Executive Summary

There is an enormous need for mental health treatment within the US and it is a health sector that continues to grow rapidly as the industry struggles to keep up with demand. The National Institute of Mental Health reported mental health care to be the fastest growing need within the five most costly medical conditions. Research found a 55% increase in medical expenses for mental health over a 5 year period, which was the fastest growing medical expenditure and resulted in an additional 11.1 million newly diagnosed individuals in the US (Olin, 4). Overall, mental illness affects 58 million, or nearly 1 in 4 Americans annually (US Census, 2) and the direct costs associated with treatment were $113 billion as of 2005 (NAMI, 3). Research from the Substance Abuse and Mental Health Services Administration indicates that spending on mental health has quadrupled during the past four decades (SAMSHA, 5). The direct and the indirect costs of mental illness, e.g., absenteeism, presenteeism, and disability, are borne disproportionately by employers in the form of lost productivity and higher health care costs.

Within these populations, there are several courses of action that one may choose, including traditional means of treatment, such as psychological therapy, psychiatric treatment, pharmaceuticals, or a combination of these. For many individuals without insurance they may utilize emergency care for traditional mental health services at their local hospital. In many cases, an individual may choose to do nothing, for a host of reasons, such as a lack of insurance, stigma, or absence of education in identifying the signs of a mental illness.

Online treatment methods, such as iP-revail’s online Cognitive Behavioral Therapy and peer support platform, offer a viable alternative to prevention and treatment of mental illness. In the case of iPrevail, its platform demonstrated in randomized clinical trials, treatment efficacy equivalent to traditional face-to-face therapy for depression and PTSD and at a fraction of the cost. iPrevail’s online CBT and peer support platform provides a unique solution to a variety of issues facing the mental health care industry, such as immediate access to care, stigma reduction, and engaging users in their treatment. Traditional treatment also typically costs 75x more than online CBT interventions like iPrevail, which has demonstrated similar clinical efficacy in randomized clinical trials. This presents employers and their partners an enormous opportunity to avoid and reduce health care costs while improving access and care quality.

Complexity and Costs

The costs associated with the current mental health care market are complex and continue to pose a major issue for both individuals who wish to seek help, and from a societal and economic perspective. While this paper’s focus is on the directly quantifiable costs of mental health treatment, it is important to acknowledge the totality of costs of mental health treatment, or a lack thereof. These costs can be broken into two major categories:

- Direct costs are easier to quantify and include spending on various treatment methods and pharmaceuticals
- Indirect costs include a myriad of additional expenses that accrue and dramatically increase costs as a result of lost productivity, such as disability, absentee-
ism and presenteeism, and comorbidity of other health issues

This also includes indirect societal costs associated with the prevalence of developing maladaptive coping mechanisms in lieu of treatment, such as crime and incarceration. Not surprisingly, the majority of these costs are ultimately absorbed by the government, non-profit sector, and society.

Traditional Mental Health Care Costs Hundreds of Billions Annually

Direct Costs

Traditional care costs include familiar elements, such as visiting a psychologist, psychiatrist, or licensed clinical social worker. In a 2003 study that reviewed changes in mental health spending in the US, specifically the economic burden of depression, the direct individual costs were reported as $1,126 (Greenberg, 6). In a recent literature review, conducted a few years later, findings indicate a dramatic rise in direct spending. The direct costs for individuals in the US totaled an average of $3,768 per case (Luppa, 7).

Understanding the Direct Costs to Employers

It is imperative to understand how depression affects health care spending overall as compared to the cost of treating individuals without depression. Recent findings by Luber and Trivedi estimated the utilization of health care resources for individuals with depression to cost between $3,296 (Luber, 16) and $7,559 (Trivedi, 15) when diagnosed by a physician, even when controlling for the higher burden of medical comorbidity. Furthermore, Luber analyzed these costs across 15,186 individuals to determine in what areas employees with depression were more costly to treat than their non-depressed peers. These findings included higher instances of primary care visits, 5.3 v. 2.9, more than double the rate of referrals to specialists, more radiological tests, and longer hospital stays, 14.1 vs. 9.5 days (Luber, 16).

Indirect Costs to Employers

Indirect costs play a major role in the rising cost of treating mental illness and can pose a large financial burden for employers. In a study of a single employer by Johnston, et al the company accrued massive indirect costs that were segmented into the following categories: 57% absenteeism, 28% presenteeism, 9% family medical leave, and 6% in short-term disability. These figures totaled 12,272 hours of productivity lost annually across 464 employees with a mental illness. (Johnston, 8). A recent review on the economic burden of depression calculated costs of indirect spending at an average of $4,381 per individual in lost productivity (Kessler, 9). The affect that mental illness has on employer costs can be further quantified with research that suggests employees with depressive disorders took an average of 9.86 sick days annually (Druss, 10). This was significantly more than any of the other chronic conditions, which included heart disease, diabetes, hypertension, and back pain (Druss, 10). Concurrent research estimates that depression alone accounts for 200 million lost workdays in the U.S. annually, which costs employers $44 billion (Stewart, 11). Additionally, as of 2002, $24 billion was spent on mental health related disability benefits by
employers and government agencies. (NIMH, 14)

Another major driver of indirect costs to employers is accrued though comorbidity of other health disorders. A recent study found that more than 68% of adults with a mental illness had a medical comorbidity with at least one medical condition (Goodall & Druss, 12). The findings revealed the cost of treating someone with comorbid depression was $560 more than without depression. Furthermore, it cost $710 more to treat a chronic condition with comorbid anxiety than for an individual without depression (Goodall & Druss, 12).

Online CBT and Peer Support Fundamentally Change Economics of Mental Health Care

A far more economical solution can be found when telehealth alternatives are utilized. iPrevail’s online CBT platform provides an innovative way to address the mental health concerns of individuals at a fraction of the cost. iPrevail’s online CBT platform integrates clinical assessments with peer coaching, community support, personalized and interactive lessons, and a reward systems that incentivizes users to complete their individualized program. iPrevail effectively engages, assesses and triages users to external clinical partners for higher risk mental health issues. The scalable technology platform allows users to be triaged into the unique health and non-health resources available at each employer through their EAP and wellness partners.

In multiple randomized clinical trials (Hobfall, 17 & Van Voorhees, 18) iPrevail’s technology platform demonstrated similar symptom reduction to traditional face-to-face therapy while allowing users to access to iPrevail via the web, including mobile devices. In the most recent clinical trial conducted at Rush University Medical Center in partnership with Bristol Myers Squibb Foundation findings included:

- Equivalent clinical effectiveness with face-to-face therapy in reducing symptoms of depression and PTSD
- Cost of treatment that is a tiny fraction of traditional approaches to treatment
- Scalable in its use across genders, races, and ethnicities
iPrevail: Analysis of Cost Savings for an Individual Employee

Based on iPrevail’s clinical trials, the economic benefits can be reasonably estimated for an individual using iPrevail compared to traditional treatment or no treatment. The average direct cost of traditional treatment for depression, including drugs, therapy, and physician visits totals $3,768 annually per individual. Additionally, when no treatment occurs due to a variety of barriers, the cost of lost productivity totals $4,381 annually per individual. Alternatively, treatment with iPrevail can be provided for approximately $50 per user (costs vary with scale of delivery). (See Figure 1)

![Cost of Treatment for Depression](image)

Figure 1.

iPrevail: Analysis of Cost Savings for a Sample Population of 10,000 Employees

To understand how these individual costs can be extrapolated within a larger population, we used the latest research and results from iPrevail’s two clinical trials to conduct a cost savings analysis within a sample population of 10,000. There are many approaches to quantifying cost savings and many intangible variables that are difficult to quantify. Wherever possible, we have used conservative assumptions and empirical evidence to substantiate the minimum expected savings for a sample 10,000 person population using iPrevail.

Our analysis assumes 3% of the population enroll in iPrevail. iPrevail’s clinical trials indicate that 74% of those enrolled will complete an iPrevail program, and that there will be an 8.5% reduction in depression diagnoses among the population who complete the program. When combined with savings on costs of traditional treatment, as well as absenteeism and presenteeism, the results is a savings of $140,900 annually or a return of approximately 8x when iPrevail is used for a sample population of 10,000. (See Figure 2)
(For a breakdown of Per Employee per Month costs, see Appendix 1).
Excluded from the discussion above is the large, growing, and complex societal costs of mental illness. Though not included in the iPevail cost analysis, these sums are enormous and are largely borne by the government, non-profit sector, and society. Nearly 1 in 4 Americans are in need of mental health treatment, yet as of 2010 only 39% of these individuals received treatment (McLean, 13). This lack of access to mental health care services creates an array of serious and expensive consequences including crime and incarceration. More than 64% of individuals incarcerated met the criteria for mental illness, though less than half had ever received treatment prior to being incarcerated (NIMH, 1). Another large societal cost is spending on substance abuse treatment. Evidence suggests that mental disorders such as PTSD and depression often lead to a need for costly interventions due to increased risk of substance abuse (SAMSHA, 5). In 2009, $24 billion was spent on substance abuse treatment and 69% was covered federally while 31% was paid for by the private sector (SAMSHA, 5).

These indirect costs stem from a lack of access to treatment and dwarf the direct spending on mental health care in the US. A study in 2006 found that in substance abuse and mentally ill populations, for each $1 spent on treatment there was a savings of $12 in health care, criminal justice, and lost productivity costs (Jordan, 19). In order to implement these types of changes and mitigate spending, preventive measures must be more accessible to a broader spectrum of populations. iPevail’s program provides a direly needed resource to provide comprehensive access to mental health services for people who encounter barriers to care such as cost of traditional treatment, living in a rural health area, stigma, and lack of education in identifying signs of mental illness.
Conclusion

There is an immediate opportunity for innovation to improve the effectiveness of mental health care in the U.S., dramatically reduce its cost, as well as the cost of non-treatment. With the rising need for mental health care in the US, iPrevail’s online CBT platform provides a solution that has demonstrated success in trials and in delivery to large populations. Clinical trials of iPrevail — done in partnership with Rush University and Bristol Myers Squibb Foundation — demonstrated clinical effectiveness equivalent to traditional face-to-face therapy. iPrevail also has the potential to dramatically change the economics of mental health care: traditional mental health care costs 75x more than iPrevail ($3,768 vs. $50), and iPrevail generates an 8x return on investment when made available to a large population. The potential clinical and economic benefits to private payers, governments, employers and all of those responsible for the mental health of large populations are enormous.
Citations


## Appendix

### iPrevail PEPM cost savings

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<th>% Annual engagement of a population</th>
<th>1%</th>
<th>2%</th>
<th>3%</th>
<th>4%</th>
<th>5%</th>
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<td>Medical costs</td>
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<tr>
<td>Total</td>
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<td>$0.78</td>
<td>$1.17</td>
<td>$1.57</td>
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