OPEN

Mental Health in the Workplace: A Call to Action Proceedings From the Mental Health in the Workplace—Public Health Summit

Ron Z. Goetzel, PhD, Enid Chung Roemer, PhD, Calliope Holingue, MPH, M. Daniele Fallin, PhD, Katherine McCleary, MS, CHES, William Eaton, PhD, Jacqueline Agnew, PhD, Francisca Azocar, PhD, David Ballard, PsyD, John Bartlett, MD, Michael Braga, MA, Heidi Conway, MS, K. Andrew Crighton, MD, Richard Frank, PhD, Kim Jinnett, PhD, Debra Keller-Greene, Sara Martin Rauch, MS, Richard Safeer, MD, Dick Saporito, MBA, Anita Schill, PhD, David Shern, PhD, Victor Strecher, PhD, Peter Wald, MD, MPH, Philip Wang, MD, DrPH, and C. Richard Mattingly, BA

Objective: The aim of the study was to declare a call to action to improve mental health in the workplace. **Methods:** We convened a public health summit and assembled an Advisory Council consisting of experts in the field of occupational health and safety, workplace wellness, and public policy to offer recommendations for action steps to improve health and well-being of workers. **Results:** The Advisory Council narrowed the list of ideas to four priority projects. **Conclusions:** The recommendations for action include developing a mental health in the workplace (1) "how to" guide, (2) scorecard, (3) recognition program, and (4) executive training.

Keywords: culture of health, mental health, well-being, workplace health promotion, workplace mental health, workplace wellness

From the Institute for Health and Productivity Studies, Johns Hopkins Bloomberg School of Public Health, Washington, District of Columbia (Dr Goetzel, Dr Roemer, Ms McCleary); IBM Watson Health, Bethesda, Maryland (Dr Goetzel); Department of Mental Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland (Dr Goetzel, Ms Holingue, Dr Fallin, Dr Eaton); The Luv u Project, Potomac, Maryland (Mr Mattingly); Education and Research Center for Occupational Safety and Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland (Dr Agnew); OptumHealth Behavioral Solutions, San Diego, California (Dr Azocar); American Psychological Association, Washington, District of Columbia (Dr Ballard); The Carter Center Mental Health Program, Atlanta, Georgia (Dr Bartlett); Sarasota Herald-Tribune, Sarasota, Florida (Mr Braga); Human Resources, Johns Hopkins University, Baltimore, Maryland (Ms Conway); Prudential Financial Inc., Newark, New Jersey (Dr Crighton); Harvard Medical School, Harvard University, Cambridge, Massachusetts (Dr Frank); Integrated Benefits Institute, San Francisco, California (Dr Jinnett); Keller Professional Services, Inc., Baltimore, Maryland (Ms Keller-Greene); Wellness Councils of America (WELCOA), Omaha, Nebraska (Ms Rauch); Johns Hopkins Health Care, Department of Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland (Dr Safeer); Human Resources, PC Connection, Merrimack, New Hampshire (Mr Saporito); National Institute for Occupational Safety and Health, Washington, District of Columbia (Dr Schill); Mental Health America, Alexandria, Virginia (Dr Shern); University of Michigan School of Public Health, Ann Arbor, Michigan (Dr Strecher); United Services Automobile Association (USAA), San Antonio, Texas (Dr Wald); American Psychiatric Association, Arlington, Virginia (Mr Mattingly).

Clinical significance: Most American adults are employed; thus, businesses can play a significant role in improving the health and well-being of society at individual, organizational, and policy levels. A diverse set of experts and stakeholders convened a call-to-action summit to identify practical next steps and make progress in achieving a healthy and productive workforce.

Funding for this study was provided by The Luv u Project, Inc., Potomac MD. The authors report no conflicts of interest.

Address correspondence to: Ron Z. Goetzel, PhD, Institute for Health and Productivity Studies, Johns Hopkins Bloomberg School of Public Health, Washington, DC;Truven Health Analytics, an IBM Company, 7700 Old Georgetown Rd., Suite 650, Bethesda, MD 20814 (rgoetzel@us.ibm.com).

Copyright © 2018 The Author(s). Published by Wolters Kluwer Health, Inc. on behalf of the American College of Occupational and Environmental Medicine. This is an open access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

DOI: 10.1097/JOM.0000000000001271

n September 30, 2014, an employee of the Cystic Fibrosis Foundation based in Bethesda, Maryland, brutally murdered Carolyn Mattingly at her home in Potomac, Maryland, after being confronted by organization officials regarding his theft of Foundation property. The Foundation's Executive Vice President and Chief Operating Officer, C. Richard Mattingly, was Carolyn's husband. Instead of descending into lifelong grief and despair, Mattingly and his daughter Christin and her husband Alex formed The Luv u Project, named after Carolyn's iconic signature "luv u," which she regularly included on her notes to family members and friends.

From the onset, the mission of The Luv u Project was "to turn an unacceptable tragedy into a quantifiable agenda and responsible actions that advance the understanding of, and treatments for, mental health issues." The Luv u Project, through its research and expanding dialogue with mental health experts, became increasingly aware of the absence of and dire need for attention to mental health in the workplace. In their quest for solutions to the problem of mental illness, especially as it impacts the workplace, Mattingly and his family convened a "meeting of the minds" at a symposium organized at the Johns Hopkins Bloomberg School of Public Health on October 20, 2016, entitled, *Mental Health in the Workplace:* A Public Health Summit.

This article summarizes the discussions that took place at the Summit and the resulting recommendations for specific actions to be taken to advance mental health in the workplace at the individual, organizational, and policy levels.

MENTAL HEALTH IN THE WORKPLACE SUMMIT

The aim of the Summit was to gather experts in mental and occupational health, drawing from various professional disciplines, including corporate medicine, human resources, health promotion, academia, clinical practice, journalism, community health, insurance, and policy making. The Summit was intended to bring together these representatives from multiple sectors, to inspire a "call to action" directed at the business community and its partners, urging them to exert their powerful influence on local, state, and national policymakers. Meaningful actions taken by forward thinking business leaders and occupational health professionals may prevent the type of tragedy that the Mattingly family experienced and could significantly enhance the quality of work life for millions of Americans as well as enhance employee productivity. In turn, such an initiative could become the springboard for a generational

¹ Throughout this article, we use the terms mental, psychological, and behavioral health interchangeably. Our aim is to urge the importance of a holistic approach to individual and organizational health, which may include individual treatments for psychological, behavioral, and medical problems as well as attention paid to organizational or systemic problems that may trigger psychosocial disorders.

change of attitude regarding mental health in America and how one's experience at work can influence quality of life overall.

This article offers both a scientific and humanistic rationale for better addressing the often-neglected topic of mental health in the workplace. In addition to underscoring the problem of mental illness, the authors recommend establishing healthy company cultures that prevent work-related stress and support the identification and treatment of mental illness. Building cultures of health at the workplace should protect and promote health and safety, enhance performance, and reduce socially harmful behaviors. Establishing a culture of health and well-being at work creates an environment where employees feel valued, supported, and stimulated to perform at their best in work they find meaningful.²

Even in a workplace with a strong culture of health, mental health problems will inevitably arise, and in this situation employers should support their workers who seek help. Establishing and maintaining healthy workplace cultures can prevent tragedies from occurring and encourage those in distress to benefit from evidencebased interventions unencumbered by the stigma associated with care seeking.

SUMMIT PURPOSE AND GOALS

The purpose of the Summit was to gather researchers, corporate executives, policy makers, and practitioners who would intelligently discuss workplace health promotion and disease prevention, policies and practices shown to be effective in improving the health and well-being of workers, gaps in the evidence regarding best and promising practices, and how to disseminate and implement effective programs. Besides highlighting unresolved issues and evidence gaps, a central aim of the Summit was to recommend practical steps that can be taken, at both individual and organizational levels, to improve mental health in the workplace. Following the full-day Summit, an Advisory Council—consisting of 22 individuals representing stakeholders from academia, occupational health, mental health services, coalitions and foundations, business, media, and government—met to brainstorm on potential actionable steps to inform further research and practical action steps employers can take immediately to achieve results.

We begin by presenting the scientific and business case for engaging employers in a discussion of mental health in the workplace. We then present case studies offered by two corporate medical directors who attended the Summit—Prudential Financial and USAA—as illustrations of how mental health issues are now being addressed within a broader "culture of health" initiative. The case studies demonstrate ways that employee health and well-being can be served in real-world settings—where corporate social responsibility aligns with the business imperatives of companies. We next describe a series of interventions that can improve the health of organizations as well as suggested public policies to improve mental health in the workplace. We end with a set of concrete recommendations put forth by Advisory Council members that, if implemented, would lead to demonstrable improvements in the health and well-being of American workers.

THE COST BURDEN OF MENTAL ILLNESS TO **EMPLOYERS**

Mental and behavioral health problems are prevalent among adults, with mood and substance use disorders having peak incidence occurring around 20 to 30 years of age.² Successful public health efforts tend to intervene in environments where at-risk populations spend the most time. Given that approximately 63% of Americans participate in the labor force,³ the workplace represents an often neglected setting for focused prevention efforts. By addressing mental health at the workplace, psychological disorders can be better identified and addressed, and negative sequelae of mental illness can be mitigated. Offering such services as employee assistance programs (EAPs), childcare and eldercare support services, and financial counseling are important benefits available to some, but not all, employees. Few can argue that more can be done to promote health and well-being at work.

In 2002, Goetzel et al presented the business case for investing in mental health programs at the workplace. The drivers for action were similar to those faced by the business community today. Then and now, health care costs were spiraling out of control and increasing at rates outpacing general inflation.⁵ In response, employers put in place various managed care and cost control measures. In addition, employers began shifting a greater portion of payments to workers and that trend in cost shifting has accelerated over time.6

Employers and employees spent on average \$18,142 for family health insurance coverage in 2016 compared with \$11,480 in 2006, a 58% increase that far outpaced the general rate of inflation.⁶ As Goetzel et al have shown,^{7,8} physical health expenditures by employers far exceed mental health payments when the principal diagnosis is used for classification purposes, even when mental health parity is required by law. In contrast to these expenditures, mental disorders top the list of the most burdensome and costly illnesses in the United States at over \$200 billion a year, well exceeding the cost burden of heart disease, stroke, cancer and

Approximately one-third of the mental health cost burden is related to productivity losses, including unemployment, disability, and lower work performance. ^{11,12} For example, in one study conducted by Dewa et al, 11 workers with severe depressive episodes were significantly less productive than those with mild or moderate depressive episodes, and a significant proportion of those with moderate (57%) or severe (40%) depression did not use any treatment. In another study, Birnbaum¹² found that a minority of workers with major depressive disorder (i.e., 20%) received treatment that would be considered minimally adequate while those with severe depression were more likely to receive adequate treatment.

Cataloguing health issues into either physical or mental health may be misleading and may partially account for the inadequacy of treatment received. There is growing evidence that mental illnesses are often obscured by physical ailments whereas the reverse is also true. Consequently, poor mental health can lead to the development of physical health conditions and poor physical health can lead to the development of adverse mental health outcomes. 13-16 Psychological problems are commonly comorbid conditions associated with costly physical health problems such as cardiovascular disease, diabetes, musculoskeletal disorders, and respiratory disorders. ¹⁷

Data from large scale insurance claims analyses reveal that costs for treating patients with comorbid mental health and substance use disorders can be two to three times as high as those for patients without the comorbid conditions. ¹⁸ For example, there is a high prevalence of depression for patients with asthma (45%) and diabetes (27%). 19 Depressed persons are twice as likely to develop coronary artery disease or stroke and more than four times as likely to die within 6 months from a heart attack. 20 In their meta-analysis, Luppino et al found a strong linkage between depression and obesity, where those with depression had a 58% greater risk of developing obesity that nondepressed individuals, and people with obesity had a 55% increased risk of being depressed than nonobese individuals. An added concern is that people with

 $^{^2}$ We acknowledge that there is a difference between the terms "employee" and "worker." Whereas "employee" implies a more traditional workplace arrangement, "worker" is a broader term that may include contractors, temporary agency personnel, and part timers. We use the terms employee and workers interchange ably throughout this paper while appreciating that definitions are undergoing continuous evolution.

depression also exhibit poor adherence with medication or other prescribed treatments.21

The underlying problem is apparent to those who provide care. When presenting to a physician, patients generally complain about their physical health problems. They may or may not bring up mental or emotional pain because of time constraints on the part of either the patient or physician, unwillingness to directly face emotional health problems, and the stigma associated with care seeking behaviors related to mental health.²² Thus, cases of mental illness may be masked, and therefore missed, by physical health ailments in primary care settings.²³ That, in turn, undercounts the substantial financial toll mental health problems pose to employers.

In sum, when people suffer from mental illnesses, other dimensions of health are similarly affected, which, in turn, increase health care spending and diminish individuals' ability to gain or regain meaningful employment or perform at their optimal level while at work.

THE HEALTH AND PRODUCTIVITY BURDEN OF MENTAL ILLNESS

Individuals with untreated mental illnesses who go to work do so with an illness that impairs them physically, mentally, and emotionally. Statistics related to mental health in general, and in the workplace specifically, are compelling. Data from a range of studies show that between 30% and 50% of all adults in the U.S. experience mental illness at some point in their lives.^{2,24,25} Additionally, 20.2 million (8.4% of adults) have a substance use disorder and 7.9 million have both mental illness and substance use disorders.²⁶ The societal impact of poor mental health for the U.S. was estimated to exceed \$210 billion in 2010.9 By 2030, the global societal impact is expected to rise to \$6 trillion.²⁷

Currently, among employed adults, anxiety, depression, and substance use disorders are the most common mental health problems.²⁶ Unfortunately, approximately 50% to 60% of adults with mental illness do not receive the mental health services they need, 28-31 and those who do receive care often suffer for years, typically a decade or more, before receiving treatment, during which time additional problems may arise, including physical, social, and other emotional impairments. ²⁶

In addition to the direct costs associated with mental illnesses, there are many indirect costs. These include increased rates of short-term disability, safety incidents, absenteeism and presenteeism (working while sick), underperformance and unrealized output, stress imposed on team members, overtime, and overstaffing to cover sick-day absences, and hiring costs related to recruitment

Productivity losses due to mental health problems have been quantified in several studies. For example, research shows that there are more workers absent from work because of stress and anxiety than because of physical illness or injury.³⁴ Furthermore, more days of work loss and work impairment are caused by mental illness than other chronic conditions such as diabetes, asthma, and arthritis.³ Employees with depression report their productivity at 70% of their peak performance, ³⁵ and approximately 32 incremental workdays are lost to presenteeism for individuals with major depressive disorders.

Although mental health problems exert a toll on all workers, they may especially affect knowledge workers whose mental acuity and creativity are key job requirements. These workers face multiple personal and business challenges that include long hours and 24/7 availability even across the globe; speed to market pressures underscored by rapid technology advances; and balancing work and family obligations often encumbered by long commutes or feelings of isolation associated with telecommuting.³⁶

As for disability losses, depression is the leading cause of disability among US adults ages 15 to 44.37 Approximately 80% of persons with depression report some level of functional impairment because of their depression and 27% report serious difficulties in their work and home life.3

ADDRESSING RISK FACTORS FOR MENTAL ILLNESS

In two studies conducted in partnership with the Health Enhancement Research Organization (HERO), Goetzel and his colleagues found that employees scoring at "high risk" for depression also had the highest levels of medical expenditures during the 3 years following their initial health risk assessments (HRAs), even after controlling for nine other risk factors such as smoking, obesity, high blood pressure, high cholesterol, and high blood glucose. ^{39,40} Other studies have demonstrated a clear relationship between selfreported psychosocial risk factors, such as depression, stress, and anxiety, and future detrimental effects on worker productivity measured in terms of absenteeism, presenteeism, workers' compensation claims, and short-term disability. 41-43 There is also evidence that physical and psychosocial risk factors are associated; meaning that people with mental health problems are more likely to have poor lifestyle behaviors such as smoking, poor diet, physical inactivity, low rates of preventive screenings, and poor safety habits. 44,45

The spillover effect on business performance is palpable. The Integrated Benefits Institute (IBI) studied ways employees' health may undermine their productivity. 46 The authors found that while physical health symptoms primarily affect absence, mental health problems tended to affect performance, and unsupportive work cultures exacerbated the effects of both. Harmful work cultures were characterized by unsafe working conditions, low respect and trust, lack of variety in tasks performed, high workloads and lack of control in decision making. Those working in unsupportive work cultures experienced higher absence rates and lower job performance.46

MOVING FROM ILLNESS TO HEALTH

Much of the evidence base for intervention has focused on disease prevention and treatment for specific mental illnesses and substance use disorders. As the World Health Organization (WHO) declared many decades ago, health is not only the absence of disease. 47 In its broadest application, good health encompasses physical, emotional, social, financial, intellectual, and spiritual well-being-a positive state whereby individuals thrive, unburdened by disease and disability. To achieve this aspirational state of health described by the WHO, employers need to play an active role. To nurture a healthy workforce, employers must recognize that their obligation to employees extends beyond making available, with minimal barriers, evidence-based clinical treatments for people with mental illnesses (i.e., tertiary intervention). It must first begin with primary prevention—focusing on reducing the onset of disease by addressing modifiable risk factors and bolstering protective factors in the workplace that are within the control of the employer.

Achieving health in the workplace begins by building and sustaining workplace cultures that enhance health and well-being, and focusing on the protection of workers from safety and health hazards in the work environment. Importantly, the design of work needs to address worker safety, health, and well-being as well as attending to the needs of individual workers.⁴⁸ The creation of healthy company cultures begins with top leadership support and includes every level of management from the C-suite to first-line supervisors. Physical and psychological job demands should be within the capabilities of the worker and workers should have an active role in deciding on how their work is to be done. The work environment should foster support from both coworkers and supervisors. Through health-enhancing supervision, worker skills and job

demands are constantly assessed and modified as appropriate. Workers are more productive when they perceive workplace health support from their employer, 49 and encouraged by an environment that rewards creativity, team work, safety, and resilience to sudden organizational changes. These attributes of a healthy workplace can foster a heightened esprit de corp, and, in turn, act as a magnet to attract and retain top talent.

Beyond primary prevention, employers should also have in place support for workers showing signs of mental health problems. Secondary prevention methods such as early detection of signs and symptoms of depression and other mental health problems (e.g., monitoring and screening tools) can help with diagnosis and proper referral for treatment before the disease becomes full-blown. Early intervention is vital and employers can provide these intervention through continuation of primary prevention efforts, such as increasing mental health literacy and reducing stigma, as well as providing resources such as EAPs. 11 By increasing education about mental health, providing support, and understanding to mitigate the stigma and fear related to exposing one's mental health problems, employees exhibiting symptoms may be more likely to seek care.

Healthy company cultures acknowledge that human beings cannot function at 100% the entire workday—workers need breaks that ideally include access to healthy foods, opportunities for physical activity, a balance between job requirements and family obligations, sufficient rest, and healthy social interactions with coworkers and supervisors. In short, to be effective, healthy company cultures address both individual and organizational concerns. 51,52 Below, we describe how two companies have implemented a balanced approach that supports both individual workers' and the organization's health.

CASE STUDY—PRUDENTIAL FINANCIAL

Dr. Andy Crighton is the vice president and chief medical officer at Newark, New Jersey-based Prudential Financial (Prudential), a company that provides life insurance, retirement services, investment management and other financial products and services. Since its opening over 140 years ago, the company has focused on improving workers' health and well-being across multiple health dimensions—physical, emotional, financial, social, and spiritual. In addition to addressing individual workers' health, the company also works to improve the organization's health and the health of the community where it is headquartered.

According to Crighton, through its programs and policies, a business can shape the work environment to support mental health in the workplace. For example, Prudential has a long-standing policy of monitoring the impact supervisors have on workers' health and well-being, especially when supervisors turn over. This is done by gathering anonymous survey data from workers, on an ongoing basis, to gauge their attitudes toward managers, senior executives, and the company, as a whole. As Crighton stated at the Summit, "supportive bosses are key to achieving health and wellness while toxic bosses lessen engagement, increase disability and workers' compensation claims, and negatively impact productivity.'

Crighton described one program aimed at demystifying mental health treatment and removing the stigma associated with seeking help for problems. The program involves broadcasting via the company's intranet video interviews with senior executives who tell their personal stories of how the health and wellness program at the company helped them by, for example, providing professional counseling, access to an alcohol rehabilitation program, and support with transition back to work.

Crighton's take-away messages to employers were as follows: (1) define health more broadly than just treatment of physical ailments, with special emphasis on mental health; (2) tie improvements in individual, organizational, and community health to the company's business goals; (3) leverage data from an integrated data warehouse to quantitatively demonstrate program impact as well as progress; and (4) in an ongoing and strategic fashion, communicate leadership commitment to establishing and sustaining a culture of health.

CASE STUDY—USAA

Since 2002, Dr. Peter Wald, chief medical officer at USAA in San Antonio, Texas, has built a culture of health in the workplace that highlights the importance of emotional health. USAA is a mutual financial services company that strives to ensure financial security to current and veteran members of the military and their families. By maximizing health and improving the quality of life of their employees, USAA can better serve its members. Across three domains encompassing well-being (physical, financial, and emotional health), USAA aims to keep employees well through primary prevention, increased awareness and response options for at-risk individuals, and improved access to effective treatments for sick individuals.

In addressing mental well-being, USAA provides a series of emotional learning tools available on a website for easy access by employees. They include online courses, videos, and reading materials on such topics as coping with feeling overwhelmed, interpersonal communication, dealing with change, managing stress, posttraumatic stress disorder, and problem solving.

A foundational element to USAA's program is establishing a culture not just in word but also in deed—"culture is both what employees 'hear' and what they 'see," Wald explains. Strategies for creating a visible healthy culture include the following: (1) ensuring the physical environment is aligned with wellness messages; (2) creating strategic wellness communications delivered pervasively across the work environment; (3) fostering healthy communities; (4) supporting physical, fiscal and emotional wellness programs; and (5) providing financial incentives for healthy lifestyles.

Underlying these strategies are measurement of progress and evaluation of outcomes to document the benefits of promoting a healthy culture. Short-term improvements in productivity and disability management sustain management commitment to longerterm gains that result from healthier employees. Data accumulated over the past decade have convinced senior leaders that comprehensive wellness programs, that incorporate mental well-being, flatten the cost curve on medical- and productivity-related expenditures, allowing the company to return savings to its members.

MOVING FROM PROBLEMS TO SOLUTIONS

As the two case studies illustrate, enlightened businesses have already put in place comprehensive programs to sustain healthy cultures. To support other employers in their efforts to do likewise, several strategies were proposed targeting three levels of intervention: individual, organizational, and societal.

To help individual workers, employers were encouraged to provide access to the full range of medical and psychotherapeutic treatments by leveraging well-established and evidence-based interventions. One form of treatment, cognitive behavior therapy (CBT), has been shown to be especially effective in treating depression symptoms among workers.⁵³ Access to these treatments should be provided at the parity with physical health interventions: with as few barriers as possible. For example, computerized, telephonic, and a combination of face-to-face with individual emails are some innovative methods for providing CBT that have shown promise in increasing treatment accessibility.⁵⁴ For most mental disorders, there are multiple treatments with proven efficacy. They include psychotropic medications alone or in combination with different types of psychotherapies.

For individuals with depression, the literature has shown that more than 80% of these individuals can be treated quickly and effectively, especially when symptoms are recognized early,55 and

TABLE 1. Organizational-Level Recommendations From Centers for Disease Control and Prevention (CDC) Worksite Health ScoreCard

Include references to improving or maintaining employee health and safety in the business objectives, core values, or organizational mission statement.

Have a strategic plan that includes goals and measurable organizational objectives for the worksite health and well-being program.

Have an annual budget or receive dedicated funding for health and wellbeing programs.

Conduct employee health risk appraisals (HRAs) or health assessments (HAs) and provide individual feedback plus health education resources for follow-up action.

Use incentives to increase participation in health promotion programs. Conduct ongoing evaluations of health and well-being programming that use multiple data sources to inform decision-making.

Support employee volunteerism.

Extend access to key components of the program to all workers, including hard to reach workers (e.g., telecommuters, contract workers, night shift workers, part-time workers).

Provide an employee assistance program (EAP) Provide and support flexible work scheduling policies. Make health and well-being programs available to family members.

approximately 86% of employees treated for depression report improved work performance, 555 Furthermore, 80% of those treated for mental illness report "high levels of work efficacy and satisfaction." In some studies, treatment of depression has been shown to reduce absenteeism and presenteeism by approximately a 40% to 43,57 Other studies have demonstrated more modest effects.

In their systematic review of the literature, Wagner et al established moderate evidence of effectiveness for workplace mental health interventions. 58 Programs with the strongest evidence of effectiveness were those that integrated mental and physical health interventions as part of multicomponent programs. 58 One national study estimated the potential for medical cost savings from effective integration of mental and physical health services to be \$15.8 to \$31.6 billion, in 2012 dollars.

From an organizational standpoint, panelist Kim Jinnett from the Integrated Benefits Institute recommended the following approach. As a first step, organizational leaders need to be presented with simple business case materials with infographics that clearly communicate the rationale for promoting health, in all forms, at the workplace. This needs to start by monetizing the cost of poor health, especially the impact on workers' performance and productivity. Although various studies⁵⁹ have shown the link between health and productivity, the data in those studies are often hard to digest for laypersons. Therefore, there is a need to "package" information and recommended solutions in simple and unambiguous terms, for example, in the form of a "how to" guide grounded on scientific evidence. Also, noted is the importance of providing recognition to businesses that have exemplary workplace well-being programs in place, with documentary evidence that their programs "work." An example of this form of recognition program is found at The Health Project (www.thehealthproject.com), which for the last 25 years has awarded the C. Everett Koop Award to employers with exemplary programs. In addition, the American Psychological Association has for the past 19 years recognized exemplary programs through its Psychologically Healthy Workplace Program Award.^o

Wald from USAA emphasized the importance of simultaneously attending to the multiple dimensions of health, with equal emphasis placed on physical, financial, and emotional well-being. Wald also underscored the critical role executives play and their insistence on metrics that quantitatively demonstrate the value-oninvestment (VOI) from programs. Finally, Wald stressed that

companies should create a long-term vision that may span a decade or longer, and consider expanding wellness efforts beyond the four walls of the organization into the community where the enterprise has its roots.

A sampling of other organizational-level recommendations compiled by the Centers for Disease Control and Prevention (CDC) as part of its Worksite Health ScoreCard are shown in Table 1.61 The CDC has also offered stress and depression management recommendations in their Worksite Health ScoreCard, summarized in Table 2. Finally, in collaboration with NIOSH, the CDC published its "Fundamentals of Total Worker Health Approaches: Essential Elements for Advancing Worker Safety, Health, and Well-Being" as organizational-level recommendations.⁶²

At a policy level, the following recommendations were offered by Dr. Richard Frank, Professor of Health Economics at Harvard University. Frank noted that employers providing disability insurance should increase their investments in return to work (RTW) and disease management (DM) programs for injured and impaired workers. 63 This can be accelerated by mandating that employersponsored disability insurance be required to provide benefits for accommodation and support related to RTW and DM. As an incentive to provide these benefits, the federal government should consider experience rating Social Security Disability Insurance (SSDI) premiums based on disability rates for individual employers. The federal government and its designees (e.g., National Committee for Quality Assurance and National Quality Forum) can help by including quality of care indicators in the basic measure sets that are consistent with evidence-based treatment.

Finally, Jinnett recommended ongoing collection and public reporting of specific outcomes, including workforce health, performance, and functioning alongside quality of life measures. These would compel business leaders to continually improve those metrics and prompt investors to consider the physical and emotional health of employees in their valuations of company performance.

DISCUSSION AND ADVISORY COUNCIL RECOMMENDATIONS

Following the Summit, the Advisory Council met to brainstorm action steps related to applied research, dissemination of best practices, and establishment of policy priorities for the nation. The expectation for the day was to create a roadmap for building a public health program in workplace mental health. The Advisory Council was split into five groups of four or five individuals. Groups were tasked with generating ideas to improve workplace mental health. The groups were then charged with picking one or two ideas of highest priority. In doing so, they were asked to consider measures

TABLE 2. Stress Management, Mental Health Program, and Substance Use Recommendations From the Centers for Disease Control and Prevention (CDC) Worksite Health ScoreCard

Provide and promote free or subsidized lifestyle coaching/counseling or self-management programs that equip employees with skills and motivation to set and meet their personal stress management goals.

Provide dedicated space that is quiet where employees can engage in relaxation activities.

Provide training for managers that improves their ability to recognize and reduce workplace stress-related issues.

Provide opportunities for employee participation in organizational decisions regarding workplace issues that affect job stress.

Provide access to alcohol and other substance use screening followed by brief intervention and referral for treatment when appropriate.

Provide a health plan with insurance benefits that include substance use disorder prevention and treatment.

of success, timelines, implementation processes, as well as funding and partnering needs.

Ideas that emerged during the initial brainstorming included building the evidence base to support specific intervention strategies, defining what constitutes a workplace environment that supports employee health and well-being, providing trainings on workplace mental health, improving communication to specific audiences on the science behind and practice of workplace mental health, undertaking public policy initiatives, and partnering with business schools.

During a second session, groups proposed more specific projects. These included the following: (1) developing and providing quantitative metrics for a healthy workplace scorecard, disseminating information, and incentivizing employer participation, perhaps through a national award; (2) developing workplace- and employee-level evaluations that directly address mental health and well-being that change the nature of the workplace to one that values mental health; (3) developing a massive open online course (MOOC) to disseminate workplace mental health information to many individuals and organizations; and (4) enhancing communication through strategies such as social media, direct to consumer advertising, and celebrity executive spokespersons.

RECOMMENDATIONS FOR ACTION

Following this Advisory Council meeting, organizers developed an implementation plan to build on the momentum gained from the Summit. Nine project ideas were developed from the many ideas put forth at the Summit and Advisory Council meeting, which included a broader list of topics such as better treatment pipelines and individual trainings. From the list of nine project ideas for action, the Advisory Council further prioritized which to pursue first, through iterative web-based feedback and conference calls in the months following the summit. Specifically, the Advisory Council responded to an online poll where it was asked to rate each project idea on a scale of 1 to 10 (1 = lowest priority; 10 = highest priority), taking its impact, feasibility, and fit into consideration for the ratings. Rating results were then shared in a conference call, with common themes highlighted, and overlapping project ideas were consolidated into a shorter list of six project proposals. Each participant was given the opportunity to elaborate on the reasoning behind the ratings, hear each other's arguments, and then rerank the top choices. These, in turn, were consolidated into four major projects that are summarized below.

Develop a Mental Health in the Workplace "How To" Guide

Provide employers with advice and guidance along with a standard set of metrics that can be used to design, implement, and evaluate mental health in the workplace programs focused on building a culture of health and well-being and work organization and design, as well as focusing on employee-specific problems such as depression, addiction, and violence. A Mental Health in the Workplace "How To" Guide (Guide) would inform effective program designs and offer assessment tools to determine whether existing programs are effective and achieving impact. Furthermore, having a clearly defined set of metrics is necessary, especially when working alongside mental health providers, wellness vendors, insurance companies, and community partners. The Guide would be made available for free on Johns Hopkins' and Luv u Project's websites.

The Guide would be especially useful to small- and mediumsized businesses that do not have, or have not allocated, the personnel or resources to implement robust programs but wish to do more than just offer employees' access to an external EAP. This would best serve employers who are interested in low-cost or no-cost programs, policies and environmental supports for building, and sustaining mentally healthy workplaces.

In terms of measures, employers would benefit greatly from standardization of metrics. These metrics would address program structure variables that support a psychologically healthy workforce. Process measures would evaluate the program's "dose" or reach and participant satisfaction. Finally, outcome measures would quantify such things as employee well-being, employees' engagement in work, risk factor reduction, economic impacts, turnover, gains in productivity, reduction in healthcare and disability costs, and enhanced company reputation.3

Develop a Mental Health in the Workplace Scorecard

Criteria for best and promising practices for corporate mental health promotion programs are lacking or nonstandard. Businesses require guidance on which programs, policies, and environmental supports to implement at the workplace to achieve a desired culture of health and well-being. To help businesses do so, a "scorecard" is needed by which employers can gauge the extent to which they have implemented best and promising practices, and their progress in achieving a culture of health and well-being at the workplace, particularly in mental health.

A Mental Health in the Workplace Scorecard would enable employers to conduct an objective self-assessment of their worksite environment and identify areas requiring remediation or attention for future intervention. The Scorecard would build upon existing workplace organizational health scorecards (e.g., CDC Worksite Health ScoreCard [https://www.cdc.gov/dhdsp/pubs/docs/hsc_manual.pdf], Samueli Institute Optimal Healing Environments-Workplace [http://www.samueliinstitute.org/research-areas/optimalhealing-environments/ohe-framework/behavioral.html], and the HERO Health and Well-being Best Practices Scorecard in Collaboration with Mercer [http://hero-health.org/scorecard/). 64,65

Develop a Mental Health in the Workplace **Recognition Program**

Businesses that have exemplary mental health in the workplace programs often appreciate recognition for their accomplishments as a method for enhancing their reputation scores, demonstrating corporate social responsibility, attracting and retaining top talent, and positively influencing consumer purchasing behaviors. Recognition for having a healthy workplace culture needs to be based on providing evidence (hard data) showing that an organization has positively influenced improvements in metrics of mental health and well-being, which, in turn, have led to measurable business outcomes. Boosting the recognition of organizations that have successfully implemented mental health programs can raise the profile of these organizations and garner support from other employers who wish to model their initiatives on those of winning programs. The Psychologically Healthy Workplace Program developed by the American Psychology Association can be leveraged to form this type of recognition program for employers with exemplary programs.

Partner With a Business School to Establish an **Executive Training Program Focused on Mental** Health in the Workplace

Business professionals lack the necessary training to address mental health in the workplace issues such as low worker

³ Sara Martin Rauch and other advisory council members, in collaboration with The Wellness Council of America (WELCOA), have produced a Mental Health in the Workplace Toolkit, available free of charge on the WELCOA website [https://www.welcoa.org/resources/?s=%22mental%20health%20toolkit%22&c=

productivity; poor health status resulting in increased medical and disability spending, turnover, high absenteeism, presenteeism, safety incidents, and disability; low morale linked to a lack of purpose and engagement; poor social relations and conflicts; harassment and bullying; and lack of adequate risk management related to workers' depression, drug and alcohol abuse, and violence. In addition, leaders often lack the skills needed to build a positive work environment where workers feel empowered, there is an appropriate work-life balance, people are energized and fully engaged in their tasks, workers are happy and resilient, and there is pride in daily work output.

To attain those skills, faculty from different departments at a university (mental health, business, psychology, occupational health, nursing, and safety) would develop a curriculum for a short 3- to 5-day executive training program that would prepare leaders to build and sustain a mentally healthy workforce. The course would be built around five to eight case studies of successful and unsuccessful attempts to address mental health issues at the workplace. The case studies will be supplemented by didactic lectures delivered by a wide array of faculty from the different departments. The program would emphasize teamwork in understanding and resolving real-world problems faced by executives. In addition, convening business leaders interested in this topic would build strong and longlasting relationships among peers from other organizations.

The case studies prepared for this program would follow a standard business school format that captures the reasoning behind a company's given course of action and tells the story in a wellstructured written document. The business cases will rely on quantifiable and nonquantifiable (emotional or attitudinal) reasoning behind business decisions. It will detail the background of the initiative (scenario analysis); how it became aligned with the company's strategic goals; the expected business benefits (both tangible and intangible); key performance indicators; options considered (with reasons for rejecting or carrying forward each option); costs (both human and financial); the risks associated with not moving ahead; and results.

The executive leadership program would be built on a curriculum shaped by a multidisciplinary steering committee made up of key administrative and academic faculty from the university. A manual that defines the curriculum and its supportive elements would be published and marketed so that business schools across the world would be able to replicate the program first designed as a best practice.

SUMMARY AND CONCLUSIONS

Mental and behavioral health are important public health issues, affecting between a third and one half of all Americans sometime in their life. Since most of life is spent in working years, the workplace is an ideal setting for public health-informed initiatives that promote mental and behavioral health and prevent illness. For businesses, improvement of employee mental health can save substantial resources by decreasing presenteeism, increasing productivity, and encouraging retention while decreasing health care costs. Mental health and well-being at the workplace are attainable if employers follow best and promising practices, but there is a critical need for a centralized, concerted effort to build the evidence base, maintain information on best practices, and effectively disseminate and implement policies and practices that connects academic, government, business, and health professional institutions. For example, integrated policy approaches are needed to support better mental health promotion in the workplace, which entails providing key players, including employers, with clear guidelines on their responsibilities, tools and training opportunities for identifying and addressing mental health issues in a timely fashion, and financial incentives for doing the right thing by

integrating health care delivery and employment services to better serve workers.66

Tragic events prompted the founding of The Luv u Project, which has now inspired action. Mattingly and his family gathered experts in multiple fields and disciplines who came together for a common cause—to improve the art and science supporting healthy workplaces. The summit not only provided a venue for presentation and discussion of public health opportunities, it also reinforced a long-term commitment to collaboration between The Luv u Project, faculty at Johns Hopkins, and the multiple stakeholders comprising the Summit's Advisory Council.

In a year's time, this initiative has articulated a set of concrete and achievable next steps. Importantly, these were developed through a sustained yearlong collaboration among over 20 stakeholders and experts across business, government, and academia who are committed to making a measurable difference in public mental health through workplace practices. The challenge now is to move beyond these initial accomplishments to establish and sustain an academic and business focus on workplace mental health. The mission of The Luv u Project can only be achieved by harnessing the enthusiasm and trust built among the Advisory Council members and their constituencies. It is our expectation that the project initiative outlined here will result in measurable improvements in workers' mental health and well-being.

ACKNOWLEDGMENTS

The authors wish to thank the speakers at the summit and participants in the Advisory Council for their contribution to this manuscript and the ideas generated during the Summit and its follow-up. They include the following: Rich Mattingly, Founder and President, The Luv u Project; Katrina Rodriguez, MHS, Senior Research Program Coordinator, Department of Mental Health, Johns Hopkins Bloomberg School of Public Health; Jacqueline Agnew, PhD, Professor, Environmental Health and Engineering and Director of the Education and Research Center for Occupational Safety and Health, Johns Hopkins Bloomberg School of Public Health; Francisca Azocar, PhD, Vice President of Research and Evaluation of Behavioral Health Sciences at OptumHealth Behavioral Solutions; David Ballard, PsyD, Assistant Executive Director for Organizational Excellence at the American Psychological Association; John Bartlett, MD, Senior Advisor, The Carter Center Mental Health Program; Michael Braga, Investigations Editor for the Sarasota Herald-Tribune, winner of a 2016 Pulitzer Prize and Carolyn C. Mattingly Award for Mental Health Reporting; Heidi Conway, Vice President for Human Resources, Johns Hopkins University; K. Andrew Crighton, MD, Vice President and Chief Medical Officer, Prudential Financial Inc.; Richard Frank, PhD, Margaret T. Morris Professor of Health Economics, Harvard University and Former Assistant Secretary for Health and Human Services; LuAnn Heinen, Vice President, Workforce Well-Being, Productivity & Human Capital, National Business Group on Health; Kim Jinnett, PhD, Executive Vice President, Integrated Benefits Institute; Debra Keller-Greene, CEO and Founder of Keller Professional Services, Inc.; Bob Meyers, President Emeritus, National Press Foundation; Sara Martin Rauch, MS, Director of Strategy and Planning, WELCOA; Pamela Rich, Manager, Institute on Innovation in Workforce Well-being at the National Business Group on Health; Richard Safeer, MD, Medical Director, Employee Health & Wellness, Johns Hopkins HealthCare, Assistant Professor, Medicine & Assistant Professor, Health, Behavior and Society Johns Hopkins University; Dick Saporito, Senior Vice President of Human Resources, PC Connection; Anita Schill, PhD, Senior Science Advisor, National Institute for Occupational Safety and Health; Joshua Sharfstein, MD, Associate Dean for Public Health Practice and Training, Johns Hopkins Bloomberg School of Public Health, Former Secretary of the Maryland Department of Health

and Mental Hygiene; David Shern, PhD, Senior Science Advisor, Mental Health America; Victor Strecher, PhD, Professor and Director for Innovation and Social Entrepreneurship, University of Michigan School of Public Health; Peter Wald, MD, MPH, Enterprise Medical Director, USAA; Philip Wang, MD, DrPH, Director of Research, American Psychiatric Association; Ellen Yankellow, PharmD, Owner, President and CEO of Correct Rx Pharmacy Services, Inc.

REFERENCES

- 1. The Luv u Project. The Luv u Project—Our Mission. 2017. Available at: https://theluvuproject.org/about/our-mission/.
- 2. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry. 2005; 62:593-602.
- 3. United States Department of Labor: Bureau of Labor Statistics. Labor Force Statistics from the Current Population Survey. 2017. Available at: https:// data.bls.gov/timeseries/LNS11300000. Accessed August 26, 2017.
- 4. Goetzel RZ, Ozminkowski RJ, Sederer LI, Mark TL. The business case for quality mental health services: why employers should care about the mental health and well-being of their employees. J Occup Environ Med. 2002; 44:320-330.
- 5. Patton M.US health care costs rise faster than inflation. Forbes. 2015.
- 6. The Kaiser Family Foundation. Kaiser Family Foundation 2016 Employer Health Benefits Survey. 2016. Available at: https://www.kff.org/health-costs/ report/2016-employer-health-benefits-survey/.
- 7. Goetzel RZ, Ozminkowski RJ, Meneades L, Stewart M, Schutt DC. Pharmaceuticals-cost or investment? An employer's perspective. J Occup Environ Med. 2000;42:338-351.
- 8. Goetzel RZ, Hawkins K, Ozminkowski RJ, Wang S. The health and productivity cost burden of the "top 10" physical and mental health conditions affecting six large US employers in 1999. J Occup Environ Med. 2003;45:5-14.
- 9. Greenberg PE, Fournier A-A, Sisitsky T, Pike CT, Kessler RC. The economic burden of adults with major depressive disorder in the United States (2005) and 2010). J Clin Psychiatry. 2015;76:155-162.
- 10. Roehrig C. Mental disorders top the list of the most costly conditions in the United States: \$201 billion; Health Aff. 2016;10-1377.
- 11. Dewa CS, Thompson AH, Jacobs P. The association of treatment of depressive episodes and work productivity. Can J Psychiatry. 2011;56:743-750.
- 12. Birnbaum HG, Kessler RC, Kelley D, Ben-Hamadi R, Joish VN, Greenberg PE. Employer burden of mild, moderate, and severe major depressive disorder: mental health services utilization and costs, and work performance. Depress Anxiety. 2010;27:78-89.
- 13. Naylor C, Parsonage M, McDaid D, Knapp M, Fossey M, Galea A. Long-Term Conditions and Mental Health: The Cost of Co-Morbidities. London, UK: The King's Fund; 2012.
- 14. France E, France EF, Wyke S, Gunn JM, Mair F, McLean G. A systematic review of prospective cohort studies of multimorbidity in primary care. Br J Gen Pract. 2012;62:e297-e307.
- 15. Gunn JM, Ayton DR, Densley K, et al. The association between chronic illness, multimorbidity and depressive symptoms in an Australian primary care cohort. Soc Psychiatry Psychiatr Epidemiol. 2012;47:175-184.
- 16. Mercer SW, Gunn J, Bower P, Wyke S, Guthrie B. Managing patients with mental and physical multimorbidity. BMJ. 2012;345:e5559.
- 17. Merikangas KR, Ames M, Cui L, et al. The impact of comorbidity of mental and physical conditions on role disability in the US adult household population. Arch Gen Psychiatry. 2007;64:1180-1188.
- Melek SP, Norris DT, Paulus J. Economic impact of integrated medicalbehavioral healthcare. Milliman Am Psychiatr Assoc Rep. 2014;7:7.
- 19. Pincus HA, Pettit AR. The societal costs of chronic major depression. J Clin Psychiatry. 2001;62:5-9.
- 20. Glassman AH. Depression and cardiovascular comorbidity. Dialogues Clin Neurosci. 2007;9:9.
- 21. Luppino FS, de Wit LM, Bouvy PF, et al. Overweight, obesity, and depression: a systematic review and meta-analysis of longitudinal studies. Arch Gen Psychiatry. 2010;67:220-229
- 22. Kessler RC, Berglund PA, Bruce ML, et al. The prevalence and correlates of untreated serious mental illness. Health Serv Res. 2001;36(6 Pt. 1):987.
- 23. Wittchen H-U, Mühlig S, Beesdo K. Mental disorders in primary care. Dialogues Clin Neurosci. 2003;5:115.

- 24. Moffitt TE, Caspi A, Taylor A, et al. How common are common mental disorders? Evidence that lifetime prevalence rates are doubled by prospective versus retrospective ascertainment. Psychol Med. 2010;40:899-909.
- 25. Takayanagi Y, Spira AP, Roth KB, Gallo JJ, Eaton WW, Mojtabai R. Accuracy of reports of lifetime mental and physical disorders: results from the Baltimore Epidemiological Catchment Area study. JAMA Psychiatry.
- 26. Hedden SL. Behavioral Health Trends in the United States: Results from the 2014 National Survey on Drug Use and Health. Rockville, MD: Substance Abuse and Mental Health Services Administration, Department of Heath & Human Services; 2015.
- 27. World Federation of Mental Health. Mental Health in the Workplace. 2017. Available at: https://www.wfmh.global/app/download/5430975/WMHD+ 2017+report.pdf; 6:6.
- 28. Mental Health America. The State of Mental Health in America. 2017.
- 29. Kessler RC, McGonagle KA, Zhao S, et al. Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: results from the National Comorbidity Survey. Arch Gen Psychiatry. 1994;51:8-19.
- 30. Substance Abuse and Mental Health Services Administration (SAMHSA). Results from the 2015 National Survey on Drug Use and Health (NSDUH). Substance Abuse and Mental Health Services Administration, Rockville, MD; 2015.
- 31. Substance Abuse and Mental Health Services Administration (SAMHSA). Results from the 2015 National Survey on Drug Use and Health (NSDUH). Substance Abuse and Mental Health Services Administration, Rockville, MD; 2016.
- 32. Goetzel RZ, Carls GS, Wang S, et al. The relationship between modifiable health risk factors and medical expenditures, absenteeism, short-term disability, and presenteeism among employees at Novartis. J Occup Environ Med. 2009;51:487-499.
- 33. Kowlessar NM, Goetzel RZ, Carls GS, Tabrizi MJ, Guindon A. The relationship between 11 health risks and medical and productivity costs for a large employer. J Occup Environ Med. 2011;53:468-477.
- 34. Organization WH. The World Health Report 2004: Changing History, Annex Table 3: Burden of disease in DALYs by cause, sex, and mortality stratum in WHO regions, estimates for 2002. Geneva WHO 2004;2004:126-131.
- 35. Finch RA, Phillips K. An Employer's Guide to Behavioral Health Services: A Roadmap and Recommendations for Evaluating, Designing, and Implementing Behavioral Health Services. Washington, DC: National Business Group on Health; 2005.
- 36. Allvin M. New rules of work: exploring the boundaryless job. In: Näswall K, Hellgren J. Sverke M. editors. The Individual in the Changing Working Life. New York, NY: Cambridge University Press; 2008. p. 19-45.
- 37. Organization WH. Promoting Mental Health: Concepts, Emerging Evidence, Practice: Summary Report. 2004.
- 38. Pratt LA, Brody DJ. Depression in the United States Household Population, 2005-2006. US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics;
- 39. Goetzel RZ, Anderson DR, Whitmer RW, et al. The relationship between modifiable health risks and health care expenditures: an analysis of the multiemployer HERO health risk and cost database. J Occup Environ Med. 1998;40:843-854.
- 40. Goetzel RZ, Pei X, Tabrizi MJ, et al. Ten modifiable health risk factors are linked to more than one-fifth of employer-employee health care spending. Health Aff. 2012;31:2474-2484.
- 41. Sanderson K, Andrews G. Common mental disorders in the workforce: recent findings from descriptive and social epidemiology. Can J Psychiatry. 2006;51:63-75.
- 42. Dewa CS, McDaid D, Ettner SL. An international perspective on worker mental health problems: who bears the burden and how are costs addressed? Can J. Psychiatry, 2007:52:346-356.
- 43. Claxton AJ, Chawla AJ, Kennedy S. Absenteeism among employees treated for depression. J Occup Environ Med. 1999;41:605-611
- 44. Brown S, Birtwistle J, Roe L, Thompson C. The unhealthy lifestyle of people with schizophrenia. Psychol Med. 1999;29:697-701.
- 45. Lambert TJR, Velakoulis D, Pantelis C. Medical comorbidity in schizophrenia. Med J Aust. 2003;178:S67.
- 46. Jinnett K. Human Capital Investment for Better Business Results: Connecting Work Climate, Employee Health and Job-Related Outcomes. Findings from the Integrated Benefits Institute Study: The Impact of Health of Job Performance and Productivity; 2015. Available at: https://ibiweb.org/ ?ACT=65&id=_unTVFBkc9O_cHfVCgYxznj_TaCv0RxLBCFo9xy9ZjbN-PfgmbRi_vXY8L_RHvFuJfB8eFseGHwUDV117ordiroBaOFk5r4m_7KA-WIFNZFqWPjKtEqZcX0fGRJhPuo2.

- 47. World Health Organization. Constitution of the World Health Organization; 1995. Available at: www.who.int/governance/eb/who_ constitution_en.pdf.
- 48. Schill AL. Advancing Well-Being Through Total Worker Health®. Workplace Health Saf. 2017;65:158-163.
- 49. Chen L, Hannon PA, Laing SS, et al. Perceived workplace health support is associated with employee productivity. Am J Heal Promot. 2015;29: 139 - 146.
- 50. Wolfe R, Parker D, Napier N. Employee health management and organizational performance. J Appl Behav Sci. 1994;30:22-42
- 51. Quinn RW, Spreitzer GM, Lam CF. Building a sustainable model of human energy in organizations: Exploring the critical role of resources. Acad Manag Ann. 2012;6:337-396.
- 52. Vallerand RJ, Salvy S, Mageau GA, et al. On the role of passion in performance. J Pers. 2007;75:505-534.
- 53. Tan L, Wang M-J, Modini M, et al. Preventing the development of depression at work: a systematic review and meta-analysis of universal interventions in the workplace. BMC Med. 2014;12:74.
- 54. Yunus WMAWM, Musiat P, Brown JSL. Systematic review of universal and targeted workplace interventions for depression. Occup Environ Med. 2018;75:66-75.
- 55. Finkelstein SN, Berndt ER, Greenberg PE, Parsley RA, Russell JM, Keller MB. Improvement in subjective work performance after treatment of chronic depression: some preliminary results. Chronic Depression Study Group. Psychopharmacol Bull. 1996;32:33-40.
- 56. PacifiCare Behavioral Health. Therapy in America. Psychol. Today 2004. Available at: http://www.prnewswire.com/news-releases/therapy-in-america-2004-poll-shows-mental-health-treatment-goes-mainstream-73817497.html. Accessed August 13, 2017.

- 57. Simon GE, Revicki D, Heiligenstein J, et al. Recovery from depression, work productivity, and health care costs among primary care patients. Gen Hosp Psychiatry. 2000;22:153-162.
- 58. Wagner SL, Koehn C, White MI, et al. Mental Health Interventions in the Workplace and Work Outcomes: A Best-Evidence Synthesis of Systematic Reviews. Int J Occup Environ Med. 2016;7:601-607.
- 59. Goetzel RZ, Guindon AM, Turshen IJ, Ozminkowski RJ. Health and productivity management: establishing key performance measures, benchmarks, and best practices. J Occup Environ Med. 2001;43:10-17.
- 60. American Psycholgical Association Center for Organizational Excellence. Psychologically Healthy Workplace Awards. 2017. Available at: https:// www.apaexcellence.org/awards/. Accessed February 10, 2017.
- 61. Matson-Koffman DM. The CDC worksite health scorecard; an assessment tool for employers to prevent heart disease, stroke, and related health conditions; 2012. Available at: https://stacks.cdc.gov/view/cdc/12023.
- 62. Lee MP, Hudson H, Richards R, Chang C-C, Chosewood LC, Schill AL. Fundamentals of Total Worker Health approaches: essential elements for advancing worker safety, health, and well-being; 2016.
- 63. Simon GE, Barber C, Birnbaum HG, et al. Depression and work productivity: the comparative costs of treatment versus nontreatment. J Occup Environ Med. 2001:43:2-9.
- 64. Goetzel R, Tabrizi M, Roemer E, Smith K, Kent K. A review of recent organizational culture assessments. Am J Health Promot Art Health Promot 2013;27(5):TAHP 2-TAHP 4.
- 65. Roemer EC, Kent KB, Samoly DK, et al. Reliability and validity testing of the CDC Worksite Health ScoreCard: an assessment tool to help employers prevent heart disease, stroke, and related health conditions. J Occup Environ Med. 2013;55:520-526.
- 66. OCDE O. Mental Health and Work: Fit Mind, Fit Job: From Evidence to Practice in Mental Health and Work. Paris, France: OECD Publishing; 2015.