

WHEN WORDS HURT:
HOW CULTURAL STIGMA CONSTRUCTS
SYSTEMIC BARRIERS TO BEHAVIORAL HEALTHCARE

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ABSTRACT

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Living with a mental illness is a lonely battle. The mentally ill have long struggled with stigma, with society ignoring or undermining their conditions. Despite the heavy disease burden and widespread prevalence of mental illness, these conditions are still widely misunderstood and stigmatized. My thesis will, through literature analysis, examine the influence of cultural stigma on access to behavioral healthcare. For the purposes of this analysis, behavioral health conditions will encompass mental illnesses and substance abuse disorders. Effects of stigma can be categorized into systemic and personal barriers. Systemic barriers include complex disease and treatment mechanisms and processes, healthcare financing, healthcare professional shortages, and employment and housing difficulties hindering self-sufficiency. Personal barriers include a lack of help-seeking behavior, unwillingness to pursue treatment, and reduction in motivation to pursue personal goals. This paper will primarily focus on systemic barriers, as they are more straightforward to analyze and address.

Finally, I aim to explore recommendations for effecting positive change, by using policy to address stigma and its consequences. One approach is to directly aim to increase behavioral healthcare access through healthcare technology, efforts to enlarge the healthcare workforce, and programs to empower patients to strive for self-sufficiency. Another approach, a more long-term method for future generations, is to address stigma. Community education has been shown to be promising by promoting empathy and awareness of physical and mental healthy parity. Integrating empathy education into the public curriculum would not only encourage a healthy environment that reduces the incidence of psychological illness, but would also address self and public stigma, teaching individuals to be compassionate to those with unseen, complex conditions.

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I. Introduction

Mental illnesses are society's silent enemies today. Unseen injuries cannot, like injured limbs, be wrapped in casts and cheerfully, flourishingly signed by swarms of smiling acquaintances. Rather, hospitalizations for suicide attempts and substance overdoses are shrouded in shame and discussed in hushed tones. Arguably, it is partly the silence surrounding these conditions that makes them so deadly. Society's unwillingness to openly discuss mental and behavioral illnesses has, through neglect, inadvertently allowed them to become one of humanity's greatest burdens. Before delving into stigma as an exacerbation of this burden, I will first discuss in-depth the burden itself: the prevalence of these conditions and current inadequacies in addressing them.

a. Burden of Disease

Suicide, the crux of the most devastating conditions, claims a staggering number of lives each year. According to data collected by the Centers for Disease Control and Prevention in 2015, suicide was the 10th leading cause of death for all ages, claiming over 44,000 lives — more than 2.5 times the 17,000 deaths by homicide (CDC, 2016). And death by suicide has a terrifyingly early age of onset. In 2015, suicide was the third leading cause of death among 10 to 14-year-olds, and the second leading cause of death among 15 to 34-year-olds. In addition to the tragedy for the descendants' and their family and friends, the economic toll of suicide, measured in terms of medical costs and productivity losses, are enormous, totaling \$50.8 billion in 2013 (Florence et al., 2013). Additionally, the rate of suicide is on the rise, having risen from 10.5 to 13.3 per 100,000 population between the years of 1999 and 2015 (CDC, 2016).

Drug overdose deaths are also on the rise, an alarming result of the growing

addiction crisis in the United States. They are now “the leading cause of death for Americans under 50” (Kaplan, 2017). Over 64,000 individuals died of drug overdose in 2016 — more than double the number a decade before (National Institute on Drug Abuse, 2017). This increase is largely accounted for by a sharp rise in overdoses of prescription and synthetic opioids and heroin epidemics.

While most people who suffer from mental illnesses do not die by suicide, the effects of the illnesses, when untreated, tend to be chronically debilitating. A study of the U.S. population by the Kaiser Family Foundation [KFF] found that the, among developed countries, the burden of all disease is highest in the U.S. Disease burden can be measured by disability-adjusted life years (DALYs), which are based both on years of life lost to premature death and years of productive life lost to health or disability (KFF, 2017, “What do we know”). Mental and substance use disorders ranked first in causes of disease burden. It has been estimated that “one in five American adults will experience a mental health issue at some point” (Norris, 2016). The World Health Organization reports that mental disorders “have much earlier ages-of-onset than most chronic physical disorders” - a claim corroborated by the suicide rates discussed earlier (Kessler et al., 2009).

To get a clearer sense of the state of behavioral health in the U.S., some further statistics are useful. Results from the 2016 National Survey on Drug Use and Health (NSDUH), an annual survey of the non-institutionalized, civilian population age 12 years and older, conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), show high prevalence of mental and behavioral problems. The survey revealed that, in that year, 20.1 million above the age 12 had a substance use disorder

(SUD), which was clinically characterized by the DSM-IV as the recurrent use of alcohol and/or other drugs to the point of impairment of health and the ability to fulfill work, school, or home responsibilities. Alcohol use disorder was by far the most prevalent, at a staggering 15.1 million, or 1 out of 18 individuals. Use disorders were also widely reported for a variety of illicit substances: marijuana, cocaine, heroin, methamphetamine, and misused prescription psychotherapeutic drugs.

Adolescents (ages 12 to 17) were surveyed slightly differently than adults, but the rates of mental illness in both age groups remain striking. In the adolescent age group, individuals were surveyed for the occurrence of a major depressive episode (MDE), defined by the DSM-IV as “a period of 2 weeks or longer during which there is either depressed mood or loss of interest or pleasure and...a change in functioning, such as problems with sleep, eating, energy, concentration, and self-image” (National Institute of Mental Health [NIMH], 2015). Of these, 12.8% (3.1 million) reported having an MDE in 2016, and 9.0% (2.2 million) were classified as having a resulting severe impairment. Results for the adult age group identified those with “any mental illness” (AMI) identified by DSM-IV criteria, and a subset group of “severe mental illness” (SMI), which is identified by symptoms which severely interfere with one or more major life activity. In this group, 18.3% (44.7 million) reported AMI, while 4.2% (10.4 million) reported an SMI. Finally, the survey revealed that 9.8 million adults have had suicidal thoughts. Of these, 2.8 million have made plans, and 1.3 million have gone so far as to make a non-fatal attempt (SAMHSA, 2017).

The co-occurrence of SUD and mental illnesses is significant. Results from the 2016 NSDUH show that 1.4% of all adolescents have had both an MDE and an SUD,

while 3.4% of all adults have any mental illness and an SUD.

Because individuals with severe mental and behavioral health conditions left untreated are often unemployable in stable, steady-income jobs, these conditions also disproportionately affect the poor - a vulnerable socioeconomic group already burdened with multiple life stressors. The National Alliance on Mental Illness reported in 2016 that 46% of homeless adults have an SMI or an SUD. In a recent report by the American Mental Health Counselors Association (AMHCA), executive director Joel Miller explained the pervasiveness of mental health problems among the lower-income population. In households with income below 138% of the federal poverty level, 1 in 6 uninsured adults has a diagnosis of mental illness “such as major depression, bipolar disorder, severe panic disorder, or schizophrenia” (Miller, 2014).

As the NSDUH only surveys the non-institutionalized population, it’s crucial to consider the mental health and substance abuse situation in correctional institutions. Arguably, these institutions house populations that are most seriously affected, in echoes of a previous era dominated by inpatient psychiatric hospitals and asylums. According to a 2006 report by the U.S. Bureau of Justice, the prevalence of mental health problems in state prisons, federal prisons, and local jails are, respectively, 56%, 45%, and 64% (James & Glaze, 2006). Additionally, a remarkable percentage of those with existing mental conditions — 74% in state prisons and 76% in local jails — also have an SUD, likely related to the initial reason for incarceration (James & Glaze, 2006).

However, these numbers alone can seem distant and abstract; it’s important to consider the impact of behavioral health problems on an individual scale. Components of psychological well-being - normal cognitive function, healthy emotional processing,

functional relationships - are often taken for granted, and it is difficult to comprehend a life absent these. Nevertheless, mental health patients must wrestle every day with these difficulties, which pervade every aspect of their school, home, and work lives. In a 2009 survey of a psychiatric inpatient hospital in Sao Paulo, patients described the onset of their illness as a disruptive break in their everyday lives that caused them to lose interest in pursuing their careers, enjoying leisurely pleasures, and maintaining their social network. Because these elements of stability are crucial components of mental health, these individuals are caught in a cruel cycle. Their symptoms as “causes and consequences of mental illness” exacerbate their situations (Salles & Barros, 2009). Finally, these conditions usually develop in adolescence and early adulthood, and if left untreated, affect these individuals for the rest of their lives (O’Haver, 2015).

Despite these disheartening numbers, it is important to note that hope is not lost, that evidence-based treatments exist. Treatments, especially those that employ a combination of prescribed medication and psychosocial therapies, have been demonstrated to be extremely effective. While some mental disorders may not be fully “cured”, they can be managed to allow patients to lead functional, fulfilling lives. The National Alliance on Mental Illness estimates that around 70-90% of individuals with even the most serious diagnoses have, as a result of treatment, experienced “a significant reduction of symptoms and improved quality of life” (“Basics of Mental Illness,” n.d.). Our knowledge of brain and neurological function is clearer and more comprehensive today than ever before, allowing for the development of safe, sophisticated medications. Additionally, the latest research in psychotherapy has shown several modalities to be effective and still others to hold much promise (Friedman, 2015). Without a doubt,

treatment takes time, dedication, and confidence, but the results are worth consideration.

b. Treatment Gaps

The effectiveness of current therapies makes the reality all the more tragic: people simply aren't getting the treatment they need. According to Mental Health America [MHA] (2017), in 2017, 56.5% of adults with a mental health diagnosis did not receive any mental health treatment in the past year. Additionally in 2017, 63.1% of adolescents with severe depression, a condition that drastically affects their social development and academic performance, didn't receive any treatment. The United States has the lowest rate of help-seeking among developed western countries. In 2003, only about a third of the most severe cases of mental illnesses received any treatment (Bill, 2003). A 2009 study yielded similar results: only 37% of those with severe mental disorders sought treatment (Schomerus, Matschinger, & Angermeyer, 2009). In Germany of the same year, about 67% of these sought treatment - far from ideal, but still far ahead of the United States. The treatment gap in the US is narrowing, but remains years behind that of other developed countries.

The rates of treatment for individuals with SUDs are especially poor. According to the NSDUH of 2016, of the 21 million individuals who needed substance abuse treatment, only 3.8 million received any treatment, and only 2.2 million of these received treatment at a specialty facility. The situation is slightly better for tragic cases of mental illness and substance abuse co-occurrence. In adolescents who have experienced a co-occurring MDE and SUD, 71.9% receive treatment at a specialty facility. In adults (age 18+) with both an AMI and an SUD, 1 in 3 received treatment at a specialty facility.

On top of this, mental and behavioral healthcare is a long-term process that requires

regularity and stability. A few brave instances of seeking help are insufficient, and treatment retention rates are dismal. As stated earlier, mental illnesses cannot be cured in the conventional sense, but require careful, monitored management of symptoms. However, depression treatment dropout rates fluctuate between 15-50% (Lenze et al., 2001). About 40-60% of children who enter outpatient mental health treatment drop out quickly, and only 39% remain in treatment programs for longer than 6 months (Harpaz-Rotem, Leslie, & Rosenheck, 2004). For SUDs, an important correlation has been clearly established between treatment duration and treatment outcomes (Tate et al., 2011). Typically, 3-4 months are required to see a reduction in drug use, but treatment programs are seeing dropout rates of 44-89% in the first 30 days. Similarly high rates exist across all treatment settings and substances of abuse.

The issue of treatment access is further complicated in correctional institutions by the added dimensions of security concerns and transportation costs (Deslich, Thistlethwaite, & Coustasse, 2013). A survey sponsored by the National Institute of Justice in 1997 yielded disheartening numbers; of 1053 jails, 84% reported that less than a tenth of inmates receive any mental health services, 43% had crisis intervention programs, and 42% provided psychiatric medications (Steadman & Veysey, 1997). According to the National Center on Addiction and Substance Abuse at Columbia University, only 11% of inmates with SUD in federal and state prisons and local jails received treatment (Sack, 2014). The rest must make do with support groups and peer counseling. While the benefits of these are not to be undermined, they certainly cannot effectively serve as the sole treatment for medical conditions. The inadequacy of behavioral health services in these correctional institutions indubitably contributes to high

rates of recidivism; 25% of inmates who have been incarcerated 3 or more times had a clinically diagnosable mental illness (James & Glaze, 2006).

c. Cultural Attitudes: a brief overview and recent trends

Despite their prevalence, individuals with behavioral health conditions have long struggled with social stigma surrounding their illnesses. It is inherently difficult to understand chronic inner struggles with complex underlying physiologies that often do not manifest themselves in physical symptoms. While attitudes are changing and society is becoming more open to discussion, there is still an overwhelmingly long history of fear and misunderstanding to overcome.

Early polls of the general public revealed attitudes steeped in misinformation and discrimination. In the mid to late 1900s, mental health problems were viewed by most as indications of personal weaknesses or character flaws. A survey in 1996 found that 54% of Americans thought depression was a sign of personal or emotional weakness. An extensive, six-year survey published in 1961 on 400 individuals in the US across age and education spectrums found that the general public “considered mentally ill people as relatively dangerous, dirty, unpredictable, and worthless” (Nunnally, 1961). A 1959 study investigating the attitude of society towards discharged psychiatric patients discovered that, of the 2,000 subjects interviewed, only 15% would hire a former psychiatric patient as a babysitter (Whatley, 1959). This is indicative of a general unwillingness to interact with formerly mentally ill individuals in close social situations (Bhugra, 1989).

These types of attitudes still pervade responses in the most recent surveys. In 2002, 82% of Americans believed that a great amount of stigma was attached to mental illness (Roper Center, n.d.). A poll by the Kaiser Family Foundation in 2013 discovered many

Americans still feel discomfort around individuals with a serious mental illness; 47% would feel uncomfortable as their next-door neighbors, 41% would feel uncomfortable as their co-workers, and 66% of parents would feel uncomfortable if a person with an SMI worked in their child's school.

Furthermore, despite a significant increase over the past several decades in a cultural willingness to discuss mental health, the choice of language used in this discussion has had detrimental consequences. The media — entertainment and news outlets alike — have a responsibility for setting the tone and quality of social discussions. These important actors have long used phrases such as “battling demons” and “inner monsters” when referring to topics such as suicide and addiction (Christensen, 2017). When famous actor Robin Williams passed away in 2014 after years of depression and addiction, the media characterized his career as a lifelong struggle and ultimate failure against “personal demons”, as exemplified in a *New York Times* article, “Busy Working, Robin Williams Fought Demons” (Cieply & Barnes, 2014). The use of such words dramatizes these health issues as supernatural, mysterious, frightening, and even somewhat immoral. But these are medical diseases in need of treatment, not strange character failings onto which society can pass moral judgment, and discussion should treat them clearly as such.

There is no doubt that attitudes have improved, and further conversation paves the way for yet still further progress. Through conversation, there has been a gradual change in the public understanding of mental health as genuinely a public health issue, instead of a personal weakness or character flaw. In 2004, only 15% of individuals viewed seeking therapy as a sign of character weakness - significant improvement from the similar

survey on depression in 1996 (Roper Center, n.d.). The “Behavioral Health Barometer” from SAMHSA found that “1.25 million Americans were enrolled in substance use treatment in 2012, an increase from 1.19 million in 2008” (American Psychological Association [APA], 2014, para. 5). This increase is indicative of a cultural trend towards decreasing stigma and increasing acceptance. As a result, patients have both a greater access to treatment and a greater willingness to seek care.

The current status and direction of mental health stigma is nicely encapsulated in the 21st Century Cures Act, signed into law by President Obama in December 2016 (Grohol, 2016). The act was considered a sweeping success for general healthcare in America, authorizing \$4.8 billion to the National Institutes of Health over the next ten years and creating financial incentives for innovative research by health and biomedical institutes (Steinhauer & Pear, 2016). More specifically, it also created a new president-appointed position of assistant secretary for mental health and substance abuse, demonstrating a governmental priority of addressing the issue of mental health in America (Steinhauer & Pear, 2016). Furthermore, the new law established a 23-member committee to oversee nationwide trends in and the success of federal programs in “the prevention of, diagnosis of, intervention in, and treatment and recovery of serious mental illnesses” (Grohol, 2016, para. 5).

But the consequences of a long history of stigmatization and discrimination are still deeply engrained in society. As evidenced by the gaping chasm between mental health needs and treatment engagement, these consequences have real, tangible results on millions of lives. The common adage, “sticks and stones may break my bones, but words will never break me”, couldn’t be further from the truth. Our willingness to openly

discuss, and the language with which we converse, has serious ramifications for the accessibility of effective mental healthcare treatment.

In this paper, I will discuss access barriers as products of cultural stigma, as well as future directions in breaking them down. Access barriers can be classified into system-level and personal-level barriers. One limitation of this discussion is its exclusion of self-stigma and personal-level barriers. These cause a decline of help-seeking behavior due to the individual's internalization of public stigma and a resulting reduction in self-confidence and self-efficacy. However, while personal-level barriers have been widely observed, the definitive research around the internal psychology around them is lacking. Because systemic barriers have been more widely studied, and are more straightforward to understand and address, they will be the primary focus of this thesis.

Finally, the focus of this thesis will be on mental illness; however, a discussion of these conditions would be incomplete without some mention of SUDs, due to high rates of co-occurrence and a prevalence of attempts to self-medicate. For the purposes of this discussion, behavioral health disorders will be defined to include mental and substance abuse disorders.

II. Barriers

There are a great number of systemic, or structural, barriers which individuals must surmount in order to access mental healthcare treatment. These barriers occur at every stage of the arduous process, from initial steps to seeking help, all the way through reintegration into society. This section will outline these barriers and how they are a product of cultural stigma surrounding mental conditions. Because these obstacles are engrained in society and the healthcare system from centuries, even millennia, of

negative stigmatization, we will first begin with an overview of the history of mental healthcare in the U.S., which will then be followed by a discussion of each individual barrier.

A. A History of Mental Health Treatment

i. Pre-Institutionalization

Colonial America inherited superstitious attitudes towards mental conditions from Western Europe that had been passed down from ancient times and through the medieval ages. (Rocheftort, 1993). Heavily influenced by Biblical passages of people going mad from demonic possession, many considered these conditions to be associated with something supernatural or divinely willed (Eghigian, 2010). Treatment, or complete lack thereof, was administered accordingly: the accused were usually subjected to the whipping post or sent to the gallows to be executed as witches.

The Age of Enlightenment ushered in an era of reconsidering long-held traditional views. Physicians began to reevaluate insanity as a phenomenon grounded in natural causes - something to be analyzed, understood, maybe even cured. But for generations, the extent of influence of these educated, lofty ambitions merely resulted in those suffering from “lunacy and idiocy” (Rocheftort, 1993) being lumped together as “mentally defective” and shuffled shamefully away into almshouses. In other words, mental healthcare was treated as a branch of welfare policy that provided for the impoverished homeless. Although this was milestones from execution, living conditions in poorhouses were deplorable, little was done in the way of actual medical care, and cruel treatment still ran rampant.

ii. Institutionalization

Beginning in the early 1800s, a wave of social reform movements, particularly the religious Second Great Awakening, once again began to reshape society's understanding of the human condition (McLoughlin, 1978). With a renewed focus on personal redemption through faith and good works, individuals were encouraged to participate in humanitarian efforts. Coinciding with this, rising urban concentration of the American population was leading to a heightened communal awareness of "poverty, mental deviancy, and crime" (Rocheft 1993). Additionally, the Enlightenment-originated attempts to explain insanity were gaining momentum, giving rise to three main schools of thought (Thielman, 1987). One school claimed insanity to be primarily a disease of the mind, emphasizing the need for moral therapy. Many rejected this view, drawing from religious beliefs to claim that the mind was immortal and could not be diseased. A second school believed madness to be merely another "bodily disease", particularly of the nervous system or as a result of inflammation. The third was based on phrenology; this (now debunked) view of medicine stipulated that specific regions of the brain were associated with specific functions or "faculties", such as musical ability, benevolence, intellect, self-esteem, and morality (Janik, 2014). Such a view provided a physiological explanation for insanity as atrophies or lesions in certain regions of the brain. As a result of all these forces, a new kind of limelight was cast on mental disability and the inhumane, inadequate provisions available to those affected.

Society's attempt to address these inadequacies resulted in a boom of new mental hospitals, a "cult of asylum [that] swept the country" (Rothman, 1971). Despite their connotation today of doom and gloom, the first mental asylums were intended to serve in the original function of the word - as a place of refuge for its residents from the stresses

and pressures of the community. Within the sheltered confines of these hospitals, patients received attempts at therapy, the variety of which is a reflection of the various conflicting medical theories of the time. “Moral treatment” involved “an organized program of education, recreation, and religious services” (Rocheftort 1993). Pharmaceutical agents were also used, backed up by the theory that insanity was a behavioral symptom of underlying physical lesions in the brain. (Thielman, 1987).

One figure instrumental in the creation of these hospitals was Dorothea Dix, a schoolteacher-turned-activist who lived from 1802-1887 (Parry, 2006). Passionate in her early life that women have equal access to education, Dix had to retire early from secondary school teaching due to emotional and physical burnout. Supported by inheritance from a wealthy grandmother, she began to volunteer to teach Sunday school in a jail in East Cambridge, Massachusetts, and was horrified to discover mentally ill individuals living in neglect. Dix began to visit various jails across the state, writing up personal accounts of the inhumane treatment suffered by the mentally ill. She reported in one case, “One idiotic subject chained, and one in a close stall for 17 years”, and that she had “seen blows inflicted, both passionately and repeatedly” (Dix, 1843). These accounts, compiled in a memorial and read aloud to the Massachusetts Legislature by a male representative (women were not allowed to give testimonies in person), became greatly influential, the beginning of an international, lifelong effort that established over thirty mental hospitals (Rocheftort, 1993).

Unfortunately, the second half of the nineteenth century saw a decline in the quality of living conditions and medical treatment in these asylums. Overcrowded and underfunded, these originally well-intentioned institutions began also to be inundated

with more patients than they could handle. Psychiatrists appointed as superintendents of these hospitals grew more consumed with the complex managerial tasks of handling a hospital pushed beyond its capacity, and less with delivering actual, personal medical treatment (Grob, 1983). A quintessential example of public mental hospitals of this time period was the Rhode Island State Hospital, built in 1867 (Rocheffort, 1993). Inspired by New York City Blackwell's Island asylum's "success" in spending only \$2.12 per patient per week, the chief intention of this new institution was to manage the state's mentally ill at the lowest budget possible. Set at an initial capacity of 200, the facility was overcrowded by 1882 with 282, with only a single physician visiting once a week (Jones, 1943).

The main endeavor of asylum superintendents was to ensure a peaceful, calming, therapeutic environment devoid of stressors that had caused the disease in the first place. This led to desperate attempts to reign in troublesome patients that might disrupt this carefully constructed environment, thereby hindering the natural recovery of both themselves and their fellow patients. Hospital staff resorted to physical and chemical restraints alike. According to an 1880 survey conducted by the U.S. Census Office, entitled *Report on the Defective, Dependent, and Delinquent Classes*, 5 percent of mental hospital patients were subjected to physical restraints such as strait jackets, muffs, straps, cribs, and handcuffs (Wines, 1880). Staff in the Rhode Island State Hospital became skilled in "the arts of subduing patients without bruising or 'marking them up'" using towels and rubber hoses (Jones, 1943, p. 33). Sedatives and hypnotics were also widely used. And these two types of restraints were correlated and often used in conjunction; it was observed that "the more mechanical restraints were employed, the greater reliance

there was on sedatives and narcotics” (Wilbur, 1881, p. 225).

As a result of deteriorating conditions (and, consequently, reputations), asylums became a last resort. Families committed their insane relatives only as desperate, last-ditch efforts when all else had failed, or if they couldn’t afford anything else. At this point, many such individuals had been exhibiting behavioral symptoms for years and were quickly written off as hopelessly incurable. However, superintendents couldn’t discharge these patients — they either posed a threat to society or an inconvenience to family — and were forced to continue housing them. In this way, mental hospitals became chiefly concerned with “providing long-term custodial care” for society’s dependents (Grob, 1983, p. 15). Asylums, originally a place of refuge, eventually became primarily burdened with those who were “dangerous or unmanageable”, “the chronically disabled: senile, alcoholic, criminally insane” (Rochefort, 1993, p. 25).

Meanwhile, as the demographic make-up of state mental hospitals began to shape and reinforce a negative characterization of insanity as “a special problem of the poor” (Rochefort, 1993, p. 24), the intellectual community became increasingly interested with the role of heredity in social problems. In 1874, sociologist Richard Dugdale discovered that six inmates in a local county jail were blood relatives. Further inquiry revealed that, in this immediate family, 17 of 29 males had been arrested, and 15 had been convicted of crimes (Christianson, 2003). Three years later, Dugdale published *The Jukes: A Study in Crime, Pauperism, Disease and Heredity*, a compilation of public records across seven generations. His publication claimed that the Juke family, genetically predisposed to social degeneration, had cost \$1.3 million (the equivalent today of \$20.9 million) in taxpayer dollars spent on medical care, arrests, and imprisonment over 75 years

(Dowbiggen, 1997; Christianson, 2003). Although deeply flawed and poorly sourced, Dugdale's sensationalist study was wildly influential on the public opinion of social dependents (Dowbiggen, 1997). Many became convinced of the predominant role of nature over nurture in producing "degenerate families". Fear began to spread that charity programs, correctional institutions, and mental hospitals that housed such people and allowed them to reproduce would lead to the degradation of society as a whole.

a. The eugenics movement: mental illness as a hereditary disease

In response to this fear, physicians and politicians began advocating eugenics policies such as segregation and sterilization. In 1894, it was revealed that Hoyt Pilcher, medical superintendent of the Kansas State Home for the Feeble-minded, had, without a legal warrant, castrated 44 boys and 14 girls (Dowbiggen, 1997). The public outcry that followed indicated that most of society was not in favor of such extreme measures. However, Pilcher was not the only asylum doctor to carry out this procedure. Additionally, a broader group of physicians, supportive of the idea of sterilization, began to search for safer, less invasive alternatives. When the salpingectomy and the vasectomy were introduced, pro-eugenicist physicians were supported the use of these surgical sterilization techniques that allowed the reproductive organs to continue their hormonal functions, and many even claimed therapeutic effects on dangerous individuals (Dowbiggen, 1997).

In 1907, Indiana passed America's first involuntary sterilization law, requiring the sterilization of indicted criminals and rapists, as well as the feeble-minded in state custody, with the approval of a board of experts (Grob, 1983; Rochefort, 1993; "1907 Indiana Eugenics Law", 2007). Over the next few decades, many states followed suit,

with varying rates of success; several sterilization laws were ruled unconstitutional in federal or state courts. But in 1927, the U.S. Supreme Court ruled in favor of Virginia's sterilization law, and served as the catalyst for a wave of similar laws across the country (Dowbiggen, 1997). By 1940, thirty states had allowed for the sterilization of individuals in state hospitals or other state institutions, and over 18500 mentally ill patients state hospitals had been legally surgically sterilized (Grob, 1983). This number is merely the official estimate; some assert that "the actual number of eugenic sterilizations...significantly exceeded those allowed by state law" (Reilly, 1947, p. 90).

The end of World War II ushered in yet another era for mental health. After the war, many psychiatrists returned home from their medical service abroad having witnessed firsthand, "soldiers who succumbed to the shock and strain of combat" (Dowbiggen, 1997, p. 111). It was a collective eye-opening experience for the field, a realization that mental diseases might not be hopeless hereditary conditions, but products of psychological reactions to traumatic experiences.

In conjunction with this post-war realization and a growing awareness of what later came to be known as post-traumatic stress disorder (PTSD), psychiatry was finally beginning to gain more traction as a credible branch of medicine. In the 1930s the American Psychiatric Association had begun to seek ways to integrate psychiatry into medical school departments and curriculums, having been left behind in the general medical education reform of the 1870s (Grob, 1983; Dowbiggen, 1997). Then, this newly board-recognized specialty recognized the need to attract promising medical students. In efforts to do so, the field sought to distance itself from involvement with eugenics theories and asylum management. Instead, there was a greater focus on the clinical,

scientific, and educational aspects of psychiatry, and the role of genetics was diminished and downplayed. Advocacy of eugenic policies became a thing of embarrassment and ridicule, and thus, psychiatrists actually became “some of the first defectors from the [eugenics] movement” (Dowbiggen, 1997, p. 131).

iii. Deinstitutionalization

In October of 1963, the Community Mental Health Centers Act was signed into law by President Kennedy (Rochefort, 1993; National Council for Behavioral Health, n.d.). By establishing community mental health centers around the country, this landmark policy “officially signaled the start of an era of community mental health and deinstitutionalization practices that continue to define the public mental health system” today (Rochefort, 1993, p. 33). Patients with mental illnesses were no longer isolated from society in asylums, but were instead encouraged by this new community-based, outpatient model of care to be integrated back into their communities.

Unfortunately, the deinstitutionalization movement perhaps over-romanticized the concept of the community, was based in an overconfidence in still developing anti-psychotic medications, and unfairly villainized hospitals as evil and cruel (Rochefort, 1993; Yohanna, 2013). In truth, the situation was not so black and white. There is no question that asylums at this point had deviated from their original purpose and become places of inhumane confinement due to overcrowding, underfunding, and mismanagement. Additionally, it is true that many symptoms of many conditions can be managed well enough to enable such individuals to remain in society to lead fulfilling, productive lives with healthy, happy relationships. However, it is also true that state hospitals had provided a structured system in which patients could be regularly monitored

for physical health, receive immunizations, and even often be given vocational training (Yohanna, 2013). Many state hospitals provided some kind of work environment in the form of workshops and farms, allowing patients to participate in meeting their own needs and even utilizing their skills to sell goods and services (Slovenko, 2002). Furthermore, communities were completely unprepared, both financially and educationally, to receive the masses of patients that were driven out among them as state hospitals were rapidly defunded and shut down. Mental and substance use disorders were still highly stigmatized and widely misunderstood. Failure by the community to embrace and successfully treat the mentally ill population has resulted in the widespread homelessness and criminalization of the mentally ill that is seen today. The hastiness of the deinstitutionalization movement was arguably almost as cruel as the system that it so fervently attempted to dismantle (Yohanna, 2013).

B. Disease Mechanisms and Treatment Methods

One of the first obstacles to treatment is an understanding of the intricate pathophysiology associated with mental disorders. As discussed previously, effective evidence-based treatment modalities have been successfully developed for some conditions. However, due to the convoluted nature of these illnesses, individuals respond differently to various treatment methods, and it often takes time, patience, and perseverance to determine the ideal approach — often a combination of methods — for each patient. Because treatment is a long-term process that requires regularity and stability, a long, uphill battle often precedes any sign of improvement. It is easy for patients to become discouraged, believing their doctors and therapists and treatment plans to be ineffective. This not only results in dismal treatment retention rates, but also

perpetuates, among the general public, misunderstanding and a lack of faith in the validity of the mental healthcare field.

So what do we know about the disease mechanism and corresponding treatment methods of mental illnesses? We know that these illnesses are attributed to complex interactions of psychosocial, biochemical, genetic, and environmental factors. The exact root cause for each individual is difficult to immediately pinpoint, but decades of research have elucidated much of the general patterns of various conditions, and mental health professionals are well-equipped with treatment protocols. What often makes treatment methods difficult to comprehend is that psychiatric therapies must reconcile the mind-body problem (Kemp, 1994). However, it is important to acknowledge that these conditions cannot be boiled down to either purely physical ailments or poor cognitive-behavioral habits. The first step in understanding mental healthcare is recognizing and embracing complexity. To provide a clearer picture of the extent of the complexity involved, this section will give an overview of the most common mental illnesses and how they are typically addressed.

i. Depression

Depression in its unipolar form, or major depressive disorder (MDD), is characterized by “episodes of sadness, loss of interest, pessimism, negative beliefs about the self, decreased motivation, behavioral passivity, changes in sleep, appetite and sexual interest, and suicidal thoughts and impulses” (DeRubeis, Siegle, & Hollon, 2008, p. 1). MDD, as discussed earlier, is one of the most prevalent mental disorders, affecting an estimated 16.2 million Americans in 2016 (SAMHSA, 2017). As a chronically debilitating condition, it is responsible for a hefty portion of the United States burden of

disease, and poses a significant global health concern (DeRubeis, et al., 2008; Moussavi, Chatterji, Verdes, Tandon, Patel, & Ustun, 2007).

Previous generations of research yielded medications that targeted the activity of norepinephrine, a neurotransmitter involved in the stress response (Kemp, 1994; DeRubeis, et al., 2008). More recent research on the underlying biochemistry of depression has implicated a deficiency in serotonin, a neurotransmitter that functions in regulating mood. Antidepressants developed in response to this are serotonin reuptake inhibitors, which essentially increase the patient's levels of serotonin (DeRubeis, et al., 2008; Shukla, 2013). However, 40% of individuals suffering from depression have little success with treatment plans relying on these medications, demonstrating that other biological molecules and systems must play a crucial role in this condition. Inspired by a well-established connection between smoking and depression, and observing that nicotine interferes with the role of acetylcholine, yet another neurotransmitter, researchers have established that acetylcholine also plays a role in this disease (Shukla, 2013). However, acetylcholine's role in the body is much broader, making it more difficult to develop an antidepressant targeting this system. Additionally, the population that does have success with current medications are at high risk of relapse. Patients who achieve remission are advised to continue medication for at least another six months, after which the risk of recurrent depression does decrease (DeRubeis 2008). Significant progress has been made in pinpointing various biochemical factors of this disease, but the sheer complexity of the antidepressants available indicates that a quick-fix cure does not exist (Cipriani, 2017).

Cognitive therapy (CT), the most prominent of cognitive-behavioral interventions for depression, is a treatment method that trains patients to change their thinking and

information processing habits (DeRubeis 2008, Rupke 2006). The premise of this method, put simply, is that negative moods are symptoms of negative thoughts and beliefs; thus, practicing healthy, positive thinking empowers a person to control the symptoms of their illness. Studies have shown that this method is of comparable effectiveness to medication in addressing the acute symptoms of depression, and the two are commonly used in conjunction for chronic cases (Rupke 2006). Patients who participate in CT have significantly lower rates of relapse following treatment withdrawal. One study of moderate to severe cases claims a startling difference of 76% relapse rate for medication and 31% for CT (Hollon, 2005).

Many other prominent psychotherapy interventions have also been developed in addition to cognitive-behavioral therapy, such as behavioral activation treatment, problem-solving therapy, and interpersonal psychotherapy (Cuijpers & Straten, 2008). Behavioral activation treatment utilizes environmental reinforcements and punishments to encourage positive thoughts or feelings and to discourage depressive behavior and encourage healthy behaviors (Hopko et al., 2003). Problem-solving therapy, also considered as behavioral activation, trains individuals to respond and adapt to situations in their daily lives with structured problem-solving skills and positive problem orientation (Bell & D’Zurilla, 2009). Interpersonal therapy involves empathetic connection between the therapist and the patient, which “helps the patient feel understood” (Markowitz & Weissman, 2004, p. 136). Meta-analyses of these different therapeutic approaches have revealed that they are of similar efficacy to cognitive-behavioral therapy and to each other (Cuijpers & Straten, 2008).

However, like any other process of acquiring a skill or habit, learning to change the

way one thinks is time-consuming and challenging. Successful psychotherapy therefore demands effort not only during the treatment sessions spread across several weeks but also regularly throughout each day. Upon additional consideration that these methods are used to treat an illness often characterized by lack of motivation, it is unsurprising that therapy can be an arduous process.

Electroconvulsive therapy (ECT) involves the controlled application of electric voltages to the brain via carefully placed surface electrodes to induce a state of seizure, usually performed under anesthesia (Kemp, 1994; Kellner, 2016). One of the oldest methods of treatment, it is now used as a last-line option for patients with severe, chronic depression symptoms that have been unresponsive to medication and other therapeutic interventions (Jelovac, Kolshus, McLoughlin, 2013). Although its high rates of efficacy as an acute treatment are accompanied by high rates of relapse, there's no question that ECT can provide significant relief of distress when it seems all else has failed.

Unfortunately, due to a history of abuse in the mental asylums of the 1950s, ECT has long been shrouded in fear and misunderstanding (Kellner, 2017; Sadowsky, 2017). In its early years of use, before being fully understood and refined, this method was used to subdue violent, disruptive patients, and wielded as a threat to control the rest.

Additionally, media portrayals of the procedure, notably the 1975 film rendition of *One Flew Over the Cuckoo's Nest*, have led the public to associate ECT with pain and punishment (Sadowsky, 2017). In reality, although the neurological mechanisms associated with its success are certainly complex, ECT has been heavily studied, increasingly regulated, and further developed into a safe, humane, and effective method of treatment for various mental health conditions (Kemp, 1994; Jelovac, et al., 2013;

Sadowsky, 2017).

ii. Anxiety disorders

Anxiety disorders are characterized by constant, extreme, debilitating anxiety (NIMH, 2016). The intensity of this anxiety severely affects daily function at work, school, and in personal relationships. Furthermore, it is often manifested in physical symptoms such as fatigue, difficulty sleeping, or heart palpitations and shortness of breath during a panic attack. (NIMH, 2016). Together, this group of disorders comprises the most prevalent category of mental illnesses in the United States, affecting approximately 18%, for 40 million individuals, of the adult population (Anxiety and Depression Association of America [ADAA], 2018). The three most common types of anxiety conditions are generalized anxiety disorder, panic disorder, and social anxiety disorder.

Psychotherapy is a prominent treatment method for anxiety disorders, usually cognitive-behavioral therapy (CBT) or teaching patients stress management techniques (NIMH, 2016). The most common CBT approaches are cognitive therapy, relaxation training, and exposure therapy, and are usually used in conjunction with medication (NIMH, 2016; Kaczurkin, 2015). Cognitive therapy has been discussed previously with respect to depression treatment. Relaxation training teaches patients stress management and meditation techniques; when used in conjunction with other therapies, relaxation training can enhance their effectiveness (NIMH, 2016). Exposure therapy aims to disentangle the unconscious fear association that patients have with certain stimuli. Although shown to be effective for panic and social anxiety disorders, the process typically takes about 10 sessions; one can understand that these sessions might seem

daunting and intimidating to patients who will be intentionally, repeatedly induced to experience pathological fear (Kackurkin, 2016).

Medication for the physical symptoms is prescribed in addition to psychotherapy for more severe cases of anxiety - typically anxiolytics, such as benzodiazepenes (NIMH, 2016; Roy-Byrne, 2016). While benzodiazepenes are effective and quick-acting in relieving anxiety and tension, they are commonly associated with high rates of addiction and misuse, leaving some patients and doctors unwilling to utilize them (Starcevic, 2012). Common side effects also include sedation, psychomotor impairment, and dangerous interactions with alcohol. However, studies have shown that individuals who do not have a history of substance abuse are unlikely to have a problem with benzodiazepene misuse. Additionally, increasing drug tolerance and psychological dependence are both quite rare under careful medical supervision (Starcevic, 2012). While these medications are not without drawbacks, there is a tendency to overlook their advantages, at a cost to certain patients who might benefit greatly from them.

iii. Trauma- and stressor-related disorders

Post-traumatic stress disorder (PTSD) is a condition that results from exposure to trauma or stress; causes may range from sexual assault to sudden death of a loved one to participation in military combat. The disorder is characterized by at least a month of re-experiences of the event, avoidance of triggering reminders (places, objects, or thoughts), high reactivity (easily startled, constantly tense, or quick to anger), and dysfunctional cognition and mood (NIMH, “Post-Traumatic Stress Disorder”, 2016). PTSD is most commonly associated with war (and rightly so — about 30% of Vietnam War veterans have suffered from PTSD), it is also quite prevalent among the civilian population (U.S.

Department of Veterans Affairs [VA], 2016). In the U.S., approximately 8 million adults are diagnosed with PTSD in any given year, and it's estimated that 7-8% of the U.S. population will have it at some point in their lifetime (VA, 2016).

Psychotherapy is the primary method for treating PTSD (VA, 2017; Reisman, 2016). While these therapies are highly effective in dramatically improving the patient's quality of life, they are time-intensive (typically involving 8-16 sessions) and the sheer variety of trauma-focused psychotherapy approaches can be daunting (VA, 2017). The three most strongly evidence-supported approaches are prolonged exposure, cognitive processing therapy, and eye-movement desensitization and reprocessing (VA, 2017; Reisman, 2016). Other trauma-focused therapies include brief eclectic psychotherapy, narrative exposure therapy, and written narrative exposure, while non-trauma-focused, albeit less-researched, approaches include stress inoculation training, present-centered therapy, and interpersonal psychotherapy (VA, 2017). It is understandably exhausting for patients and their families to understand all these options and weigh the pros and cons for each option specific to their situations.

In addition to psychotherapy, medication is often prescribed to provide further relief. To address the depression and anxiety symptoms associated with PTSD, antidepressants are commonly recommended (VA, 2017). The complexities of these have been discussed previously. In 2010, the VA began recommending prazosin to treat PTSD-associated nightmares (Kung, Espinel, & Lapid, 2012). Originally approved by the FDA for hypertension, prazosin is one of few drugs that can cross the blood-brain barrier and works to counter the effects of norepinephrine (FDA, 2015; Kung, et al., 2012; Osser, 2018). Although there is a significant amount of research to support this

medication, the nightmare symptoms are often not fully resolved by low doses, and increasing doses are accompanied by increasing concerns of side effects. Recent research has established that higher doses are indeed both tolerable and more effective in treating nightmares (Koola, Varghese, & Fawcett, 2014). However, clinicians and patients must collaborate, escalating dosages slowly to determine the ideal prescription for each individual and constantly monitoring any effects on blood pressure. Relief from symptoms can be hard-earned and slow to come.

iv. Schizophrenia

The prevalence of schizophrenia across the world has consistently been estimated at about 1%, regardless of race, gender, or socioeconomic class. Although this may seem like a small percentage, this means hundreds of millions of people worldwide — about 3.5 million in the U.S. — are affected by this incredibly debilitating disorder (Schizophrenia and Related Disorders Alliance of America [SARDAA], 2018). The defining symptom of schizophrenia is psychosis, in the form of auditory hallucinations or delusional beliefs (Frankenberg, 2018). Otherwise, there is not a clear set of defining symptoms: different patients display different sets of behaviors (Kemp, 1994). Symptoms are broken down into four categories (Frankenberg, 2018; Owen, 2016). Positive symptoms include hallucinations, delusions, and disorganized speech and behavior; they typically come and go. Negative symptoms include a decrease in range of emotion, poverty of speech, loss of motivation, and social withdrawal; these tend to be chronic, and are associated with long-term, detrimental effects on social function. Cognitive symptoms consist of neurocognitive deficits and poor interpersonal communication skills. Lastly, mood symptoms often cause the patient to be either extremely, oddly cheerful or

sad.

Treatment of schizophrenia requires a multifaceted approach, often a combination of antipsychotic medication and psychosocial therapy (Frankenberg, 2018). Most antipsychotic medications are designed to address the positive symptoms of the disorder, and are typically designed to diminish the firing rate of specific dopamine neurons (Frankenberg, 2018; Miyamoto, Duncan, Marx, & Lieberman, 2005; MHA, 2018). However, antipsychotic medication management is incredibly complex; there are a staggering number of options, and many can be associated with serious side effects, ranging from blurred vision and dizziness to loss of muscle control (MHA, 2018). For example, Clozapine, known as the most effective antipsychotic (but oddly a weak dopamine antagonist), is not used as a first-line treatment due to severe side effects on the immune system and therefore constant necessary blood-work (Frankenberg, 2018; Miyamoto, et al., 2005). However, it might become the best option if patients are unresponsive to other alternatives. Symptoms and side effects must therefore be closely monitored by mental health professionals for adjustment of medication type or dosage.

Psychosocial intervention approaches include social skills training, cognitive-behavioral therapy, cognitive remediation, and social cognition (Kern, et al., 2009; Frankenberg, 2018). When used in conjunction with medication, these interventions result in higher treatment program retention rates and have been shown to stabilize improvement (Guo, et al., 2010). These interventions also empower individuals to manage their finances and medications and enable them to be socially and functionally integrated into the community (Frankenberg, 2018; Guo, et al., 2010). However, there is no doubt that psychosocial therapy takes a significant amount of time and effort; one

study on its effectiveness implemented 48 group sessions over the course of a year (Guo, 2010).

v. Substance use disorders

As stated, SUDs tend to co-occur with other common mental health illnesses. About 7.9 million adults in 2014 had a dual diagnosis (SAMHSA, 2016). Many SUDs are results of attempts to self-medicate mental health problems, especially anxiety disorders or social phobias, with drugs or alcohol (Kaplan, 2011). Not only do SUDs exacerbate debilitating symptoms of separate conditions, but they also further complicate the use of psychotropic medication.

Medications for SUDs are slightly more straightforward and have a greater rate of success. Broadly speaking, once medical researchers have determined the physiological mechanism of the substance in question, they can develop drugs that target the relevant biochemical pathways. Often these drugs are, in terms of chemical structure, imitations of the addictive substance, and are aimed at addressing withdrawal symptoms.

Opioid addiction, for instance, is the result of a reliance on a class of drugs that create an anesthetic effect by stimulating a type of cell receptor known as ‘opioid receptors’ (Hemmings & Egan, 2013). Medications for this addiction, such as methadone and buprenorphine, are often opioid agonists or partial agonists (NIH, 2018). In essence, these medications are a low, controlled dosage of opioids that carry their own risk of addiction. The benefits of pharmacotherapy for substance abuse are crystal clear, as these therapies enable patients to lead productive lives, reduce violent crime driven by desperation for illegal substances, and eliminate exposure to HIV caused by drug injections. To criticize these medications, as many do, as merely substituting one

addiction for another, is an unfair oversimplification (NIH, 2018). Still, one can understand a concern that these medications can cultivate a reliance of stimulation on the same physiological pathway.

Another medication used in opioid addiction treatment is naloxone, an opioid receptor antagonist, typically used to treat opioid overdose (van Dorp, Yassen, & Dahan, 2007). Administration of naloxone restores regular respiration (NIH, 2018). Although it has determined to be safe within a wide dose range, side effects may include acute withdrawal syndrome, which is accompanied by headache, blood pressure changes, increases in heart rate, and vomiting (NIH, 2018). The effects of the drug on reversing respiratory depression might wear off prematurely. Finally, high doses of naloxone for severe pain may result in catecholamine release, leading to pulmonary edema and cardiac arrhythmia (van Dorp et al., 2007). Naloxones should therefore be administered under very close medical supervision to monitor for normalized breathing and for dangerous side effects (NIH, 2018).

Treatment plans often also utilize forms of behavioral therapy (often following detoxification), sometimes supplemented by the use of motivational incentives as positive reinforcement to encourage abstinence. Patients receive vouchers or other mentally rewards for each drug-free test result, with reward values increasing for each consecutive successful test (NIH, 2018). Unfortunately, these behavioral approaches are costly and time-consuming for both the patient and the provider.

vi. Conclusion

Complete assessment and successful management of each mental health patient's condition is complex and time-consuming for both the patient and the provider. As a

result, it is easy for the patient, struggling to comprehend their own symptoms and illness, become discouraged during this long, arduous process. More biological, psychological, and clinical research is necessary to further our understanding and treatment of these illnesses. However, the stigma surrounding mental illness lowers societal motivation and allocated funding for this crucial research.

C. Mental Healthcare Financing

The contribution of mental and substance use disorders to the disease burden in the United States is primarily due to years lost to disability. It is true that issues such as intentional and accidental drug intoxications are certainly causes of suicide and overdose deaths not to be understated or overlooked. However, by and large, individuals must live with their mental health conditions for many years. On the one hand, these individuals still have a hope of living many happy, functional, and fulfilling years. On the other hand, they must also struggle for all these years to find affordable, accessible, high-quality treatment in order to manage their illness in a way that allows them to maintain this functional, fulfilling life. This section will therefore discuss the financial barriers associated with mental healthcare — namely lack of health insurance and lack of insurance coverage parity — as well as successes and shortcomings of recent health policy developments.

i. Lack of health insurance

The mentally ill are, whether due to disability or discrimination, often not typically employable in jobs that traditionally provide a steady source of income and health insurance coverage. Because of this, individuals make up a large percent of the low-income population. As stated, 46% of homeless adults have a severe mental illness or

substance abuse disorder (NAMI, 2018). Prior to the Affordable Care Act of 2010, of the 47.5 million uninsured adults, about 25% had either a mental illness diagnosis or an SUD (Beronio, Po, Skopec, & Glied, 2013). As discussed previously, in households with an income below 138% of the FPL, a sixth of adults have severe mental health diagnosis (Miller, 2014). Furthermore, a study using data between 1999 and 2010 revealed that the mentally ill are more likely to be covered by public insurance or entirely uninsured altogether (University of Minnesota, 2013). Thus, it is clear that those with behavioral health issues make up a significant proportion of the uninsured population.

The negative impacts of lack of health insurance on accessibility and affordability of medical treatment cannot be overlooked. Research conducted by the Kaiser Family Foundation on the uninsured population has found that they are significantly less likely to receive proper preventative, outpatient care. In 2016, the National Health Interview Survey revealed that 20% of uninsured non-elderly adults had chosen to forgo healthcare services that year due to cost — a steep jump from just 8% of those with public health insurance and a mere 3% of those with private health insurance (KFF, 2017, “Key Facts”). Even those who do receive medical advice choose not to obtain the treatments recommended by their providers. In the same year, 18% of uninsured non-elderly adults either postponed and did not fill their prescriptions. This was triple the rate for those covered by private insurance (KFF, 2017, “Key Facts”).

Due to insufficient outpatient, preventative care, the uninsured are significantly more likely to be hospitalized for otherwise avoidable health issues. Once hospitalized, not only are these patients without insurance forced to pay hefty medical bills out of pocket, but they are also charged higher rates by hospitals charge in contrast to the

insured. As a result, the uninsured are more likely to accumulate medical debt. In the United States, in 2014, 52% of debt collection actions were on medical debt, and about 50% of declared bankruptcies were due to medical debt (KFF, 2017, “Key Facts”). The 2016 National Health Interview Survey also found that uninsured non-elderly are more than twice as likely as their insured counterparts to be anxious about being able to afford normal healthcare (CDC, 2017). Factors that add to the anxiety and stress of patients already struggling with their mental health are especially detrimental. For both those who are unable to pay their medical bills and those who simply avoid the treatment so crucial to functional living, this system perpetuates a cruel, constraining cycle of poverty and illness.

ii. Lack of health coverage parity

To better understand how health insurance policies cover mental health treatment, it is important to first consider the different types of insurance plans. There are, broadly speaking, two categories of insurance - public and private (Bodenheimer & Grumbach, 2016). Public insurance is funded by the government, and is divided into two programs. Medicare is designed for individuals 65 years and older, or individuals with certain chronic illnesses or disabilities, such as end stage renal disease. Medicaid is meant to serve as a safety net for low-income individuals and families. Policies about who exactly is eligible to enroll for Medicaid vary from state to state. Private insurance, on the other hand, can be purchased from private health insurance companies by individuals (as individual health plans) or by employees for their employers (large-group for over 200 hundred employees, small group for fewer) (Lindquist, 2016).

The good news is, although the income bar to qualify for Medicaid enrollment is

unstable and low, and the benefits vary from state to state, most state Medicaid programs have a relatively generous range of behavioral health benefits (Bodenheimer & Grumbach, 2016; Garfield, Lave, & Donohue, 2010). However, there are limitations. For example, Medicaid does not cover “nursing and hospital services in an institution for mental disease (IMD) for those aged 22-64 years” or “social support services, such as supportive employment or housing” (Garfield, et al., 2010, p. 1082).

In 2008, Congress passed the Mental Health Parity and Addiction Equity Act, which regulated large-group health insurance plans (Norris, 2016). It stated that if mental health and addiction treatment coverage was provided by the plan, this coverage had to provide benefits equal to those provided for medical and surgical care. However, the act made no requirement on whether the mental health coverage should actually be provided. Furthermore, it placed no regulation whatsoever on individual and small group insurance markets.

As of 2013, before the Affordable Care Act went into effect in 2014, out of those covered by individual health insurance plans, a third were not covered for SUD treatment, and 20% were not covered for mental health services (Beronio, et al., 2013). The small group health plans were an improvement from the individual plans - an estimated 95% of these provide benefits for mental health and substance abuse treatment services. However, because the federal parity requirements of 2008 did not apply to individual and small group insurance plans, there was no assurance that these benefits were comparable to those provided for medical and surgical care (Norris, 2016).

iii. Recent developments

a. The Affordable Care Act

The Affordable Care Act (ACA), signed into law on March 23, 2010, implemented an incredible expansion and equalization of mental health insurance coverage. First of all, the ACA resulted in a drastic reduction of the uninsured rate in the United States. The uninsured rate just before the ACA took effect stood at 18% (KFF, 2017, “Key Facts”). In the third quarter of 2015, this had dropped down to 11.6%. In other words, between September 2014 and February 2015, 17 million more Americans gained access to health insurance (KFF, 2017, “Key Facts”). A large portion of this was due to the fact that the ACA expanded Medicaid to allow enrollment for those with income at 138% of the federal poverty line. This was a marked increase from the previous average of about 44% of the federal poverty line. As discussed previously, those with behavioral health diagnoses make up a disproportionately large percent of the uninsured population. Thus, increasing accessibility to health insurance coverage for all Americans dramatically benefits patients of behavioral health conditions.

One of the most notable provisions of the ACA was its elimination of medical underwriting (Norris, 2016). Prior to the ACA, health insurance companies would either deny insurance enrollment to or significantly up-charge consumers with pre-existing conditions. Consequently, individuals with severe behavioral health diagnoses — such as bipolar disorder, schizophrenia, anorexia, or alcoholism — would be refused health insurance coverage. Those with less severe diagnoses were typically charged higher monthly premiums, which likely discouraged many of them from obtaining insurance altogether. Additionally, those who were already covered by insurance at the time of their diagnoses were essentially trapped with their plan, lacking the freedom to shop around for better options if their annual rates became unfavorable or unaffordable. Under the

ACA, health insurance companies are no longer allowed to use a patient's medical history to deny enrollment or raise premiums.

Additionally, beginning in 2010, the ACA allowed young adults, up to the age of 26, to remain on their parents' health insurance plans. This has led to a remarkable drop in the uninsured rate among 18-24 year olds from 31.5% in 2010 to 18.9% in 2014. Dr. Jarcho, a postdoctoral fellow at the NIMH, states that "the vast majority of mental health disorders do emerge during one's adolescence or early 20s", meaning that greater insurance coverage for this demographic translates to benefits for many with mental health conditions (O'Haver, 2015).

Not only did the ACA increase the number of Americans covered by health insurance, but it also increased the amount and type of coverage for every insured American. Beginning on January 1, 2014, individual and small group insurance plans were required by the ACA to cover ten "essential health benefits": (1) hospitalization, (2) ambulatory services, (3) emergency services, (4) maternity and newborn care, (5) services for mental health disorders and substance abuse, (6) prescription drugs, (7) lab tests, (8) chronic disease management, (9) pediatric services, and (10) rehabilitative services (Norris, 2016). Plans were not allowed to place annual or lifetime dollar limits on these benefits. Not only is explicit inclusion of specifically mental health services beneficial, but general prescription drug coverage also enables patients to afford psychotropic medication prescribed by their healthcare providers, and lab tests covered by these benefits also includes screening for behavioral conditions such as autism and alcohol misuse.

b. SCHIP coverage parity

The Children's Health Insurance Program (CHIP) is a collaboration between federal and state governments that aims to provide an affordable health insurance option for children whose families' income surpasses the upper limit for Medicaid (U.S. Department of Health and Human Services [HHS], n.d.). The program is administered at the state-level in conjunction with the Medicaid program (therefore sometimes called SCHIP), so exact benefits and qualifications vary from state to state. Generally, the program provides benefits to families earning up to 200% of the federal poverty line; in some states, the eligibility limit might be higher. Because children in poor (0-99% FPL) and low-income (100-200% FPL) families experience the highest rates of mental health disorders, this insurance program has the potential to play a significant role in increasing the affordability of mental healthcare to those in need (MHA, 2013).

However, only recently was coverage parity for benefits under SCHIP definitively finalized. In 2013, the Center for Medicare and Medicaid Services (CMS) applied the ACA's essential health benefits requirements to Medicaid and SCHIP benefits; at this time, the CMS only released a set of recommended guidelines that had some flexibility (Jones, 2016). In 2016, the CMS turned these guidelines into legal requirements, and also established coverage parity between behavioral health and medical/surgical care for Medicaid and SCHIP benefits (Dickson, 2016; NAMI, 2016).

iv. Remaining disparity in health policy

Because of the June 2012 Supreme Court ruling on mandatory Medicaid expansion implemented by the ACA, states were given the option to decide whether or not to adopt the expanded coverage or not (Brink, 2014; Garfield & Damico, 2017). As of January 2018, 18 states have chosen to opt out (KFF, 2018). In these states, the median income

cut-off for Medicaid eligibility is 44% of the federal poverty line (for reference, this is an annual income of \$9,000 for a family of three) (Garfield & Damico, 2017). The ACA had implemented marketplace subsidies for lower-income families not covered by the Medicaid expansion (about 100-400% of the FPL) to make other options of health insurance more affordable. However, because it did not make these alternative provisions for those below the poverty line, failure to implement Medicaid expansion created a coverage gap in which many families' incomes are above the Medicaid eligibility limit, but below marketplace subsidies limit. In 2017, this coverage gap affected about 2.5 million adults (Garfield & Damico, 2017).

In addition to this, many psychiatrists do not accept insurance for their services. A study based on the National Ambulatory Medical Care Survey (NAMCS; a nationwide survey of patient visits to office-based physicians revealed that psychiatrists consistently accept insurance, both public and private at significantly lower rates than other office-based physicians (Bishop, Press, Keyhani, & Pincus, 2014). In recent years (2005-2010), psychiatrists' insurance acceptance rates have also decreased more rapidly than others'. In 2010, 54.8% of psychiatrists accepted Medicare, in contrast to 74.3% in 2005. For other office-based physicians, the Medicare acceptance rate decreased from 87.8% to 86.1% in the same years. The rates for private insurance were better, but not by much: 72.3% to 55.3% for psychiatrists, 93.1% to 88.7% for other office-based physicians (Bishop et al., 2014). Health insurance increases the accessibility and affordability of healthcare across the board. However, these low acceptance rates indicate that coverage is far from a golden ticket to necessary treatment. Paying for physician fees out-of-pocket (and high co-pay) is especially discouraging to patients already trying to budget for their

deductibles and monthly premiums, and, even worse, further exacerbates the idea that mental healthcare is an unnecessary extravagance.

Because the survey did not ask doctors *why* they did not accept insurance, the study could only hypothesize. One potential reason is the low reimbursement rates of insurance plans (Bishop et al., 2014). Reimbursement rates per patient for office-based psychiatry services are not significantly different from those for other office-based medical evaluations. However, for psychiatrists who want to use psychotherapy and counseling in conjunction with medication management, the time required to evaluate each patient takes much longer. Consequently, these psychiatrists are able to see fewer patients in one day than other office-based specialties, and are therefore at a financial disadvantage should they choose to accept insurance. Another consideration is the supply and demand of psychiatric treatment. It is clear that, across the nation, there is a severe shortage of psychiatrists; the workforce supply can no longer meet the demand for mental health treatment (Japsen, 2018; Raphelson, 2018). This topic of mental healthcare provider shortages will be further explored in a later section. However, suffice to say for now that with so many patients in need of their services, psychiatrists have little financial motivation to accept insurance.

v. Conclusion

Without compassion and understanding for a patient population, lawmakers and their constituents lack the motivation to advocate for them. As a result, subsequent health policy fails at multiple levels to ensure affordable treatment under sufficient insurance coverage for behavioral health conditions. The role of stigma in the financial obstacles of accessing treatment is therefore abundantly evident. While major headway has been made

by the Affordable Care Act to increase the coverage rates and the coverage parity for mental illness, significant disparity still remains, and the future of mental health financing looks uncertain under the current presidential administration.

C. Shortage of Behavioral Healthcare Professionals

Cultural aversion to mental health conditions affects the relevant fields of specialty. Psychiatry, in particular, has long been questioned and doubted as a valid, credible profession. As discussed earlier, it was left out of the medical education reform of the 1870s, largely remaining a job involving management of impossibly, hopelessly overcrowded asylums, and did not become a board-recognized specialty until the 1930s (Grob, 1983; Dowbiggen, 1997). Even much after this, unlike medical professionals in other specialties, the public views psychiatrists as “distant, detached, expensive doctors who engendered more fear, anxiety, and hostility” (Bhugra, 1989).

This history of negative attitudes has discouraged aspiring healthcare professionals from pursuing a specialization in caring for the mentally ill, leading to a shortage in the mental health workforce. Vermont’s Department of Mental Health faced a prime example of such a staffing crisis in June of 2016 (Mansfield, 2016). At the time, the entire state of Vermont had only 33 voluntary psychiatric beds for children and adults, due to a recent closure of the Vermont State Hospital, and thus relied on two hospitals near the border in New York and New Hampshire to supplement psychiatric bed space. As a result of a national staffing problem, these two hospitals were shutting down or refusing to take new patients. Frank Reed, commissioner of the Vermont Department of Mental Health, expressed concern that the system’s inability to respond to voluntary help-seeking would result in an increase in involuntary hospitalizations due to worsening patient conditions

(Mansfield, 2016). This would place strain on hospitals and patients alike.

Mental health professional shortages are exacerbated in rural areas. An evaluation of the Texas mental health workforce by the Hogg Foundation found that 185 of 254 Texas counties — mostly rural — did not have a single practicing psychiatrist in 2015 (Hogg Foundation, 2016). This meant that about 3 million Texan residents did not have access to a psychiatrist.

Furthermore, not only are there not enough psychiatrists; their numbers are declining. According to the AAMC, of about 28,000 currently practicing psychiatrists, 3 out of 5 are 55 years or older. So while there has been a recent increase in psychiatric residency enrollment (5% increase between 2010 and 2015), it is not enough to address the retiring of this aging population (Japsen, 2018).

D. Economics of Self-Sufficiency

Now, what is the goal of medicine, of healthcare? What does it mean to achieve full recovery? If the ultimate goal of healthcare is to enable individuals to lead happy, healthy lives, it follows that a discussion of the entire treatment process would be incomplete without mention of efforts to re-integrate patients into society and enable them to be fully self-sufficient. Due to social stigma, individuals with mental health conditions face many difficulties in the transition from patient to functional, productive citizen. Most are willing and able to work, and yet remain dismally unemployed (Macias, et al., 2001; Stuart, 2004). Additionally, many must leap additional hurdles constructed by discrimination and misunderstanding to obtain rental housing arrangements (National Low Income Housing Coalition [NLIHC], 2017). A 2003 survey of individuals with psychiatric disabilities reported that 52% have experienced discrimination in the area of

employment, and 32% have experienced discrimination in the area of housing (Corrigan et al., 2003). Government programs to supplement incomes and assist with housing are in place, but fall short. This section will discuss the economic struggles of self-sufficiency faced by those with behavioral conditions, specifically employment and housing discrimination, as well as the strengths and shortcomings of current assistance programs.

i. Employment discrimination

The Americans with Disabilities Act (ADA) of 1990 protects individuals with disabilities from discrimination in the workplace (ADA National Network, n.d.; U.S. Equal Employment Opportunity Commission [EEOC], n.d.). These disabilities include depression, PTSD, and/or other mental health conditions. Under the ADA, employers are not required to hire or retain those who would be unable to perform their job or who would pose a safety threat to others. However, disabled employees are entitled to reasonable accommodations for their condition, such as flexible scheduling around regular therapy appointments, or more structured, clear instructions from supervisors. Employers are not allowed to make hiring and firing decisions based on stereotypes surrounding mental health conditions, but only based on objective evidence that the condition would severely hinder job performance. Additionally, employees and applicants are entitled to keep their condition private, except in specific circumstances (e.g., every applicant receiving the job offer is asked the same question) (EEOC, n.d.). These legal regulations certainly have a positive impact on employer treatment towards employees with disabilities. However, simply making disability discrimination in the workplace illegal does not entirely prevent it from happening (Sayce, 2000). Discrimination is a difficult thing to monitor for, prevent, and prove. Eliminating all the

subtleties of deeply-engrained social stigma that create hostile hiring processes and work environments requires an organic cultural attitude change. Thus, despite the ADA, individuals with mental health conditions still face significant hurdles in both obtaining and retaining employment.

a. Obtaining employment

Research has demonstrated that most individuals even with severe mental illnesses are both willing and able to work. One study analyzing the importance of integrated vocational services into routine mental healthcare also conducted surveys on the interest in working (Macias, et al., 2001). Of 166 individuals with serious mental health diagnoses enrolled in a community-based outpatient treatment program, only 30% expressed no initial interest in employment. Then, even the majority of the uninterested agreed to participate in vocational services to prepare for the job application process and re-entering the workforce. In the end, two-thirds of the initially interested and half of the initially uninterested obtained a competitive job after completion of the provided vocational services. There was no significant difference in the subsequent length of employment between the two groups (Macias, et al., 2001). The results of this study indicated that most individuals with mental health conditions are eager to participate in the workforce, and even more can be made willing with just a little assistance.

However, employment rates remain low. According to an analysis of data from the 2009 and 2010 National Survey on Drug Use and Health, employment decreases with increase in the severity of the diagnosis (Luciano & Meara, 2014). Among those with no illness, 76% had either full-time or part-time employment; for mild, 69%; for moderate, 63%; for serious, only 54%. Furthermore, the jobs held by the mentally ill tend to be less

stable and lower paying: 39% of individuals with serious diagnoses (compared to 23% of those with none) had annual incomes below \$10,000 (Luciano & Meara, 2014).

Employment rate is also affected by the type of condition, plummeting to 10-20% for those with schizophrenia and 20-35% for those suffering from anxiety disorders (Stuart, 2006).

This disparity is almost certainly exacerbated by obstacles in the hiring process. A 1999 paper described the legal requirements of the ADA as a “rational myth”, as hiring decisions will inevitably be influenced by “attitudes toward persons with mental disabilities” (Scheid, 1999, p 73). Not only do employers hold misconceptions about their job competency, but also “may be hesitant...having to interact with the person on a regular basis in an office setting,” believing them to be dangerous (Hipes, Lucas, Phelan, & White, 2016, p. 17; Hanisch et al., 2016). One study sent out two groups of fictional job applications. Both groups were comparably well-qualified; one group disclosed a history of mental health hospitalization to explain a 6-month work absence, while the other disclosed a history of physical injury. In the end, 22% of the “physically injured” received callbacks compared to only 15% of the “mentally ill” (Hipes, et al., 2016). Many qualified individuals have reported having a job offer rescinded once they had revealed their mental health condition (Stuart, 2004; Wahl, 1999).

The influence of social stigma in creating employment obstacles is indubitable. In a survey of employers, about 50% felt uncomfortable about hiring a former mental hospital patient, 70% felt uncomfortable hiring someone on anti-psychotic medication, 44% about someone receiving treatment for depression, and 69% about an individual with a history of substance abuse (Scheid, 1999). Stigma towards mental illness goes beyond concerns

about job competency; there is an additional, complicated layer of discomfort and uneasiness that employers do not feel towards applicants with physical disabilities. A survey of 1,426 restaurants found that half had physically handicapped employees, while only 29% had hired a “mentally disabled person” (Stuart, 2004, p. 104).

b. Retaining employment

Once employment has been obtained, stigma in the workplace creates difficulties in maintaining employment status. Often, mental health conditions are not viewed by colleagues as a legitimate medical problem, but rather as a character flaw or an attitude problem. Alternatively, individuals with such diagnoses are misunderstood to be dangerous or unpredictable (Krupa, Kirsh, Cockburn, & Gewurtz, 2009; Reavley, 2016). Consequently, these individuals are avoided out of fear, treated as a burden, or viewed as having an “attitude problem”. Not only does this create a hostile environment for an already fragile mental health, but also might give the individual a reputation as being incompetent or underperforming. As a result, employees with mental illnesses report being passed over for promotions or denied opportunities for greater responsibility, making it difficult for them to advance their careers and fulfill their aspirations (Reavley, 2016). Even worse, should a company be forced to downsize, these employees might be the first to go.

ii. Housing

The Fair Housing Act of 1968 “prohibits discrimination in the sale, rental, and financing of dwellings, and in other housing-related transactions, based on race, color, national origin, religion, sex, familial status, and disability” (U.S. Department of Housing and Urban Development [HUD], n.d., para. 1). Nevertheless, as with the ADA,

discrimination still occurs, and largely towards the disabled. Of almost 5,000 complaints filed to HUD in 2016 regarding the Fair Housing Act, over 58% were on the basis of disability (HUD, 2017). A significant percent of these typically involve those with mental disabilities, which include mental illnesses and intellectually disabilities. In 2010, HUD reported that 40% of disability complaints involved mental disability. These instances of discrimination create difficulties for persons with mental illnesses trying to obtain safe, affordable housing.

In a pilot study conducted by the HUD on mental disability discrimination in the rental housing market, researchers confirmed that persons with mental disabilities do indeed receive differential treatment in their search for housing (HUD, 2017). The study paired two people of “similar age, race, gender, education, employment, household size, and income” (NLIHC, 2017). The only difference was that one had a mental disability, while the other did not. Several methods were employed (telephone, email, and in-person) to contact housing providers; while the rate of differential treatment varied slightly by contact method, discrimination occurred consistently across the board. Individuals with mental disabilities were less likely to receive an email response, less likely to be told an advertising unit was available upon in-person inquiry, and less likely to be invited to preview the unit (HUD, 2017). If they were invited to view a unit, they were most likely to be encouraged to view a different unit than the one advertised; this results in segregated living patterns, which exacerbates and perpetuates detrimental stereotypes about minorities (Bodenner, 2015; HUD, 2017).

Discrimination against persons with mental disabilities also encompasses an unwillingness to assist with reasonable accommodations (HUD, 2017). Examples of

reasonable accommodations include regular rent reminders or allowing for therapy or assistance animals. These allowances are enormously beneficial, introducing an element of stability and comfort that would help individuals retain their housing. Although reasonable accommodations are covered by the Fair Housing Act, a significant number of such requests were denied by housing providers (45% for mental illnesses and 36% for developmental disabilities) (HUD, 2017).

iii. Existing solutions

a. Income support: SSI and SSDI

For individuals who are unable to secure employment, either due to the severity of disability or due to obstacles caused by discrimination, the federal Social Security Administration (SSA) runs two programs that provide income support and health insurance through Medicaid: Supplemental Security Income (SSI) and Social Security Disability Insurance (SSDI) (NAMI, 2018, “SSDI and SSI”). In order for an adult to receive SSI support, he or she must prove at least a 12-month-long “impairment that prevents [them] from working on a regular and sustained basis” (NAMI, 2018, “SSDI and SSI”). There are also maximum income and asset requirements. The income limit is known as the federal benefit rate (FBR) — generally, this is also the monthly SSI payment (Laurence, 2018). In 2018, the FBR was \$750/month for individuals and \$1125/month for couples; actual income caps and benefits received may vary slightly from state to state due to state supplements (Laurence, 2018; SSA, 2018). Maximum assets (excluding primary residence, one vehicle, burial savings, and a few other exceptions) are \$2,000 for individuals and \$3,000 for couples (NAMI, 2018, “SSDI and SSI”; SSA, 2018). To receive SSDI benefits, individuals must also demonstrate

employment impairment. However, they must also have been employed and paid into the Social Security trust fund for at least five years in the previous ten years (Laurence, 2018; NAMI, 2018, “SSDI and SSI”). The average monthly payment in 2014 was \$1165; however, payments may differ between individuals as they are directly correlated to the amount that has been contributed to the Social Security Program (NAMI, 2018, “SSDI and SSI”).

The intentions of these programs are well-placed and the resulting benefits are numerous. The stability imparted by income support cannot be understated, and serves as a stepping stone to numerous other necessities, such as “housing...social services, therapy, and vocational support” (Bland & Bolas, 2014, pp. 143). Additionally, a stable income prevents individuals from ending up in jails, prisons, or hospitals, which are considerably more costly (Bland & Bolas, 2014).

Unfortunately, securing approval for SSI and SSDI benefits can be difficult. The 2016 annual statistical report released by SSA showed that only 33% of initial applications were approved (SSA, 2017). Of the appeals considered in 2016 from 2015 applications, only 12% were approved (SSA, 2017). Approval rates are low for many reasons. Decisions are not made using a medical diagnostic process, and are not made by medical professionals (NAMI, 2018). Because mental health conditions are more complex and subjective than those of physical conditions, application denials may result from a poor understanding by SSA staff of the degree to which these conditions impair normal function (Bland & Bolas, 2014).

Furthermore, the approval rate for the homeless stands at an exceptionally abysmal 10% (Dennis, Lassiter, Connelly, & Lupfer, 2011). Persons in this demographic tend to

lack a consistent treatment history; therefore, the little medical documentation that is available is often insufficient to definitively demonstrate severe impairment and qualify for SSI. The full application process also sometimes involves mailed correspondence requesting additional information, which these individuals fail to receive (Bland & Bolas, 2014). Treatment access, stable income, and housing all turn out to be intricately interdependent.

b. Housing assistance programs

The U.S. Department of Housing and Urban Development has several housing assistance programs for low-income families, the elderly, and individuals with disabilities. The Housing Choice Voucher Program, referred to as “Section 8”, enables participants to choose from apartments for rent below a certain price point (NAMI, 2018, “Securing Stable Housing”). Participants are only required to contribute 30% of their income to the cost of rent, and a voucher is provided to cover the remainder. Unfortunately, the state-level implementation of this program and landlord discrimination against vouchers has resulted in segregation of voucher-holders into poverty-ridden neighborhoods with high rates of crime and violence (Semuels, 2015). The program that was originally intended to increase mobility and enable low-income families “to get out of the ghetto” has instead become a cause of the very same segregation (Semuels, 2015, para. 8). Even worse, applications rarely open, usually only for about a week every several years. The waitlists for the program are prohibitively long — tens of thousands of families long — due to increasing budget cuts. When Yonkers, New York opened its waitlist for a week in 2012, 11,000 applications were submitted (King, 2015). Vouchers can only be awarded when someone leaves the program. Joseph Shuldiner, executive

director of the Municipal Housing Authority in Yonkers, estimates that about 300 applicants a year will be accepted off the waitlist, theoretically making an 11,000-long list a ridiculous 40-year-long wait (King, 2015). Shuldiner also estimates that only a quarter of families nationwide who qualify for Section 8 housing will actually be able to obtain a voucher (King, 2015).

The Section 811 Supportive Housing for People with Disabilities Program is specifically for very low or extremely low-income individuals with disabilities, which include chronic mental illnesses (NAMI, 2018, “Securing Stable Housing”). It provides funding via interest-free loans to developers of supportive housing for individuals with disabilities. Rental assistance is also provided to qualified tenants, who are then, like Section 8 beneficiaries, only required to pay 30% of their monthly income to rent (Housing Assistance Council [HAC], 2014). “Very low” income is defined as being 50% of the median family income; for 2018, in Travis County, Texas, this was set at \$43k for a 4-person family (HUD, 2018).

iv. Conclusion

Stability through meaningful employment and safe housing have been shown to be beneficial for mental health outcomes. Additionally, income, housing, and accessible medical care are inextricably related. Individuals without regular medical treatment and some form of permanent residence encounter difficulties when applying for federal income assistance. Without a source of stable income, they cannot obtain housing and afford medical care. In the absence of effective medical care, they are often unable to secure employment and cannot be empowered to strive for self-sufficiency. It is therefore absolutely imperative that persons with mental health conditions have fair employment

and housing opportunities to be released from a cruel cycle of poverty, homelessness, and poor health outcomes. Once again, the role of stigma in creating multi-level systemic barriers for patients is evident.

III. Future Directions

A. Increasing access

To have the most immediate effect on improving behavioral healthcare access, access can be addressed directly. Although the impact of these may be limited, as they do not address the root of the problem, various developments and programs can nevertheless still have a remarkable impact. These include technological developments, programs to improve self-sufficiency, and the recruitment of mental healthcare professionals.

i. Technology

The complexity of behavioral health conditions can make the development of beneficial technology difficult. Nevertheless, technology is playing a rising role in the administration of healthcare services. This section will discuss three notable topics in this area: telepsychiatry, smartphone applications, and artificial intelligence.

a. Telepsychiatry

Telepsychiatry, or telemental health (TMH), after having been slowly developed and implemented clinically around the world for the past fifty years, has finally recently begun to be widely introduced (Hilty, Yellowless, Parrish, & Chan, 2015). This branch of telemedicine can be defined as the use of “telecommunication modalities, including teleconferencing software, hardware, and supporting infrastructure, to provide mental health care” (Deslich et al., 2013, p. 80). In early 2017, Texas became the last of the fifty states to pass legislation eradicating “the requirement that patient-physician relationships

be established with an in-person visit before telemedicine can be used” (Comstock, 2017, para. 1). This bill is groundbreaking for a large, populous state with an uneven distribution of mental healthcare professionals, which results in severe shortages in vast areas of rural poverty. Not only does the new legislation allow for a redistribution of healthcare access within the state, but it also paves the way for national telemedicine companies to fully expand their operations across the country (Comstock, 2017).

The seemingly sluggish pace of telepsychiatry can be attributed to hesitation and uncertainty in weighing the benefits against the shortcomings. Many are concerned with its effectiveness in comparison to in-person consultations. However, the painstaking care with which telehealth services have been developed and evaluated has allowed for several studies demonstrating that TMH is comparable to conventional face-to-face treatment in terms of outcomes such as successful diagnosis, medication adherence, and symptom reduction (De Las Cuevas et al., 2006; Hilty et al., 2015; O’Reilly et al., 2007). At the same time, TMH drastically reduces costs, especially those associated with travel, and maximizes efficient use of time for both the patient and the provider.

Over the years, protocols have been developed to administer both psychotropic medication management and cognitive-behavioral therapy via videoconference. These have been utilized for depression, schizophrenia, panic disorders, and various developmental disorders (Hilty et al., 2015; Richardson, McCauley, & Katon, 2008; Fortney et al., 2007). Additionally, these protocols have been tailored to fit the spectrum of patient demographics, such as children and adolescents, homebound older adults, geriatric patients in nursing homes, veterans suffering from PTSD, and incarcerated individuals (Choi, Marti, Bruce, Hegel, & Kunik, 2014; Hilty et al., 2015; Myers, Palmer,

& Geyer, 2011). In many cases, outcomes were even better than those of in-person consultations. Such outcomes are remarkable, considering that patients utilizing TMH services are often isolated and might not otherwise receive any care at all.

One patient population for which telepsychiatry has had an especially noteworthy impact is inmates housed in correctional facilities. As discussed earlier, the prevalence of behavioral health conditions — both mental disorders and substance use disorders — is disproportionately high in correctional institutions (Dlugacz, 2014; James & Glaze, 2006). However, access to behavioral health services for inmates has long been subpar, leaving many with severe conditions untreated and exacerbated, which leads to high rates of recidivism (James & Glaze, 2006). Low accessibility of services is largely attributed to mere transportation issues. There is an unwillingness on the behalf of mental health providers to come to these facilities because of safety concerns, transportation expenses, and travel time (Deslich et al., 2013). Financial and time concerns are twofold, as travel time to prisons detracts from time that could be spent receiving patients in the clinic (Deslich et al., 2013). Conversely, regularly transporting inmates to clinics for treatment is an undesirable alternative, as it raises costs in the form of “actual transportation costs, [security] person hours, and increased risk to public safety and security” (Deslich et al., 2013, p. 80). Telepsychiatry has been shown to be a high-quality, cost-effective solution to these transportation barriers. Despite initial costs associated with setting up the required technological infrastructure, including software and hardware, the overall long-term savings are unquestionably substantial. The Arizona Telemedicine Program, founded in 1996, reported in 2004 that it had saved over \$1 million in transportation costs (Deslich et al., 2013).

Despite encouraging progress, there are still areas of potential improvement for TMH. Picking up a videoconference call in the comfort of a private home is much less intimidating and serves as a lower-risk commitment for stigmatized individuals afraid to disclose their condition to the public. This logically would result in greater willingness to follow-up with providers and higher rates of treatment retention. However, this capability of telepsychiatry has not yet been fully implemented; most states' current regulations "require patients to be located at an 'originating site' while receiving telemedicine services from a provider located at a 'distant site'" (Malerba, Richman, & Kozicz, 2017, para. 11). Certain states, such as Utah, have taken the lead in eliminating restrictions on originating site locations (Malerba, et al., 2017). Regulations in New York have also gradually been relaxed to include more and more locations (such as adult care facilities, schools, and child care programs) as acceptable originating sites (Wicklund, 2017)

When asked about ways in which existing telepsychiatry practices could be improved, patients have suggested the implementation of simpler, more user-friendly technology (Lauckner & Whitten, 2016). Most programs have primarily utilized "traditional desktop videoconferencing technology" (Lauckner & Whitten, 2016, p. 10). Mobile device-based platforms (either smartphones or tablets) are becoming increasingly effective, viable alternatives. Not only do they utilize technologies already owned and understood by the vast majority of patients (global mobile penetration reached 91% in 2012), but these platforms are also becoming more secure and HIPAA-compliant (Lauckner & Whitten, 2016; Donker et al., 2013; Sourabh, 2012). This leads us to the next section, which will discuss the rise of smartphone applications, or apps, in the field of mental healthcare.

b. Smartphone apps

1. Counseling and therapy apps

One category of smartphone applications aims to connect users to an anonymous human helpline available 24/7. These applications often provide databases of either trained listeners or licensed counselors and therapists who are categorized within the app according to their experience or specialty (Nichols, 2018). Users can search within the app for categories such as experience with anxiety, phobias, depression, eating disorders, and panic attacks. These apps are not intended to replace professional medical care, but rather to make the benefits of regular therapy and human connection in a stigma-free environment more accessible to all. Trained listeners usually volunteer their time free of charge. Licensed therapists on these apps have a weekly or monthly fee for unlimited contact. These fees are up to 80% cheaper than traditional office-based appointments (Nichols, 2018). The effectiveness of internet-based therapy, which is similar in concept to telepsychiatry, is comparable to that of conventional face-to-face therapy (Wagner, Horn, & Maercker, 2014). The utilization of smartphone technology as a platform for therapy has the added benefit of maximizing patient-provider contact time.

2. Mindfulness and meditation apps

Another popular type of smartphone app encourages mindfulness and healthy thinking habits by offering meditation and breathing programs, or pre-recorded cognitive-based therapy video or audio sessions (Nichols, 2018; Utley, 2016). Some of these apps either teach the user to record their thoughts and track their own moods and thought patterns, or ask daily questions to screen for symptoms of various mental conditions. A record of these thought journals or answers can often be compiled in an electronic record

to be discussed with the patient's own healthcare provider. These are mainly intended for individuals with anxiety and depression. They, too, are intended to supplement rather than replace a professional medical opinion, but also empower patients to play an active role in their own treatment process.

3. Social connection apps

The final category of common smartphone applications emphasizes the role of a supportive social network in mental health treatment, and provides a platform for users to stay in touch with their support system and with other recovering participants. One particularly successful app, WEconnect, was specifically developed for those recovering from substance use disorders (WEconnect, 2018). It organizes routines into daily and weekly schedules, keeps track of progress and future goals, and sends push notifications to remind users and their loved ones to communicate regularly with each other. Although the exact contribution of genetics versus environment to the development of SUDs is still being debated, several studies have indubitably demonstrated that environment does play *a* role, and that meaningful social connections can decrease tendency for and vulnerability to addiction (Alexander, Coombs, & Hadaway, 1978; Chauvet et al., 2009; Nader et al., 2012; Solinas et al., 2008).

c. Artificial intelligence

1. Instant messenger conversational agent

In 2017, psychologists from the Stanford School of Medicine investigated the use of a fully automated conversational agent as a vehicle for cognitive-based therapy (Fitzpatrick, Darcy, & Vierhile, 2017). Their goal was to develop a self-help method for young adults, especially college students, exhibiting symptoms of depression and anxiety.

The automated conversational agent, named “Woebot”, was created for use on “an instant messenger app...either on a desktop or mobile device” (Fitzpatrick et al., 2017, p. 3). The bot provided information about CBT theories in both conversational style and using links to educational YouTube videos (Woebot, 2018). Users were either prompted to select from certain responses, such as selecting a current mood or demonstrating agreement to the bot, or given more open-ended opportunities to write down their anxious thoughts and analyze them for automatic negativity or thinking distortions. Woebot kept track of participants’ moods and thoughts, and could be set to “check in” with the participant by starting a conversation at a certain frequency or at a certain time of day. By presenting information in an empathetic, interactive fashion, Woebot was able to significantly reduce participants’ PHQ-9 depression scores in just two weeks (Fitzpatrick et al., 2017). Again, while this conversational agent should not be used in place of professional medical attention, especially for more severe, chronic cases, it can serve as a highly accessible tool to alleviate mild symptoms or to be used in conjunction with professionally administered medications and therapies.

2. Avatar therapists

Another form of artificial intelligence being used for mental healthcare can be found in “Ellie”, a virtual avatar interviewer created by scientists at the University of Southern California’s Institute for Creative Technologies (Robinson, 2015; Lucas, Gratch, King, & Morency, 2014). The creation process involved analyzing “the linguistic and behavioral nuances” used by humans in conversation (Robinson, 2015, para. 4). Designed using in-depth knowledge of these nuances, not only can Ellie sense the facial and body movements to detect for signs of depression, anxiety, or PTSD, but she can also

respond with encouraging, empathetic, non-judgmental body language and vocal tones. Ellie is meant to be used as a information-collecting aid; rather than replace actual therapists, she facilitates the initial screening and diagnosis process, gathering information from interactions to be analyzed later by a human clinician. (Robinson, 2015).

Although interaction with an AI therapist might seem limited by a lack of real human connection, Ellie's creators found that the removal of human presence actually encouraged participants to open up (Gonzalez, 2017; Lucas, 2014). In studies interviewing Afghanistan veterans to screen for symptoms of PTSD, half the participants were accurately informed that Ellie was only a virtual therapist, while the other were misled to believe that Ellie was being controlled by a human being. The test subjects who thought Ellie was an AI therapist, and that the conversation was therefore removed from human presence, disclosed significantly more indications of PTSD symptoms than on both their official and anonymous Post-Deployment Health Assessment (PDHA) questionnaires (Gonzalez, 2017). These results demonstrated that individuals struggling with the stigma attached to their symptoms and conditions might actually be more willing to open up to a virtual therapist than a human therapist. By lowering the difficult and hesitance associated with initial help-seeking behavior, Ellie certainly increases the accessibility of behavioral healthcare.

ii. Encouraging self-sufficiency

The SSI/SSDI Outreach, Access and Recovery (SOAR) initiative is a national collaboration between SAMHSA and SSA that aims to improve the SSA benefits application acceptance rates of individuals who are both homeless and have a behavioral

health diagnosis (Bland & Bolas, 2014). The SOAR initiative is run in conjunction with a state-level disability agency. Its first efforts took place in Baltimore, Maryland around 2001, and today is run in that state with Maryland's Office of Special Needs Population of the Mental Hygiene Administration (Bland & Bolas, 2014; SAMHSA SOAR TA Center, n.d.). In this program, trained case managers work closely to individual applicants and serve as their representative during the application process. Their role is to compile medical records into a complete narrative of "the individual's personal history, current diagnosis, symptoms, and functioning" (Bland & Bolas, 2014, p. 144). This ensures that the individual's application is complete, comprehensive, and compelling for acceptance for disability benefits. The impact was remarkable: initial applications under Maryland's SOAR initiative had an acceptance rate of 86% in 2014, an impressive jump from the national 33% acceptance rate of 2016 reported by SSA (Bland & Bolas, 2014; SSA, 2017).

In 2005, fourteen additional states were invited to participate in the initiative; today, the initiative has spread to all 50 states (SAMHSA SOAR TA Center, n.d.). Disability benefits applicants are never charged to utilize these services. In Texas, the program is led by the Texas Homeless Network (THN), and has increased application acceptances from a state-average of 15% to a new state-average of 67% (THN, n.d.). Although this improvement is heartening, it is clear that still more can be done. One possible course of action is to increase the implementation of the SOAR initiative in smaller communities at a more local level in order to maximize participation.

iii. Increasing the number of mental health professionals

As discussed previously, there is an alarming inability of existing psychiatrists to

meet the growing need for their services. Another method to directly increase the accessibility of mental healthcare is to increase the size of the provider workforce. This section will discuss ways in which the reduction of cost of medical education and the exposure to mental illness can improve psychiatrist recruitment rates. Additionally, because social workers are playing an ever more instrumental role in the behavioral healthcare workforce, recruitment programs for students of social work would also be greatly beneficial.

a. Reducing the cost of medical education

One area in particular that needs to be addressed is the staggering cost of a medical education in the United States, which serves as a major deterrent to many potentially wonderful, empathetic psychiatrists. The financial barriers begin in the early stages of the admissions process. Medical school admissions committees “favor applicants whose physician relatives and access to money afford prestigious experiences and shadowing opportunities” (Kahn & Sneed, 2015, p. 173). Students from lower socioeconomic backgrounds must keep jobs to pay for their undergraduate education, and lack the time to participate in these additional clinical activities, much less the connections necessary to obtain them. The admission process is already costly by itself. Just for the chance to be considered by a medical school, applicants must pay the registration cost of the MCAT, potentially thousands in preparation materials and courses, hundreds of dollars in primary and secondary application fees, fees to securely transmit transcripts and recommendation letters, and expenses associated with travel and overnight accommodations for interviews. This is all before the hefty price of medical school tuition alone. In 2017, the median cost of attendance was about \$61,000 for a public medical school and \$82,000 for

private (American Association of Medical Colleges [AAMC], 2017). In the same year, U.S. medical students graduated with an average debt of about \$190,000 (AAMC, 2017). Aside from the very fortunate, very few who are so graciously granted fee waivers and scholarships, individuals from underprivileged backgrounds are relatively unlikely to pursue medicine.

This underrepresentation of medical students from lower socioeconomic backgrounds directly affects the rate at which medical students will choose to specialize in psychiatry. A UK survey of medical students revealed that those with exposure to mental illness via family history were significantly more likely to pursue psychiatry (Rajagopal, Rehill, & Godfrey, 2004). As discussed in previous sections, mental illness disproportionately affects the financially disadvantaged. Therefore, financial deterrents to this demographic in pursuing a medical career result in fewer medical students who have personal, firsthand experience with mental illness, and therefore lower the influx of mental health professionals. To address this issue, the cost of medical school application and tuition absolutely must be reduced.

b. Increasing exposure of aspiring physicians to mental health

Because U.S. physicians are required to obtain an undergraduate degree prior to applying for and attending medical school, and subsequently do not decide on a medical specialty until the end of their medical education, individuals at the junction of this career choice are, at the very earliest, in their late twenties. At this point, their existing belief systems, stigmas, and misunderstandings about mental health are likely already well-established. To encourage higher rates of specialization in psychiatry, it is paramount that future aspiring physicians be exposed to the issue of mental health as a

serious and valid public health concern early in their education. This will be discussed further in a later section.

c. Expanding the role of social workers

Recent developments in the policy, delivery, and administration of healthcare have placed a new emphasis on the use of integrated health services, which requires an inter-professional, collaborative team (Society for Social Work and Research [SSWR], 2017). As a result, a greater portion of social work program graduates will be participating in this newly restructured healthcare system, and will therefore need to be trained to fulfill these new positions. In 2014, the Bureau of Labor Statistics estimated that, because of this recent restructuring, the employment of social workers will rise faster than the average of all other occupations (SSWR, 2017). To meet the crucial need for this kind of training, the Health Resources and Services Administration (HRSA) has recently established federally funded Behavioral Health Workforce Education and Training (BHWET) grants for MSW programs to encourage the preparation of their students “to work with children, adolescents, and transitional age youth in integrated health settings” (SSWR, 2017, para. 2).

B. Decreasing stigma: community education programs

As Benjamin Franklin once said, “An ounce of prevention is worth a pound of cure.” Because stigma is an issue that affects the system at all levels – scientific research, medical staffing, healthcare policy, recovery and reincorporation into society – it is logical that stigma prevention will have a major impact on healthcare access in all these areas. Although trends in attitudes are looking upwards, much more remains to be accomplished. To implement proactive programs to educate and spread awareness, it’s

practical and worthwhile to start small (just an ounce!), and best to start early. One can consider the various ways that the public education system encourages healthy habits and physical activity in schoolchildren beginning from a young age. While current methods are admittedly imperfect (sedentary lifestyles and poor diets still have detrimental effects on population health), these efforts are light-years ahead of anything similar in the realm of mental health.

Much like mandatory physical education classes and school lunches carefully curated to match giant plastic posters of food pyramids, simple lessons on mental well-being can also be built into the curriculum: practicing self-care, substance abuse consequences, symptoms and risk factors of various conditions. As a result, children will learn to prioritize their mental health, a valuable habit that will be beneficial once they begin to encounter increasingly weighty responsibilities and stressors, such as academic pressure, financial difficulties, or family conflict. Additionally, once they have internalized the importance of their own psychological health, they will have more compassion and understanding for those who show signs of internal struggles. One public preschool program, aptly named the “Kindness Curriculum”, employs “a potpourri of sensory games, songs and stories that are signed to help [participants] pay closer attention to their emotions” (Schiffman, 2017, para. 4). Subsequent research revealed that these children were more likely to engage in prosocial and altruistic behaviors, while their peers not enrolled in the program displayed increasingly selfish behavior over the 12-week period (Flook, Goldberg, Pinger, & Davidson, 2015). In other words, empathy can and needs to be taught.

It is devastating to society that we allow the basic building blocks of psychology

and sociology to fall to the wayside as optional high school or college electives, by which time individuals have largely developed their own opinions and belief systems. Rather, these topics should be incorporated as essentials of the early education system as kids begin to explore themselves and the world around them. Not only will this improve their own mental health, but it will also foster empathy, decrease stigma, and perhaps even encourage them to pursue a career in mental health in the future. Mental health awareness is as fundamental to growth and development as the food we eat and the air we breathe.

IV. Final Conclusion

In conclusion, the way we think about and the language we use to discuss behavioral health has a profound and tangible impact on the people who have such conditions. As discussed in the beginning, the size of the population affected by this stigma is tremendous; behavioral health conditions are the number one cause of disease burden in the United States. Despite the fact that the vast majority of affected individuals who seek treatment do experience symptom reduction and quality of life improvements, most people simply don't get the treatment they so desperately need.

These treatment gaps are so significant due to deeply rooted systemic barriers, such as a long history of misunderstanding and mistreatment, complex disease and treatment mechanisms, healthcare financing, behavioral healthcare professional shortages, and obstacles to achieving self-sufficient and productive lives. The complexity and time-consuming nature of a wide array of treatment protocols for conditions such as depression, anxiety, PTSD, and schizophrenia can be daunting to patients. The high cost of treatment deters many from seeking help due to lack of health insurance and lack of insurance coverage parity between physical and behavioral health benefits. Behavioral

healthcare professional shortages exacerbate the problem: the shrinking number of psychiatrists cannot meet the growing demand for their services. Finally, as the ultimate goal of healthcare is to enable functional, productive living, barriers to self-sufficiency in the form of income and housing discrimination are detrimental to healthcare outcomes and healthcare access. The extensive discussion in this paper has made it clear that these barriers are a product of cultural stigma.

Many attempts at reducing these barriers have been in place for years, even decades. They include the recent Affordable Care Act, federal anti-discrimination employment and housing laws, and Social Security income assistance, have been in place for years. While certainly beneficial, these attempts have their limitations and thus far have failed to adequately address existing treatment gaps.

There are a number of ways to further directly address access, and many of them are in the process of being successfully implemented. These methods include the expansion of telepsychiatry, the rise of artificial intelligence and smartphone platforms to track moods and administer psychosocial treatments, and policies and programs to train more mental health professionals including psychiatrists and social workers. However, the best way to have a long-term, multi-level impact is to address cultural stigma, as it can be found at the root of access problems. Public school curriculums place a far greater emphasis on the importance of physical health over mental and emotional health. As research has shown that empathy can be taught by encouraging emotional self-awareness, incorporating this awareness in public education will result in a reduction of the stigma surrounding behavioral health. If behavioral health conditions can be understood by society to be valid, medical, and treatable, the subsequent impact on all levels of barriers

to healthcare access would be extraordinary.

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Jasper Shei was born in Austin, TX on October 23, 1996. She attended the University of Texas at Austin, studying Biomedical Engineering and Plan II Honors, from 2014-2018. In her free time, she enjoys reading, knitting, drinking tea, and hanging out with her dog, Yoyo. Eventually, she hopes to pursue a career in psychiatry and have a real impact on the topics discussed in this thesis.

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