



Article from

## **Health Watch**

May 2016

Issue 80

# Mental Health Enables Wealth

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**T**he need for mental health care is a well-documented and growing problem within the United States. According to the National Institute of Mental Health, out of the five most costly medical conditions within the United States, mental illness has grown the fastest. The increasing amount of people with mental health issues has added 16.9 million new people over the last 10 years in need of behavioral health treatment.<sup>1</sup> This growth is mimetic within various populations, particularly those in life transitions, such as unemployment,<sup>2</sup> college age students, new parents,<sup>3</sup> children<sup>4</sup> and aging populations.<sup>5,6</sup> Further, those suffering from a mental illness are disproportionately entangled within the criminal justice system compared to the general population.<sup>7</sup> Proactively targeting these individuals is imperative to reforming mental health treatment across the United States.

The current mental health care system in the United States has set the stage for a looming national crisis, particularly in light of recent expenditures—\$147 billion in direct spending on mental health care costs alone in 2009 accounting for 6.3 percent of all health spending and over 1 percent of the American gross domestic product (GDP).<sup>8</sup> These inefficiencies affect a diverse population of individuals who suffer from pervasive and well-documented barriers to care due in large part to demographic, economic and access disparities,<sup>9,10,11</sup> as well as a lack of recognition of mental health<sup>12</sup> problems and co-morbidity,<sup>13</sup> and subsequent cost.<sup>14</sup> These problems are reaching epidemic proportions:

- **Staggering demand for mental health services.** Fifty-eight million, or nearly 1 in 4, Americans experience some type of mental health disorder annually.<sup>15</sup> Passage of the Affordable Care Act (ACA) expanded coverage of mental health and substance use disorder benefits at parity to general medical benefits to over 60 million people.<sup>16</sup> The ACA in conjunction with the Mental Health Parity and Addiction Equity Act (MHPAEA) expands behavioral health care to levels never before seen. Additionally, the United States Preventive Services Task Force (USPSTF) recently suggested all adults over 18 to be screened for depression.<sup>17</sup>

- **Lack of access to care.** Within this population, less than one-third of adults and less than one-half of children receive services for their mental health issues.<sup>18</sup>
- **Escalating indirect costs.** Lost earnings of \$193.2 billion, \$24.3 billion in disability benefits.<sup>19</sup>

Mental health issues catalyze a host of problems such as disabilities,<sup>20</sup> medical comorbidities<sup>21</sup> and suicide.<sup>22</sup> These have high associated costs resulting from family dissolution, chronic medical conditions, substance abuse, violence and incarceration. In many instances, lost productivity in the workforce is a direct result of untreated mental illness, the leading cause of disability in the United States.<sup>23</sup>

The increase in access to services to levels never before seen coupled with increasing costs creates a need for a solution. Unfortunately, traditionally private payers and employers did not have incentives to solve these problems, predominantly due to a lack of obvious profitability, and due to the government and nonprofit sectors shouldering the indirect costs of inadequate mental health care, such as suicide,<sup>24</sup> lost productivity and disability,<sup>25</sup> incarceration costs,<sup>26</sup> and a majority of hospital bills from uninsured individuals.<sup>27</sup> Due to the disparity in who is affected by the majority of these indirect costs, it will fall to the public and social sectors to fund the services required to address such a large, broad challenge.



There is an enormous unmet need which a proven online cognitive behavioral therapy (CBT) solution could fill. The goal of this article is to connect these two, creating a healthier and thus wealthier America. A clinical trial conducted at Rush University on Prevail Health Solutions' tailored online CBT intervention proved efficient and effective in the assessment, triage and treatment of depression and post-traumatic stress disorder (PTSD). The initial platform was tested within a veteran population, and the trial results demonstrated a number of benefits of online CBT over conventional treatment:<sup>28</sup>

- Equivalent effectiveness as face-to-face therapy in reducing symptoms of depression and PTSD with an effect size for PTSD of 0.42 and depression at 0.56 (the average effect size of over 117 trials of traditional face-to-face psychological treatment was 0.42)<sup>29</sup>
- Cost of treatment that is a fraction of traditional approaches
- Scalability in its use across genders, races and ethnicities

These findings point to an economically attractive solution to provide greater access to care, while at the same time reducing overall spending. Most important, there is an opportunity to expand the usage of this technology to reach a larger population and make a significant impact on health spending in America.

## FRAMING THE PROBLEM

### Rising Need for Mental Health Services

The need for mental health care is a well-documented and growing problem within the United States.<sup>30</sup> Quality of life is also greatly reduced for those living with an untreated mental illness. This is illustrated by the fact that many individuals who do not receive treatment for mental illness develop detrimental coping mechanisms such as alcohol or substance abuse.<sup>31</sup> Additionally, those suffering from a mental illness are disproportionately involved with the criminal justice system compared to the general population.<sup>32</sup> Proactively targeting these individuals is recommended, as costs have increased from \$42 billion spent in 1986 to \$172 billion in 2009 for mental health and substance abuse.<sup>33</sup> Importantly, the passage of the MHPAEA could also increase the usage of mental health services.<sup>34</sup>

### Lack of Access and Prohibitive Barriers to Treatment

The Centers for Disease Control and Prevention estimated the U.S. suicide rate in 2013 to be an average of 113 completed per day<sup>35</sup> with suicide attempts much higher. Research suggests there are strategies, including CBT, that could help address the needs of people showing risk factors.<sup>36</sup> Additionally, research estimates that 90 percent of those who die from suicide suffer from one or more mental illnesses.<sup>37</sup> These rates are even higher in the veteran community, where 22 individuals commit suicide daily, totaling 8,000 deaths per year.<sup>38</sup> Such statistics support the need for additional and alternative services to care for those in need, and for providing more effective treatment alternatives.

Most important, there is an opportunity to expand the usage of this technology to reach a larger population and make a significant impact on health spending in America.

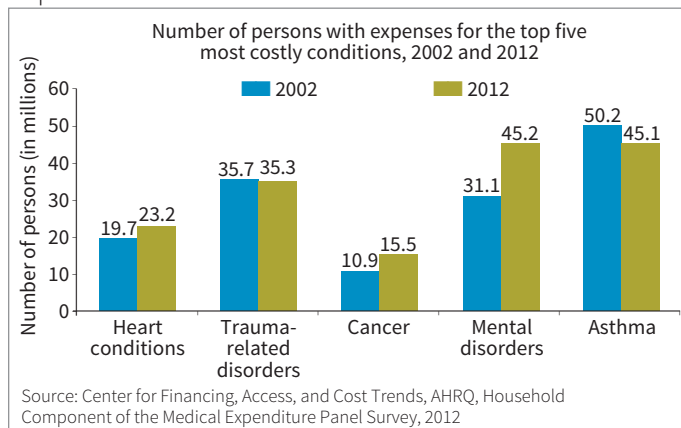
Prohibitive barriers to treatment include access to effective care, high cost of care, living in an underserved area, and attrition rates in face-to-face therapy.<sup>39,40,41,42</sup> Data from the Substance Abuse and Mental Health Services Administration (SAMHSA) found that 4 out of 10 Americans with mental health issues did not receive treatment in 2011 for mental illness. Half of them reported that cost was the primary barrier preventing them from seeking care. Within the population of those who have mental illness, treatment is not equally accessible to all geographic regions. The National Alliance on Mental Illness (NAMI) reports that 58 percent of the US population lives in underserved mental health areas.<sup>43</sup> In many cities, the closing of state-run mental health facilities focused in low-income areas exacerbates this problem, creating an even graver outlook for these higher-risk populations.

Particularly troubling are the findings for indicators of drop-off rates in treatment, which disproportionately affect low-income and urban populations. Studies<sup>44,45,46</sup> have repeatedly found that many of the underserved populations, which more often than not have more profound mental health needs, are also more likely to discontinue seeking mental health services. Indicators for high drop-off rates include low education levels, low socio-economic status, young age and broken family status.<sup>47,48</sup> Concurrently, research has shown that higher-quality referral sources, such as increasing education about various treatment types and medications, and reducing the wait time between the referral and scheduling an appointment, can be fundamental in lowering attrition rates within the mental health treatment model.<sup>49,50</sup>

### Spiraling Direct and Indirect Costs

Costs associated with the current mental health care marketplace are complex and continue to pose major issues for both individuals who wish to seek help and from a macroeconomic societal perspective. Spending on mental health care represents a major driver of the overall costs associated with health care expenditures. Figure 1, depicting the top five drivers of health care costs in the United States, as well as the five-year growth, illustrates this point.<sup>51</sup>

Figure 1  
Top Five Drivers of Health Care Costs in the United States



These statistics encompass a variety of costs, which can be simplified into direct and indirect. Direct costs, such as spending on treatment, are easier to quantify. While the current direct cost of mental health was a staggering \$147 billion as of 2009,<sup>52</sup> the most recent year for which comprehensive data is available, an equally alarming trend is the quadrupling of cost within the last 20 years.<sup>53</sup> Estimates for the actual total costs exceed \$300 billion annually, as of 2014;<sup>54</sup> and with the rising need for mental health services that have been reported in this same time span, this cost is certainly now drastically higher. Costs that are not directly spent on mental health treatment stem primarily from comorbidity of additional health issues, lost productivity, including absenteeism, violence and incarceration costs, and increased severity of untreated mental illness.

Although medical costs for those with mental health issues can be two to three times as high as for those not having mental health or substance use disorders,<sup>55</sup> by far the highest indirect costs originate from lost productivity and disability caused by a severe mental disorder. Data from the World Health Organization in 2010 found that neuropsychiatric disorders were the leading cause for disability within the United States,<sup>56</sup> causing more than 400 million disability days per year.<sup>57</sup> Additionally, NAMI found workplace costs to be over \$34 billion annually in direct and indirect costs of mental illness. When SAMHSA broke down the spending, it found that in 2009, \$147 billion went directly to mental health care expenditures, treatment, direct care, medication, and so on. However, \$193.2 billion was allocated for loss of earnings and \$24.3 billion in disability benefits.<sup>58</sup> Those suffering from depression had higher rates of absenteeism and, in some instances, three times more sick days than non-depressed workers.<sup>59</sup> A recent Gallup poll, with data collected during 2011–2012, found that individuals diagnosed with depression accrued costs up to \$23 billion annually in absenteeism-related expenditures.<sup>60</sup>

At the same time, comorbidity of other health disorders plays a major role in the increased spending that is related to a lack of treatment for mental health. A 2011 study by the Robert Wood Johnson Foundation found that more than 68 percent of adults with a mental illness had a medical comorbidity with at least one medical condition.<sup>61</sup> As stated, there is evidence showing that those with mental health issues who are unable to afford treatment often develop damaging coping mechanisms to deal with those issues. This can develop in the form of smoking, binge drinking, substance abuse issues and unhealthy eating habits as a way to cope with untreated mental illness.<sup>62</sup>

Furthermore, those with mental health issues are disproportionately entangled within the criminal justice system, driving additional costs and placing the burden for care on the prison systems.<sup>63</sup> A Department of Justice survey on inmates in state and federal correction facilities, along with a survey of inmates in local jails, found an extremely high prevalence of mental illness within the population.<sup>64</sup> The more salient point of this research was that it found that fewer than 50 percent of inmates had ever received mental health treatment before being in prison. The cost of incarcerating these individuals in need of treatment is extremely high. The Department of Justice *Source Book of Criminal Justice Statistics* reported that \$15 billion was spent on incarcerating individuals with mental illness in 1996.<sup>65</sup>

### The Current Payers

Private payers and employers do not have incentives to solve these problems alone, predominantly due to a lack of obvious profitability and the increasing responsibility being shifted to the government. As the private payers focus on medical expenses, the government must face the more holistic societal costs of mental health issues that ultimately are far greater than treatment. Also, many of the costs associated with untreated mental health issues are indirect costs that stem from a failure to invest in preventive care. These costs fall on society, for example, in the form of incarceration as a de facto treatment option or the utilization of emergency hospital services for the uninsured. Over half of prison and jail inmates report having mental health issues.<sup>66</sup> In a report by the Agency for Healthcare Research and Quality, findings indicated that 7.6 million emergency room visits involved adults seeking treatment for mental health concerns. Within this population, more than 1 in 8 did not have insurance.<sup>67</sup> Research estimates that uninsured care totaled \$84.9 billion in 2013.<sup>68</sup> However, various government programs were found to cover the cost for 75 percent of these bills, while the rest of the costs were absorbed by various hospitals.<sup>69</sup>

Currently, there is a disconnect between those who are expected to provide the upfront resources to mitigate these long-term costs (employers and insurance groups), and those who will appreciate the majority of long-term benefits from such expenditures (society as a whole). Not surprisingly, the government and



nonprofit sectors find themselves shouldering more and more of the indirect costs of inadequate mental health care; a trend that is likely to continue and accelerate into the future.<sup>70</sup> It will fall to those sectors to fund the innovation required to address such a large, broad challenge. A recent report in 2011 by the Kaiser Commission stated that federal and state funding accounted for 62 percent of mental health care spending, while the private health sector covered 27 percent and individuals accounted for 11 percent.<sup>71</sup>

Employee assistance programs (EAPs) can be useful for many individuals who have access to them. However, there is still a large unmet need for underserved populations who are unlikely to be employed at organizations that offer such services as part of their health care package. Additionally, for those who are employed at eligible organizations, there is not always incentive on the employer's part to identify these individuals. And in this case, EAPs become ineffective in proactively identifying those suffering from mental illness and ultimately treating them.

As private insurance companies have an administrative and payer role, the indirect costs such as crime, incarceration and public assistance have less of a tangible effect on their profits and are therefore largely pushed to the public sector. In effect, the situation is a classic example of an externality. Because solutions to these problems will benefit all of society, asking only private insurance companies or employers to shoulder the burden of paying for them entirely makes little sense. Ultimately, the ramifications of not offering mental health treatment are far more dire for the public than the consequences passed along to private institutions, and new solutions funded through public/private partnerships are likely necessary to change the status quo.

## PROPOSED SOLUTION

Longitudinal studies by the federal agency SAMHSA suggest that mental disorders, such as PTSD and depression, often lead to a need for costly interventions because of increased risk of substance abuse,<sup>72</sup> incarceration,<sup>73</sup> and the need for disability benefits.<sup>74</sup> Currently, the United States spends more on these consequential interventions for those with untreated mental illnesses than on treatments or prevention efforts that directly target PTSD and depression. With the increasing costs of not treating those with mental health issues, there is an enormous economic and societal need to resolve the situation. There has been a shift toward using technology for a variety of services,<sup>75</sup> laying the groundwork for implementing technology-based solutions for mental health care that could provide the ability to reach more people.<sup>76</sup> Online behavioral health interventions, such as online CBT, offer a highly scalable, effective and anonymous model that provides a powerful solution for many of the problems currently facing the mental health care industry. Specifically, online behavioral health interventions offer:<sup>77</sup>

- **Cost savings.** Massive reduction relative to current mental health treatment costs
- **Tailored, scalable solution.** An Internet-driven model that proactively identifies and engages users while still allowing scalability across geographies and populations
- **Effective triage and referrals.** The ability to provide quality referrals effectively and efficiently to established partners for higher-risk mental health issues
- **Education.** The capacity to enable individuals in their mental health choices through mental health literacy
- **Stigma reduction.** The ability to allow users to take easy first steps in an anonymous and non-stigmatizing environment

## SCIENCE BEHIND THE SOLUTION

### CBT Efficacy on Mental Health Disorders

CBT has extremely strong efficacy rates for mental health disorders such as PTSD, including in instances of severe mental illness,<sup>78</sup> depression<sup>79</sup> and anxiety.<sup>80</sup> The process of CBT is a practical hands-on approach to problem solving. The goal of CBT is to examine underlying core beliefs and then to change patterns of thinking that lay a foundation for an individual's mental health needs. Ultimately, this process seeks to change behaviors through changing attitudes and beliefs that may cause emotional distress. The structured process of the CBT model also provides an important framework to empower the individual during treatment and independently. An important strength of CBT, and why it is well-suited for an online model, is that the therapy tends to be brief but maintains strong post-treatment follow-up rates.

### Evidence Supports Efficacy of Online Cognitive Behavioral Interventions for Mental Illness

CBT has increasingly proven to be an accepted treatment model for online behavioral interventions.<sup>81,82,83,84,85,86,87,88</sup> As discussed, CBT is well-suited for incorporation into an online intervention due to CBT's efficacy, structure and brevity. The efficacy of CBT online interventions continues to be substantiated as more randomized control trials like Hobfoll<sup>89</sup> and Ruwaard<sup>90</sup> are conducted. A 12-week randomized control trial, conducted at Rush University, implemented an intervention on veterans using Prevail Health Solutions' tailored online CBT model for PTSD and depression, and users showed significant symptom reduction versus the control adjustment as usual group.<sup>91</sup> Another significant finding was around user perception of efficacy of treatment. A 2014 trial found user perception of online behavioral interventions for depression to be equally acceptable as face-to-face therapy at a rate of 60 percent.<sup>92</sup> Finally, brief and efficient online screening and support were shown to reduce attrition rates in therapy.<sup>93</sup> These findings provide strong evidence for efficacy of this treatment model in general populations.

The intervention has been independently assessed by the Agency for Healthcare Research and Quality (AHRQ), which assessed its evidence base as “strong.”

### **Treatment Cost Savings**

The cost-effectiveness of online behavioral interventions has been highlighted in several studies and is continuing to be researched. In 2013, Rush University completed a randomized control trial of a next generation behavioral health platform developed by Prevail Health Solutions (Chicago) in collaboration with the National Science Foundation that created a Small Business Innovation Research (SBIR) success story.<sup>94</sup> The intervention has been independently assessed by the Agency for Healthcare Research and Quality (AHRQ), which assessed its evidence base as “strong,” and 94 percent of actual users would recommend it to their friends.<sup>95</sup> Prevail utilizes a model of acquire-engage-assess-triage, whereby reluctant care seekers are proactively acquired through digital marketing and social media efforts. From there, the individual engages with trained peer specialists, interactive communities, and a points rewards system. Next, demographic and clinical assessments are given to build a unique and custom profile on the user, creating a truly individualized experience. Finally, the user is triaged to the appropriate level of care, which could be clinically proven interactive programs, additional online resources, or, for high acuity cases, connection to a real person for traditional care. The online CBT intervention demonstrated a cost significantly less than conventional face-to-face therapy with similar clinical efficacy.<sup>96</sup> Additionally, 2014 findings also supported equivalent symptom reduction as face-to-face therapy for depression and PTSD.<sup>97</sup> By reducing the costs associated with treatment, economic barriers are removed and a broader range of individuals can be reached. Concurrently, by extending services to a wider range of individuals in need of mental health, the indirect costs associated with a lack of treatment may be reduced as well, as was demonstrated in the Rush University clinical trial.

### **Strength of a Tailored and Scalable Model**

Historically, tailored and individualized interventions provide a more effective way of reaching individuals than off-the-rack models of care.<sup>98,99,100</sup> With this in mind, there is a need for a model that can be easily customized to meet the unique needs of a wide variety of individuals, while still remaining cost-effective. Online behavioral interventions are well suited for

this, as they have much larger potential for national replication, providing rapid implementation and low costs. Substantially, lower barriers of entry into these types of mental health services allow for the treatment to be implemented efficiently and cost-effectively. The Prevail acquire-engage-assess-triage model is both interactive and individually tailored, using participant-supplied socio-demographic information such as race, ethnicity, employment, educational background and relationship status to inform lesson content and structure the overall intervention.

### **Effective Triage and Referral of High-Risk Mental Health Disorders**

It is important to understand the scope of mental health disorders that online behavioral interventions can effectively treat. This requires a model that proactively identifies higher clinical levels of symptoms in individuals and provides a seamless triage to other services, such as crisis centers and face-to-face interventions. It is also necessary to reduce attrition rates in face-to-face therapy for individuals at higher risk for drop-off in care. Indicators for high drop-off rates include lack of insurance, stigma, youth, divorce, separation, loss of spouse to death, low education and low socio-economic status.<sup>101,102</sup> At the same time, research has suggested that higher-quality referral sources, such as those that reduce waiting times and provide comprehensive education regarding treatment options, can be fundamental in lowering attrition rates within the mental health treatment model.<sup>103,104</sup> A streamlined online behavioral health intervention has the capacity for quality referrals and could reduce the current drop-off rates of high-risk populations.<sup>105</sup>

### **Educating Individuals**

Education around mental health is instrumental in enabling individuals to make proactive decisions regarding their own mental health and well-being. Research has demonstrated global deficiencies in mental health literacy.<sup>106</sup> This includes recognizing signs and symptoms of developing mental illness, knowledge of effective self-help strategies for more mild problems, and information on where they can receive treatment. Through online behavioral interventions, like online CBT, a more broad and diverse range of populations will have access to all of these key points to educate and empower them in their mental health decisions.

A valuable and fundamental aspect of the online model is the ability for users to manage their own experience in the most convenient and private setting. This can be facilitated by enabling users to take control of their treatment through guided interactions such as peer-to-peer counseling, cognitive behavioral programs and community member boards. In addition, these cognitive behavioral programs reinforce healthy mental health behaviors to maintain positive effects long term. Providing clients with the capacity to access various stages of the

program at any point in their treatment process will allow them to heal on their own time.<sup>107</sup>

## CONCLUSION

Resolving the mental health crisis our nation faces is one of the most important challenges in modern health care. This will have a tremendous effect on reining in both direct and indirect health care costs that are spiraling out of control and will improve health outcomes for populations at higher risk of developing mental health issues. Online CBT interventions can support efforts to address this crisis by:

- Reducing direct and indirect costs
- Expanding coverage to underserved populations
- Engaging reluctant care seekers
- Providing a scalable solution

Combining a validated treatment method like CBT with an innovative, technology-driven model provides one of the key potential answers for reaching the largest population and effecting the greatest change.

Utilizing Prevail's proven technology is a way to address the aforementioned needs to a wider population. There is increasing need for a solution that is impacting nearly 1 in 4 Americans suffering from mental health issues, particularly when many of these people do not receive care. A technological solution enables more people to have access to much-needed care. The indirect costs of mental health issues continue to escalate, and a solution is needed to act in a proactive manner to mitigate these costs. In summary, using a technology solution provides the unique opportunity to both increase access to much-needed care while at the same time reducing both direct and indirect mental health costs. ■



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