n = 123; 46%) or the United Kingdom/WHO (n = 18; 7%). As can be seen in the table below, about three-fourths of the Canadian papers included in this review (n = 96) were produced in the last couple of years. This is important, because many of the works prior to this were already reviewed in the 2004 special issue of the journal *Healthcare Papers* on workplace mental health.

Canadian Papers by Year

Year Published	*Count*	*%*
2006/2007	36	29%
2005	22	18%
2004	38	30%
2003	7	6%
2002	13	10%
2001	3	2%
2000	4	3%
1999/earlier	2	2%
Total	125	100%

One goal of this paper is to compare the research from Canada and the United States and therefore works from these two countries was emphasized in the selection and review process. However, several select papers and major reports from other countries were included (such as from the World Health Organization), but this review was not an exhaustive search of all of the studies on workplace mental health research from around the world.

For example, there is important work being done in other countries, including Australia (reducing stigma), the Netherlands and Scandanavia (job design), Japan (work culture), and the UK (outcomes of employee assistance programs). Thus, given the sheer volume of information available and the differences in the appropriate application of findings from different cultures to Canada, this review does not cover the full range of research produced globally on this topic, rather it is focused mostly on works from Canada and the United States.

Summaries of the research findings from the following perspectives are found in Appendix E at the end of this document:

Epidemiological Factors	(what the counts, or numbers say)
Economic Factors	(what the costs are)
Etiologic Factors	(what the causes are)
Efficacy Factors	(what the cures or effectiveness factors are)

Readers who are unfamiliar with the broad range of literature that has been published will find these summaries quite useful. This data formed the basis for the identification of gaps, and the recommendations for short and long term projects going forward.

Part 4 – Research Gap Analysis

> *"The clinical, population health research and health services research areas remain weak in the fields of mental health, mental illness and addiction. It is vital that efforts be made to close the significant gaps in our understanding in these areas"*
>
> (*OUT OF THE SHADOWS* Report 1, 2006, page 259)

The earlier quote underscores the conundrum of this area in that although there are over two hundred scientific papers and reports included in this review, there remains much to be learned about workplace mental health disorders. This part of the report moves from literature review to commentary on the state of the knowledge base that exists today and what is needed next from the research community.

Before examining the gaps between what we know and don't know as a result of research focusing on mental health in the labour force, the following table sets out a number of important facts which ground discussion of this topic. This speaks to the "where and when" as well as the economic impact. It includes facts concerning the cause and development of mental illness and the effectiveness of care and treatment.

Table 1
What Is Known Today About Workplace Mental Health

EPIDEMIOLOGIC FACTS

- Mental health and substance abuse disorders are common among working age populations
- The most common conditions include social anxiety, major depression, substance abuse with other less common disorders including bipolar depression, panic attacks and schizophrenia
- Some people have both mental illness and substance abuse issues
- Many mental health disorders have an early age onset and can then last for decades with periods of episodic changes in symptom severity
- Most people with mental illness are not diagnosed early enough or treated appropriately
- Suicide can result from untreated mental health disorders

Table 1
What Is Known Today About Workplace Mental Health *(continued)*

ECONOMIC FACTS

- Workers with mental health disorders tend to have higher direct costs (for treatment of mental health conditions, physical health co-morbid conditions, disability claims, and job safety)
- Workers with mental health disorders tend to have higher indirect costs (for missed time away from work, lost productivity on the job, and higher risk for job loss and turnover)
- Cost burden for mental health disorders is higher than most physical health conditions
- Productivity losses account for the majority of all combined costs for workers with mental health disorders

ETIOLOGIC FACTS

- Mental health disorders are caused or exacerbated by many factors
- Person factors include influences from genetic, biological, personality, and coping skills
- Work factors include job design, management style, relationships, and work culture
- Societal factors include stress, time pressures, work/family issues, and stigma

EFFICACY FACTS

- Traditional psychotherapeutic and psychiatric pharmacological treatments for mental health disorders are effective at reducing clinical symptoms and returning to higher levels of work function and are also cost-effective for avoided overall health care costs and workplace performance improvements in absenteeism and productivity
- Mental health services in the workplace have had less research attention on clinical efficacy and cost effectiveness. Yet, the applied research and case study data suggest that workplace- based services can be clinically effective and offer cost savings to the employer
- There is sufficient research evidence to support "Making the Business Case" for employers to take action on ways to improve mental health in the workplace

4.1 Introduction

This part of the report presents the analysis of the extent of knowledge represented in the existing research and applied literature than informs our understanding of workplace mental health. The principal goal of this project was to identify what was known and also what needs more study. The topic areas that remain to be better explored are considered "gaps" in knowledge.

A similar effort was completed a few years ago in which a group of distinguished Canadian scholars and business leaders reviewed the literature and made suggestions for future directions in research. The results of this work, directed by the CIHR, were published in a special issue of *HealthcarePapers* journal in 2004. The editors of this issue complied the most important areas for future study (Lesage, Dewa, Savoie, Quirion, & Frank, 2004). These areas included the following:

- facilitating **coalition building** among all stakeholder groups (employees, employers, health service providers, and researchers)
- making "**the business case**" for pursuing specific research initiatives, including economic studies
- developing **data sets**, based on surveys of both labour force and employers, that include longitudinal and cross-sectional data
- facilitating access to, and ethical linkage of, **administrative data** held by employers, payers and providers
- developing and evaluating measurement tools for prevention and promotion, treatment, disability management and interventions that address **stigma and discrimination**. These tools can be used to collect data on working populations at the organizational (worksite) and societal levels
- fostering the development and evaluation of **intervention models** for individuals and organizations that address prevention, promotion, treatment, disability management and recovery, and stigma and discrimination issues.
- fostering the recognition and evaluation of current **Canadian best practices** with respect to these themes.
- ensuring that research takes issues into account that are related to the **diversity of the workforce** in Canada. Some of these factors include gender, age, socio-economic status, employment status, ethnicity, culture and time of arrival in Canada.

Indeed, these topics are all of significant value for further research attention. See Appendix D for a summary of the specific research issues raised from this set of papers. The current report echoes these same issues and builds on this work with greater depth of information and a prioritization of the gaps in knowledge that should be addressed next in the short-term as well as those that merit long-term investments.

A related effort was recently completed by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST). Harvey and colleagues (2006) conducted a literature review that focused on organizational intervention programs and strategies for managing worker mental health and stress. Their report identified many of the same gaps in the literature and also offered some of the same suggestions for future research as the 2004 reports noted above.

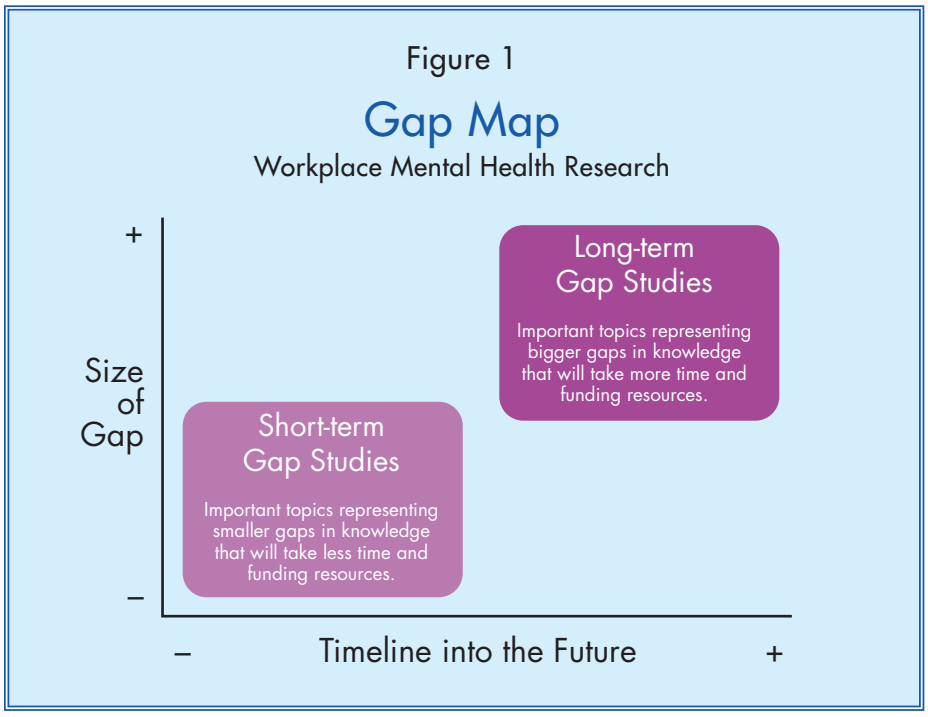
4.2 Gap Analysis Methodology

We developed a methodology to identify the gaps in research-based knowledge that are important to know more about and which can be successfully conducted as collaborative applied research projects in both the near- and long-term. The general conceptual model for the Gap Analysis is to sort the topics and issues into three categories. The *first* category is for what is already known from data that is fairly well established by past research. These areas are considered small gaps that are of less importance. These are not less important because of their role in workplace mental health, but only less important from an action agenda perspective because much of the issue has already been examined.

In the *second* category are topics that are small gaps in knowledge but of high importance. These are issues that we do already have some high-quality research evidence to demonstrate that the issue of important, but it has not been replicated in Canada or it has not been studied in enough depth to fully understand the issue. These are the kinds of gaps in knowledge that can be reduced significantly with new research studies that can be done fairly quickly by leveraging the methods and tools from prior studies on the same topic.

In the *third* category are the gaps that represent topics of high importance that will take major investments of time and funding to conduct the kinds of studies that will yield useful answers that can close the gap in understanding. These last two categories of gaps are represented in The Gap Map, shown in Figure 1.

Figure 1



Research Study Design. One of the reasons for dividing the research agenda topics into short- and long-term status is that research can take on differing degrees of scientific rigor and corresponding differences in the amount of foundational knowledge needed to design a study and the level of effort, time and funding needed to reach an answer.

The general progress along this continuum of research difficulty and clarity of result is as follows:

- Qualitative descriptive studies that explore a few illustrative examples of the topic and examine the issue in detail.
- Survey studies that take a descriptive approach to collecting more data from a bigger sample of events but with a more selective focus on the important themes identified by the qualitative study.
- Studies that use a quasi-experimental research design with historical control groups. This means that two or more groups are compared that have experiences or interventions of interest but that these interventions occur without random assignment to the groups. These studies can also involve an assessment of change over time across two or more periods, such as changes from one year versus a baseline year.
- Randomized experimental design. This kind of study features random assignment of the participants or worksite in the study to experience different kinds of treatments (or to not experience the intervention and serve as a control group) and tests for changes over time in outcomes and factors important to the area of interest.

The short-term gap projects are more appropriate for the kinds of study designs that are the front of this list. Whereas the long-term gap projects are more toward the middle and end of the list above. In practice, applied research done in business settings involving actual worksites and employed populations often makes it difficult to create opportunities for the more controlled experimental kinds of studies at the high end of this continuum.

4.3. Gaps in Knowledge: What We Don't Know

The results of the Gap Analysis are presented in this section. Topics that comprise short-term opportunities and those that are suited for long-term research projects are presented for each of the four major themes used to organize the literature review. Presented first are the research questions for the epidemiological factors of mental health in the workforce.

4.3.1 Gaps in Knowledge: Epidemiologic Factors

There are several gaps requiring short-term research in the area of mental illness prevalence and use of services.

(1) Conduct a cross-sectional study of multiple employers with survey and archival data collection of the entire workforce population to assess the prevalence and co-occurrence of various mental health and alcohol/drug disorders and their association with employee work performance outcomes (absence, productivity, turnover) and health care services use and cost. Include employers of different sizes and geographic locations throughout Canada.

(2) Conduct a multi-employer survey study of the prevalence of workplace mental health prevention and intervention programs and services are provided (EAP, Work-Life, Stress Management, Health Promotion, Disability Management, etc.), as well as traditional mental health care services through the medical and mental health system and community resources that are sponsored or encouraged by the employer.

(3) Include use of validated assessment and screening items for depression and alcohol as a co-morbidity factor in major population based surveys of general health as well as company specific assessments for health promotion at the worksite (e.g., health risk assessments).

(4) Assess and monitor the scope of stigma and discrimination, their determinants and their consequences in the Canadian work setting through combinations of direct work site studies, qualitative studies and population studies.

There are also gaps requiring long-term research in the area of mental illness prevalence and use of services.

(5) Conduct longitudinal follow-up research on above cross-sectional employer studies of the prevalence and burden study to test for change in outcomes over time for those with mental health and addiction disorders who use treatment services vs. those employees who do not.

(6) Continue future data collection waves of already established national panel community interview surveys of health that include mental health and alcohol/drug prevalence assessments. But add to the survey, items that assess workplace functioning and human capital performance measures (days absent, presenteeism, disability days, job loss). Stigma and related discrimination issues should be added to the next Community Health Survey in Canada and the next Watson Wyatt Stay@Work survey.

(7) Develop integrated database with standardized data on mental health disability and physical health disability cases at a national level in Canada.

4.3.2 Gaps in Knowledge: Economic Factors

The gaps in knowledge of economic factors of mental health in the workplace with a short-term focus are listed below:

(8) Collaborate with large insurance companies in Canada to conduct a major study of their combined claims data to document across many employers the financial impact of mental health and addiction disorders in STD and LTD disability claims.

(9) Study the impact of government and corporate policies for disability and return to work on short-term and long-term individual outcomes and workplace outcomes.

(10) Develop more standardized measures and larger datasets from Canadian companies to study the contextual variations in the general association between mental health workplace problems and impaired work capacity of employees (human capital outcomes of absenteeism, productivity, disability, accidents, reduced occupational attainment, turnover).

(11) Provide expert panel recommendations for specific self-report research measurement tools for researchers to use to assess within-person risk factors and outcomes and also to measure within-work risk factors. If widely adopted, this could result greater comparability across different studies. For example, consider use of the WHO's Health and Work Performance Questionnaire, brief screening tools for mental health and addictions, workplace-level health, work culture factors, workplace management style, and so forth.

(12) Collaborate with business leaders, consultants, and researchers to create an agreed upon conceptual model and practical methodology for employers to use to measure the business case for mental health in the workplace. This could include recommendations for what data is relevant to collect, how it should be collected, how to organize the data for analysis, and how to assign dollar or business value metrics to the findings.

There are also gaps requiring long-term research in the economic area of mental health in the workplace:

(13) Establish methods for ongoing collection of information on the cost burden associated with all direct and indirect aspects of mental health and addictions in Canada. More recent and accurate cost of burden and cost of use figures are needed to set policy and track progress over time.

(14) Explore how to create better economic model for provider reimbursement for mental health care assessment and treatment from the medical care system at the family physician level so that this common access point is more effective at yielding early diagnosis for mental health and addictions.

4.3.3 Gaps in Knowledge: Etiologic Factors

The gaps with a short-term focus in the etiologic area of mental health in the workplace are listed below:

(15) Conduct research on the working populations to confirm in descriptive prevalence data the overlap of workplace specific problems of stress and burnout with more psychiatric problems of mood disorders (depression), anxiety disorders, and substance abuse and adjustment related disorders.

(16) Create to develop an integrated bio-psycho-social model for defining and treating mental health disorders in the workplace. This model should include assessment of worker functional outcomes as well as personal clinical outcomes.

(17) Create broader access among employers to comprehensive assessment tools that build on the work-life studies done in Canada on the impact of family child care, elder care and marital relationship issues and the greater societal demands of time and money that can negatively affect work performance and employee mental health. The recent work on "social anchorage" as a factor in mental health care use should be examined more.

(18) Explore the need for a more organizational and systems-level approach to prevention, assessment and treatment that includes work factors as well as person factors and aspects of the health care system. Research should be done at the workplace level that examines how to identify and improve contextual factors in the workplace which contribute to the mental health of workers.

The major long-term gap in the area of causes of mental health in the workplace is listed below:

(19) Conduct longitudinal follow-up research on the nature of workplace culture, management style, workplace social relations and other work-factors as they contribute to employee mental health. Organizations with different kinds of workplace cultures can be compared over time on overall employee workforce health and on company profitability and success measures.

4.3.4 Gaps in Knowledge: Efficacy Factors

The short-term gaps in the knowledge of efficacy factors for mental health in the workplace are listed below:

(20) Study the impact of integrating into primary care doctor contact the standard use of mental health and addictions brief screening tools and referrals to psychological or psychiatric providers who are experienced in these areas.

(21) Develop and test the effectiveness of training techniques for educating the medical provider community on the importance of determining if mental health and addictions are possible co-morbidity factors that affect the care planning for patients with other health conditions.

(22) Create standardized basic research on factors that drive the engagement, use and effectiveness of EAPs for response to workplace mental health and addictions issues of workers.

(23) Examine the best practices at Canadian companies with EAPs that have resulted in high utilization of EAPs by the employee workforce. Can these success factors be isolated and shared with other businesses?

(24) Test the effectiveness of telehealth treatment for mental health in the workplace issues, to include controlled between group comparisons of traditional in-person patient counselor contact models versus telephonic and Internet based treatment service.

The topics that require long-term research studies to close the gaps in the knowledge of efficacy factors for mental health in the workplace are listed below:

(25) Conduct longitudinal prospective controlled studies (quasi-experimental or experimental) that assess mental health workplace interventions on both clinical outcomes and workplace economic outcomes.

(26) Examine the factors related to why workplace mental health issues are under-identified and also under-treated. There is a need for a more qualitative study of the process of seeking care for mental health issues among working populations. Why do so few people use care? Why do they relapse? How are workplace service delivery models linked to community psychological services? What can employers do to raise awareness and improve access to mental health care for their employees?

(27) Studies that can offer greater understanding of the complicated and poorly integrated mental health delivery system model in Canada and role of employer benefit design and employer-provide services.

These 27 gaps identified by the Gap Analysis offer a road map for future investigations into the counts, costs, causes and cures of workplace mental health.

4.4 Gaps in Knowledge: Recommendations for Short-term Research Studies

The gaps in knowledge noted in the last section represent many opportunities for further study. To help organize this list of topics, we have proposed a number of research studies that can be considered for ways to create knowledge to fill in these short-term gaps. The seven studies are noted in Table 2.

Table 2

Gaps In Knowledge About Workplace Mental Health: Short-Term Research Recommendations

- Expert Panel on Workplace Mental Health Measurement Tools
- National Survey Study of Canadian Employers
- National Survey Study of Employees in Canada
- Disability Insurance Providers Integrated Dataset Study of Costs and Best Practices
- EAP Best Practices Study of Canadian Employers
- Physician Primary Care Study of Best Practices in Workplace Mental Health
- Intervention Modality Effectiveness Study for Workplace Mental Health

Short-Term Study 1: Expert Panel on Workplace Mental Health Measurement Tools

Method: Create national panel of experts from science and business communities to examine current options, set criteria for success, and then make recommendations (with a 'seal of approval') for the following:

- Develop an integrated bio-psycho-social model for defining and treating mental health disorders in the workplace. (GAP 16)
- Definitions for standards for sharing health and disability claims and other archival administrative data from many Canadian companies to study the contextual variations in the general association between mental health workplace problems and impaired work capacity of employees. (GAP 10)
- Selection of specific self-report measurement tools to use to assess within-person risk factors and outcomes and also to measure within-work risk factors that describe the workplace. (GAP 11)
- Create a conceptual model and practical methodology for employers to use to measure the business case for mental health in the workplace. (GAP 12)

Short-term Study 2: National Survey Study of Employers in Canada

Method: Survey

Design: Cross-sectional

Sample: Include employers of different sizes and geographic locations throughout Canada

- Measure level of offering and use of various workplace-based prevention, intervention and disability programs and services for workplace mental health issues. (GAP 2, 17, 18)
- Measure level of stigma and discrimination of workers with mental illness and addictions. (GAP 3)
- Capture general company level rates of employee absence, turnover, productivity, job safety. (GAP 1)

Short-term Study 3: National Survey Study of Employees in Canada

Method: Survey

Design: Cross-sectional

Sample: Include random samples of employees from employers of different sizes and geographic locations throughout Canada

- Assess the prevalence and co-occurrence of various mental health and alcohol/drug disorders and their association with person factors (family anchorage, demographics, job grade, job type), work factors (workplace culture factor), and societal factors (work-life, time pressures) and with employee work performance outcomes (absence, productivity, turnover), use of workplace-based services (EAP, Work-Life, etc), use of health system services for mental and physical health care and related costs of care paid by employees. (GAP 1, 15, 17)

Short-term Study 4: Disability Insurance Providers Integrated Dataset Study of Costs and Best Practices

Method: Collect archival claims data and recode as necessary to aggregate data to compare across companies

Design: Cross-sectional

Sample: Pooled administrative data from several large disability insurance companies in Canada to represent range of employer sizes and locations

- Document across a range of many employers the financial impact of mental health and addiction disorders in STD and LTD disability claims. (GAP 8)

- Examine the differences between disability and return to work initiatives on costs and effectiveness that would improve the speed of return to work associated with variations in company and government policies for disability. (GAP 9)

Short-term Study 5: EAP Best Practices Study of Canadian Employers

Method: Qualitative interviews with EAPs and then a Survey for each company

Design: Cross-Sectional

Sample: Include employers of different sizes and locations in Canada who are nominated by several employee assistance providers as having high use of EAP services and best-practices for creating a healthy workplace

- Identify at the employer level, the kinds of workplace practices and company culture factors that drive greater employee engagement, use and effectiveness of EAPs, Work-Life and related health care services that identify and treat workplace mental illness and addictions issues of workers. (GAP 17, 18, 23)

Short-term Study 6: Physician Primary Care Study of Best Practices in Workplace Mental Health

Method: Introduce standard screening and workplace function measures into physician practices for use with ongoing patient care

Design: Quasi-experimental with Comparison Groups of Clinics or Practices. Compare groups over time in patient clinical outcome measures in claims data.

Sample: To be determined

- Study the impact of integrating into primary care doctor contact opportunities in traditional health care system the standard use of mental health and addictions brief screening tools and referrals to psychological or psychiatric providers who are experienced in these areas. Include in this the assessment of work outcome functioning – absence and productivity impact of health. (GAP 20)

- Develop and test the effectiveness of training techniques for educating the medical provider community on the importance of determining if mental health and addictions are possible co-morbidity factors that affect the care planning for patients with other health conditions. (GAP 21)

Short-term Study 7: Intervention Modality Effectiveness Study for Workplace Mental Health

Method: Introduce standard screening and workplace function measures into physician practices for use with ongoing patient care

Design: Prospective Longitudinal Test with Quasi-experimental Design with Comparison Groups of Workers with care serviced delivered from In-person, Phone-based or Internet-based Modalties

Sample: To be determined from EAP and Mental Health provider community and employer clients in Canada

- Test the effectiveness of telehealth treatment for mental health issues in the workplace, to include controlled between group comparisons of traditional in-person patient counselor contact models versus telephonic and Internet based treatment services (GAP 24)

4.5 Gaps in Knowledge: Recommendations for Long-term Research Studies

The long-term gaps in knowledge also offer many opportunities for further study. We have proposed several research studies that can be considered for ways to create knowledge to fill in these long-term gaps. Some the studies can address several of the specific gaps. The studies are noted in Table 3 and each is described in more detail below.

Table 3

Gaps In Knowledge About Workplace Mental Health: Long-Term Research Recommendations

- Future Waves of Canadian National Community Health Surveys
- Follow-up on Employee Study of Those with Workplace Mental Health Disorders
- Follow-up on Employer Best Practices Study to Create Quasi-Experimental Tests of Interventions for Employers
- Follow-up on Primary Care Studies
- New Quasi-Experimental Tests of Interventions for Employers
- Overcoming Stigma and Encouraging Use of Mental Health Workplace Services
- Build a National Data Warehouse for Workplace Mental Health

Future Waves of Canadian National Community Health Surveys

- Continue future data collection waves of already established national panel community interview surveys of health that include mental health and alcohol/drug prevalence assessments. But add to the survey, items that assess workplace functioning and human capital performance measures (days absent, presenteeism, disability days, job loss). Stigma and related discrimination issues should be added to the survey. Use recommendations from Expert Panel on Measurement on the most appropriate measures to use in the study. (GAP 5)

Follow-up on Employee Study of Those with Workplace Mental Health Disorders

- Conduct longitudinal follow-up research on employees in the short-term gap cross-sectional studies who had high enough level of need for mental health care. Test for change in outcomes over time for those with mental health and addiction disorders who used treatment services versus those employees who do not. (GAP 4)

Follow-up on Employer Best Practices Study to Create Quasi-Experimental Tests of Interventions for Employers

- Conduct longitudinal follow-up research on the nature of workplace culture, management style, workplace social relations and other work-factors as they contribute to employee mental health, overall workforce health and company profitability and financial business success measures. Use recommendations from Expert Panel on Measurement for the best measures to include in the study. (GAP 19).

Follow-up on Primary Care Studies

- Follow-up studies on employer best practices and on primary care provider mental health enhanced service model studies. The information to be used for making changes in the mental health delivery system model in Canada and the role of employer benefit design and employer-provide services. Include role of physician reimbursement for mental health. (GAP 14, 27)

New Quasi-Experimental Tests of Interventions for Employers

- Conduct longitudinal prospective controlled studies (quasi-experimental or experimental) that assess mental health workplace interventions on both clinical outcomes and workplace economic outcomes of employees. Use recommendations from Expert Panel on Measurement for which measures are best for the study. (GAP 25)

Overcoming Stigma and Encouraging Use of Mental Health Workplace Services

- Replicate key components from past research on anti-stigma intervention to Canadian workplaces and communities for long-term prevention aspects of mental health. Use learning from short-term gap studies of stigma factors to customize interventions that will be effective for Canadian workers. (GAP 7, 26)

Build a National Data Warehouse for Workplace Mental Health

- Develop an integrated database with standardized data on mental health disability and physical health disability cases at national level in Canada. Use recommendations from Expert Panel on Measurement to establish methods for ongoing collection of information on the cost burden associated with all direct and indirect aspects of mental health and addictions in Canada. Store this information in integrated data warehouse. (GAP 6, 13)

4.6 Gaps in Knowledge Making Tools and Technology

In addition to gaps in knowledge that merit research attention, there are also some practical issues that need to be considered that pertain to removing roadblocks to performing the proposed research in mental health in the workplace. One set of issues is primarily technical and involves collecting, integrating and analyzing data. There is a dire need for systematic data collection of administrative utilization and cost data, measurement tools and related methodologies for routine assessment of workplace performance outcomes, and for the ability to store, access and analyze data from multiple sources in a data warehouse environment. The other primary issue is one of leadership in businesses that is needed to make research on workplace mental health issues of great enough importance to overcome some of "reality factors" that can limit the opportunity for conducting high-quality research on these issues.

4.6.1 Aggregating Administrative Claims Data

> *"Canada currently has no national picture of the status of mental health across the country. That is, we lack a national information base on the prevalence of mental illness and addiction in all their diverse forms. We also lack the information system required to measure the mental health status of Canadians and to evaluate policies, programs and services in the fields of mental health, mental illness and addiction."*
>
> (*OUT OF THE SHADOWS*, 2006, Report 1, p. 266)

This quote aptly describes a basic gap in our understanding of mental health disorders and in being able to track the progress of changes in the prevention and treatment of these problems. Canada simply needs more prevalence data and other related forms of utilization and outcome data to better understand the nature of the problems and how to best advance policy and procedures to improve the situation. Three of these data issues are now described.

The primary data source most relevant for tracking health care costs are insurance claims records. Yet, the claims data system was designed to pay health care bills and is simply not well suited to evaluation purposes. The problem is that most of the records are stored in transactional databases and aggregated in a benefit-centric approach that organizes the claims around the kind of benefit, the place of clinical service (ER, MD office, hospital, etc.), or the type of medical diagnosis. When evaluating the impact of these kinds of programs, the data often needs to be organized at the person or patient-centric level in order to compare program participants and non-participants. Even more basic, though, is the need for events and experiences in the care of people with mental health needs to be recorded in a consistent manner all over Canada.

However, there may be a Canadian advantage in having nationalized health care and data systems that are more commonly shared across the different providers. One suggestion is for a task force to be set up to specifically examine the opportunities in the Canadian health care system and the mental health provider services areas across Canada to determine the level of common data coding and categorization that is already in place and what could be done in the new near future to expedite better use of claims and other administrative data. Better use of existing data collection practices can have fairly immediate payoffs for better use of larger datasets for conducting population health research studies that describe and compare the prevalence and course of care for mental health and related physical health conditions. Comparable data is also needed to test for the efficacy of

improved clinical management and prevention programs because these experiences will need to be compared over time with data from earlier periods before the interventions or clinical program changes were made.

4.6.2 Self-Report Measures

The evaluation of workplace outcomes also faces challenges in the availability and comparability of employer data on the absence and productivity of the workforce. The first issue is a general lack of workplace performance data to even analyze. Less than a third of U.S. businesses routinely measure workplace outcomes (productivity and absenteeism) in enough detail to be able to accurately study the data (IBI, 2002). The extent of routine data collection on workplace performance outcome factors among Canadian employers is not known yet. This simple question is a good topic for a short-term research project.

The lack of useful company administrative records of workplace outcome data has necessitated a shift toward self-report measures. Fortunately, the validity of some self-report measures in this area is now supported by empirical research. For example, a recent study of over 5,000 employees found that self-report measures of work limitations (based on a 15 minute survey assessed retrospectively, concurrently or prospectively), were correlated with company administrative data on adverse events in terms of absenteeism hours, workers compensation claims, STD claims, group health claims dollars and pharmacy claims dollars (Allen & Bunn, 2003).

A number of published, validated survey tools of health and work factors are now in the public domain (see review in Goetzel et al, 2004). Many of these instruments are profiled in the 2004 "Platinum Book" by IHPM. One of the most popular tools is the *Health and Work Performance Questionnaire* (see Appendix C – www.HPQ.org), developed by the WHO and Dr. Ron Kessler of Harvard University and based on normative data from over 200,000 respondents around the world. This measure is already used in several major research studies already reviewed in this report. Replication of past studies using the HPQ could be done in Canadian companies to help establish the cost burden of mental health (and physical health) problems and build the case for improved health care interventions. The repeated use over time of such measures can then serve as an outcome study because the company can test for changes over time in the health care and workplace outcome areas.

4.6.3 Data Management and Data Warehousing

One effective approach for improving the understanding of health care impact is for employers to invest in aggregating their health care administrative data into a common data storage and analysis environment with standardization coding processes applied to the data to allow for accurate comparisons. This move to "data warehousing" is expensive but has become more popular in recent years among large employers. Research on health care claims cost trends also shows that the employers who have such data integration services and other measurement practices tend to have lower annual increases in the overall health care costs (See Appendix C – Watson Wyatt Worldwide/National Business Group on Health Survey, 2006). Future CIHR initiatives on mental health in the workplace that involve multiple employers as partners will likely need some form of data aggregation and warehousing services to create and maintain the information required for conducting the research.

A practical suggestion is that a group of Canadian businesses could form a research data collective and jointly purchase and use a data warehouse to understand and track all health care and workplace performance metrics. Similar efforts have already been done in the United States with the HERO group and with the National Data Cooperative from Watson Wyatt. Perhaps in Canada, it would be wise to have a trusted national agency that excels in variables definition, surveying and confidentiality, like Statistics Canada, be given the mandate to direct a workplace mental health data warehouse service.

4.6.4 Research Rigor in the Real World

A final issue is that applied research on workplace programs and services that are designed to improve workplace mental health outcomes often suffers from inherent limitations imposed by the business settings in which the programs are implemented (Pelletier, 2005). The manner in which the program is set up often is inappropriate for a scientifically valid test of its impact. Many programs are offered to all covered employees as part of a broader constellation of benefit services. Thus, the study context lacks a control group or even a matched comparison group, which makes it difficult to test for the unique causal role of the program versus other factors. The other problematic research design issue is the instability of the business context. From a longitudinal perspective, there are frequent changes to employee benefits design and to company and vendor computer systems that can render data from one period incomparable to that from other periods. It is often up to company leadership to place a priority on participating in research to create a stable benefits environment that will allow for more rigorous kinds of research study designs to be used in assessments of the prevention and intervention programs.

4.7 Gaps in Knowledge Transfer and Sharing What is Known

The sources of research and data and reports relevant to workplace mental health are many and they are dispersed in many different places. As there does exist a good body of evidence already on what is known in this area, it becomes important to share the information and to create knowledge transfer opportunities. This need for greater dissemination of research- based knowledge was described in detail in the 2004 and 2006 reports by the Standing Senate Committee on Social Affairs, Science and Technology, and by also by the CIHR 2004 special committee on mental health in the workplace (Neufeldt, 2004).

One area than can lead to knowledge transfer is for greater contact and collaboration between researchers, clinicians, and business leaders involved in this area of work. The recent conferences and meetings of the various organizations noted in Part 2 should be continued and expanded. There is also the opportunity for more national coordination of these kinds of meetings from the mandate to the 2007 Canadian National Mental Health Commission.

There are already some organizations within the government, science and the business community that have a mission to educate and inform the public and employers on mental health issues. We can help share what is known today and what will be known soon from the next set of research projects with the general public. The websites, magazines, reports and workplace meetings provided by these organizations must be continued and expanded. (See Appendix B – Resources.)

The research that has been done so far on knowledge transfer has show that there are different cultures between the providers/clinicians, the researchers/academics and the employers. Thus, there is the need to reframe mental health research results and clinical experiences in terms that workplace understands and can relate to. For example, the recent advances in measuring workplace performance outcomes and costs of care in addition to clinical symptom outcomes has helped tremendously in creating greater awareness and understanding of mental health needs in the workplace.

To have successful transfer of knowledge to other audiences is not an easy task and there remains an area of research in and of itself to study the most effective methods for conducting knowledge transfer activities. Neufeldt (2004) offers the following conceptual framework for this issue (making employers understand and

take action around the mental health needs of its workforce). Information on workplace mental health can be organized into three concept areas. The *first* is employer-led research initiatives that focus on *prevention and mental health promotion at the workplace*. Examples include programs that address workplace stressors that contribute to employee mental illness conditions: workplace management policies, long work hours, time pressure, restructuring, job control, job insecurity, and so on. The *second* area is employee-focused research initiatives and *interventions for employees* with mental health problems that are sponsored or supported by employers. Examples of these include EAP, stress management programs, return to work accommodations and work placement support. The *third* area are *community-based* resources, such as mental health related services that help employees stay on the job and work well. These kinds of services are found in the larger mental health outpatient client system and in programs that feature integration of mental and medical provider as well as disability management programs. Examples include STD and LTD insurance programs, comparisons of integrated case management vs. standard mental health system treatments, assertive community-based treatment, and supported employment for return to work. The value in organizing the knowledge into these conceptual areas may make it easier for non-researchers and those in business to understand the importance of the information.

4.8 Summary

This section on the Gap Analysis presented the methodology for the analysis and the results organized by short- and long-term agenda topics for each of the four major areas of interest for workplace mental health. Also discussed were gaps in the tools and technology needed to enact these research projects and for sharing the knowledge with others.

Part 5 – Conclusions

This project was intended to synthesize the best research available in North America to take stock of what is known today and to identify gaps in knowledge. The results of the Gap Analysis are offered to the scientific community for consideration in planning future research in this important area. Another objective of this paper was to suggest ways that employers can use this knowledge to take action to improve the mental health of their workers and to also participate in creating new knowledge through their funding of and participation in workplace mental health research. Before we discuss the implications of these project findings for researchers and for business, a brief recap of the information presented in this document follows.

5.1 Review

Part 2 of this paper presented the social context for the growing interest in workplace mental health from the business, government and science sectors in Canada and in the United States. This review indicates that the past ten years has witnessed increased acceptance and understanding of mental health issues and how they are critical to employee health and to business success. Both countries have active business organizations devoted this issue. Both countries have advanced national commissions on mental health. Both countries have contributed significant federal scientific agencies that conduct research on mental health issues. There are also university-based research centres that focus on mental health problems. There are many parallels between Canada and the United States in how the two countries are responding to the challenge of mental health in the workplace.

Appendix E of the paper presents the results of the research literature review. It organized the research on mental health in the workplace into four general areas. The epidemiological research data shows that mental health conditions are commonly experienced among working age populations and yet, for a variety of reasons, there is widespread lack of use of available services for mental health issues. The economic aspects of workplace mental health show that these disorders have high costs to society and to employers, both in direct costs of care and in direct workplace performance losses. The etiology section reviewed studies that show a complex set of causal factors for mental health disorders. Of most interest are the many studies that indicate how the workplace itself can contribute to mental health problems among workers. The section on efficacy factors presented the findings from many studies showing that individual oriented mental health treatments are both clinically and cost-effective. Workplace-based prevention and treatment programs for mental health and alcohol also have general support for their effectiveness. What is known from all of this research is that mental health disorders are commonly experienced among working populations; most people with these disorders do not get proper care soon enough or from the most qualified providers; that untreated mental health problems create enormous costs to the patient, to the employer, and to society; that effective prevention and treatment interventions are available; that there is a financial payoff or ROI for providing these kinds of services for mental health workplace problems.

In Part 4, the methodology and the results of the Gaps Analysis were presented. The focus of the analysis was on sorting the many possible topics for further investigation into those that are of the most importance that can be studied in a relatively short period of time (a year or two) and those of import that will require a more long-term effort. Over two-dozen gaps were identified that spanned the four major themes in the literature review. We suggested seven short-term research projects and seven long-term research projects to address these gaps.

5.2 Implications for Research

The literature review and gap analysis from this report have many implications for researchers in Canada. The first contribution is the identification of what is already known and what is not known that well yet. The gaps in knowledge revealed in our analysis can serve as a general guide for setting a national health care research agenda for future studies that address mental health issues in the workplace. This report also provides direction for setting a pragmatic path for the timing of different future research initiatives through grouping topics into those with a short-term opportunity and those with a longer course.

The short-term gap topics were selected both for their importance to understanding the problem and for their potential for quick results that build upon the success of past studies. These kinds of research studies can be completed within a year or two. Such a short time frame can help get the participation and collaboration of businesses and other applied research partners. They are also topics that are likely to have results that are meaningful and easily able to be interpreted for action. They are based on valid measures and proven methodologies used in solid (but only a few) prior research projects.

The long-term gaps concern topics that are also important to advancing an understanding of mental health in the workplace but which require more complicated research designs or address the need to create more sophisticated kinds of research infrastructure tools. Many of these longer-term gap studies will need the collaboration of different groups of researchers and government agencies and clinical provider groups, as well as the participation of many employees and companies as study participants. Thus, the need for secure long-term budgets and the presence of stable research project management teams over several years is important.

Canada – United States Research Collaboration. A final suggestion for researchers from this report is a closer relationship between research teams, scientific organizations and academic centres in the Canada and the United States who are concerned with mental health in the workplace. This is a first step for the U.S. and Canada to work more closely together. And the opportunities for collaboration are many. Although there are more similarities than differences, a few of the key distinctions between the two countries in their research on workplace mental health are worth mentioning. Canadian researchers have tended to emphasize the workplace factors that drive mental health issues more so than Americans have. These workplace factor areas represent the heart of workplace mental health issues as they address how social and structural dynamics the workplace can affect employees and their performance. Canadian researchers also have a practical advantage in conducting future studies through greater use of standardized administrative data residing in the nationalized health care system.

There are also some kinds of workplace mental health studies that have been done more often in the United States than in Canada. These include the use of worker productivity measures from employer records, use of self-report measures of employee presenteeism, use of Disability Adjusted Life Years measurement procedures for estimating cost burden, and the use of integrated data warehouse studies with claims data for medical, pharmacy, mental health services and workplace performance data. Most EAP and Work-Life program participant outcome studies have been done with United States based providers and companies. Many of the initial studies on cost burden, cost effectiveness and cost benefit ROI for mental health services have been done in the United States, but recently there have been some good examples of work in these economic areas by Canadian researchers (Brun & Lamarche, 2006; Gnam et al., 2006). Both countries have been successful in conducting large-scale national community-based interview studies of the general working age population on health care and mental health, with these studies being repeated over time. These kinds of national projects need to be continued and enhanced with more specific measurement of workplace contextual factors and employee absence and productivity indicators.

Some of the most fruitful North American partnerships could center upon the creation of a joint Canada-United States panel of research experts in the area of mental health in the workplace. One project for such a group could be to bring together existing measurement tools, and the analytic procedures for using them, to form a standard set of research measures. A set of "approved" measures could be used by researchers and businesses in both countries, to foster the rapid development of applied benchmarks of the core aspects of mental health risk factors and workplace outcomes. For example, measures could be grouped for those that have clinical and diagnostic application (for example a brief screening questionnaire for depression and alcohol misuse), workplace culture assessments, health care condition history and use of health care services, employee workplace performance indicators (absence, presenteeism), and so on.

A related task for such a group is to collaborate with a small group of business leaders and together come up an approved methodology for assigning dollar value to clinical and workplace outcomes from studies of workplace mental health (and by extension for physical health as well). Dr. Kessler at Harvard University is presently leading an effort in this direction. Although there is sufficient research evidence for "making the business" case for mental health in the workplace, there is confusion among those in business and the health care consulting community on just how to complete the findings of an ROI analysis to assign value in dollars to a day of missed work, an hour of on-the-job productivity, employee turnover, and disability days. There already exist various approaches to these measurement questions. So now it is more an issue of adopting an industry standard for how to interpret the outcomes data and how to best convert clinical and work outcomes into business value outcomes that can be adapted to different kinds of jobs and industries. Research leadership on this measurement issue is needed for measurement and definition of key elements of the business case. This is not just an academic issue as many employers who are new to recognizing the role of mental health as a driver of business success will need data translation methodologies that they can trust.

Researchers also will need to be compensated and valued not just for creating new knowledge from their original research or review of studies but also for their activities that support the associated task of translating research into words and concepts more understandable by those not trained in science. It may be that multi-disciplinary teams of researchers and communication specialists need to be formed and funded in order to facilitate this kind of communication production about the research.

5.3 Implications for Business

The significance of mental health in the workplace is becoming apparent to more and more business leaders. Employers can take several actions now to help share what is already known about mental health in the workplace and they can also contribute to new research that fills in the gaps of what we don't know.

Prevention and Education. The simplest course of action is to just recognize the problem. Employers can do a lot to champion the importance of positive mental health to their company. This can be done in many ways, such as offering more prevention oriented educational programs and services. It can also be done with visible leadership and line management participation in health management and wellness activities associated with the worksite. Employers can partner with the many government, science and business organizations in Canada who offer up to date information on mental health for employees and their families as well as for supervisors and managers in order to better prepare them for working more effectively with others who may need help for mental health issues.

Mental Health Services. Employers can also offer increased access to mental health and substance abuse services through an integrated EAP that provides immediate assessment, counseling sessions and appropriate referrals to other needed services. Employers can also ask for increased collaboration between disability insurance providers and mental health and workplace EAP providers to offer psychosocial assessments for all disability cases in order to find the co-morbid mental health problems that can be missed by more medical approaches to case management. Employers can also ask how the medical providers in the medical care system and more local community health care systems can do a better job of recognizing mental heath disorders among their patients who come to them with complaints of physical health problems and co-morbid health conditions.

Enhanced Data Collection. Employers can play a major role in advancing the science of workplace mental health by simply making it a company priority to collect better data on the extent and nature of mental health and physical health problems that are experienced by their employees and to also collect data on a regular basis on the workplace performance of employees. This kind of data collection greatly helps all parties in the situation as it can be used for conducting a needs assessment to determine the priority of health issues and prevention and intervention programs needed. It can also be used to help identify and steer workers into health management programs that can assist them in getting back to a more productive level of personal health. It can also be used to evaluate the effectiveness of intervention programs year over year when comparing current year costs and use figures against past year's data or against other benchmarks available from others using the same measures.

Reporting and Benchmarking. One of the features that turns data into information and information into knowledge is the ability to compare data to a meaningful standard or benchmark. As more employers share in the use of aggregated and standardized methods for creating and storing health care data, the more useful this kind of administrative data becomes. When enough data on the prevalence and costs of mental health care become available, then employers can make much more sense of the real impact that mental health is having on their company bottom line. It can also help to provide a level playing field for employers to evaluate different health and disability service providers, workplace health programs and specialty service providers (such as EAP). Indeed, a 2006 study by Watson Wyatt of over 500 large employers, found that the companies who were most active in using data to understand their health care and benefits experience tended to spend less on overall healthcare over a two-year period than their peers who were less inclined to use empirical data to study their business' health care context.

Participation in Research. By definition, the area of mental health in the workplace requires the participation and collaboration of those in the workplace to be able to conduct research studies. When employers become actively involved in a research study, it not only makes the project possible it also creates a dynamic context in which the researchers and business team can learn from each other as the study progresses. When a business gets involved in a research study, they become a leader in their field through their first hand knowledge of factors that are genuine and real as they come from their own workforce experience. The contextual experience and knowledge of the workplace and of the workforce that an employer has can also be of great value to the research in developing an appropriate intervention or study design and to just interpreting the findings of the study and making conclusions that have practical utility for other employers.

The five areas noted above are general opportunities for employers to get more involved in this area. A more specific path to follow for businesses is presented in the 2006 Business and Economic Plan for Mental Health and Productivity, prepared by the Global Business and Economic Roundtable on Addiction and Mental Health (2006). This comprehensive report offers a comprehensive multi-step plan that provides

specific recommendations for employers. The plan is grounded in the research on workplace mental health but is presented the straightforward language of business.

5.4 Final Comments

Mental health disorders and alcohol issues are a hidden problem in most organizations, but one that nonetheless creates immense problems for the individual employees with these conditions and also for the company as a whole. There is now a substantial research literature base that informs this important social problem. We now know that mental health disorders are common among working age populations. Most of the people with mental illness are not diagnosed and are not treated appropriately. The result of this combination of a high rate of occurrence and a low rate of use of treatment results in cost burdens in the billions of dollars to the Canadian economy. Mental health disorders are more costly than many physical health conditions when considering all of the workplace and health care costs. These kinds of disorders are caused or exacerbated by many factors, including those within the person, the worksite and larger societal issues. Fortunately, most individual and workplace-based interventions for mental health are effective at reducing clinical symptoms and returning employees to a higher level of work function. Perhaps most important to businesses is that workplace mental health prevention and intervention programs are also cost-effective.

While the past decade has produced hundreds of studies in this area, there are still so many additional questions. What we do not know about workplace mental health disorders is much more than what is known. This report identified and prioritized these gaps in our knowledge into a couple dozen of the most important short- and long-term research projects. The next step is to further refine this list into a national research agenda for Canada - a task called for by the newly enacted national commission on mental health in 2007. It is also important to note the opportunities for closer collaboration with the United States on some of these research and applied business action projects that are of mutual interest.

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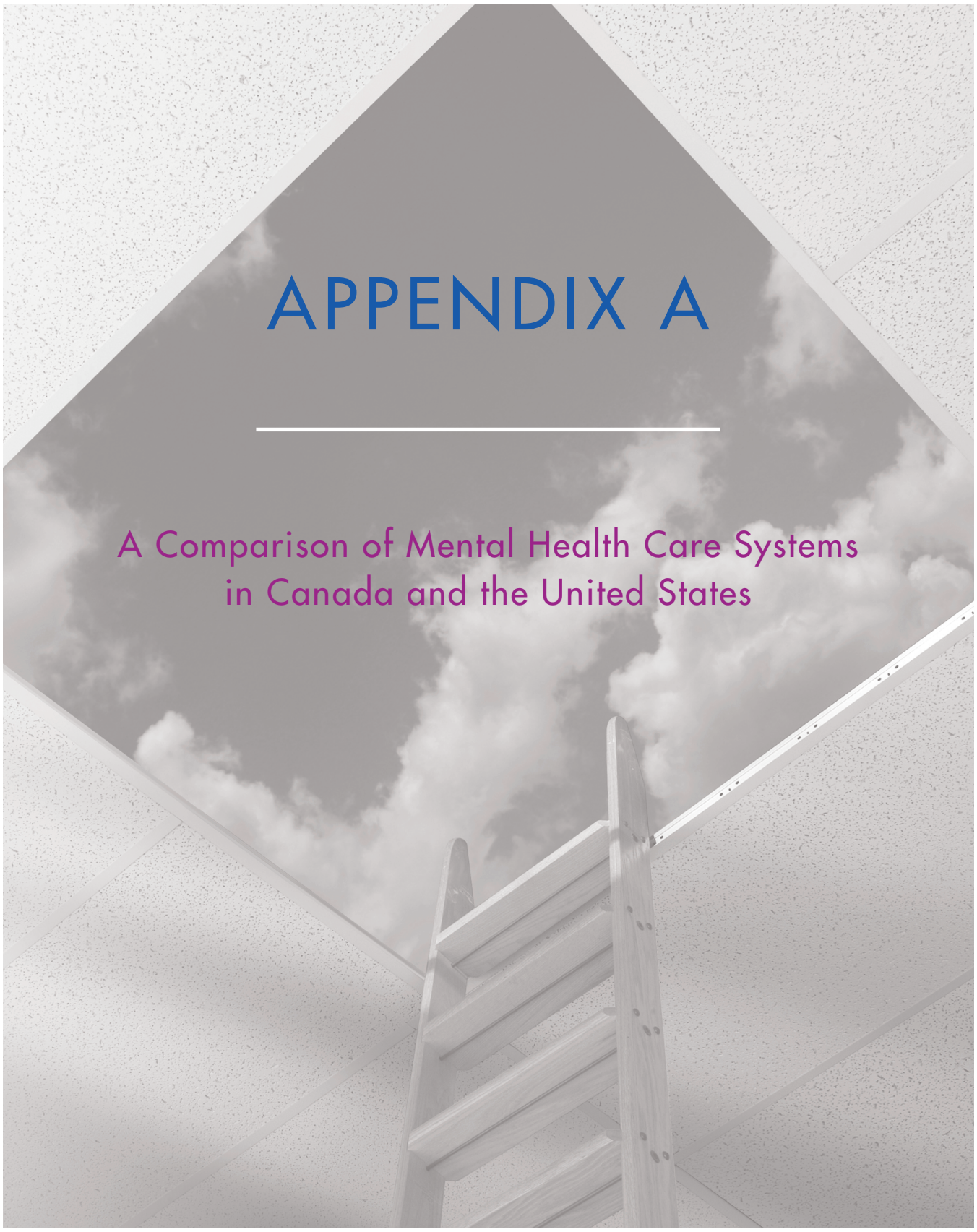
APPENDICES



APPENDIX A

A Comparison of Mental Health Care Systems in Canada and the United States

Appendix A – A Comparison of Mental Health Care Systems in Canada and the United States

Comparison of Canadian and United States Mental Health Systems

The second report in 2004 on mental health from the Standing Senate Committee On Social Affairs, Science And Technology, provides a detailed account of the Canadian mental health care system also information on the mental care health systems of four other similar countries (Australia, New Zealand, England and the United States). Vasiliadis and colleagues (2007) also provide a review of the Canadian and United States mental health care systems. Much of the information for the comparisons made in this section comes from these reports.

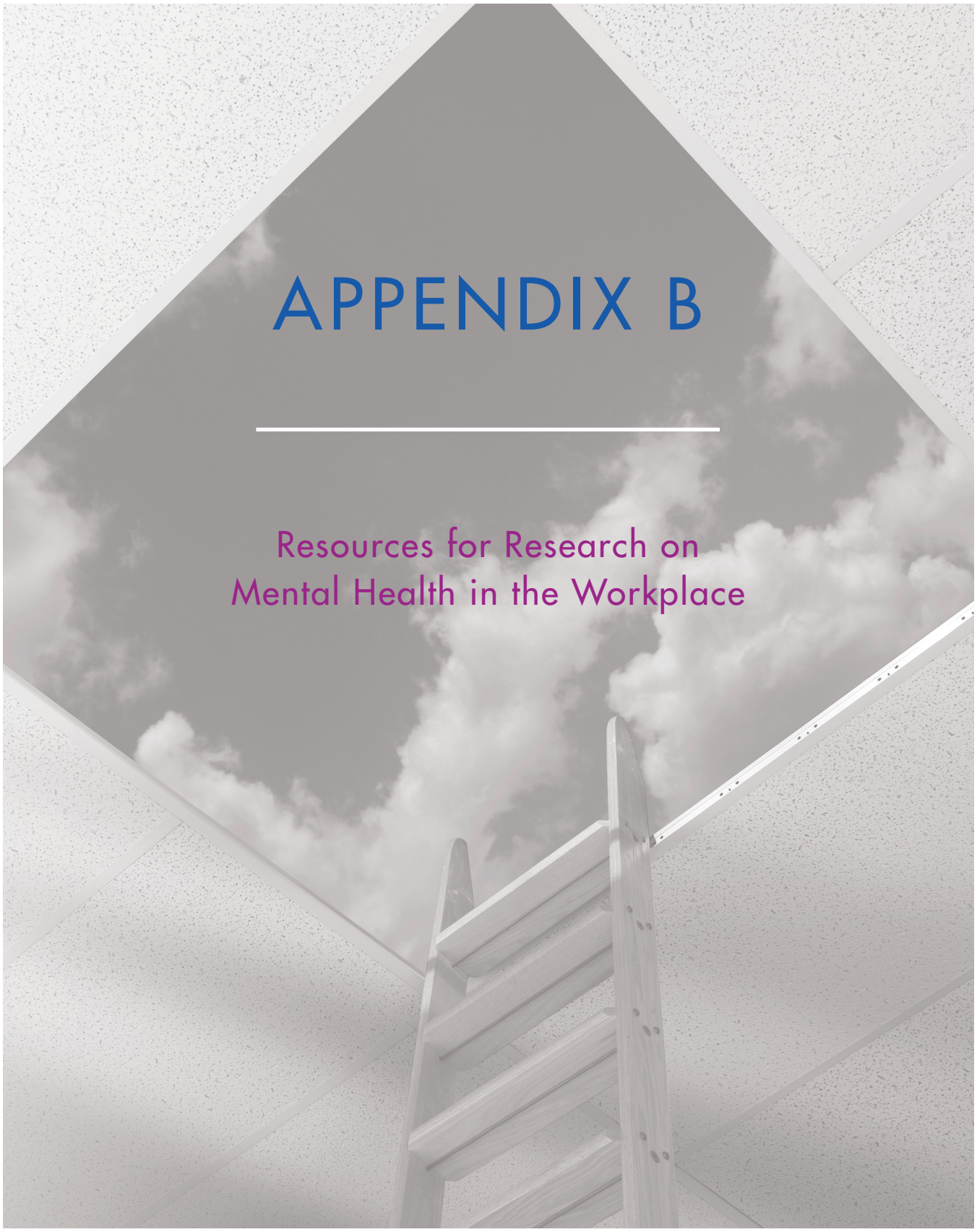
Canada's Mental Health Care System

The Canadian government funds mental health care only for services provided in hospitals and by physicians. The actual mix of spending on mental health care services is not well documented for how much comes from the federal government, from various private insurers (often paid by employers) or from out-of-pocket costs paid by patients. The system of care is comprised of a diverse array of services and supports for individuals with mental illness and addiction that are fragmented among many separate agencies and many access points. The mental health system is largely independent from the medical health care system. Addiction treatment services tend be provided without much integration with either the mental or medical health systems. The current mental health services system still reflects to a large extent an hospital and provider-driven philosophy of care. The current mental health services system is under resourced and is thus not comprehensive enough to provide the continuum of services and supports needed. Compared to other health areas, mental health services have been under-funded. This has lead in part to a shortage of qualified providers of mental health care workers. There is also a lack of comprehensive data tracking and effectiveness monitoring of the mental health care system at the national level.

United States' Mental Health System

The American health care system is unique in the extent to which it relies on the private sector both to provide health care coverage and deliver health services. Private sources account for about half of health care financing, made up of private health care insurance (33%), out-of-pocket payments made by individuals under both public and private plans (17%), and other sources (5%). The majority of Americans receive their private insurance coverage through employer-sponsored plans.The federal government contributes approximately 33% of total health care spending, with state and local governments paying the remaining 12%. The national government runs the Medicare program, which provides health care insurance for the elderly. Jointly with the states, the federal government finances Medicaid for the poor and the State Children's Health Insurance Program (SCHIP) for children. Overall, public health care insurance covers about one in four people in United States. Many people in the United States have no health insurance care coverage (estimated at over 40 million people). Mental disorders and mental health problems in the United States are treated by a variety of caregivers who work in diverse, relatively independent, and loosely coordinated facilities and services—both public and private – to form a patchwork kind of health service system. These programs exist at every level of government and throughout the private sector and have varying missions, settings, and financing. About 15 percent of all adults and 21 percent of United States children and adolescents use services in some part of this system each year.

There are significant differences in the national approaches to medical health care between the two countries, with Canada having a universal single payer medical model that is tax funded and the United States having a complicated private payer system in which employers pay for most the heath care from a bewildering mix of private insurance arrangements. There are also considerable differences in how medications are paid for between the plans in the two countries. In contrast, the two countries are somewhat similar in the funding arrangements for mental health care of working adults. Both countries do pay for mental health care and the associated psychiatric medications when provided by the members of the medical community and yet much of the psychological services performed outside of the medical clinic is either limited in the number of contact sessions that is paid by private insurance or is paid entirely by the employee.



APPENDIX B

Resources for Research on Mental Health in the Workplace

APPENDIX B – Resources for Research on Mental Health in the Workplace

This is a list of resources from Canada and other countries that are relevant to conducting applied research on mental health in the workplace. The listing offers a brief profile of select government agencies, business organizations, research centres/universities, and leading researchers.

B.1. Organizations (Canadian and U.S.)

B.2. Clinical Providers (Canadian)

B.3. Research Universities (Canadian)

B.4. Individual Researchers (Canadian and U.S.)

B.1. Organizations (Canadian and U.S.)

Association of Professional Executive of the Public Service of Canada

Country: Canada
Website: www.apex.gc.ca
Executive Director: Michel Smith

General: Association of Professional Executive of the Public Service of Canada (APEX) is the national association for federal public service executives, fosters excellence in leadership and is a strong advocate on behalf of executive interests. Created in 1984, the Association focuses on issues such as compensation, the work environment and public service management reform. It is a resource for employers concerned with enacting workplace change and creating a better working environment.

British Columbia Business and Economic Roundtable on Mental Health

Country: Canada
Website: www.bcmentalhealthworks.ca
Chairman: Lloyd Craig

General: The BC Business and Economic Roundtable on Mental Health is an alliance of people who think that:

- Workplaces should be mentally as well as physically healthy.
- Untreated mental illnesses are a cause of needless human suffering and a serious cost of productivity issue for business.

- We must eliminate the stigma that surrounds mental illnesses, in order that people suffering from them will more freely seek help, and,
- BC business leaders should be actively exploring how their companies can move these objectives forward in their own domains.

The BC Roundtable sponsors "Employers in Action" — a support network of public sector and private sector managers who are actively involved in changing their workplaces and creating programs to improve workplace mental health.

British Columbia Workplace Mental Health & Addictions Scientific Committee

Country: Canada
Website: www.bcmas.ca/research/workplace_sci_committee.htm
Chair: Dr. Elliott Goldner

General: The British Columbia Workplace Mental Health & Addiction Scientific Committee represents a collaboration of researchers/scientists (both in BC and other provinces) with expertise in the area of workplace mental health and addiction. The purpose of the committee is to coordinate and provide advice on the development, dissemination and exchange of workplace mental health and addiction research in BC, in partnership with the British Columbia Business and Economic Roundtable on Mental Health, and other key stakeholders in BC, other provinces, and at the national and international level.

Canadian Best Practices Portal for Health Promotion and Chronic Disease Prevention

Country: Canada
Website: www.cbpp-pcpe.phac-aspc.gc.ca
Leadership: The Public Health Agency of Canada

General: The Canadian Best Practices Portal for Health Promotion and Chronic Disease Prevention is a central and early component of The Canadian Best Practices System – a project of the Centre for Chronic Disease Prevention and Control (CCDPC) within the Public Health Agency of Canada (PHAC). This national system has evolved to address three purposes: To facilitate knowledge exchange about best practices among decision makers in research, policy development and practice, to build consensus about best practices approaches, provide a centralized access point for these approaches and coordinate activities to increase the uptake and utilization of best practices approaches. Basically the portal works to provide evidence based interventions for health issues such as best practice health interventions for mental health and the workplace.

Canadian Health Network

Country: Canada
Website: www.canadian-health-network.ca

General: The Canadian Health Network (CHN) is a national, bilingual health promotion program found on the Web. The CHN's goal is to help Canadians find the information they're looking for on how to stay healthy and prevent disease. This network of health information providers includes over 200 sources such as the Public Health Agency of Canada, Health Canada and national and provincial/territorial non-profit organizations, as well as universities, hospitals, libraries and community organizations. The Canadian Health Network is a collaborative effort by the federal government and some health organizations across Canada, is considered by many to be among the best in the world. It provides in-depth health promotion and disease prevention information to Canadians on 26 key health topics, including mental health and substance use/addiction.

Canadian Institute for Health Research (CIHR)

Country: Canada
Website: www.cihr-irsc.gc.ca
Scientific Director: Dr. Diane T. Finegood

General: CIHR is the Government of Canada's health research funding agency. It supports the work of up to 10,000 researchers and trainees in universities, teaching hospitals, and research institutes across Canada developing high-quality people, excellent science and training the next generation of health researchers by funding research that improves Canadians' health, health care system and quality of life among other things. For example, one project that is currently funded regarding mental health and the work place includes a grant to Dr. Alain Marchand (PI) at the University of Montreal titled: Developing better diagnosis, interventions and policies in occupational mental health: A multi-disciplinary approach.

Canadian Mental Health Association (CMHA)

Country: Canada
Website: www.cmha.ca
President: Judith Watson
Executive Director (BC division): Bev Gutray

General: CMHA is a nation-wide voluntary organization that promotes the mental health of all and supports people experiencing mental illness through many centres located across the country. This is done through information resources, educational events, direct services, research and advocacy, as well as the support provided to the many CMHA branches throughout Canada. In 2004, CMHA released a report titled: Navigating Workplace Disability Insurance: Helping People with Mental Illness Find the Way which details the workplace disability insurance system in British Columbia from the perspective of those who have experienced the system. The goal of the report is to make a complex system easier to understand for employees with mental illness and their employers. The 2006 Business and Economic Plan for Mental Health and

Productivity report was created for the Global Business and Economic Roundtable on Addiction and Mental Health.

Employee Assistance Society of North America (EASNA)

Country: Canada
Website: www.easna.org
President: Rich Paul

General: The Employee Assistance Society of North America is an association focused on advancing knowledge, research and best practices toward achieving healthy and productive workplaces. Comprised of thought leaders and change agents, EASNA is focused on ensuring that the EA field continues to grow and flourish by broadening its base of engaged and committed stakeholders. EASNA hosts an annual institute for professionals and researchers in the EAP field. EASNA also is a sponsor of the only peer-reviewed research journal in the EAP field, the Journal of Workplace Behavioral Health: Employee Assistance Practice and Research (formerly Employee Assistance Quarterly).

Fondation Travail et Santé Mentale

Country: Canada
Website: htwww.fondation-travailsantementale.qc.ca/

General: The purpose of the Fondation travail et santé mentale in Quebec is to promote mental health and prevent problems in the workplace. It is supported by leading Quebec academics like Dr Gaston Harnois (Montreal World Health Organization Collaborating Centre for Research and Training in Mental Health) and Université du Québec à Montréal, union leaders and community oriented business like Desjardins. It offers on-site training for managers for example.

Global Business and Economic Roundtable on Addiction and Mental Health

Country: Canada
Website: www.mentalhealthroundtable.ca
CEO: Bill Wilkerson

General: The Roundtable was formed in 1998. It is not a vehicle for fundraising or corporate advocacy. It is an instrument of information analysis and ideas concerning the linkage between business, the economy, mental health and work. The Roundtable consists of business, health and education leaders who have undersigned the proposition that mental health is a business and economic issue. The roundtable has produced several influential white papers on mental health in the workplace and it's importance to business and the global economy. Roundtable CEO Bill Wilkerson and co-author Dr. Edgardo Perez have been acknowledged by the World Federation for Mental Health for the "landmark" book "MINDSETS: Mental Health – The Ultimate Productivity Weapon" – now entering its second printing.

Institut de Recherche Robert-Sauvé en Santé et en Sécurité du Travail (IRSST)

Country: Canada
Website: www.irsst.qc.ca/en/home.html

General: Established in Québec since 1980, the Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST) is a scientific research organization known for the quality of its work and the expertise of its personnel. The Institute is a private, non-profit agency. Its board of directors is composed of an equal number of trade union and employers' representatives, making it a joint body. The Commission de la santé et de la sécurité du travail (CSST), the Quebec work compensation board provides most of the Institute's funding from the contributions it collects from employers. It has supported research on mental health in the workplace, and recently a review of its research mission on psychological health in the workplace.

Institute for Work & Health

Country: Canada
Website: www.ihwh.on.ca
President and Senior Scientist: Dr. Cameron Mustard

General: The Institute for Work & Health (IWH) is an independent, not-for-profit organization whose mission is to conduct and share research with workers, labour, employers, clinicians and policy-makers to promote, protect and improve the health of working people. The Institute maintains a strong research focus on factors that contribute to work-related soft-tissue illness, injury and disability. This breadth of research aims to inform both primary prevention efforts—programs, policies and initiatives to prevent work-related injury—and secondary prevention efforts—treatment and management programs to reduce disability and recurrence of work-related injury. In addition, IWH scientists examine the broader population-level work-health issues.

Mood Disorder Society of Canada

Country: Canada
Website: www.mooddisorderscanada.ca
National Executive Director: Phil Upshall

General: The Mood Disorders Society of Canada (MDSC) is a virtual not-for-profit organization that brings concerns, issues and understanding forward in public education, the setting of research priorities, the development of treatment strategies, and the creation of government programs and policies related to mental illness. It has a demonstrated track-record of project management and of working collaboratively across sectors to meet the needs of Canadians. The MDSC maintains an informative, user-friendly web site, which includes discussion boards and a chat room as well as information on diagnosis, treatment, medications, accessing community supports and services, and useful links and self-help resources.

Occupational Health and Safety Agency for Healthcare in British Columbia

Country: Canada
Website: www.ohsah.bc.ca
Chief Scientific and Medical Officer [interim]: Dr. Jaime Guzman

General: The Occupational Health and Safety Agency for Healthcare (OHSAH) in British Columbia is a provincial occupational health and safety agency for the healthcare sector. Our goal is to reduce workplace injuries and illness in healthcare workers and return injured workers back to the job quickly and safely. OHSAH-BC is jointly governed by employers and unions (bipartite), providing an innovative approach to improving workplace health and safety in the healthcare sector. A true strength of the Agency is the collaboration that occurs among these key stakeholders. We have programs and expertise in disability and disease prevention, occupational hygiene, ergonomics, occupational medicine, occupational psychology, education and training, and program evaluation. We also design, maintain, update, and provide analyses for the full range of occupational health indicators and initiatives, using the Workplace Health Indicator Tracking and Evaluation (WHITE™) Database, developed by OHSAH.

Ontario Healthy Workplace Coalition

Country: Canada
Website: www.thecu.ca/workplace/coalition.htm
Project Manager: Larry Hershfield

General: In March 2006, the Health Communication Unit at the University of Toronto organized a gathering to open discussion with workplace health stakeholders about this topic and to determine interest in forming a coalition. The well-attended gathering sparked much interest, and generated support to move ahead on planning for an independent, not-for-profit body. The purpose of the Ontario Healthy Workplace Coalition is to serve as a unifying structure across the province, helping to facilitate communication among workplace health stakeholders, coordinating resources to address duplication and gaps, and advocating for the importance of using a comprehensive approach to create healthy and safe workplaces in Ontario.

The American College of Occupational and Environmental Medicine (ACOEM) – Health and Productivity Management Center

Country: United States of America
Website: www.acoem.org/HealthandProductivity.aspx
President: Dr. Tee L. Guidotti

General: The American College of Occupational and Environmental Medicine (ACOEM) is a medical organization committed to enhancing the health, safety, and productivity of workers, retirees, and their families. Health and productivity is a component of occupational health, safety, loss and risk management, disability management, health promotion, disease management, injury prevention, hazard control, and health care management. **The Health and Productivity Management Center**, housed at ACOEM headquarters in suburban Chicago, offers educational courses, webinar series, and the HMP Toolkit. ACOEM's goal is to initiate, foster, and participate in strategic alliances in order to further health and productivity research by:

- Developing metrics for the measurement of health and productivity.
- Enhancing the "business case" for health and productivity
- Educating its members on health and productivity management and measurement.
- Partnering with other organizations working on health and productivity initiatives.

American Psychiatric Association - Partnership for Workplace Mental Health

Country: United States of America
Website: www.workplacementalhealth.org
President of the APA: Pedro Ruiz, M.D.

General: The Partnership for Workplace Mental Health advances effective employer approaches to mental health by combining the knowledge and experience of the American Psychiatric Association and our employer partners. The partnership delivers educational materials and provides a forum to explore mental health issues and share innovative solutions. It promotes the business case for quality mental health care, including early recognition, access to care and effective treatment. The APA also produces a free quarterly newsletter – called Mental Healthy Works – that includes summaries of key scientific studies and also profiles companies with successful case study examples of effective ways to address Mental Health in the Workplace. Some of these employers who have been profiled in the newsletter include: Dow, Florida Power and Light, Ford, Hughes Electronics, IBM, Johnson & Johnson, Pitney Bowes, Pittsburg Paint and Glass (PPG), and Sprint.

The American Psychological Society – Human Capital Initiative

Country: United States of America
Website: www.psychologicalscience.org
President: Morton Ann Gernsbacher, PhD

General: The APS has produced a series of detailed white papers for its Human Capital Initiative. This academic-based organization has pulled together a great deal of theory and high-quality empirical research findings on how psychological processes and services can help individuals cope with a variety of basic issues, including aging, literacy, productivity, substance abuse, health, and violence.

American Psychological Association – Initiative on Workplace Health

Country: United States of America
Website: www.apa.org
Specific to Workplace Topics: www.apa.org/topics/topicworkplace.html

General – The American Psychological Association, the National Institute for Occupational Safety and Health, the National Institute of Justice, the National Institute on Disability and Rehabilitation Research, and the U.S. Department of Labor, sponsor the bi-annual international Work, Stress, and Health conference

series. This conference was designed to address the constantly changing nature of work, and the implications of these changes for the health, safety, and well-being of workers. Numerous topics of interest to industry, employees, and researchers were covered in the series.

Cornell University Institute for Health and Productivity Studies

Country: United States of America
Website: www.human.cornell.edu/che/CUIPR/Research/Health_and_Productivity/index.cfm
Director: Dr. Ron Goetzel

General: Health and productivity research focuses on the relationship between employees' health and well-being and their work-related productivity. It includes, for example, analyses of the impact of chronic disease and risk behaviors on the corporate bottom line, health promotion program evaluations, and strategies for effective health and productivity management.

Employee Assistance Professionals Association (EAPA)

Country: United States of America
Website: www.eapassn.org
CEO: John Maynard, PhD, CEAP

General: Established in 1971, the Employee Assistance Professionals Association (EAPA) is the world's oldest and largest membership organization for employee assistance professionals, with approximately 5,000 members in the United States and more than 30 other countries. EAPA hosts an annual conference, publishes the Journal of Employee Assistance, and offers training and other resources to enhance the skills and success of its members and the stature of the employee assistance profession. EAPA provides its members with a number of benefits including an annual conference, a subscription to the Journal of Employee Assistance, training, networking, continuing education, professional certification, on-line information, and legislative advocacy.

Ensuring Solutions to Alcohol – The George Washington University Medical Center

Country: United States of America
Website: www.ensuringsolutions.org/
Director: Dr. Eric Goplerud

General: Ensuring Solutions provides research-based information on effective alcohol treatment and the barriers many people face when they seek help for a drinking problem. By publishing a variety of publicly available resources, by working with major corporations, government agencies and leading organizations like the National Business Coalition on Health, and by drawing on the actual experiences of employers and ordinary people, Ensuring Solutions shows how successful efforts to increase access to alcohol treatment have improved the lives of many individuals and their families, increased productivity in the workplace and made our communities safer.

Health Enhancement Research Organization (HERO)

Country: United States of America
Website: www.the-hero.org
Co-Founder and Chairman: Mark Dundon, MHCA

General – HERO is a national, research oriented, not-for-profit, coalition of organizations with common interests in health promotion, disease management, and health related productivity research. The HERO mission is to facilitate research that will impact health care by shifting the paradigm from a system dependent almost exclusively on diagnosis and treatment toward one with major emphasis on prevention and a more healthy and productive population. In support of this mission, HERO facilitates interaction among Research and Associate Partners and others that have a common desire to collaborate on specific research projects. HERO then coordinates and manages a variety of research projects supported by HERO, private and public sector financial grants. HERO has facilitated the creation of a large, retrospective, multi-employer health promotion research database. They have published six papers from this dataset.

Institute for Health and Productivity Management (IHPM)

Country: United States of America
Website: www.ihpm.org
President: Sean Sullivan

General: IHPM is an organization of employers, health providers, researchers, and pharmaceutical companies that is dedicated to establishing the value of employee health as a business asset and an investment in corporate success. It holds a number of specialized conferences each year and publishes a magazine featuring new research in this area.

Integrated Benefits Institute (IBI)

Country: United States of America
Website: www.ibiweb.org
President: Thomas Parry, Ph.D.

General: The Integrated Benefits Institute focuses on collecting benchmark data from medical claims as well as from disability, workers compensations, absence management and productivity areas. The data is then linked together at the individual employee level and analyzed to reveal opportunities for identification of high-cost/high-risk employees and thus for more coordinated health interventions. IBI has participated in a number of case studies of companies that have saved millions of dollars (compared to projected trend increases) after adopting more integrated health management practices.

National Business Group on Health (NBGH)

Country: United States of America
Website: www.businessgrouphealth.org
President: Helen Darling

General: The National Business Group on Health, formerly the Washington Business Group on Health, is the only national non-profit organization exclusively devoted to representing the perspective of large employers and providing practical solutions to its members' most important health care problems. Recognized as the leading voice of large employers, the Business Group represents over 200 members on their most important health issues. Business Group members are primarily Fortune 500 companies – including the nation's most innovative health care purchasers – who provide health coverage for more than 45 million U.S. workers, retirees, and their families. The Business Group fosters the development of a quality health care delivery system and treatments based on scientific evidence of effectiveness.

National Institute of Clinical Excellence

Country: United Kingdom
Website: www.nice.org.uk/
Chief Executive: Andrew Dillon

General: The National Institute for Health and Clinical Excellence (NICE) is the independent organization responsible for providing national guidance on the promotion of good health and the prevention and treatment of ill health. NICE produces guidance in three areas of health: public health, health technologies and clinical practice. NICE guidance is developed using the expertise of the NHS and the wider healthcare community including NHS staff, healthcare professionals, patients and careers, industry and the academic world.

National Institutes Mental Health (NIMH)

Country: United States of America
Website: www.nimh.nih.gov
Director: Dr. Thomas R. Insel

General: The NIMH is actively involved in strategic planning and priority setting for the Institute as whole as well as for specific research areas. NIMH solicits input from patients and their advocates, scientists, Congress, the public, and the National Advisory Mental Health Council. Workgroups of the Council and staff review the portfolio to recommend areas for future investment, with respect to relevance to the mission, traction (capacity for rapid progress), and innovation.

National Registry of Evidence-based Programs and Practices

Country: United States of America
Website: www.nrepp.samhsa.gov
Leader: David Parker, PhD

General: The National Registry of Evidence-based Programs and Practices (NREPP) is a searchable online registry of mental health and substance abuse interventions that have been reviewed and rated by independent reviewers. The purpose of this registry is to assist the public in identifying approaches to preventing and treating mental and/or substance use disorders that have been scientifically tested and that can be readily disseminated to the field. NREPP is one way that SAMHSA is working to improve access to information on tested interventions and thereby reduce the lag time between the creation of scientific knowledge and its practical application in the field.

Substance Abuse Mental Health Services Association (SAMHSA)

Country: United States of America
Website: www.samhsa.gov
Administrator: Terry L. Cline, PhD

General: The Substance Abuse and Mental Health Services Administration (SAMHSA) has established a clear vision for its work — a life in the community for everyone. To realize this vision, the Agency has sharply focused its mission on building resilience and facilitating recovery for people with or at risk for mental or substance use disorders. SAMHSA is gearing all of its resources — programs, policies and grants — toward that outcome.

World Health Organization (WHO)

Country: Global - Swizterland
Website: www.who.int/topics/mental_health/en/
Director-General: Dr. Margaret Chan

General: The World Health Organization is the United Nations specialized agency for health. It was established in 1948. WHO's objective, as set out in its Constitution, is the attainment by all peoples of the highest possible level of health. Health is defined in WHO's Constitution as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. WHO has release a number of major reports on mental health since 2000.

B.2 Clinical Providers (Canadian)

Medisys Health Group - The Health and Productivity Council

Country: Canada
Website: www.medisys.ca
President & CEO: Dr. Sheldon Elman

General: The Group's principal activity is to provide healthcare services to corporations and insurance companies. The Group delivers preventative, diagnostic and consultative healthcare services to approximately 4,000 Canadian corporations through its national network of facilities, including offices in Montreal, Toronto, Calgary and Vancouver. It operates under four segments: Corporate health services include all services provided to corporations concerned with occupational health, absenteeism management, and so on. The insurance medical services comprises of all services provided to life and health insurance companies. Medgate is its occupational health and safety software development subsidiary. Medical Imaging is used for early disease detection and effective diagnosis of patient condition. Medisys' suite of Healthy Workplace Services helps clients in a diverse range of industries to ensure employee health, mitigate health risks, and manage health events, when they do occur. Medisys Health Care Group has launched a Health and Productivity Council to help its own customers better understand and respond to the issues embraced by this complex concept.

Michael Smith Foundation for Health Research

Country: Canada
Website: www.msfhr.org
President: Aubrey J. Tingle

General: The Michael Smith Foundation for Health Research is a major funding organization in British Columbia. It leads, partners and serves as a catalyst to build British Columbia's capacity for excellence in clinical, biomedical, health services and population health research. The organization currently funds several projects on mental health and the workplace.

Ministry of Health, Mental Health and Addictions Branch, British Columbia Health Authorities

Country: Canada
Website: www.healthservices.gov.bc.ca

General: The Mental Health and Addictions Branch has the following responsibilities:

- Providing leadership in provincial policy development and long-term planning for mental health and addictions services;
- Providing leadership in developing best practices for mental health and addictions services to meet diverse needs; and,
- Developing partnerships between government, health authorities, service providers and community organizations.

The province-wide delivery of addictions and mental health services is provided through British Columbia's Health Authorities. The recent alignment of addictions services with mental health services offers new opportunities for improving access and responsiveness.

Homewood

Country: Canada
Website: www.homewood.org
CEO & President: Edgardo Pérez, MD, Homewood Corporation, Homewood Health Centre;
CEO: Fran Pilon, Homewood Employee Health

General: Homewood provides comprehensive mental health and addiction services. For over 27 years, Homewood Employee Health Inc. has been providing high quality, comprehensive employee assistance programs and mental health disability management services to North American organizations that have incorporated employee health and well being as part of their business strategy.

Homewood Employee Health is a division of the Homewood Corporation, which includes the Homewood Health Centre (HHC), a 312-bed psychiatric facility that offers nationally acclaimed in-patient and community programs for addictions, trauma, eating and mood disorders. We are able to leverage the clinical expertise of the Corporation as a whole to provide exemplary service to our clients. Homewood Employee Health is recognized for its clinical quality, professional standards and its ability to leverage mental health expertise to provide sustainable results and cost-effective workplace solutions.

The Centre for Organizational Health (COH), an affiliate of Homewood Health Centre, is devoted to the exploration, analysis, and communication of mental illness and mental disabilities as related to the Canadian workplace, economy and society. The Centre's mission is to define management practices that support sustainable, high-level resilience and performance of individuals and corporations, and to evaluate the barriers, which impede performance at this level.

Sunshine Coast Health Centre

Country: Canada
Website: www.sunshinecoasthealthcentre.ca
General Manager: Daniel Jordan

General: The Sunshine Coast Health Centre is a centre for drug rehabilitation. Their philosophy includes: individualized treatment plans rooted in the "basics" of recovery, an understanding of recovery centered on relationships well formed rather than tasks well done, the belief that true recovery is more than mere sobriety but also emotional, physical, social and spiritual health, a program that includes the family as a critical element in the recovery process, a strong Step One focus throughout a client's stay (not an exclusive focus, but a continued focus).

Shepell.fgi

Country: Canada
Website: www.shepell.fgi.com
President & CEO: Rod Phillips

General: WarrenShepell and FGIworld have joined together to form Shepell·fgi, one of North America's leading providers of health and wellness solutions for employers and their employees.

Shepell·fgi's goal is about personal and organizational wellness. We help people be well and stay well by understanding the wide variety of factors that have an impact on physical, mental and social health. Shepell·fgi also helps companies create healthy, productive workplaces. We are committed to acting in the best interests of our clients and their employees and providing you with the same high level of customer service and confidentiality.

B.3 Research Universities (Canadian)

McMaster University - Program in Occupational Health and Environmental Medicine

Country: Canada
Website: www.mcmaster.ca/pohem/
Director: Dave K. Verma

General: The POHEM, with its new administrative home in the School of Rehabilitation Sciences, Faculty of Health Sciences, is now focused mainly on the provision of education and training. The major educational effort being our Diploma in Occupational Health and Safety (DOHS), which has been offered every year since 1979 and as of April 2006 has graduated 418 students of which approximately 30% are physicians, 15% nurses, 15% hygienists and 40% are other health and safety professionals.

Simon Fraser University, Centre for Applied Research in Mental Health and Addiction (CARMHA)

Country: Canada
Website: www.carmha.ca
Professor: Dr. Elliot Goldner

General – CARMHA is a research centre within the Faculty of Health Sciences at Simon Fraser University with a mandate is to conduct research that can be applied to enhance the effectiveness, efficiency, and quality of mental health and addiction services in British Columbia. Research interests address the full spectrum of issues related to mental health and substance use, throughout the lifespan and within the context of various cultural, social, geographic and economic environments. Research activities often address innovative approaches to the development, implementation and dissemination and evaluation of health promotion activities, preventive strategies and treatment services, particularly those that can be applied at a system-wide, population level. Primary funding sources supporting many of our core research activities include Simon Fraser University, the British Columbia Ministry of Health, health authorities and other government ministries.

University of British Columbia, School of Occupational and Environmental Hygiene

Country: Canada
Website: www.soeh.ubc.ca
Research Team Manager: Dr. Mike Brauer **mailto:** demet@interchange.ubc.ca

General – SOEH is a multidisciplinary teaching and research unit whose mandate is to study exposures, health effects, and control strategies in the work and community environments. It offers masters and doctoral programs, a continuing education program, a seminar series open to the public (& available via web cast), and specialized laboratory and exposure measurement services and takes part in conferences on many topics in occupational health such as mental health.

University of Calgary - HORCHKISS Brain Institute

Country: Canada
Website: www.hbi.ucalgary.ca
Director: Dr. Samuel Weiss

General: The Hotchkiss Brain Institute brings together a large, diverse group of medical experts and trainees in the pursuit of a common goal; the discovery and development of new, improved ways to prevent, detect, and treat neurological and mental health conditions. Supported by the Calgary community and based in Alberta, the recognition and impact of our work can be seen across Canada and around the world.

Université of Laval

Country: Canada
Website: www.ulaval.ca
Director: Raymond J. Leblanc

General: Located in the heart of Quebec's historic capital city, Université Laval is one of Canada's leading universities. Among the top ten Canadian universities in terms of research, it has received more than 230 million dollars in external funds in year 2004 for research and international cooperation. From this university, Dr. Jean-Pierre Brun is a leading expert in the field of mental health in Canada. He devotes himself to the prevention of mental health problems associated with work and the promotion of healthy workers.

University of Lethbridge - Centre for Health Management Research

Country: Canada
Website: www.uleth.ca/man/research/centres/chmr
Co-Director: Dr. Angela Downey

General: The Centre for Health Management Research is encourages health related research and facilitates dialogue between many stakeholders focused on changing our health care system from a curative to a preventative system. These stakeholders include government policy makers, primary and tertiary health care providers and researchers, and worksite health promotion experts and researchers.

Université de Montreal – Department of Psychiatry

Country: Canada
Website: www.psychia.umontreal.ca/ Also www.umontreal.ca
Executive Director: Jean Hébert

General: Research on mental health workplace issues is conducted by several scholars at the university, including Dr. Alain Lesage.

University of Ottawa – The Institute of Population Health

Country: Canada
Website: www.iph.uottowa.ca
Interim Director: Denise Alcock

General: The Institute of Population Health aspires to add to the knowledge base in population health, and to work with established groups and others to make a contribution. The Institute approach is to mobilize leading-edge research programs, transdisciplinary in nature, spanning the whole spectrum of determinants of health and well-being from sociocultural and economic through environmental, clinical and molecular levels. The true power of population health results from the interplay of multiple sectors through the interaction of determinants, resulting in multiple interventions and policies for the betterment of health and well-being. The Institute reports, through the director, to the vice-president of Research, Dr. Howard Alper. Operationally and administratively, the director works with the Council of Deans of participating faculties. Its objective include: building a strong scientific foundation for population health in the areas of risk assessment, intervention design, policy formation and global health offering world-class transdisciplinary training programs for those who are designing, implementing and evaluating population health initiatives and informing the development of evidence-based population health policy in Canada and at a global level.

University of Toronto - Centre for Addiction and Mental Health (CAMH)

Country: Canada
Website: www.camh.net
Director of Research Training: Dr. Atkinson

General: The Centre for Addiction and Mental Health (CAMH) is Canada's leading addiction and mental health teaching hospital. CAMH succeeds in transforming the lives of people affected by addiction and mental illness, by applying the latest in scientific advances, through integrated and compassionate clinical practice, health promotion, education and research. The Centre has central facilities located in Toronto, Ontario and 26 community locations throughout the province. CAMH is fully affiliated with the University of Toronto and is a Pan American Health Organization and World Health Organization Collaborating Centre. CAMH was formed in 1998 as a result of the merger of the Clarke Institute of Psychiatry, the Addiction Research Foundation, the Donwood Institute and Queen Street Mental Health Centre. The CAMH website contains many resources (research papers, health promotion information) initiatives and contact information is available in the topic of mental health and the workplace.

University of Toronto - Centre for Health Promotion

Country: Canada
Website: www.utoronto.ca/chp
Executive Director: Connie Clement

General: The Centre for Health Promotion, in the Department of Public Health Sciences, was established in 1989. The Centre is a community-academic partnership. The Centre is committed to excellence in education, evaluation and research. In a multi-disciplinary, collaborative context it activates, develops and evaluates innovative health promotion approaches in Canada and abroad. The Centre is an active, high quality, internationally recognized leader in health promotion.

University of Victoria - Centre for Addictions Research of British Columbia

Country: Canada
Website: www.carbc.uvic.ca
Director: Dr. Tim Stockwell

General: The Centre is a partnership between University Victoria and BC's other four major universities (UNBC, UBC, SFU and Thompson Rivers University). The Centre builds on the research strengths of the University of Victoria and the partner universities in B.C. which include expertise in: the biomedical causes of addictions, the social cultural dimensions of addictions particularly related to youth and aboriginal health, and health service delivery to remote populations. The centre is currently involved in projects that address mental health and the workplace.

University of Western Ontario – Consortium for Applied Research and Evaluation in Mental Health

Country: Canada
Website: http://caremh.ca/whoweare/index.html
Director: Dr. Stephen State.

General: The Consortium for Applied Research and Evaluation in Mental Health (CAREMH) is an informal and unincorporated network with its administrative centre at the Population and Community Health Unit (PCHU) of the Department of Family Medicine at the University of Western Ontario (UWO) under the directorship of the unit head, Dr. Evelyn Vingilis. Strategic direction is performed by a Steering Committee whose current members (Dr. Kathleen Hartford, Dr. Beth Mitchell, Mr. Ted Schrecker are among the co-investigators on the CIHR grant which funds its operation.

B.4 Individual Researchers (Canada and U.S.)

Julian Barling, PhD

Country: Canada

Research Chair, Queens; **Professor of Organizational Behavior and Psychology**, Queen's School of Business, and **Associate Dean**. Queen's School of Business.

General: Dr. Barling is the author of several books, including Employment, stress and family functioning (1990, Wiley & Sons), The union and its members: A psychological approach (with Clive Fullagar and Kevin Kelloway, 1992, Oxford University Press), and Changing employment relations: Behavioral and social perspectives (with Lois Tetrick, 1995, American Psychological Association), and Young workers (with Kevin Kelloway, 1999, American Psychological Association). Dr. Barling co-edited the psychology of workplace safety, and is the editor of the Handbook of Work Stress (2005; Sage Publications), and the Handbook of Workplace Violence (2006; Sage Publications). He is currently editing the Handbook of Organizational Behavior, which will appear at the end of 2007. In addition, he is the author/editor of well over 125 research articles and book chapters.

Jean-Pierre Brun, PhD

Country: Canada

Professor, Business Administration Faculty and **Chair**, Occupational Health and Safety Management, Laval University, as well as of the MBA program in OHS Management. He is also the Director of the Québec Health and Safety Research Network. See website: http://cgsst.fsa.ulaval.ca

General: Dr. Brun's interests include management systems for occupational prevention, occupational health and safety in small- and medium-sized firms, stress and violence at work and youth and safety. Dr. Brun is a leading expert in the field of mental health in Canada. He devotes himself to the prevention of mental health problems associated with work and the promotion of healthy workers.

e-mail: jean-pierre.brun@mng.ulaval.ca

Wayne Corneil, PhD

Country: Canada

Affiliate Scientist, University of Ottawa, Gap Sante Program

General: Dr. Corneil is an occupational psychologist and epidemiologist with experience with first responders, crisis management and PTSD and the Federal Public sector. His field experience includes work related to the Swiss Air flight crash; work with the National Capital CBRN team and work related to the trauma and false alarms associated with the September 11th event

e-mail: wcorneil@uottawa.ca

Carolyn Dewa, PhD

Country: Canada

Health Economist/Research Scientist, Health Systems Research & Consulting Unit, CAMH; and Assistant Professor, Department of Psychiatry, University of Toronto

General: Her Ph.D. is in Health Economics and her M.P.H. is in Health Services Administration. She was also a Visiting Fellow in the Department of Health Care Policy at Harvard Medical School. Dr. Dewa has been involved in a multi-site evaluation of community mental health services in Ontario where her primary interest is in developing methods to study program costs and cost effectiveness. She is also the lead on a project examining depression in the workplace - assessing adequacy of treatment and predicting worker disability. Other activities include analyses looking at the differences in factors affecting the demand for mental health services among service users in Canada and the U.S.

e-mail: Carolyn_Dewa@camh.net

Linda Duxbury, PhD

Country: Canada

Professor, Sprott School of Business, Carleton University

General: Dr. Duxbury is an acknowledged international expert on work-life balance in Canada. She is a noted pioneer in the field of organizational health. Over the years her interest in human relations related issues has earned her a variety of awards that recognize both her research and her contribution to the workforce.

e-mail: linda_duxbury@carleton.ca

Gaston Harnois, M.D.

Country: Canada

Director, Montreal World Health Organization (WHO) Collaborating Centre for Research and Training in Mental Health (www.douglasrecherche.qc.ca/oms/about/index)
Psychiatrist and Associate Professor, Department of Psychiatry, McGill University (www.medicine.mcgill.ca/psychiatry)

General: Dr. Harnois, has wide-ranging expertise in psychosocial rehabilitation, technical cooperation, mental health policy formulation, mental health services planning, development and evaluation, and legislative reform, both nationally and internationally. His determination to improve people's services and quality of life - including access to work - is fuelled by his belief in the inherent potential of people with mental illness to improve and to play a useful role in the community, if they are given the chance and proper treatment and support.

Clyde Hertzman, PhD

Country: Canada

Associate Director, Senior Faculty, UBC Centre for Health Services and Policy Research (www.chspr.ubc.ca); **Professor**, Department of Health Care and Epidemiology, UBC (www.healthcare.ubc.ca); **Director**, Human Early Learning Partnership, British Columbia (www.earlylearning.ubc.ca); **Canada Research Chair**, University of British Columbia

General: Dr. Hertzman has played a central role in creating a framework that links population health to human development, emphasizing the special role of early childhood development as a determinant of health. His research has contributed to international, national, provincial, and community initiatives for healthy child development.

e-mail: clyde.hertzman@ubc.ca

Alain Lesage, M.D., FRCP(C), M.Phil

Country: Canada

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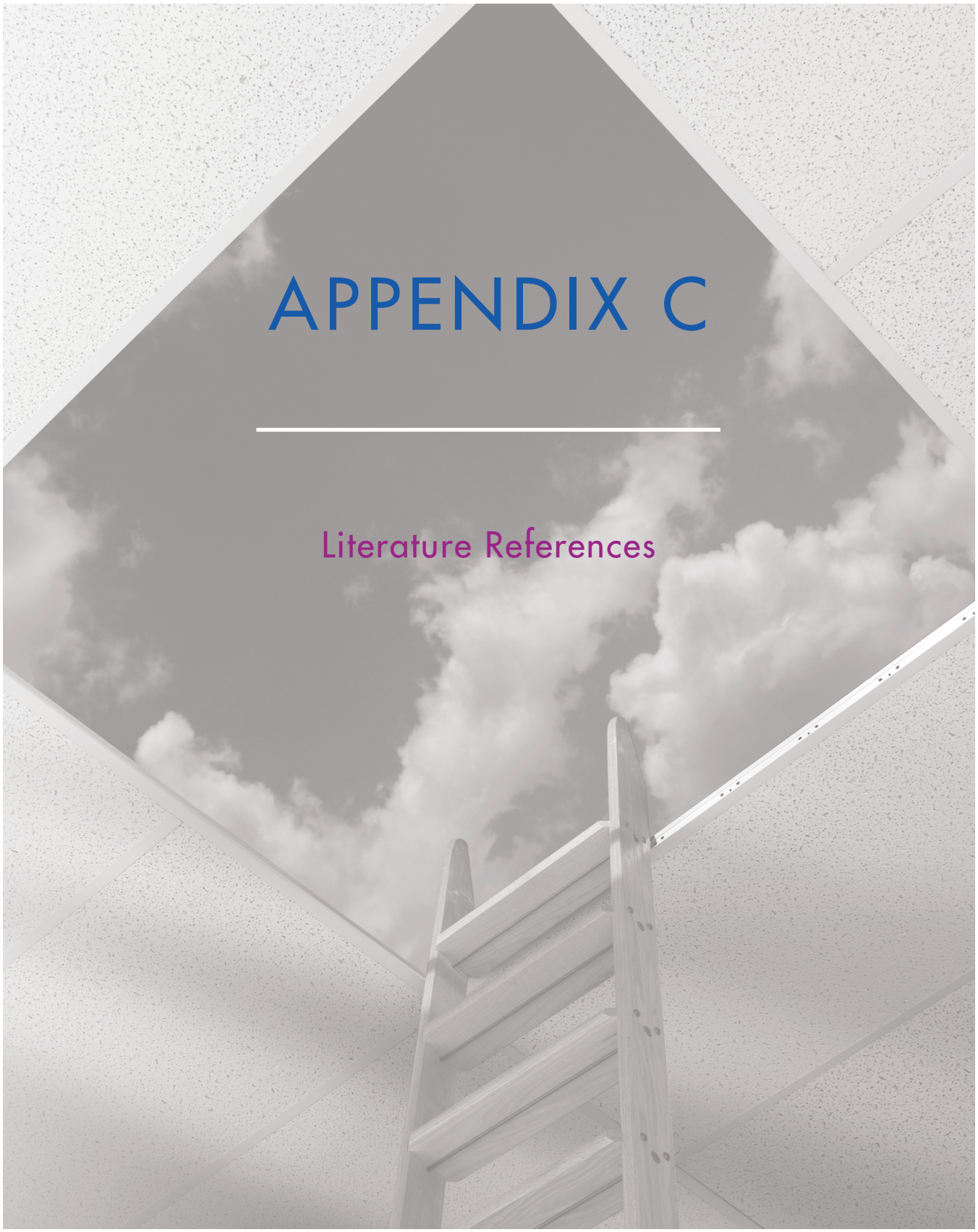

APPENDIX C

Literature References

APPENDIX C – Literature References

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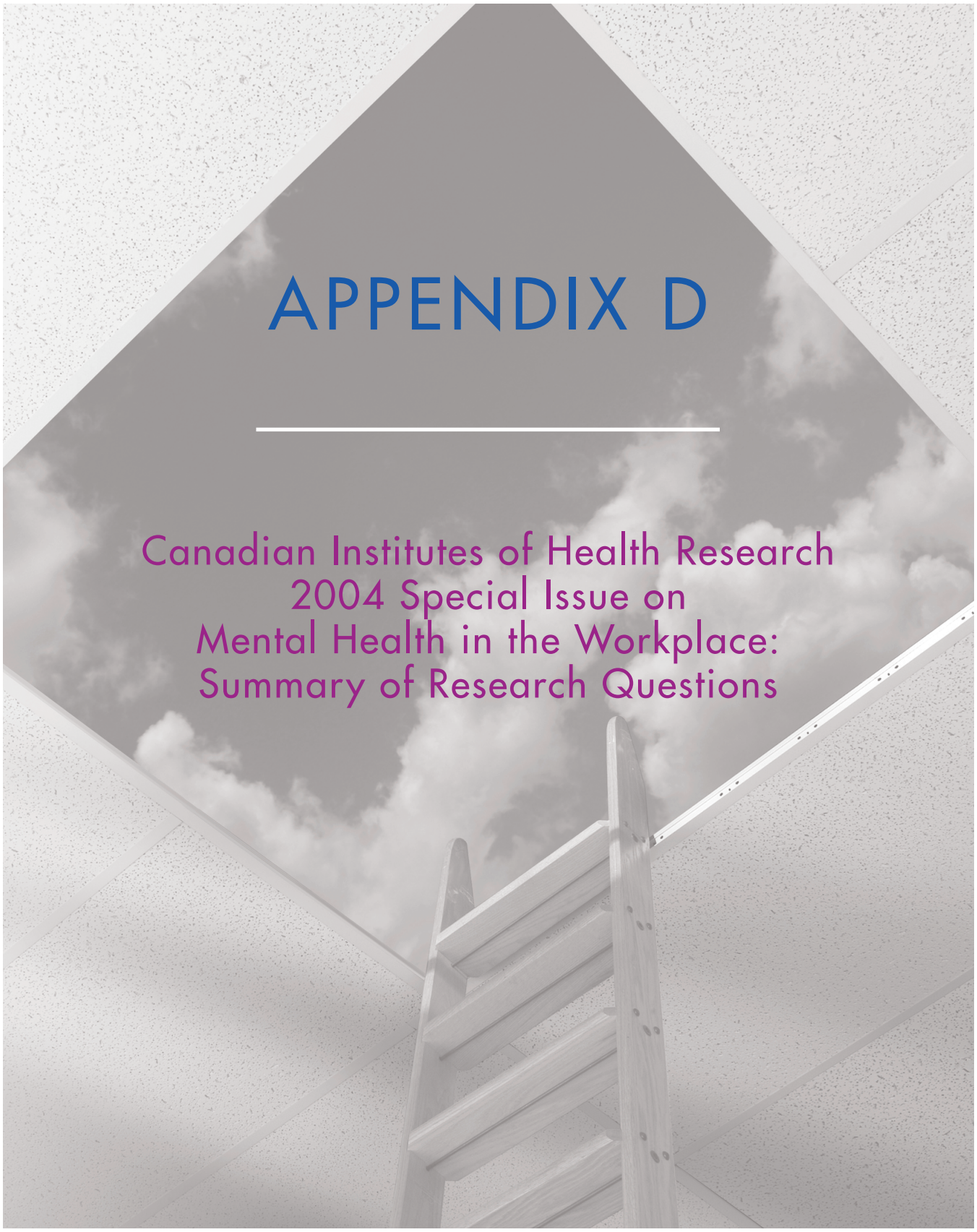


APPENDIX D

Canadian Institutes of Health Research 2004 Special Issue on Mental Health in the Workplace: Summary of Research Questions

APPENDIX D – Canadian Institutes of Health Research 2004 Special Issue on Mental Health in the Workplace: Summary of Research Questions

RQ = Research Question

General Themes

The committee of scholars and business leaders who were convened to conceptualize the issues of Mental Health in the Workplace agreed upon the importance of selecting key issues or themes that would assist in organizing their work and the research agenda. Six broad themes were identified and collectively agreed on. These are noted below:

1. The nature and magnitude of the problem
2. Workplace prevention and promotion strategies
3. Diagnostic and treatment issues
4. Disability and return to work
5. Stigma and work
6. Integration of health research and the Canadian workplace

Theme 1: The Nature and Magnitude of the Problem

Dewa, C. S., Lesage, A., Goering, P. & Caveen, M. (2004). Nature and prevalence of mental illness in the workplace. HealthcarePapers 5(2), 12-25.

RQ – need basic descriptive data on extent and severity of MH among working population. Vary this by industry, job type, etc. Compare working MH to non-working MH populations.

RQ – what is impact of work sponsored benefits on use and success of MH services? Insurance coverage, EAP, disability benefits

Marcotte, D. E. (2004). Essential to understand the relationship between mental illness and work. HealthcarePapers 5(2), 26-29.

RQ – need large population based studies of experience of working factors and MH factors (prevalence, severity, kind of work, work outcomes) and REPEAT data collection nationally in panel studies with longitudinal follow-up (large $)

RQ – need to understand causal linkage for MH and workplace – what aspects of workplace organization, job design, work culture, mgt style etc contribute to better or worse MH and stress among employees?

RQ – what is the epidemiological course of MH issues among working populations as they change over the lifespan? Entry into workforce and training, vs. prime years, vs. end of career and retirement?

RQ – need better measures of the cost and dollar impact of MH issues and the relative cost-effectiveness of various kinds of workplace and outpatient treatment services. Making the business case for MH services and prevention with economic analysis models and data sets relevant to these measures. (DALYs in UK and some U.S. studies but not in Canada; HPQ studies in U.S. can be replicated in Canada – see SUCCEED study as example).

Theme 2: Workplace Prevention and Promotion Strategies

Lesage, A., Dewa, C. S., Savoie, J-Y., Quirion, R., & Frank, J. (2004). Note from the guest editors. Mental health and the workplace: Towards a research agenda. HealthcarePapers 5(2), 4-10.

- Acquire a further understanding of, and monitoring the effects on mental health of, prominent trends in organizational practices.
- Emphasize target populations through studies that measure changes over time in mental health outcomes; these studies should consider broader societal outcomes.

Vézina, M., Bourbonnais, R., Brisson, C., Trudel, L. (2004). "Workplace Prevention and Promotion Strategies." HealthcarePapers 5(2): 32-44.

RQ – create effective models of interventions designed to reduce the individual worker's psychosocial risk factors (like EAPs)

RQ – measure prevalence and nature of workplace organizational and functioning factors that cause or contribute to worker stress and mental health problems

RQ – measure impact of business organizational and structural trends that can affect worker mental health (mergers, flex staffing, etc)

RQ – measure direct and indirect workplace costs of stress and mental health workplace issues for employers and for society (making the business case)

Thus, next step is need to study effectiveness of the two major kinds of interventions:

a) person centered reactive model – teach the worker to have better skills to react to work stress and coping to events (EAP, WL, etc).

b) organizational change preventative model – change the causes of problem aspects of the job design or workplace structure, management style, organizational culture, benefits design, etc.

RQ – Research needed on this kinds of interventions at three levels – development, implementation (evaluation), effectiveness.

RQ – large-scale population surveys with panel longitudinal study design for gathering descriptive data on prevalence and nature of mental health issues among working age groups and industries in Canada.

Kompier, M. (2004). Research must look at what interventions work as well as when and why. HealthcarePapers 5(2), 45-48.

RQ – do know what factors are major risks for causing stress of work environment (job demands, extrinsic effort; need to thus identify risks and diagnosis for job features and good fit to the worker.

RQ – in addition to within-person risk factors, we need to define and measure the many kinds of within-work factors that lead to stress and mental health. Not to point to worker as the problem and thus only offering coping and treatment resources as tertiary prevention. Bigger issue of overcoming the bias to the individual as focus of workplace mental health research agenda.

Parent, D. (2004). Industry recognizes the importance of taking action. HealthcarePapers 5(2), 49-51.

RQ – Many companies recognize the role of the organizational culture and structure of work as contributing to employee heath and performance. What is needed from research are the validated measurement tools and best practices to address these issues on a preventive basis as employers.

NEW See primary prevention tools and educational models – such as 2005 Brun Univ Laval 3-part series on workplace stress.

RQ – need research on what are the organizational factors and practices that assist in creating, implementing and sustaining prevention and treatment programs and services that are workplace based to address worker stress and mental health. Also identify key success factors for health promotion and stress prevention at worksite level.

RQ – need research on what kinds of work factors can be changed that improve work organization.

RQ – develop tools and study measurement designs for evaluation and business impact of work and individual oriented interventions (business case data metrics)

Theme 3: Diagnostic and Treatment Issues of Mental Health in the Workplace

Lesage, A., Dewa, C. S., Savoie, J-Y., Quirion, R., & Frank, J. (2004). Note from the guest editors. Mental health and the workplace: Towards a research agenda. HealthcarePapers 5(2), 4-10.

- Pursue studies to clarify diagnostic entities, sub-diagnostic threshold conditions, stress and burn-out, personality disorders and associated physical and mental co-morbidities. Include in these studies an understanding of the bio-psycho-social risk and protective factors.

Bender, A., & Kennedy, S. (2004). Mental health and mental illness in the workplace: Diagnostic and treatment issues. HealthcarePapers 5(2): 54-67.

RQ – need research on working population to confirm in descriptive prevalence data the overlap of workplace

specific problems of stress and burnout with more psychiatric problems of mood disorders (depression), anxiety disorders, and substance abuse and adjustment related disorders.

RQ – more standardized measures and larger replicated datasets for good evidence to date for association between mental health workplace problems and impaired work capacity (human capital outcomes of absenteeism, productivity, disability, accidents, reduced occupational attainment, turnover).

RQ – have data to establish co-occurrence of alcohol and substance abuse with stress related syndromes and mental health disorders. Also co-morbidity with medical problems.

RQ – Although do have good evidence for effectiveness of brief screening tools for depression (see U.S. Preventative Services Task Force), still need better tools for brief screening for stress and other mental health risk factors among workers. Also needed are more functional outcomes measurements. See GWU standardized brief screening instrument demonstration project for alcohol (2006).

RQ – what are factors related to why workplace mental health issues are under-identified and also under-treated? Particularly for medication drug treatments for anxiety and depression.

RQ – understand complicated and poorly integrated mental health delivery system model in Canada and role of employer benefit design and employer-provide services.

RQ – need standardized basic research on factors that drive the engagement, use and effectiveness of EAPs for response to workplace mental health and addictions issues of workers.

RQ – role of integrating mental health screening and effective care options with primary care doctor contact

RQ – need longitudinal prospective controlled studies (quasi-experimental or experimental) that assess mental health workplace interventions on both clinical outcomes and workplace economic outcomes.

Kates, N., & George, L. (2004). Organizational and environmental factors can influence effectiveness of new care models. HealthcarePapers 5(2), 68-71.

RQ – need to have integrated bio-psycho-social model for defining and treating mental health In workplace issues. This includes assessment of worker functional outcomes.

RQ – need a more organizational and systems-level approach for including work-factors, person factors and aspects of the health care system. This features an emphasis on the contextual factors in the workplace that contribute to mental health of workers.

RQ – need data and study of the process of seeking care for mental health issues among working populations. Why do so few people use care? Why do they relapse? How is workplace services delivery model linked to community psychological services?

RQ – how to identify and offer mental health related services to smaller employers and diverse populations of workers in Canada?

Service, J. (2004). Workplace culture and mental health are interwoven. HealthcarePapers 5(2), 72-74.

RQ – have good data on the physical health and injury costs of workplace mental health issues. Need new data on how mental health factors affect other areas – particularly work success factors.

RQ – need research on addictions and alcohol as well as other mental health problems (mood, adjustment, anxiety).

RQ – need better data collection and shared database of standardized measures of mental health related experience in Canada.

RQ – how does treatment yield impact on workplace outcomes and organizational outcomes – not just on clinical personal health outcomes? (See Marcotte 2004)

Theme 4: Disability Management and Return to Work for Mental Health in the Workplace

Lesage, A., Dewa, C. S., Savoie, J-Y., Quirion, R., & Frank, J. (2004). Note from the guest editors. Mental health and the workplace: Towards a research agenda. HealthcarePapers 5(2), 4-10.

- Study the impact of government and corporate policies for disability and return to work on short-term and long-term individual outcomes and workplace outcomes.

Goldner, E., Bilsker, D., Gilbert, M., Myette, L., Corbiere, M., & Dewa, C. S. (2004). Disability management, return to work and treatment. HealthcarePapers 5(2), 76-90.

Known: individuals with severe and disabling mental illness get better from employment and worksite related programs than from other vocational services.

Known: Most research on mental health disability is on severe mental health illness.

Known: less severe mental health issues, like depression, can see work function improvements from evidence-based treatment programs.

RQ – Can successful disability management programs and practices from physical health conditions (e.g., musculoskeletal) be applied to mental healthy conditions?

RQ – what is extent of co-morbidity of mental health conditions with other medical chronic and acute conditions that have disability services and RTW needs (such as pain, back injury, heart disease, diabetes, etc).

RQ – what is descriptive evidence on comparison of mental health as factors in STD and LTD claims?

RQ – how do organizational services help with disability cases for mental health and successful return to work? EAP for example, private health insurance STD programs integrated with company benefits,

Gnam, W. H. (2004). Research priorities are critical. HealthcarePapers 5(2): 91-94.

RQ – need to articulate conceptual models for understanding the process and structures for successful disability management for mental health in workplace.

RQ – conduct basic descriptive survey on employment and economic forecast or future trajectory in labor market for Canada.

RQ – study of novel and innovative treatment methods for disability mental health cases and RTW.

RQ – insurance system has many private companies and not integrated with Canadian mental health delivery system; so need to conduct partnerships with large disability insurance companies and explore their data in context of employer based employee demographic data and workplace performance outcome data

RQ – higher priority for workplace setting interventions and practices that help with mental health disability rather than conventional mental health treatment delivery system in outpatient and inpatient care settings

Future RQ – need integrated database with standardized data on mental health disability and physical health disability cases at national level

Allen, P. (2004). For the employer productivity is critical. HealthcarePapers 5(2): 95-97.

Known: workplace mental health has impact on workplace in areas of health care costs, employee performance (absence, productivity).

RQ – what conceptual models and research data can be used to present to the employer community in Canada the impact of mental health and mental health disability as business issues? Profile prevalence and impact issues of employees as it relates to productivity and work functioning.

RQ – mental health disability is complicated issues that needs research on an integrated model to understand the factors of the employee, the company/manager and the mental health treatment providers and service partners/insurers

RQ – research on the mental health disability management area to understand the real-world aspects of treatment and RTW system that is successful and that which is de-motivating / gaming etc.

Theme 5: Stigma and Discrimination for Mental Health in the Workplace

Lesage, A., Dewa, C. S., Savoie, J-Y., Quirion, R., & Frank, J. (2004). Note from the guest editors. Mental health and the workplace: Towards a research agenda. Healthcare*Papers* 5(2), 4-10.

- Develop conceptual models of the causes of or results of stigmatization and discrimination, as well as what creates positive attitudes regarding individuals with mental illness in the workplace.
- Assess and monitor the scope of stigma and discrimination, their determinants and their consequences in the Canadian work setting through combinations of direct work site studies, qualitative studies and population studies.

Stuart, H. (2004). Stigma and work. HealthcarePapers 5(2): 100-111.

Known: Stigma, or negative attitudes and discriminatory behavior toward people with mental health conditions are pervasive, persistent, and profound in their consequences. WHO contends that stigma is one of the most

important factors affecting mental health worldwide. Stigma related to mental health in workplace has been found to affect being able to get work at all and to get appropriate level of work. It has been found to affect career advancement as well. Past research has demonstrated that mental health patients experience higher rates of unemployment and underemployment.

RQ – basic research on the extent and nature of workplace stigma in Canada, for all forms of mental health - from mild disorders (anxiety, depression) to severe and persistent mental illness (schizophrenia). This would entail surveys of employers and workers in Canada on their attitudes, behaviors and motivations concerning mental health of fellow co-workers and their families.

RQ – explore the processes and dynamic nature of stigma and discrimination toward mental health patients at the workplace (use to then develop interventions and social policy)

RQ – document the social and economic consequences of the discrimination and stigma for working people with mental health. Such as job instability, hiring practices, underemployment, career advancement, use of benefits and insurance, self-stigmatic consequences to manage self-image and social impression at work – hiding mental health and this not taking advantage of EAP and other mental health services)

RQ – Need research from both the perspective of those workers and management who do not have mental health conditions and also from those living and working with mental health conditions.

Future RQ – national data collection on regular basis in Canada on mental health issues for general population (including employed patients) that addresses the experience of stigma and discrimination for mental health in the workplace (not just in general society and community treatment settings). Stigma and related employment issues should be added to the next Community Health Survey in Canada.

RQ – business and employer alliances to conduct applied research designed to understand and explore how to improve stigma and discrimination of workers (and potential workers) with mental health issues. NEW – See Wilkerson Roundtable papers. See mental health commission. Describe the business case economic consequences and continued losses to employers for not properly helping workers with mental health conditions (lost productivity, additional medical care costs, unnecessary STD claims, unneeded retirement and turnover, etc)

Angermeyer, M. (2004). Important to investigate the dynamics of the stigma process. *HealthcarePapers* 5(2): 112-113.

RQ – need research on the nature and extent of stigma in attitudes and practices of non-affected people at worksites (management, employees) towards mental health at the worksite – particularly for moderate conditions that are more commonly experienced, such as depression.

RQ – need basic research on the experience of stigma and discrimination among workers (patients) with mental health conditions.

Everett, B. (2004). Best practices in workplace mental health: An area for expanded research. *HealthcarePapers* 5(2): 114-116.

RQ – Expand concept of stigma to include "discrimination." This places the experience and consequences of stigma for mental health into language and practices that the business community understands and can take action on to help.

RQ – Conduct research to identify and examine the employer and workplace practices, structures, and policies that are doing GOOD around the area of stigma and treatment of workers with mental health conditions. What are Canadian best practices among employers that can be replicated and shared with other employers?

Theme 6: Knowledge Transfer of Mental Health in the Workplace Research to the Workplace

Lesage, A., Dewa, C. S., Savoie, J-Y., Quirion, R., & Frank, J. (2004). Note from the guest editors. Mental health and the workplace: Towards a research agenda. Healthcare*Papers* 5(2), 4-10.

- Conduct research on how to move knowledge into action, including specific research on the knowledge exchange process with respect to mental health in the workplace.

Neufeldt, A. H. (2004). What does it take to transform mental health knowledge into workplace practice? Towards a theory of action. Healthcare*Papers* 5(2): 118-132.

Known – different cultures between mental health knowledge system of mental health providers as clinicians and mental health researchers/academics and the workplace system of employers.

Known – need to reframe mental health research results and mental health experiences in terms that workplace understands and can relate to – Making the Business Case for Mental Health in the WorkplaceP.

RQ – need conceptual framework for this issue (making employers understand and take action around the mental health needs of its workforce)

RQ – CONCEPT AREA 1: Employer-led research initiatives. Prevention and health promotion focus.

Examples include: workplace stressors that contribute to employee mental health conditions; workplace management policies (long work hours, time pressure, restructuring, job control, job insecurity)

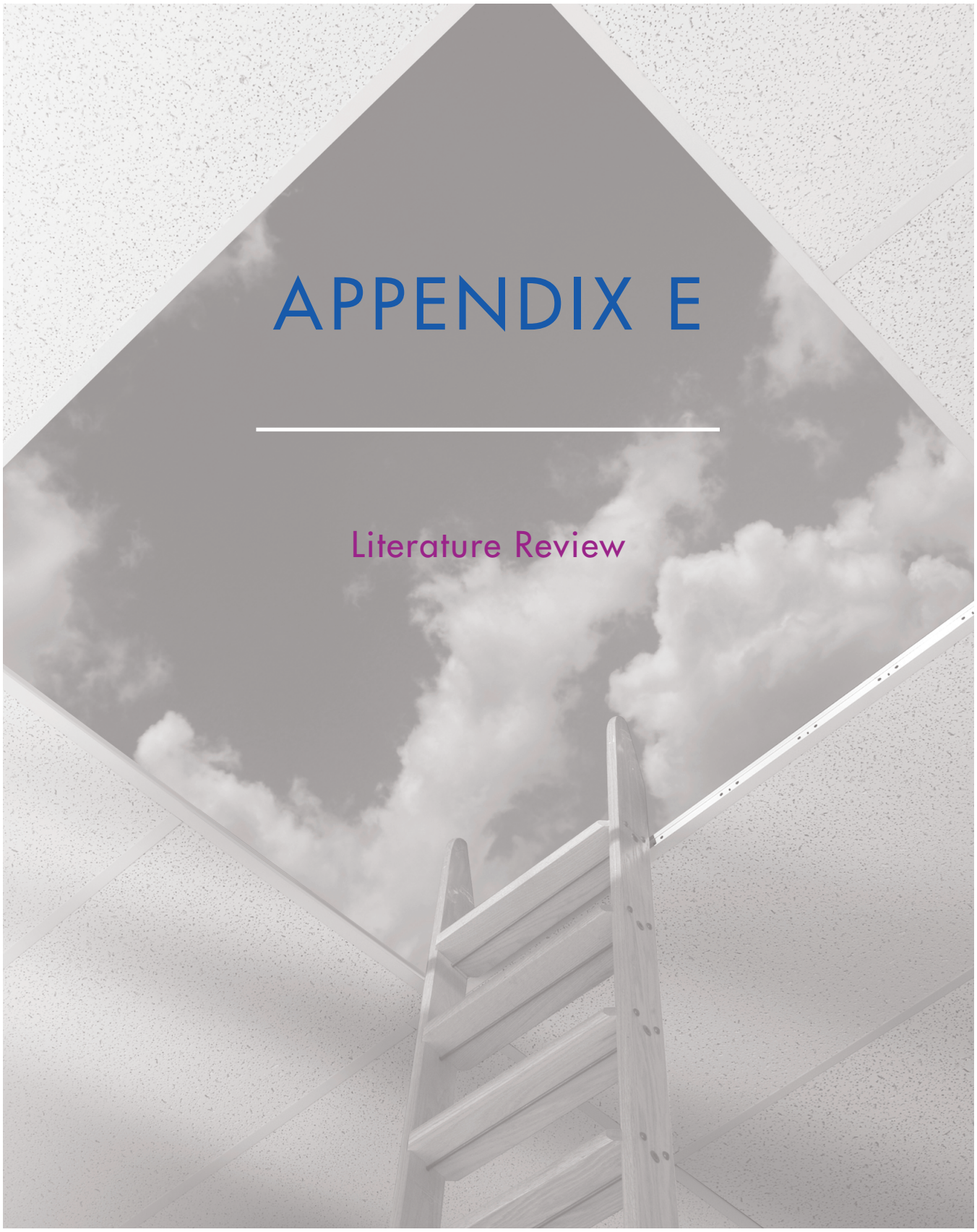
RQ – CONCEPT AREA 2: Employee-focused research initiatives. Interventions for employees sponsored or supported by employers. EAP, work/life, STD, etc

Examples include: EAP, Stress Management Programs, Workplace RTW accommodations and support

RQ – CONCEPT AREA 3: Community-based resources. mental health related services that help employees with mental health issues to stay on the job and work well (mental healthOP system, integration of mental health and medical) and services to assist employees who need to return to work for mental health disability

Examples include: STD and LTD insurance programs, case management vs. standard mental health system treatment, assertive community treatment, supported employment.

RQ – where to focus the knowledge transfer energy and budgets? Stage theory of new knowledge adoption – from early adopters to more participants to a tipping point to widespread adoption. Use of opinion leaders in business and academic/clinical communities to form partnerships with shared goals. Conduct a quickly completed pilot project with visibility of sharing the results of successful findings. Need a systematic plan for promotion and publicity/marketing. Continued activity and sharing into future that is financed and funded.



APPENDIX E

Literature Review

APPENDIX E – Literature Review

A recent bibliometic study of the research publication output of Canadian authors and the rest of the world for workplace topics examined papers in biomedical literature databases published during years of 1991 to 2002 (Archambault, Cote & Gingras, 2004). The results found that the number of total papers in the world on the topic of mental health in the workplace nearly doubled, going from 535 to 940. In Canada, the number of total papers on mental health in the workplace increased from 14 to 52 during the same period. The results also showed that Canada had a relatively higher proportion of its total publishing output on this topic than did the rest of world – 0.3% vs. 0.2% (defined as papers per population size of the country). Other analyses revealed that the volume of papers from leading Canadian universities and research centres was spread around the country with no clearly dominant place, with each organization with between 1 and 3 papers on average per year. More specifically, the universities with the most papers in this area during the 12 year analysis period were: University of Toronto & Centre for Addiction and Mental Health, McMaster University (West Hamilton, Ontario); Université de Montréal; University of British Columbia (Vancouver, BC); University of Western Ontario and Université Laval (Quebec City).

Thus, Canada already has made a significant contribution to the global study of Mental Health in the Workplace. It also has many experienced researchers and institutions to draw upon for future research projects.

The literature findings are grouped into four major themes. The first theme includes information related to epidemiological factors of the prevalence of mental health disorders and use of mental health services. The next theme reviews information the costs associated with mental health in the workplace – the economic factors. The third section presents information on the etiologic or causal factors that represent the many causes of mental health disorders in the workplace. The final section focuses on efficacy factors and reviews findings from studies that have examined the degree that various kinds of traditional mental illness care treatments and workplace-based services have been effective at helping individuals with mental illness disorders to return to better health and improved work performance.

EPIDEMIOLOGIC FACTORS – COUNTS

This part of the review presents the facts on how often mental health disorders are found in the general population, both in Canada and in the United States and also globally when relevant.

Prevalence of Mental Illness

This section includes prevalence information on the following conditions: Major depression, bipolar depression, panic disorder, social anxiety/phobias, schizophrenia, alcohol and drugs, suicide, and co-occurring disorders. Also addressed are related issues of physical health co-morbidity and the episodic and chronic aspects of mental health. This information is based on several large-scale national community surveys which have been conducted over the past decade that provide information on how many people in the country have mental health conditions and what kinds of individual demographic characteristics are associated with having mental illness (see detailed reviews by Danna, 1999; Dewa, Lesage, Goering and Caveen, 2004; and Hyman et al, 2006).

General Findings

Mental disorders are commonly experienced in Canada and internationally. The World Health Organization (WHO) released a major literature review report in 2006 that profiles the general nature of the different kinds of mental disorders, their prevalence in society, their cost burden, the effectiveness of treatment, the cost-effectiveness of treatments and the social policy implications of these facts (Hyman et al., 2006). This review focused on the four leading contributors to mental ill health globally: Schizophrenia and related non-affective psychoses, bipolar affective disorder (manic-depressive illness), major depressive disorder, and panic disorder. The last three kinds of mood disorders are most relevant to workplace mental health. Interested readers can also see an appendix to the *2006 Business and Economic Plan for Mental Health and Productivity*, from the Global Business and Economic Roundtable on Addiction and Mental Health (2006), which provides a compilation of key statistics from ten major studies on the prevalence rates for various mental illness in Canada and other countries.

Several studies show lifetime prevalence rates for mental illness at about 1 in 4 people. Based on the U.S. National Institutes of Mental Health (NIMH, 2006), about 22% of adults in the United States suffer from a diagnosable mental disorder. An estimated 26.2 percent of Americans ages 18 and older — about one in four adults — suffer from a diagnosable mental illness in a given year (Kessler, Chiu, Demler, & Walters, 2005). When applied to the 2004 U.S. Census residential population estimate for ages 18 and older, this figure translates to 58 million people. Even though mental disorders are widespread in the population, the main burden of illness is concentrated in a much smaller proportion — about 6 percent in the United States — who suffer from a serious mental illness.

[Please note that this review report does not focus on inpatient hospital based care for mental health. For information on this topic in Canada see the Canadian Institute for Health Information (2006) and Madi, Zhao and Fang (2006).]

After considering the general frequency of occurrence for mental illness, we now turn to examining the prevalence of major types of mental illness that are most relevant to working age populations. The 2002 Canadian Community Health Survey (CCHS), Cycle 1.2 on Mental Health and Well-Being, carried out by Statistics Canada, provided for the first time nationally representative prevalence rates for some mental illnesses, substance use disorders, suicidal ideation, and pathological gambling. It has data from approximately 37,000 Canadians. Major reports from this data were published in 2004 by Statistics Canada (see Supplement to Health Reports, Vol. 15, 2004). Highlights from these reports are reviewed below.

Major Depression

Major depression is one of the most commonly experienced mental illnesses among those in the working age population. In terms of day-to-day functioning, researchers found that depressed patients functioned at very low levels, equivalent to those with coronary artery disease and lower yet than patients with hypertension, diabetes and arthritis. Of course, in addition to associated physical ailments, there are the debilitating symptoms of the disease itself. These include loss of appetite, lack of motivation, extreme sadness and suicidal thoughts. Thus, the symptoms of depression, singularly and in combination, can significantly impair a person's ability to function in the world (Hirschfeld et al., 2000). According to Canadian national surveys conducted in 1994 and again in 2002, almost 4% of working age adults experienced at least one episode of depression in the past year (Gilmour & Patten, 2007). Depression was associated with more with women, with lower incomes, and with having other chronic health conditions. This is similar to the finding that about 6% of the adult population in Canada had a major depressive episode in the past year, based on the earlier 1994-95 national population health survey (Diverty & Beaudet, 1997).

A cross-national comparison study of depression was recently completed. This study examined reports from over 3,500 Canadians and 5,000 Americans (Vasiliadis, Lesage, Adair, Wang & Kessler, 2007). The rates of depression were similar in Canada (8.2%) and the United States (8.7%). However, United States respondents without medical insurance were twice as likely as Canadian respondents and United States respondents with medical insurance to meet the criteria for depression. A different study on depression with data from 2002/2003 found similar rates for prevalence and treatment of depression between Canadians and Americans (Mojtabai & Olfson, 2006). An interesting finding was that there was a smaller difference in the severity of depression symptoms and seeking professional care in Canada, which suggested a more efficient allocation of provider resources in Canada than in the United States

Bipolar Depression

Depression can also include episodes of mania. These episodes are characterized by elevated mood with feeling of euphoria and unusual energy and cheerfulness. This often leads to high interest in interpersonal, general or occupational interactions. Mania can also include volatility in mood, with swings from very positive mood to irritability.

Nationally representative data in 2002 from Statistics Canada on over 35,000 individuals indicate that that the lifetime prevalence rate for bipolar depression disorder is 2.2% of the population (Schaffer et al, 2006a). Factors associated with having bipolar depression include anxiety disorder, younger age, low income, and substance abuse disorder experience in the last year. A different analysis of this same dataset focused just on the working-age people was also conducted (Wilkins, 2004). This data indicate a lifetime prevalence level in Canada of 2.6% of the working age population.

Bipolar depression disorder affects men and women to the same extent and it tends to begin early in adult life (onset in the 20s). In addition, people with bipolar disorder had higher rates of experiencing other mental health conditions as well as physical health conditions, including asthma and migraine headaches. People with bipolar depression tend to have less social support among family and friends and from coworkers. Given the difficulties of this disorder, it is important to note that about two-thirds of people with bipolar depression are employed. These findings from Canada are consistent with studies conducted in other countries. For example, in the United States, bipolar depression disorder affects approximately 5.7 million adults, or about 2.6 percent of the United States population age 18 and older in a given year (NIMH, 2006).

Panic Disorder

Panic disorder is characterized by recurrent and unexpected panic attacks. Such attacks are discrete periods of intense fear that occur in the absence of any real danger. According to a national survey in 2002, there is a lifetime prevalence level in Canada of 2.1% of the working age population (Ramage-Morin, 2004). These Canadian findings are generally consistent with research in other countries. In the United States, approximately 6 million adults ages 18 and older, or about 2.7 percent of people in this age group in a given year, have panic disorder (NIMH, 2006).

Panic disorder affects more women than men and it tends to begin early in adult life (onset in the 20s). In addition, people with panic disorder tend to have had stressful life experiences, such as divorce or separation, and lower levels of education and income. Individuals with panic disorder also have higher rates of experiencing other mental health conditions, especially depression, and chronic physical health conditions. People with panic disorder are much more likely (about six times) to seek attention from medical professionals. Panic disorder typically develops in early adulthood (median age of onset is 24), but the age of onset extends throughout

adulthood. About one in three people with panic disorder develops *agoraphobia*, a condition in which the individual becomes afraid of being in any place or situation where escape might be difficult or help unavailable in the event of a panic attack.

Social Anxiety/Phobias

Social anxiety disorder is characterized as "crippling shyness" that includes intense fears of being socially scrutinized or embarrassed in interpersonal situations. According to a national survey in 2002, there is a lifetime prevalence level in Canada of 8 percent of the working age population who have social anxiety (Shields, 2004a). These Canadian findings are consistent with research in the United States. Approximately 15 million Americans age 18 and over, or about 6.8 percent of people in this age group in a given year, have social phobia (NIMH, 2006).

This disorder affects slightly more women than men. It tends to begin early in adult life and persist for many years. Social phobia begins in childhood or adolescence, typically around 13 years of age. People with social phobias tend to have a range of difficult life experiences, such as never marrying, divorce or separation, lower levels of education and income. Individuals with social phobias tend to experience more serious mental health problems later in life (such as depression, panic disorder and substance abuse). The most significant aspect of this disorder is that despite being relatively common, the majority of those affected do not seek professional treatment for their condition.

Schizophrenia

Schizophrenia is a chronic disorder punctuated by episodes of psychotic symptoms, such as hallucinations and delusions. Hallucinations are sensory perceptions that occur in the absence of actual objects. Hallucinations may occur in any sensory modality but in schizophrenia are most commonly auditory—for example, hearing voices or noises. Delusions are fixed false beliefs that are not explained by the person's culture and that the patient holds against all reasonable evidence to the contrary. Incidence studies show that onset of schizophrenia is usually in middle to late adolescence to early adulthood, with later onsets also observed. Assuming conservatively that the main age range of risk is between ages 15 and 55, researchers estimate lifetime risk is in the range of 0.08 to 0.44 percent (Hyman, Chisholm, Kessler, Patel, & Whiteford, 2006). It is estimated that about one percent of Canadians will experience schizophrenia in their lifetime (Mood Disorders Society of Canada, 2006). Despite the low rate of occurrence, the effect of this disorder on patients is often quite debilitating and severe. There are effective treatments for this difficult disorder using pharmacological methods. Many individuals suffering from schizophrenia are so affected by it that it makes it a challenge to work productively at many full-time jobs.

Alcohol and Drugs

According to a national survey in 2002, more than 600,000 Canadians were alcohol dependent and 200,000 were dependent on illicit drugs (Tjepkema, 2004). That is about 3% of all households. Men are higher users of alcohol and drugs than are women. Younger age (20-24 years) was also associated with higher levels of alcohol and drug use. In addition, about 15% of this group had mental health problems, particularly depression, even when considering other demographic and physical health factors. These Canadian findings are consistent with research in other countries.

National studies from the United States show that the number of adults meeting criteria for requiring treatment for alcoholism is 19 million (To, 2005). Yet, the number of Americans that have actually been diagnosed with alcoholism is only 2.4 million. Thus, only about 1 in 10 people with alcoholism get the care that is needed to treat it. Problem drinking is the third leading cause of preventable death in the United States, killing 85,000 Americans annually. It also drains $185 billion from the United State's economy every year (see Ensuring Solutions website). Three out of four Americans in the general public say that alcoholism affects their daily lives and of this group, 41% have encouraged a loved one to get treatment for alcoholism.

Suicide

One of the tragic consequences of the lack of proper treatment for mental health issues, particularly depression and substance, can be suicide (Rhodes, Bethell & Bondy, 2006; New Brunswick and Douglas Hospital Research Centre, 2005). Suicide is a major, preventable public health problem. One in twenty-five Canadians will attempt suicide during their lifetime, according to the Department of Psychiatry at the University of British Columbia.

In Canada, prevalence data shows that in every age group, males had a higher suicide rate than did females. According to Langlois and Morrison (2002), suicide was the leading cause of death for men in the age groups between 25 to 29 and 40 to 44, and for women between the ages of 30 to 34. For the three younger age groups from 10 to 14, 15 to 19 and 20 to 24, it was the second leading cause of death for both genders, surpassed only by motor vehicle accidents.

According to WHO data in 2003, Canada's suicide rate for the entire population ranks 9th among 12 industrialized countries. Age-standardized suicide rates range from a low of 7.5 per 100,000 population in the United Kingdom to a high of 22.5 in Finland. The suicide rate in Canada is slightly higher than that in the United States (12.2 vs. 10.7 per 100,000 population).

In the United States in 2004, suicide was the eleventh leading cause of death, accounting for over 30,000 deaths. The overall rate was 10.9 suicide deaths per 100,000 people. That is about 1 suicide per every 10,000 people. An estimated eight to 25 attempted suicides occur per every suicide death. Suicidal behavior is complex. Some risk factors vary with age, gender, or ethnic group and may occur in combination or change over time (NIMH, Suicide facts, 2006).

Co-occurring Mental and Alcohol/Drug Disorders

About a third of people diagnosed with a mental illness will also have a substance abuse problem in their lifetime, and similarly, 37% of people diagnosed with an alcohol abuse problem also have a mental illness (Skinner et al., 2004). Most of the Canadians who are addicted to drugs use substances that are legally available, such as alcohol, tobacco and prescription medications. Further, many people are cross-addicted such that they use alcohol and medication in a variety of combinations (Rehm & Weeks, 2005). In addition, comparative analyses show that Canadians are among the highest per capita users of psychiatric medications in the world. Canadians are the second-highest users of sedatives and the fourth-highest of prescription narcotics (Rehm & Weeks, 2005).

Given the overlap at the patient level of mental illness and alcohol issues, recommendations for best practices in treatment feature an integrated approach that addresses both kinds of problems (see Canadian Centre for Addiction and Mental Health, 2002). The fact of dual-disorders is now widely recognized by treatment providers in Canada and the United States as a significant challenge for diagnosis and intervention efforts in

the workplace. For example, in the United States, there is a part of SAMHSA that is dedicated to dual-disorders that has its own research budget, agenda and national annual conferences.

Physical Health Co-morbidity

Having a mental health problem is often found in people who have physical health conditions. It's not always clear whether mental health problems cause physical health problems or is a consequence of such problems. Most likely, the associations travel in both directions, but co-morbidities associated with depression are considerable. Depression has also been linked to chronic pain (Currie, 2004; Kopec & Sayre, 2004). Over 90% of patients with major depression have difficulty with sleep, including decreased overall sleep time, quality of deep sleep, and insomnia (Motivala & Irwin, 2007). Lack of sleep has also been linked to lower general immune system functioning and may help explain why alcohol-dependent patients and depressed patients have higher rates of medical conditions.

It now appears that depression is an important risk factor for heart disease, just as real as high blood pressure or cholesterol (Frasure-Smith & L'Espérance, 2005; Also see white paper by the Global Business and Economic Roundtable on Addiction and Mental Health, 2005). Depression is associated with chronically elevated levels of stress hormones — such as cortisol and adrenaline — and the activation of the sympathetic nervous system (part of the "fight or flight" response), which can have harmful effects on the heart. The landmark "INTERHEART" study on cardiovascular disorders in 52 countries that compared over 15,000 heart attack cases with over 14,000 controls, found that in industrialized countries, like Canada and the U.S., the behavioral factors of obesity and psychosocial stress were the two main risk factors for a heart attack (Yusuf et al., 2004). These findings raise several concerns, since heart disease is not only a leading cause of death worldwide, but also one the most costly health conditions faced by employers. And undue stress is also the main cause of depression and burnout in the workplace. So if it is possible to reduce undue stress in the workplace, it may reduce both heart attacks *and* depression (Vézina et al, 2004).

Episodic and Chronic Aspects of Mental Health

Evidence from the Canadian National Population Health Survey was examined longitudinally over two-year span to examine the timing patterns of depression (Patten, 2001). Results showed that many people with depression have relatively brief episodes and that others are characterized by period of longer duration, with an average of six to seven months. The data, like many other studies, also showed that depression was about twice as common in women than in men and that is was much more common for those of younger ages.

The episodic and cyclical nature of most mental illnesses is another factor that makes it complicated to understand and treat effectively (Pinder, 2001). It creates additional difficulties in making the necessary work accommodations for employed people living with mental health disorders. Unlike other disability groups, people with mental illness are rarely ill continuously; rather, they tend to cycle between periods of illness and wellness. When they are symptom-free, they are usually able to work and carry out the normal tasks of life. During episodes of psychiatric illness, however, they may be incapable of functioning at a level that would permit them to work in regular, full-time employment. The cyclical, episodic, and unpredictable nature of serious mental illness can impede the establishment of a long-term and stable employment history (Greden, 2001).

People with Mental Health issues have varying kinds of challenges with respect to employment. In many cases, the onset of a mental disorder occurs in late adolescence or early adulthood, at a time when the affected person's education and training are not yet complete. Thus, the process of obtaining qualifications can be interrupted, often never resumed. For others, their careers once started may be disrupted by serious

mental illness or addiction and many never work again. For those with mental health issues who do find work, the periods outside the labour force caused by their mental illness often hinder the success of their re-entry into employment. The episodic and cyclical nature of most mental illnesses is another factor that makes it harder to assess the impact of mental illness in the workplace.

Summary

The most prevalent mental illness conditions include social anxiety and phobias, major depression, and substance abuse problems. Less common are bipolar depression, panic disorders, and schizophrenia. Suicide can also occur as a cause of death from mental illness. There is also considerable overlap among different mental health disorders and alcohol and drugs as well as significant comorbidity with physical health conditions. The timing of first symptoms and cyclical and life-long course of many kinds of mental health disorders and addictions also raises concerns for a greater need for preventive services, enhanced early detection techniques and for ongoing maintenance treatment to avoid relapse of chronic mental health disorders.

USE OF MENTAL HEALTH CARE SERVICES

This section presents information on how often those with mental illness seek and get professional care for their problems. Mental Health care is provided in the traditional health care system of psychiatrists, psychologists, social workers and other kinds of trained counselors. In addition to the traditional outpatient care system of mental health care providers, there are also a variety services offered at the workplace and or the behalf of employer benefits that assist in the diagnosis, referral and treatment of mental health issues.

Mental Health in a Traditional Health Care System

In Canada, national survey data by Vasiliadis, Lesage, Adair, and Boyer (2005), explored the annual rates for those experiencing various mental health disorders and the range of reasons for seeking care across Canada and between different provinces within Canada. About 1 in every 10 Canadians sought care for mental health issues in the past year. The overall use of services for mental illness care differed between regions of the country. The highest use was in Nova Scotia and British Columbia (both 11.3%) whereas the lowest use was in Newfoundland and Labrador and also Prince Edward Island (6.7% and 5.4%). As in other studies of Canada and other countries, the most common source of care for mental illness was the general medical system (primary care doctors) as opposed to psychologically trained specialists. Person factors that were associated with higher use of Mental Health services included being female, younger age, and unmarried. Those with lower education and born outside of Canada had a lower likelihood of use. Once need and other factors were taken into account household income was not a barrier to mental health care service use in Canada.

A recent comparative study found that overall rates of mental illness service use did not differ between Canada and the United States (10.1% vs 10.6%, respectively;) Vasiliadis, Lesage, Adair, Wang & Kessler (2007).

It is commonly found that women use Mental Health care services much more often than men (10.6% vs 4.0% in this study). However, more careful research shows that the use of mental health care services depends more on social family context than a person's gender. A study of Canadian national prevalence data found that this is more complex when considering how "anchored" a person is in society (Drapeau, Lesage & Boyer, 2005). Among individuals who are single parents or unemployed parents, the rate of access to services is similar for women and men. The rate of use for these kinds of individuals is also higher than for those in other

more "socially anchored" contexts. Generally, the more social roles a person had (employed, parent, married) the less their use of Mental Health services, regardless of gender. Many people also suffer from more than one mental disorder at a given time. Nearly half (45 percent) of those with any mental disorder meet criteria for 2 or more disorders, with severity strongly related to co-morbidity (NIMH, 2006).

Under Diagnosis and Under Treatment of Mental Health

Mental health problems are often under diagnosed and under treated (Young et al., 2001). For example, only 26% of Canadians with major depression had received minimally adequate psychological treatment (three or more psychotherapy consultations), based on the 1994-95 national population health survey (Diverty & Beaudet, 1997). Studies in Canada dating back to the 1994-95 national population health survey have typically found that the majority of people suffering from major depression do not get appropriate psychiatric treatment (54% in 1994-95 data). Other reviews have concluded that only about a third of patients suffering from clinical depression receive appropriate medication or psychotherapy (Diverty & Beaudet, 1997).

The Primary Care Doctor. Major review studies have consistently found that physicians and other providers involved in the delivery of primary care have the most contact with the largest portion of people receiving mental health services (Wang, Langille & Patten, 2003). Often the entry to mental health providers is from first contact with a family physician or primary care doctor. In the United States, more than 6 percent of the adult population uses the general medical sector for mental health care, with an average of about 4 visits per year (Presidents Report on Mental Health, 2003). The general medical sector has long been identified as the initial point of contact for many adults with mental disorders, and about half of the care for common mental disorders is delivered in general medical settings. Primary care providers actually prescribe the majority of psychotropic drugs for both children and adults.

However, the central role of primary care doctors in the diagnosis and delivery of mental illness treatment has a number of difficulties. First, most family physicians are poorly paid for their efforts to provide mental health counseling and treatment by fee for service payment systems. Second, there is a concern about lack of sufficient resources to adequately deal with such care. And finally, the relative lack of coordination between primary and secondary care can limit the effectiveness of family physician-based care. The psychiatric training of many primary care physicians to adequately diagnose and treat patients with mental health issues is also a concern.

Under-treatment. A majority of Canadians suffering from mental illness and addiction do not seek and receive professional help. Statistics Canada's Canadian Community Health Survey (CCHS), Cycle 1.2 on Mental Health and Well-Being, found that only 32% of those suffering from mental illnesses and substance use disorders saw or talked to a health professional during the prior year. These professionals included either a psychiatrist, a family physician, a medical specialist, a psychologist or a nurse. When individuals did see a health professional for mental illnesses or alcohol or drug use and abuse, family physicians were most often consulted. Nearly one in four of those individuals surveyed consulted a family doctor; some 12% consulted a psychiatrist, 10% saw a social worker; and 8% visited a psychologist. This study also showed that adolescents and young adults (15 to 24 years old) were the least likely of all age groups to use any resources for mental illness and addiction than other age groups, although they exhibited higher prevalence rates for mental disorders. Only 25% of affected adolescents and young adults reported having consulted a professional or using other assistance during the previous year (Statistics Canada, 2003).

Lack of care seeking for mental illness conditions is also found in countries other than Canada. The U.S. Surgeon General reports that less than 1 in 3 adults with a diagnosable mental disorder receive treatment in any given year (DHHS, 1999).

Why do people not receive the treatment and services they require? There are many reasons, including: a lack of awareness in the Canadian population of mental illness or a lack of understanding of the symptoms of mental illness; stigma of Mental Health issues; Mental Health Services are scarce; not all services are available to all Canadians as some cost money out of pocket. On the part of the medical community, diagnostic awareness is strong, however, sub-optimal treatment plans are common place.

WORKPLACE-BASED SERVICES FOR MENTAL HEALTH

Several kinds of workplace based or sponsored intervention and prevention programs are available for mental health issues.

Employee Assistance Programs (EAPs). EAPs are employer-sponsored programs designed to alleviate and assist in eliminating a variety of workplace problems. The source of these problems can be either personal (legal, financial, marital or family-related, mental health problems and illnesses, including addiction) or work-related (conflict on the job, harassment, violence, stress, etc.). EAPs have become the primary channel for working Canadians to get their first access to mental health care and addiction treatment services (Csiernik, 2002). The primary job of an EAP professional is to identify and resolve workplace, mental health, physical health, marital, family, personal addictions or alcohol, or emotional issues that affect a worker's job performance (Collins, 2000). Most EAPs also offer consultative and educational services around legal and financial issues that affect employees. Other aspects of EAP include services that support individual supervisors with their management and work team problems. Some EAPs also lead more strategic consulting around organizational change and development issues. EAPs typically offer preventative and reactive services for critical incidents. Most programs also put emphasis on screening and assessments for alcohol issues, as the workplace offers a useful context for the identification and referral for individuals with drinking and drug abuse problems (Roman & Blum, 2002).

It is estimated that between 60% and 80% of Canadians who are employed in a medium-sized or large company (over 500 employees) currently have access to some form of an employee assistance program (EAP). EAPs have been widely adopted across North America and are positively regarded by employers and employees. A 2006 survey of 1,501 adults found that 50% of Canadian workers reported having workplace access to an EAP and 11% have used an EAP (Desjardins, 2006). Data from a 2002-2003 national sample survey of full-time employed persons in the United States (not self-employed) reveals that 60% of them are employed in settings where EAPs are present (Roman & Blum, 2004). EAPs are very common in large organizations. A survey of Fortune 500 companies in 1997, found that 92% of firms offered EAPs – a historic high level of market penetration among large employers (Sciegaj et al, 2001). Similar findings come from a 2000 Society for Human Resource Management Benefits Survey. It found a majority of United States businesses offering EAP services ranged from 48% for small employers to over 90% for the largest employers. However, only about 1 in 8 very small employers (those with less than 50 employees) have access to EAPs and this is often through their health plan medical benefits package (Teich & Buck, 2003).

Work Life. A series of major studies by Duxbury and Higgins (Duxbury & Higgins, 2001; Duxbury & Higgins, 2002; Duxbury, Higgins & Coghill, 2003, Higgins, Duxbury, & Johnson, 2004; Duxbury & Higgins, 2005) have examined the growing societal problems associated with work-family conflicts in Canada. Many workers in the prime of their careers are now in a double bind of caring for both young children and for an aging parent. This so-called "sandwich" generation of dual earner married couples is particularly stressed from their family care obligations.

Absence Management. Due to rising disability costs, total absence management programs are becoming more popular among large employers (Brunelle, 2004). These kinds of programs take an integrated approach and feature efforts to coordinate a disability manager with staff from areas of safety and injury prevention, wellness staff, and EAP and work-life and emphasize pro-active processes to speed the return to work process.

Disability and Return to Work Accommodation. Studies in the United States have shown that supported employment is an evidence-based practice that can assist individuals with disability from severe mental illness to obtain and maintain employment (see meta-analysis by Crowther et al, 2001). When this model was examined in British Columbia, it also had success, especially when it focused on an individual placement and support approach (Corbière, Bond, Goldner, & Ptasinski, 2005).

Integration of Workplace Services. Although EAP and Work-Life have already become more closely aligned, there are emerging opportunities for their greater integration with health promotion and wellness programs, absence management, and disability programs (see edited book by Attridge, Herlihy & Maiden, 2005). Some EAPs collaborate with disability and workers compensation services (Brunnelle & Lui, 2003; Handron, 1997; Smith & Rooney, 1999). SAMHSA also features a report with case examples of employers with integrated mental health care management best practices (Robinson et al., 2001), including Bank One, Delta Air Lines, Eli Lilly and Company, Fannie Mae, and Motorola.

Summary

Use of the traditional mental health outpatient and community based network of service providers is low in Canada. Use of services for mental health has been found to differ by several background factors, most notably younger age, female gender, and lack of social anchorage. Most people with mental health problems are treated minimally from a primary care doctor, who often provides only pharmaceutical treatment without accompanying talk therapy sessions. Many studies clearly show massive under diagnosis and under treatment for mental health disorders. Many employers offer a range of services through the workplace that are used to assess, treat and refer workers with mental illness and work/life kinds of personal issues. Though widely available to most of the population who work for large employers, these kinds of workplace services are not included as part of benefits for many small employers. The recent trend toward the integration of EAP and other kinds of workplace health and disability management services may help to boost the use of mental health services due to greater awareness, centralized access and less stigma.

STIGMA AND DISCRIMINATION

As already reviewed, many studies show that only about 1 in 3 people with mental illness get the kind of appropriate professional treatment that would help them. Thus, there are many workers who could benefit from mental health services but who do not use them. Why is this the case? One major factor is that there is widespread negative attitudes and discriminatory behavior from the general public and many components of the health provider community against mental illness (Stewart, 2004). The stigma concerning mental illness is one of the most significant factors that limits the use of services. People with mental illness often do not seek care because of their fears about possible negative reactions from others and workplace consequences for job stability and advancement.

The recent Canadian government reports on mental health (Kirby, 2004, 2006) emphasize the enormous significance of the problem of the stigmatization of, and discrimination against, individuals with mental illness and addiction. Stigmatization and discrimination affect individuals with mental illness and addiction in many ways (Corbiere, et al., 2004). There are many forms of this stigma. Media portrayals of both patients and Mental Health care providers are overwhelmingly negative. People with mental health disorders are routinely excluded from social life and can even be denied a variety of civil rights that others take for granted. They are often denied basic rights in housing, employment, income, insurance, higher education, criminal justice, and parenting.

Individuals with mental illness and addiction also face discrimination and rejection by service providers both in the mental health system and the broader health care system and discrimination by policy makers and the media. For many individuals with mental illness and addiction, the stigmatization and discrimination they experience can be as important a source of distress as the disorder itself. This happens to such a degree that there is also self-stigmatization among those with mental illness. These fears of social consequences from disclosing their disorder can prevent many people from taking advantage of available therapeutic resources, either from the traditional health care system or from services in the workplace (Angermeyer, 2004). One of the interesting findings from workplaces that have integrated the access point for many kinds of workplace health services, is that the use of mental health and alcohol related resources from the EAP has been found at some companies to have increased, in part, due to less stigma associated with seeking care through a general health promotion access point (Attridge et al, 2005).

Conclusions on Epidemiologic Factors – Counts

The epidemiological research data on the general prevalence of mental illness conditions and the level of use of mental health services has two general conclusions. First, that mental illness conditions are quite common in society in general and even more so among women and the younger working-age generation. The second major theme is that the rate of getting appropriate clinical treatment for mental health disorders through traditional health system programs and services is quite low and the treatment received can be less than optimal. Although there are many reasons for this low level of use - including lack of access to providers, lack of enough qualified providers, cost considerations – the stigma and discrimination faced by those with a mental illness also plays a major role in limiting service use.

ECONOMICS – COSTS

This section speaks to the enormous economic cost burden of mental illness. In a comprehensive review of research literature on workplace mental health, Langlieb and Kahn conclude that "substantial research exists about anxiety and depression costs, such as performance and productivity, absenteeism, presenteeism, disability, physical disability exacerbation, mental health treatment, increased medical care costs, exacerbating of physical illness, and studies of mental health care limitations and cost-offset." (p. 1099, 2005).

In 1996, the United States spent almost $100 billion for the direct treatment of mental illness, as well as substance abuse, and Alzheimer's disease and other dementias (DHHS, 1999). Of this, $69 billion was spent in 1996 for diagnosis and treatment of mental illness alone, representing 7% of total health care spending that year. More than 70% of direct mental health spending was for the services of specialty providers, with most of the remainder for general medical services providers. Again, more than ten years later these costs are now much higher and these initial figures are also considered to be quite conservative.

Numerous studies have chronicled the economic burden and health care costs of mental health in the labour force. The numbers have been generally consistent, but subject to the variance of the number and scope of studies. Perhaps the most recent and comprehensive of the subject (peer reviewed) can be found in the Oct 2006 (Cost of Illness study) by Dr. Gnam et al.

This study examines the economic costs of mental disorders, alcohol, tobacco, and illicit drug abuse (in Ontario). The Gnam report says "the total economic cost attributable to mental disorders and substance abuse in Ontario in the year 2000 was $33.9 billion dollars."

Productivity losses associated with these costs, totaled $28.7 billion dollars – consistent with all other major findings which find that the economic burden of mental disorders exceeds health care costs. Notably, this report alters the status quo on cost estimates and assumptions for Canada as a whole quite dramatically. For example, Dr. Gnam et al, in a report commissioned by the Global Roundtable in 2002, found that the total production losses of mental disability in the labour force amounted to $33 billion for the country as a whole. This tells us that the combined burden of these conditions – exacerbated by the low rates of treatment – needs to be comprehensively re-examined once again.

The same might be said of the cost estimates of the U.S. Other estimates put the total burden including addiction at a total of $275 billion per year with depression accounting for $44 billion per year.

All in all, the sources of economic evaluation and analysis are readily available on many sites, including a comprehensive summary from all sources as part of the 2006 business and economic plan for health and productivity as published by the Global Round and the BC Business and Economic roundtable. That said, it is vividly apparent that the economic cost burden is enormous, and exceeds by far the costs of direct care and treatment. This assumption can and should stand as a platform for judgments concerning the benefits of investing in the workforce.

There is also a significant amount of research information available on questions concerning workers compensation eligibility and payments. As a general rule, mental illness are not construed as a compensable form of coverage under WBC rules. There have been efforts in the past to cover certain stress related conditions and this produced much controversy. In some areas of employment, employees may leave the job with a form of mental disorder due to a specific event seen as a trigger or cause of this condition. One example of that

is a bank employer suffering PTSD as a consequence of a bank robbery. Other examples may be found in workplaces where employees have been subject to catastrophic events.

None the less, WCBs must take an interest in mental illness. In Ontario, the Workplace Safety and Insurance Board (WSIB) is examining the impact of depression as a secondary diagnosis affecting the recovery and RTW of employees suffering compensable injuries which constitute the primary diagnosis. This is an enlightened stance, and an encouraging development. Regardless of whether depression is relevant to the primary diagnosis, it is a risk factor in long term disability cases because isolation is a potential cause of the onset of depressive disorder.

> *"Human capital is really productive capacity. In an economy based on the mental performance of employees, the capacity to think, concentrate and innovate is critical. Strategies that undermine this capacity are likely to have detrimental effects on the long-term interests of the corporations that engage in them. There is thus a strong and compelling business case to be made for making the workplace an environment that is conducive to mental health, since the payback in greater productivity will outweigh the costs of the investment required to significantly reduce mental health risk factors in the workplace."*
>
> (from *OUT OF THE SHADOWS REPORT*, 2006, p. 180)

The book *Human Capital* (Davenport, 1999) describes how companies can benefit financially from taking an active interest in the welfare and success of their employees. More recently, arguments for the human capital approach are presented in the book *"Leveraging the New Human Capital"* by Burud and Tumolo (2004). This book presents an extensive review of the literature that addresses the business case for providing comprehensive and integrated mental health, work-life, wellness and organizational culture kinds of services. Their analysis, involving review of findings from over 50 studies, suggests that human capital performance practices have "overwhelmingly positive effects on business objectives that are pivotal to success: employee creativity, commitment, productivity, health, recruitment and retention." (p. 216). In the book, they also review 13 other studies that show a link between human capital practices and customer satisfaction and loyalty. Also reviewed are another 21 studies that correlate human capital practices positively with the financial success of the organization. Although most of the research reviewed in their book is not conducted with experimental scientific methods, the sheer number of applied studies with consistent findings is impressive.

Watson Wyatt Human Capital (WWHC) Studies. The series of human capital studies by Watson Wyatt (2002, 2004) are also informative. They used a comprehensive survey of company level management practices and employee benefits and linked the patterns of organizational care to the actual stock performance of the companies over time. These studies examined human resources practices of companies and tracked the actual financial performance of the companies for the next several years (Watson Wyatt, 2002). The first study was conducted in 1999 and included data from more than 400 firms in the United States and Canada that were publicly traded, had three years of shareholder returns and a minimum of $100 million in revenue or market value. Interviews were conducted around more than 30 kinds of human resources practices relating to people management. These were coded into a Human Capital Index, a composite single measure that could range from 0 to 100. Results showed that use of these people practices were significantly correlated with a 30% increase in market value.

The second WWHC study was conducted in 2000 and targeted global businesses. The survey featured over 200 questions and the data was collected in six languages. The sample included more than 250 companies from 16 countries, representing all sizes and sectors of the economy. The findings showed that improvements in 19 key HR practices were associated with a 26% improvement in market stock value.

The third WWHC study, conducted in 2001, assessed more than 500 North American companies. This sample included some larger companies, with average market value of over $8 billion and over 18,000 employees. The analyses combined the European data from the second study with new data to create a study pool of more than 750 firms from the United States, Canada and Europe. The results of the aggregated study showed the same pattern as the two previous studies. The higher the Human Capital Index score, the higher the financial performance of the company. In fact, future business success was predicted relatively better by how the company treated its people than by its own past financial performance.

These three studies from Watson Wyatt are quite interesting. But it must be noted that they are correlational in nature and offer no direct proof that when a company does the kinds of human resources practices that are human capital friendly, they will be more financially successful. It could be that some companies have the kind of organizational culture (or some other factors) that contributes both to business profits and to having management practices and benefits that take good care of their employees. The causal chain is not clear from these studies. Even so, these kinds of applied studies, albeit correlational in their research design, are essential as part of the path toward scientific demonstration of the causal linkages between company level practices and the health of the organization.

It remains to be seen in more controlled research if overall workforce mental health contributes directly to organizational success and company profits. This is a gap in our research history that can be addressed in future workplace-based studies. What these kinds of research efforts do indicate is that there is lot to lose for companies that ignore the psychosocial health of its employees. Indeed, the ultimate cost to employers of workplace mental health can be the long-term health of the business itself.

Summary

The research evidence from many studies in Canada and the U.S., is that employees with mental illness miss work more often and work less productively. The costs of these absences are often much more than direct costs of health care for these employees. The research on the indirect cost factors of employee turnover and company financial success is less robust but makes logical sense that there are costs nonetheless.

Conclusion on Economic Factors

The evidence from dozens of studies shows that employees with mental illness and substance disorders have enormous economic costs for society and for their employers. They generate considerable direct costs in the use of mental illness treatment services, in the costs for treatment of medical care for physical health co-morbid conditions, for short- and long-term disability claims, and for worker compensation claims and safety issues. There are even greater costs for employees with mental illness for the indirect costs of lost work days, lost productivity or "presenteeism" while on the job, in employee turnover, and even in overall company success.

Most of these cost burden studies use a research methodology that identify workers with a mental illness diagnosis or disorder and compares them to other workers without mental illness. These costs are found among study populations of groups of people with mental illness that represent a heterogeneous mix of patients in

regards to the severity and duration of their mental illness and most importantly, to the stage and level of effectiveness (or lack of) for their treatment. The reader will recall that the majority of people with mental illness do not get properly diagnosed or treated. Thus, logically, there is also a significant opportunity to reduce the magnitude of these economic costs from mental illness in the workplace with better clinical practices and workplace interventions for more employees who suffer from these conditions. But for clinical and workplace interventions to be successful, they must be aligned with the most important causal factors of mental illness in the workplace. Thus, we now move to examining the causes and contextual factors that contribute to the development of workplace mental illness.

ETIOLOGIC FACTORS – THE CAUSES OF WORKPLACE MENTAL ILLNESS

Mental health, mental illness and addiction are strongly influenced by a wide variety of interconnected factors including biology and genetics, income and educational achievement, employment, social environment, and more (see Ray 2004 for a review). In this section we address causal components in three general areas: Person factors, work factors, and social factors.

Person Factors

The causes of mental illness are many and involve genetic, biological and social factors. There have been many advances in recent decades to understanding the brain chemistry of mental illnesses and the interaction of these medical components with the environment and individual differences among patients and the cultural contexts they live in. These advances in studying the etiology of mental illness are being made by researchers around the globe. However, given that the focus of this report is on workplace mental health, the intra; individual genetic, biological and chemical causal factors involved with mental health are not reviewed. Instead, the extra; individual causal factors associated with the workplace, organizational culture and the larger social community are examined as these are the domains that employers can possibly exert some influence to help with mental health issues of their workers.

Work Factors

The World Health Organization (2000) identified the following five psychological aspects of work environments that promote mental health: Time structure (known and reasonable deadlines), social contact, collective effort and purpose (team work), social identity, regular activity (organization of work). The contribution of these kinds of work factors in creating healthy organizations has since been replicated in many studies. Similar conclusions were found in a major review of the scientific literature prepared by the Health and Safety Executive in the United Kingdom (Bond, Flaxman & Loivette, 2006). Their analysis concluded that stress management at the workplace can be best categorized into six key areas of the workplace context:

1. Demands – aspects for which people have to respond, such as workload, work patterns, and the work environment
2. Control – the extent to which people have a voice in the way they do their work
3. Support – the encouragement, sponsorship and resources provided by the organization, management and colleagues
4. Relationships – promoting positive working rapport to avoid conflict and unacceptable behavior (bullying, harassment)

5. Role – the extent to which people understand their role in the larger organization and the degree to which people have conflicting or competing roles
6. Change – the extent to which organizational change is effectively managed and communicated to all staff.

A recent survey of workers in the Quebec health sector by a large occupational safety organization (ASSTSAS), found that 49% of employees with a major health problem believed that their health problem was directly related to their work (Parent, 2004). This literature documents how employee perceptions of these kinds of work environment factors are a key predictor of health outcomes (Quick & Tetrick, 2003). One of the most well known conceptual approaches in this area is the Job Strain Model (Karasek & Theorell, 1990). When employees perceive highly demanding jobs over which they have little control, there is increased risk for depression (Mausner-Dorsch, & Eaton, 2000) and drug dependence (Reed, Storr & Anthony, 2006). Another major conceptual approach is called the Effort-Reward Imbalance Model (for review see Tsutsumi & Kawakami, 2004). There are many studies that show that when workers perceive an imbalance between (high) effort and (low) reward that they are at an elevated risk of stress-related diseases and depression (Kouvonen et al., 2006). The behavior of management and supervisors been associated with employee health and work performance (Rhoades & Eisenberger, 2002; Tepper, 2000).

For example, Wilkins and Beaudet (1998), in a national sample of Canadians, found evidence of the work factors of job strain, job insecurity, physical demands, low co-worker support among employees being associated with a variety of negative health outcomes, including higher levels of mental stress, migraine headaches, and work injury. Another study using longitudinal national Canadian survey data (Shields, 2006), found that certain job factors predicted depression in the future. More specifically, men with high strain jobs and women with high personal stress and low co-worker support had greater chance of depression over the following two years.

There have been many studies conducted in this area. A meta-analysis of 73 prior research studies found that low levels of perceived organizational support (particularly from the supervisor) predicts increased job strain symptoms among employees, such as fatigue, anxiety and headaches (Rhoades & Eisenberger, 2002). A meta-analysis of data aggregated from many studies and representing over 7,800 workers found that employee perceptions of their work leader significantly affects their psychological well-being (Parker et al., 2003).

However, there is controversy around the quality of the evidence supporting the relative causal contribution of key constructs of both the job-strain and the effort-reward models of workplace factors. Recent Canadian studies have noted the lack of comprehensive assessment of personal and social life contextual factors in addition to the workplace structure and practices as well as a lack of longitudinal follow-up in examining the relative contributions of personal and work factors (Marchand, Demers, & Durand, 2005; Marchand, Demers, & Durand, 2006).

A recent literature review by the IRSST (Harvey et al., 2006) that focused on organizational interventions for workplace mental health and their implications for workplace health and safety in Quebec. Their review offered a useful conceptual model of the stress process that incorporates much of the above noted factors. In this model, there are various kind of *stressors*, which lead to *stress* experiences, which if unmanaged then turn into *strain*. There are many moderating factors at each step that fit into the same person, organizational and societal contexts as we use in this report. Also noted is the role of primary, secondary and tertiary kinds of workplace-based prevention programs that employers can implement.

Social Factors

Mental disorders are uniquely relevant to the interests of business (and employees generally) because they are concentrated among men and women in their prime working years. Chronic job stress is a well established risk to the develop and onset of depression and anxiety disorders and in recent years, the perception of workers in both Canada and the U.S. emerged that "stress" is a major factor in their daily working lives.

Data from Statistics Canada surveys in 1994/95 and 2000/01, indicate that women report more stress than men and that stress levels (regardless of gender) are associated with mental and physical health conditions, lower education, lower income, and divorce (Shields, 2004b). Further analysis of the over 10,000 people with longitudinal follow-up data, revealed that initial levels of high psychological distress and having chronic health conditions both predicted greater stress and further health problems six years later. Chronic and persistent stress factors were the most troubling for workers and were linked to a range of mental distress and physical disorders in the long-term, including arthritis, back problems, ulcers, asthma, heart disease (for men) and migraine (for women). The study also found some evidence of social support buffering the negative impact of stress on short- and long-term psychological distress but not for long-term medical problems.

Analysis of more recent national survey data of Canadians (Shields, 2006), found that one in four workers considered that most work days were "quite a bit" or "extremely" stressful. Part of this stress is due to having jobs characterized by high job strain (psychologically demanding work coupled with little opportunity to make decisions or use personal skills). This study also found that stress was associated with low supervisor and co-worker support.

Nationally representative general social surveys of over 12,000 Canadian workers in 1994 and also in 2000 by Statistics Canada, asked about the most common sources of workplace stress. The top sources in 2000 were long hours and heavy workload demand (34%), often from increased electronic technology factors, followed by poor interpersonal relations (15%) and risk of accident or injury (13%). The impact of these kinds of stressors differed somewhat based on factors of worker gender, work shift and age (Williams, 2003). Greater stress has also been found to double the rate of having a work-related long-term disability claim over the next two years (Marshall, 2006).

Time Pressures. According to national survey data, Canadian workers in 1986 spent, on average during a workday, 4.2 hours in various activities with their spouse or children. In 2005, that figure had dropped to 3.4 hours (Truscott, 2007). That is a 19% decrease in family time, mainly due to more time working. There has also been an increase in the last 20 years in time spent alone, including mealtime (*dinner for one*!). Ross (2002), in a national sample of over 48,000 Canadians in 2000-2001, found evidence that a person's sense of belonging to a social community is associated with a variety of positive healthy outcomes. This relationship connection effect was found even when accounting for other demographic and background factors.

Elder Care and Child Care. Research shows that the majority of people providing care for young children and for older age family members are in the workforce. Using national survey data from Canada in 2002, Piper (2006) found that over one million employed persons aged 45-64 provided informal care for seniors with chronic health conditions or disabilities. Caregivers are more likely to be women. Many female caregivers experience significant employment-related consequences with greater amounts of time devoted to providing care. More women than men also reported that care giving was the reason for retirement from work (1 in 5 for women vs. 1 in 10 for men). A series of major studies by Duxbury and Higgins (2001, 2002, 2003, 2005) have examined the growing societal problems associated with work-family conflicts in Canada. Many workers

in the prime of their careers are now in a double bind of caring for both young children and for an aging parent. This so-called "sandwich" generation of dual earner married couples is particularly stressed from their family care obligations.

Conclusions on Etiologic Factors

There are many causes for mental illness. Modern brain research has shown that mental illness is a medical problem, often an imbalance of certain chemicals in the brain and/or other brain structural abnormalities associated with genetic and biological causes. There are also a set of cognitive and behavioral components at the person level that characterize the onset and severity of mental illness. Major life stress events and traumatic incidents, for example, can exacerbate or trigger certain mood or anxiety disorder responses that a person has a biological readiness to experience. There is also much evidence that the psychosocial context of the workplace is a factor in mental illness. The nature of the demands of the work itself, of the relationship with coworkers, the style of supervision and overall workplace culture all can contribute to an unhealthy workplace and the experience of mental illness among workers. Finally, larger societal pressures also can affect mental health. Time pressures, work-family demands, economic upheaval, and other social problems also can lead to mental illness among workers.

EFFICACY OF MENTAL HEALTH CARE

This section reviews the research on the clinical effectiveness and cost effectiveness of traditional mental health services. These are defined as those services that are primarily delivered outside of the workplace by psychiatrists, psychologists, social workers and other trained professionals in the mental health care system. These do not include the kinds of services delivered primarily at the worksite or through workplace-based benefits programs and interventions.

Efficacy Factors – What's the Cure?

Hundreds of clinical research studies over the last three decades have conclusively demonstrated that a wide range of modern mental illness treatments are highly effective. Treatment of depression, in particular, has helped a large proportion of patients because of advances in the use of medications and/or psychotherapy. Major reviews of the global literature have been conducted by the World Health Organization (2004, 2005, 2006) and government agencies in Canada (Kirby 2004, 2006) and the United States (DHHS, 1999; NIMH, 2006), all with similar conclusions of the general effectiveness of most mental health care interventions.

Clinical Effectiveness of Outpatient Mental Health Services

It is known that mental illness treatments generally produce positive clinical outcomes. Clinical outcome studies in Canada have generally found that treatments for depression and mental health conditions are effective at relieving clinical symptoms (Wang & Patten, 2002; Wang, 2004). According to a landmark review study that examined over 300 meta-analysis papers (each paper itself a review of other many original studies; see Lapse & Wilson, 1993), mental health treatment is largely effective at improving patient functioning. Large-scale survey research of lay consumers of mental health services in the United States has also found generally positive outcomes (see Consumer Reports Survey results in Seligman, 1995). One random sample survey study in the United States found that over 80% of mental health patients reported "high levels of efficacy and satisfaction" with psychological services (Harris Interactive, 2004).

Simon and colleagues (2001) provide a comprehensive literature review paper on the research question of how the treatment of depression and mental health disorders results in improvements in work productivity outcomes. Several kinds of research designs of studies of differing levels of experimental rigor were reviewed: Naturalistic cross-sectional studies; naturalistic longitudinal studies; uncontrolled treatment studies; and uncontrolled comparison trials. Each of these study types generally found positive results that treatment for depression was associated with improved work productivity. These workplace gains are typically enough to offset the cost of providing adequate professional medical care and thus serve as a business case for mental health treatment services. However, these authors noted that there still remains a need for proper scientific evidence from controlled randomized clinical trial study designs with treatment for depression and measurement of workplace performance outcomes.

A more recent report of clinical research from a study with a randomized control trial longitudinal design (Wells et al., 2004) with United States data found that depressed patients treated in primary care settings had improved health outcomes both initially and again at 5 years later. Wang (2004) also found greater improvement in longitudinal clinical outcomes among persons treated for depression than among those not treated for their depression. Similar findings were obtained in a study on providing high-quality management of major depression disorder in primary care settings (Roost, Smith & Dickinson, 2004). This U.S. study used a longitudinal randomized control research design with a two-year follow-up period. Results showed that not only did patients improve in clinical symptom severity and emotional role functioning but also in work performance (less absenteeism and improved productivity).

Other studies have begun to provide evidence for the clinical effectiveness of psychological treatments conducted within the primary care physician environment (Simon, Lumen, Tatty, Operskalski & Von Korff, 2004). This series of studies demonstrated the use of potentially effective interventions (anti-depressant medications and specific psychotherapies, alone or in combination) within a 'chronic disease management' model that includes a pro-active case-management approach delivered in person or by phone. These positive initial findings support a model of individual care delivery in primary care practice that is emerging in Canada that follows the same practical methods that are used to successfully treat common chronic physical health disorders (diabetes, hypertension, chronic pulmonary obstructive disease, asthma, etc.).

The area of telehealth for mental health disorders is becoming a cost-effective method for reaching some people who are in remote areas or prefer the immediate access to counselors and relative anonymity of the patient-provider communication over the telephone. Nonetheless, there remains much work to do in conducting more studies that use high quality research designs, with random assignment of patients to different treatment channels, in order to fairly compare traditional in-person and telephonic (or web-based) channels of delivery of workplace health treatment services.

The available scientific evidence is quite clear that once people with mental illness can find a treatment provider, the results of the treatments are generally effective at restoring better mental health and work functioning. This is an area that has already received a great deal of quality research.

Cost Effectiveness of Outpatient Mental Health Services

The appropriate use of mental health services is often associated with lower overall medical costs. This "medical cost-offset" effect has been demonstrated in many studies (see reviews by Shemo, 1985; Miller & Magruder, 1999; Wang, Simon & Kessler, 2003). The U.S. Surgeon Generals Report on Mental Health, concluded that the clinical and cost-effectiveness evidence was both substantial and sufficient to recommend

that future research should be directed more at understanding why more people are not using mental health services than on questions of whether such treatments are effective (DHHS, 1999). For example, Zhang and colleagues (1999) found that the direct cost of providing treatment for depression is more than offset by the savings realized in the reduction of lost work days. In another example, Frank and colleagues (1999) used an expert panel to review clinical outcome data over five years from over 13,000 employees with depression. They found that a wide range of mental illness treatments produced substantial clinical improvements and that the costs of treatment declined over time.

Summary

There is general agreement for the clinical effectiveness of most of the traditional psychotherapy and pharmaceutical interventions delivered at the person level from trained mental health professionals (psychologists, psychiatrists, social workers and such). The success rates for treating some of the most common mental health disorders are quite high. Patients with major depression, bi-polar depression, anxiety, social phobias and panic disorders typically get relief from these problems and can work again. However, given the early adult age of onset for most mental health disorders and their lifetime chronicity, once they are identified and initially treated these disorders often need to switch to a maintenance kind of therapy that has the goal of preventing a relapse of the disorder in the future. These kinds of services are provided much less often. In addition, the long-term efficacy of these maintenance-oriented treatments has not been studied as much as the short-term treatments for acute mental health disorder symptom relief. This last area represents another gap in our evidence about mental health in the workplace.

Substance abuse and other addictions can be treated with success. These disorders typically last over many years and have a complicated course toward achieving lasting improvement and lifelong sobriety or substance-free living. The reality of co-occurring disorders or combinations of mental illness and substance abuse disorders also can interfere with the clinical success of therapy that does not follow a more integrated and coordinated model of therapeutic interventions. The well documented co-morbidity of mental health and physical health problems among many people with mental health disorders also suggests the absolute necessity of providing a more integrated treatment approach between the mental health provider community and the physician-based medical care system.

The financial offset to society for providing effective interventions for people with mental illness is also well established from research. Given the immense cost burdens of these conditions, the relatively low cost per intervention, and the high success rate for most mental health outpatient care, the cost-benefit in terms of overall health care cost savings offset for providing these services is clear. This is especially true for employers, and for the general economy, when the losses from workplace productivity and absence can be easily recouped from getting workers with mental health problems into appropriate treatment. Many employers are especially interested in making mental health interventions and preventive services available to their workforce with the singular goal of reducing the losses from employee performance when mental health issues are not managed effectively.

EFFICACY OF WORKPLACE-BASED SERVICES

Employers hold the potential to significantly impact the health, well-being and productivity of their workers (Barling, 2005). There are many kinds of interventions that employers can use to achieve these goals, including conducting effective employee education programs; providing appropriate screening and early detection; regularly assessing the organization's climate; removing barriers to appropriate medical, pharmacological, psychotherapeutic care; better coordinating benefits, EAP, occupational medicine, health promotion, and other related health and productivity management services; and working toward achieving a healthy company culture. These kinds of workplace-based Mental Health treatments are now examined for research support for clinical effectiveness and then for cost-effectiveness.

Clinical Effectiveness of Workplace Mental Health Services

EAP Efficacy. A recent review of over 30 workplace mental health research studies conducted in the UK found varying levels of methodological rigor to the studies, but came to the conclusion that there was consistent evidence of clinical effectiveness, workplace performance improvements and very high client satisfaction from EAP counseling (McLeod & McLeod, 2001). In the United States, there has been a similar history with only a handful of high quality experimental research work completed in the field of EAP. Most of the best research which has been conducted in the United States, was prior to 1990 and focused largely on issues of alcohol prevention and treatment referral in workplace settings (Roman & Blum, 2002). When including studies with less rigorous scientific designs, there are several dozen empirical case studies of EAPs that show high levels of outcomes in areas of client clinical change, workplace improvements in absenteeism, productivity and turnover, and a few that document savings in medical, disability or workers compensation claims (see reviews by Blum & Roman, 1995; EAPA, 2003). For example, many EAP providers routinely offer telephonic services for client assessment, referral and brief treatment of workplace mental health issues and the follow-up assessments of users of these services have very high levels of patient reported satisfaction and workplace outcomes and satisfaction (Attridge, 2003; Csiernick, 2002)

EAPs have been challenged with certain limitations due in part to their relatively low cost of service in the marketplace (Sharar & Hertenstein, 2006). For example, some observers have expressed concern about the number of therapeutic sessions being offered to EAP clients, as the number of counselor sessions have decreased at many large U.S. providers from seven per individual to fewer than three. Thus, the likelihood is low of effectively addressing any serious substance abuse or mental illness problem in this limited therapeutic time frame. Also, the incidence of alcohol issues among the cases at most EAP providers is very low (often less than one percent of cases), even though it has much higher prevalence rates in the working population.

Work-Life Efficacy. The relatively recent development of work-life as an applied industry has not allowed the opportunity for high quality scientific investigations of the best practices or the outcomes of its core services. The field has not enjoyed the kind of federal government research support that other more developed fields have had. Despite these obstacles, there have been over 100 studies and reports on the use and impact of work-life practices (reviewed in Work & Family Connection's annotated bibliography, 2003). Most of the research conducted in this area has featured sociological surveys (for example, see the Canadian studies by Duxbury and colleagues), case studies of major employers, or client outcome studies from the major vendors in the work-life field. The book by Burud and Tumolu (2004) reviews many of the key studies in work-life. Employers seem to value work/life services. A Watson Wyatt consulting survey of United States employers found that 77% of respondents believed that work-life programs improve employee satisfaction; 54% believe that they enhance employee health and productivity and 39% say they reduce health care costs (cited in Sherman, 2004).

Organizational Intervention Efficacy. There is sufficient scientific evidence to indicate that well-structured organizational approaches to improving mental and physical health generate more important, longer-lasting effects than secondary intervention strategies directed at individuals (Mackay et al., 2004; Pelletier, 2001; Pelletier, 2005, Riedel et al., 2001; Vezina et al, 2004). Preventative intervention research identifies work-related causes that can be addressed in order to reduce or eliminate stress. Various studies have identified workplace attributes that contribute both to profitability and to better mental health, including: employment security, self-managed teams and decentralized decision-making, extensive training, reduced status distinctions, and reduced barriers to sharing financial and performance information across the organization (see meta-analysis by Parker et al, 2003; review of Canadian studies by Macdonald et al., 2006).

Model Programs for Workplace Prevention and Interventions. Some of the best examples of multi-disciplinary workplace mental health prevention programs are listed in the National Registry of Evidence-based Prevention Programs (NREPP), funded by SAMHSA in the United States. Examples of these kinds of programs include: "Coping with Work and Family Stress", "Wellness Outreach," "The Healthy Workplace," and "Team Awareness." Each of these programs has a multi-disciplinary emphasis that crosses the boundaries of health and wellness, work and home, and the awareness of alcohol and workplace performance issues. These programs have been shown in controlled experimental research conducted in workplace settings to be effective at a number of significant outcomes such as greater awareness and treatment seeking for alcohol issues, reductions in binge drinking, and overall health outcomes (Bennett & Lehman, 2002). There is a similar resource in Canada provided by the University of Toronto's Centre for Health Promotion (see Resources Appendix 2).

Cost Effectiveness of Workplace Mental Health Services

The above section notes many research studies that demonstrate the clinical effectiveness of workplace-based prevention and treatment intervention programs and their ability to reduce absenteeism and presenteeism among workers affected by mental illness. Employers may next ask if these kinds of services can deliver a financial return in other cost savings that is greater than their costs to implement and deliver the service?

The Conference Board of Canada found that employers who engaged in health promotion along with initiatives toward improving psychosocial and physical work environments are the most likely to see results in overall health care cost savings, improved productivity, and better employee retention (Bachmann, 2002). Using more scientific means, a literature review and series of meta-analysis were performed on high-quality research studies with either a longitudinal quasi-experimental design or cross-sectional quasi-experimental design for each of the six major areas of workplace functioning (demands, control, support, relationships, role and change). The findings resulted in the conclusion that "there is a business case" for these six areas of workplace functioning (Health Safety Executive, 2006, p. 24). These findings constitute fairly convincing evidence that, overall, the interventions that address the working conditions do lead to impact over time in improved business outcomes, namely better employee performance and productivity (measured objectively and self-reported) and also less absenteeism and less turnover intention among employees. Other critical reviews of published research studies have been conducted (Aldana, 2001; Pelletier, 2001; Pelletier, 2005). These reviews conclude the there is evidence for the clinical effect of workplace based employee health promotion and prevention programs and there is also generally sufficient cost savings in indirect workplace outcomes (absence and productivity) to justify the costs of the programs.

Summary

Employers have the potential to use system wide interventions to positively affect change in the health status of employees. There is relatively strong evidence to show that EAP programs are effective, with a high level of satisfaction expressed by employees who access these services. As the number of telephonic sessions decrease, however, questions need to be raised regarding the efficacy for employees with addictions.

The best examples of prevention programs involve a multidisciplinary emphasis on the full range of health and wellness factors – the relationship between home on work, work on home, addictions and workplace performance issues.

Clinical effectiveness aside, employers continue to seek out evidence of the cost effectiveness of interventions. There is strong evidence through a variety of studies to indicate that there is generally sufficient cost savings in indirect outcomes to justify the costs of the programs.

BEST PRACTICES IN WORKPLACE MENTAL HEALTH (WMH)

WMH does have some areas with what are considered "best practices" available. These practices have been examined in research and in applied business settings as effective and producing positive outcomes to address WMH issues. There is now some agreement about how to identify the most appropriate clinical methods for diagnosis and treatment of mental illness at the individual patient level. Although not without debate, most clinicians now recommend treating anxiety and depression with a combination of psychotherapy and medications (see the 2006 WHO report on mental disorders by Hyman, Chisholm, Kessler, Patel, & Whiteford). The dissemination of best practices in mental illness diagnosis and treatment has been done by several groups, including the UK's National Institute for Health and Clinical Excellence (NICE). In the United States, there is also a movement among most large insurance companies and their provider systems to adopt the use of "evidence-based medicine" (EBM) guidelines for the treatment planning of patients. Though most of these EBM guidelines are for physical health conditions, the condition of depression is included.

There are also several kinds of research study designs for conducting empirical studies with working populations that are effective and could be adopted by other projects in the future. In 2005, the National Quality Institute (see Resources Appendix) added mental health into its healthy workplace criteria for Canadian companies. In 2006, mental health was included for the first time as part of the criteria for NQI's Healthy Workplace Award. NQI, along with partners Homewood and the Global Business and Economic Roundtable on Addiction and Mental Health, are currently in the process of developing a training program for employers to add mental health into what it means to have a healthy workplace. There are also specific workplace-based intervention programs that have already been developed and tested in controlled research that can be considered as "best practices" (see programs listed at the NREPP website in the United States and the University of Toronto website in Canada). There are also a small set of outcome measurement tools and self-report surveys that have been carefully examined and tested in prior studies (such as the WHO's HPQ instrument).

Best practices are also found at the company level. In the United States, SAMHSA has compiled a "best-practices" report with case examples of employers who had effectively integrated their mental health care management services (Robinson et al., 2001). The Institute for Health and Productivity Management annually honors one company that has been able to successfully address health and productivity issues at their organization. What is less clear from these case examples is just what are the common elements that lead to the

success experienced by these companies. A useful research project would be to examine the kinds of services, processes and workplace cultural factors that resulted in highly effective programs to address mental health illness in working populations.

MAKING THE BUSINESS CASE FOR WORKPLACE MENTAL HEALTH

The last decade has produced a significant body of research that offers: 1) strong evidence of both the clinical and cost-effectiveness of traditional mental illness outpatient treatment services; 2) strong evidence of the clinical effectiveness of workplace based interventions for the prevention and treatment of mental health issues; 3) suggestive evidence of the cost-effectiveness of workplace prevention and intervention programs; and 4) dozens of major employers with compelling case study longitudinal success with documented ROI savings. Many serious critics believe that these factors convene to signal that there is now enough empirical evidence to "make the business case" for employers to provide greater access to traditional and workplace-based mental health services. Indeed, there is now a movement that supports health and productivity management at the population level, with recognition of the central role of mental health factors. These trends are noted in both Canadian (Canadian Healthcare Manager, 2005) and United States business journals (Molmen, 2005).

Seminal Review Papers. The last few years have seen a number of critical review papers published in prestigious peer-review journals that have summarized the evidence and concluded that in most aspects, the business case for mental health services can be made. In other words, that there is enough of a financial return on investment (ROI) for providing mental health services. Much of this work is carefully examined and presented in the book *Mental Health and Productivity in the Workplace: A Handbook for Organizations and Clinicians*, edited by Kahn and Langlieb (2003). Other major papers on this topic include those by Goetzel, Ozminkowski, Sederer, and Mark (2002) and Langlieb & Kahn (2005), both published in the *Journal of Occupational and Environmental Medicine*. See also the pair of WHO reports in 2006 on the economic aspects of the mental health system.

The Business Value Triad Model. One of the challenges that remain, however, is how to best present all of the research findings in a way that business leaders can appreciate and understand. As employee assistance programs are inherently involved in communicating with employers in order to promote and deliver their services, researchers in the EAP field have developed a useful conceptual heuristic for communicating the business value of mental health workplace services to employers (Attridge, 2005; Amaral & Attridge, 2004; Attridge, Amaral & Hyde, 2003). The "Business Value Triad Model" organizes the business value that results from positive employee mental health into three major kinds of outcomes that are important and salient to employers (see Figure 2). The first outcome area is health care costs, the second is human capital costs, and the third is organizational costs.

The health care costs value component includes the impact of the program on medical, mental health, disability and workers compensation claims. These are essentially the direct costs that are paid by the employer or the government for direct services to treat employees with mental illness. The human capital value component includes the indirect cost areas. It represents the kinds of savings that an employer can expect when effective prevention and intervention services result in avoided employee absenteeism and presenteeism losses and yields enhanced employee recruitment and retention and avoided turnover. These two areas of health costs and human capital costs are considered the base of overall value construct. These are the areas that often get first attention from business managers and are also relatively simple to measure and show change over time

after mental health problems are better addressed at the worksite from prevention and intervention services and programs. These areas are also where most of research evidence exists for their effect.

The organizational value component includes workplace safety risk management, legal liability risk prevention, organizational culture change, improved worker morale, secondary impacts on health costs and human capital costs, and ultimately the bottom-line outcome of company profitability. This part of the construct is placed on the top of the visual display to indicate both its significance to the company and to the level of difficulty in obtaining proper measurement and convincing data to demonstrate change from mental health workplace interventions. It is also important to recognize that the two lower base areas of health costs and human capital costs may not get addressed if senior leadership at an organization does not see the connection between mental health and these kinds of costs and the performance of the company as a whole.

Figure 2

The Business Value Triad Model

CONCLUSIONS ON EFFICACY FACTORS

There is not much debate anymore among scientists about the clinical value of mental illness treatments. Most forms of traditional mental illness treatments, when properly provided by trained professionals, do yield relief for the patient and improvements in clinical symptoms and work performance. These services have also been shown to have a general cost-offset value in avoiding other medical care costs and avoiding further lost employee workplace outcomes.

The workplace based services for mental health conditions do not have as much high quality research evidence to support their efficacy. More controlled quasi-experimental and longitudinal kinds of studies are needed to assess the long-term efficacy and cost-effectiveness of EAP, Work-Life and other workplace health promotion and prevention programs. But the research and evaluation data that is available is consistent enough to support a business case that providing mental health workplace services results in savings in health care costs and less employee lost productivity, absence and disability.

Conclusions

This part of the report reviewed a great deal of research on the nature and course of mental health in general and how it is experienced in the workplace. The epidemiological research data shows that mental illness are commonly experienced among working age populations and yet, for a variety of reasons, there is widespread lack of use of available services for mental illness. The use of mental health care services in Canada is also complicated by a delivery system that has many flaws and is in need of fundamental changes in areas of better integration with medical care providers, better funding, and better clinical data collection concerning clinical practices and outcomes for patients.

The economic aspects of workplace mental illness are just as dramatic. Employees with mental illness have high costs to society and to their employers. They generate direct costs in the use of mental health providers, the use of medical providers, and for workplace-sponsored disability and injury claims. What many do not realize is that employees with mental health illness tend to have very high indirect costs for absence, productivity and turnover.

Other research shows that there is a complicated set of interrelated factors that are causes of mental health disorders. Not only are there biological and medical history factors, but cognitive and behavioral components unique to individuals that relate to the timing and severity of mental health disorders. Psychosocial elements of the workplace itself are also a factor in mental disorders. The nature of the job design, interactions with co-workers, supervision styles, and organizational culture all can contribute to mental health problems among workers. Time pressures, work-family demands, economic changes, and other societal level factors also can lead to mental illness among workers.

The positive side of this story is that when workers are properly diagnosed and are able to get access to a professional mental health care provider, the research on efficacy issues is clear that most mental health care services are clinically effective. There are many studies that document the cost-effectiveness of mental health services. As the awareness of mental health in the workplace has grown, so has the response by employers to provide services directly at the worksite to prevent some triggers to mental illness and to assist workers in need of treatment for mental illness. The efficacy of these kinds of workplace based programs and services has also been largely supported, although the inherent difficulties in conducting research in actual work settings has led to the use of study designs and research methodologies that lack scientific rigor in regards to the cause and effect relationship of the many factors involved with workplace mental health prevention and intervention.

Perhaps most significantly, many scientists consider the available evidence from hundreds of controlled studies, descriptive studies and employer case studies to be sufficient to support the business community demand that there is a financial "business case" for investing in mental health workplace services. Workplaces that are better able to prevent, identify and treat those employees in their workforce who have mental health disorders and alcohol problems can achieve economic savings that more than offset the costs of care. These savings come in the form of lower overall health care costs, avoided further losses in the indirect human capital cost areas of missed work, presenteeism and turnover and in creating better organizational health, all of which contribute to company profitability. Effective management of workplace mental health problems thus has the potential to not only assist the more than 1 in 4 workers who suffer from these issues, but also to make Canadian companies more successful and reduce the significant burdens of mental illness on society and the larger economy.

This review of the literature show that there are some areas of workplace mental health issues that have a solid evidence base derived from many high quality published research studies. The highlights from the most well established findings from the epidemiologic, economic, etiologic and efficacy components of workplace mental health are shown in Table 1, on pages 15–16.