Erin M. O'Connor, Esq.,
Practice Leader,
Health Care Practice,
Cammack LaRhette
Consulting

# Depression in the Workplace:
## Prevalence and the Impact on Health Costs and Productivity

According to the World Health Organization and the National Institute of Mental Health, depression is the leading cause of disability worldwide and within the United States (WHO; NIMH). Approximately 16.2% of Americans had Major Depressive Disorder (MDD) in their lifetime while 6.6% of the population has had MDD in the past 12 months (Kessler, 2008). Within the working population, approximately 6.4% of Americans had MDD (Kessler, 2008). The prevalence of MDD does not differ significantly by education or occupation, although depression is significantly higher in women and is inversely associated with age.

Depression is a ubiquitous term that refers to multiple mental health issues including Major Depressive Disorder, Major Depressive Episodes, Dysthymic Disorder, and other conditions that are not formally diagnosed. According to the Diagnostic and Statistics Manual of Mental Disorders (DSM), depression is characterized by a depressed mood and/or the loss of interest or pleasure in nearly all activities. Additionally, an individual may experience symptoms that include sleep disturbances, changes in appetite or weight, decreased energy, feelings of hopelessness, difficulty thinking or concentrating and thoughts of death or suicide. The differences in diagnoses depend on the severity of symptoms and the period of time over which they are experienced. MDD is the most commonly diagnosed depressive disorder and is characterized as a depressed mood and at least four additional symptoms that lasts more than 2 weeks (DSM-IV-TR). MDD is a debilitating disorder that affects all aspects of a person's life including a person's family, work or school, sleeping and eating habits and overall health.

## Cost of Depression

Depression generates significant medial costs for employers. Depression costs are the result of direct medical expenditures, absenteeism, presenteeism and short-term disability. For example, Anderson (2000) found that depression was associated with an increase in medical expenditures of $1,824 per employee. Within the same study, depression ranked number one in costs of medical expenditures out of 7 risk factors that included conditions like hypertension and obesity.

In 2010, Curkendall found that depression resulted in absenteeism costs of $377 dollars more per employee compared to controls without depression. A study on emotional disability in the workplace found that 44% of depressed employees reported that they missed one or more days of work in the past 3 months due to emotional issues (Kouzis, 1994).

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### Adjusted Difference in Absenteeism Cost Between Patients With Treated Depression and Nondepressed Controls

| Annual Marginal Effect of Depression on Absenteeism Costs [1] | | | |
|---|---|---|---|
| | *Dollars per patient with Depression* [2] | *95% CI* | *P* |
| All Depression | $377 | $157-$598 | <0.001 |
| Severe Depression | $338 | $287-$390 | <0.001 |

Similarly, Curkendall (2010) found that for employees with depression, the odds of having a short-term disability claim compared to employees without depression was 2 to 1, which resulted in an annual marginal cost of $356 dollars. For individuals with severe depression, the odds of having a short-term disability claim was 3.26 to 1 with an associated marginal cost of $861 dollars annually compared to those without depression.

### Effect of Treated Depression on STD Claims and Cost

| Odds Ratio for Having an STD Claim | | |
|---|---|---|
| | *OR* | *95% CI* |
| All Depression | 1.99 | 1.89-2.09 |
| Severe Depression | 3.26 | 2.92-3.65 |

| Annual Marginal Effect of Depression on STD Costs [3] | | | |
|---|---|---|---|
| | *Dollars per patient with Depression* [4] | *95% CI* | *P* |
| All Depression | $356 | $312-$394 | <0.01 |
| Severe Depression | $861 | $743-$997 | <0.01 |

Multiple studies found that depression is associated with a decrease in productivity (Lerner, 2008); specifically, depression led to a 10.5% decrease in job productivity compared to 2.5% in non-depressed controls (Lerner, 2008). This loss in job productivity is very costly to employers. A recent study (Goetzel, 2004) found that presenteeism was more costly than medical care, absenteeism, and disability combined.

[1] Results of regressions on absenteeism cost using patients matched on age, gender, and employer and additionally controlling for geographic region, insurance plan type, urban vs rural location, employee classification (eg, salaried, hourly, union and nonunion), employment status (eg full-time, part time), and patient Complexity.

[2] Dollars estimated using wages in 2005.

[3] Results of regressions on STD cost using patients matched on age, gender, employer, and additionally controlling for geographic region, insurance plan type, urban vs rural location, employee classification (eg, salaried, hourly, union, and nonunion), employment status (eg, full-time, part-time), and patient complexity.

[4] Dollars estimated using wages in 2005.

## Depression Screening in the Workplace

Due to the negative health effects and associated costs, it is imperative that employers screen employees for depression and help them seek appropriate treatment. The American College of Occupational and Environmental Medicine recommends administering screenings because they are an "effective and inexpensive way to identify employees at high risk for depression" and identifying depression and providing access to appropriate treatment is highly effective at improving both clinical and workplace outcomes (Wang, 2007).

Screening methods vary, as well as the measures against which risk is evaluate. Screenings methods include two-question surveys to in-depth interviews with mental health providers. One of the most efficient, accurate and commonly used screenings is the Patient Health Questionnaire-2 (PHQ-2). When compared to diagnostic interviews, an elevated PHQ-2 score correctly identified the employee as high risk for depression 83% of the time (Kroenke, 2003). The PHQ-2 asks two questions: 1) During the past month, have you often been bothered by feeling down, depressed, or hopeless; and 2) During the past month, have you often been bothered by little interest or pleasure in doing things? Responses are categorized as "negative," or " high risk," at which point an employee may be referred to their primary care physician for further evaluation.

## Recommended Depression Screening Practice

We recommend a multifaceted approach to depression screening and management that takes into account the following: 1) the debilitating nature and significant, negative effects of depression; 2) the importance of depression screenings for both employees and their employers; 3) best practice screening methods; 4) the need to reach all employees and not just those who frequently participate in wellness activities.

In the screening process, Cammack LaRhette works with a medical (note – not disease) management organization to ensure that all employees who are participating in medical management are screened for depression. The intensity of managing a chronic disease increases the risk for depression. Likewise, managing depression correlates with developing a chronic disease. Therefore, screening for depression in this population is essential. For example, up to 15% of patients with cardiovascular disease experience major depression (Jiang, 2005). Similarly, major depression among adolescents is predictive of a higher body mass index when these individuals become adults (Stunkard, 2003). Depression also can exacerbate medical symptoms and an individual's ability to properly control the disease. For example, research has shown that patients with depression are 3 times more likely to be non-compliant with medical treatment (DiMatteo et al. 2000). Therefore, in order to optimize medical management, high-risk individuals should be routinely screened for depression as a co-morbidity.

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Results from depression screenings indicate individuals that are in need of interventions. Interventions, in the form of a depression care plans, are designed by the individual's personal health nurse assigned through medical management, primary care physician, and other health management team members. The depression care plan includes shared goals with the medical management care plan to assure appropriate treatment and improvement of all symptoms. Health management team members work collaboratively with the individual and provider to track symptoms, discuss all treatment options, manage expectations, and provide follow up to ensure compliance with treatment. The personal health nurse also informs the employee of additional resources that may be available at minimal cost and accessible at the worksite, (for example, an Employer's Employee Assistants Program (EAP)).

For employees not enrolled in medical management, Cammack LaRhette recommends using a Health Risk Assessment (HRA) as a depression screening tool. Leading HRA vendors, such as Mayo Clinic Health Services and WebMD Health Services, incorporate depression and emotional health screening questions within their HRAs. The HRA platforms have the functionality to send customized, targeted messages to employees who are identified as "at-risk" for depression or other emotional health issues – without the intervention of the employer (so information regarding the risk for depression is not shared with the employer in an identifiable way). Messages may urge individuals to seek care from their primary care physicians or other resources such as an EAP program. These platforms allow the employer to provide high-risk employees with meaningful information on depression, and local resources, as well as health management tools that can track progress in treatment.

The number of employees engaged with either medical management or the HRA may only represent a fraction of the total employee population, therefore, Cammack LaRhette recommends implementing a depression screening protocol as part of the general employee health program, if possible. Visits to employee health—for treatment of accidents or annual compliance checks—should be leveraged to reach those who do not normally participate in employer sponsored health programs. The PHQ-2 is particularly useful in this scenario, given the succinct nature of the test. Prior to engaging in this level of screening, however, it is critical to ensure you have the right resources in place to manage referrals that result from the screening.

## The Benefits of Treatment

The first step in depression treatment begins with a referral to a primary care physician for diagnosis, treatment, and further referrals to specialists. Primary care providers treat more than 50% of patients with mental illness and have taken a central role in treatment (Regier, 1978). Providers may use one or multiple effective treatment including antidepressants, cognitive behavioral

therapy, interpersonal therapy, and/or other practices outlined in published clinical guidelines for treating depression in the primary care setting.

Depression interventions have produced positive effects in both employee's health and work impairment, and associated medical costs. Research data suggests that productivity gains following effective depression treatment may far exceed direct treatment costs (Simon 2001). In one study on depression and short-term disability, between 45 and 98% of the costs of depression treatment for the employer could be offset by the resulting gains in work productivity (Simon, 2001). These estimates were modest because they only took into account the costs associated with short-term disability and did not take into account costs associated with intermittent absences, presenteeism, long-term disability and medical expenditures. Remission from depression is associated with significant cost decreases and utilization decreases in mental health and general medical care (Seelig, 2008).

Depression may be more prevalent in your workforce, and be contributing to medical costs at a higher rate, more than you realize. The first step to encourage a healthier workface and manage costs is to implement an effective mental health screening, and have a follow-up plan protocol in place.

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*For more information on our healthcare practice or any of our other services please contact Frank Lonardo, Practice Leader at 1-212-227-7770 or flonardo@clcinc.com.*

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