



# **COVID-19 in Texas:** **An Analysis of Behavioral Health Needs to Advance Response Efforts**



Kenneth D. Smith, Ph.D.  
Sara Barge, MPH, MPAff  
Calandra Jones, MPH

September 28, 2020



## Introduction

The novel coronavirus disease 2019 (COVID-19) pandemic may be recorded in history as one of the most pivotal pandemics of all time. The psychological and social effects of COVID-19 have emerged as a challenge to be met with as much tenacity as the disease itself. This issue brief describes the impact of COVID-19 on behavioral health needs in Texas.<sup>1</sup> It includes recommendations for meeting increased demand for behavioral health support for both the short and long term needs.

.....

**During late June, 40% of U.S. adults reported struggling with mental health or substance use.**

Source: Morbidity and Mortality Weekly Report, 69(32), 1049

.....

# Behavioral Health Needs and Barriers During the Pandemic

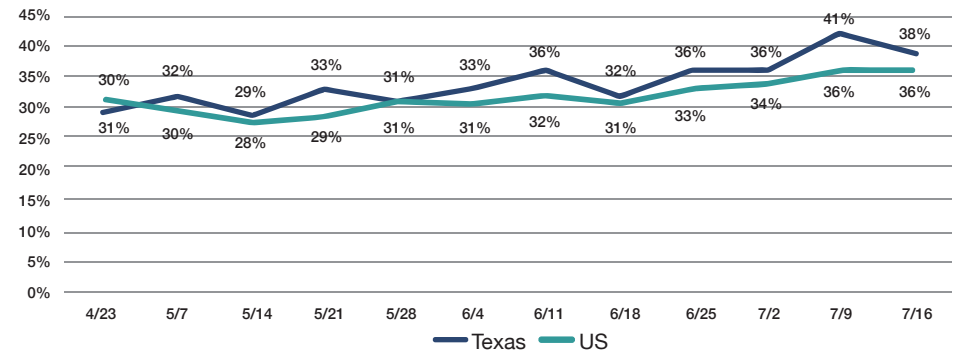
Natural disasters and other catastrophic events cause an enormous amount of stress and anxiety for those directly or indirectly impacted. The effects of these stressors can linger. An analysis conducted by the Meadows Mental Health Policy Institute suggests that most trauma impacts of mental health and substance use disorders (MHSUD) manifest 60 to 90 days following exposure to the initial stressors, and the effects can continue to manifest in MHSUD-related morbidity and mortality for years.<sup>2</sup>

This has particularly salient implications for the COVID-19 pandemic, which has no clearly defined ending. The stressors from the uncertainty, social isolation, and economic fallout from the pandemic are challenging individuals' ability to cope and increasing the incidence of behavioral health conditions.

To help gauge the immediate impact of the pandemic in Texas, we analyzed available trends data for behavioral health needs during the pandemic while applying a health equity and systems lens to facilitate sense making. Our analysis was based on behavioral health surveillance data, a review of the scientific literature, focused discussions with local mental health authorities and other experts in Texas, and systematic news monitoring. We triangulated the results from these sources with evidence collected from one-on-one interviews conducted as part of THI's community health needs assessments (CHNAs).

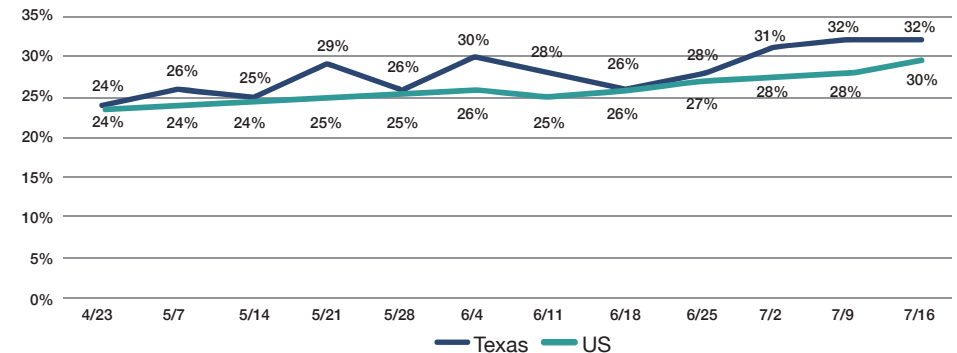
The focused discussions were meant to validate findings from our analysis about behavioral health needs, identify barriers to access behavioral health care, and help identify potential recommendations to address these issues. We include quotes from CHNA interviews that shed light on validated findings. We identify four key issues that stand out in Texas and identify potential health equity and systems implications where applicable.

Figure 1. Adults Reporting Symptoms of Anxiety Disorder During the COVID-19 Pandemic



Source: U.S. Census Bureau, Household Pulse Survey, 2020  
 Note: Data are reports of having symptoms of anxiety that generally occur more than half the days or nearly every day. Household Pulse Survey questions are: "Over the last 7 days, how often have you been bothered by the following problems: Feeling nervous, anxious, or on edge? Would you say not at all, several days, more than half the days, or nearly every day?" and "Over the last 7 days, how often have you been bothered by the following problems: Not being able to stop or control worrying? Would you say not at all, several days, more than half the days, or nearly every day?"

Figure 2. Adults Reporting Symptoms of Depression Disorder During the COVID-19 Pandemic

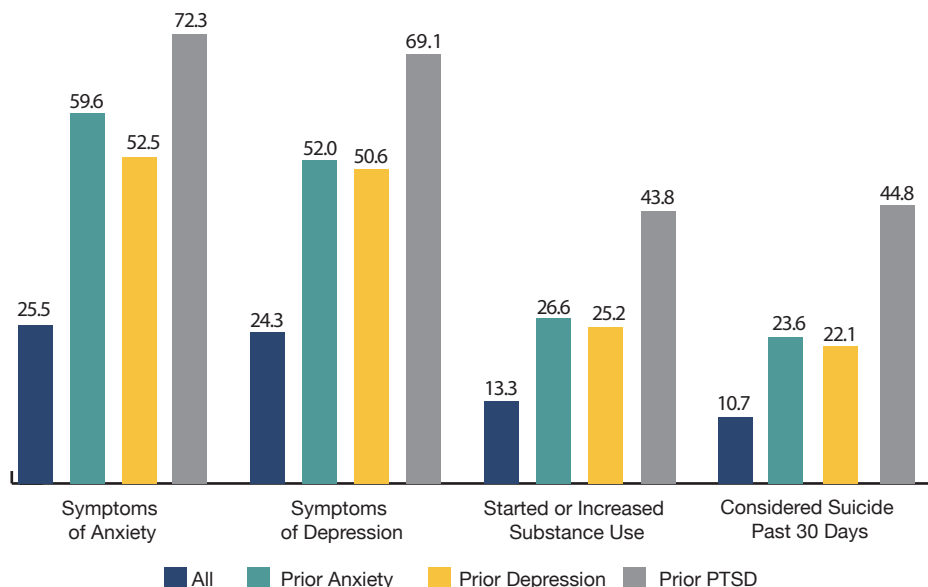


Source: U.S. Census Bureau, Household Pulse Survey, 2020  
 Note: Data are reports of symptoms of depressive disorder that generally occur more than half the days or nearly every day. Household Pulse Survey are: "Over the last 7 days, how often have you been bothered by having little interest or pleasure in doing things? Would you say not at all, several days, more than half the days, or nearly every day?" and "Over the last 7 days, how often have you been bothered by feeling down, depressed, or hopeless? Would you say not at all, several days, more than half the days, or nearly every day?"

## Symptoms of Behavioral Health Disorders

National mental health surveillance data show an increase in symptoms of anxiety and depression over the course of the COVID-19 pandemic (see Figures 1 and 2). Over a 4-month period, symptoms of anxiety increased from 20% to 36% and depression from 24% to 30% among American adults. However, Texans reported these symptoms at rates higher than the US. Symptoms of anxiety and depression rose by 7 and 8 percentage points, respectively, from April 23 and through July. To appreciate the magnitude of these trends, these figures suggest that an estimated 1.6 million more Texans experienced symptoms of anxiety and 1.8 million more Texas experienced symptoms of depression.

**Figure 3. Adults Reporting Symptoms of Anxiety or Depression, Increased Substance Use, or Suicide Ideation During the COVID-19 Pandemic (%)**



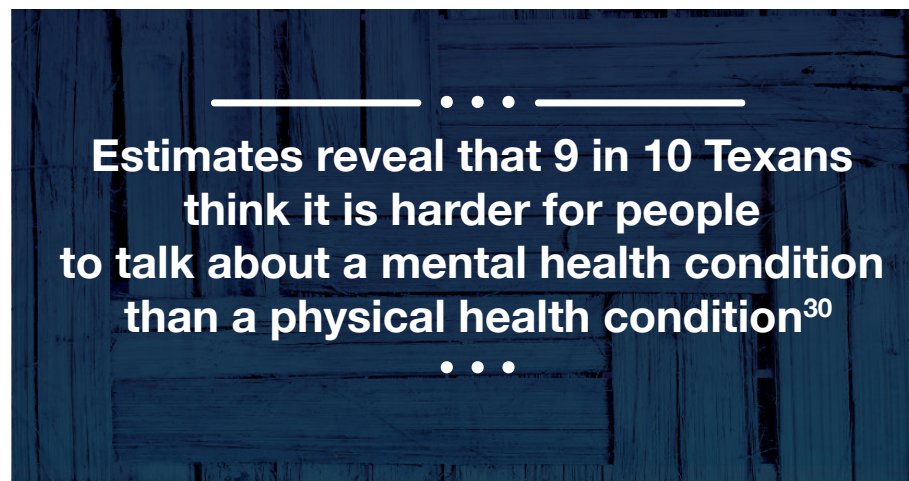
Source: Morbidity and Mortality Weekly Report. August 14, 2020, 69(32);1049–1057

Note: Data are based on a web-based survey of 5,412 (54.7%) of 9,896 eligible invited adults administered of June 24–30, 2020. Quota sampling and survey weighting were employed to improve cohort representativeness of the U.S. population by gender, age, and race/ethnicity. Orange, gray, and yellow bars indicate respondents reported treatment for a previous diagnosis of anxiety, depressive, or posttraumatic stress disorders (PTSD), respectively.

The symptoms may subside over time for some. In others, they may develop into long-term mental health problems without early intervention. Without needed behavioral healthcare and support, some individuals may cope through drugs and alcohol. Those with prior substance use disorders may relapse. For example, the CDC reports that in June 2020 13.5% of US adults had started or increased substance use to cope with pandemic related stressors.<sup>3</sup>

Individuals with preexisting behavioral health conditions may be especially susceptible to new symptoms of anxiety or depressive disorders or coping with drugs and alcohol. These relationships are illustrated in Figure 3, which reproduces the results of a CDC online survey of US adults in late July 2020. While a quarter of all respondents reported COVID-associated symptoms of anxiety, over half of those in treatment for a prior diagnosis of anxiety and depression reported COVID-associated symptoms. A similar relationship is seen for symptoms of depression and initiating or increasing substance use for coping. A prior mental health diagnosis is associated with a greater likelihood of COVID-related symptoms.

Financial hardship and unemployment during the pandemic may be one mechanism driving these relationships. A MMPHI study of the relationship between the pandemic and MHSUD estimates that a 5% increase in the unemployment rate is associated with an additional 600,000 cases of substance use disorder (SUD) nationwide. In Texas such a rate increase would lead to 50,000 new cases of SUD per year.<sup>4</sup>



Crisis counseling is designed to help individuals decrease disaster-related stress and mitigate against associated future mental health problems. After the President declared the pandemic a national emergency, Texans Recovering Together implemented a crisis counseling hotline for those experiencing stress during the pandemic. However, the ability to mitigate against the long-term mental health impacts will depend on successful outreach, the public's willingness to seek mental health counseling and access to more intensive counseling and treatment when needed.<sup>5</sup> Geographic and population differences in outreach, access, and perceptions of mental health counseling need to be considered if behavioral health disparities are to be avoided.

## Domestic Abuse and Trauma

### Domestic Abuse

Texas print and broadcast media has extensively covered the story of rising cases of child maltreatment and intimate partner violence. Local news covered the story of the treatment of 7 children for severe abuse in a single week in March at Cook Children's Medical Center in Fort Worth—two of whom died.<sup>6</sup> The Statesman conducted extensive interviews with Children's Advocacy Centers, the agencies that coordinate investigations into child physical and sexual abuse with state Child Protective Services. Agency interviewees warned that the observed decline in reports of child abuse to Children's Advocacy Centers was mainly because teachers were unable to report abuse after schools and daycare centers shuttered. They suggest that child victims of abuse are not protected and "children in unstable situations might be in more danger than usual."<sup>7</sup>

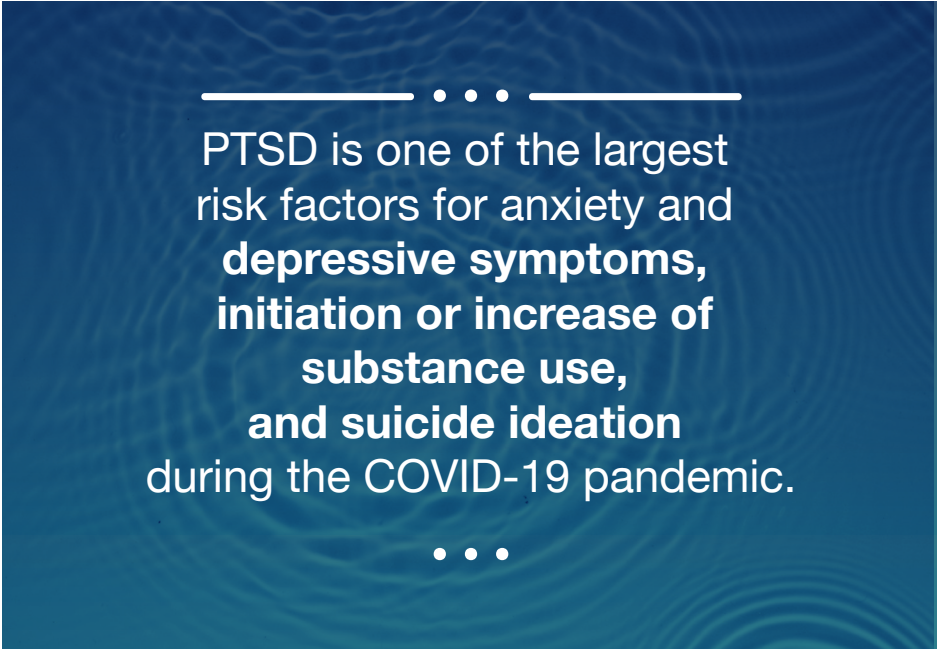
The Houston Chronicle conducted surveys of domestic abuse hotlines to gain insight into the potential COVID-related impact on domestic abuse. They report, for example, that calls by victims increased from 3,019 in April to 4,249 in June. This sizeable increase of 1,230 calls was in line with observations among similar hotlines across Texas and was likely the result of social isolation and fewer accessible safe areas during the pandemic.<sup>8</sup>

Early in the pandemic, with more families sheltered in place, increased domestic abuse became a global concern. The United Nations produced a brief highlighting evidence that violence against women

and girls had intensified during the pandemic. The report connected increased security, health, and financial worries during the course of the pandemic with increased domestic violence. In addition, cramped and confined living conditions are likely to accentuate domestic abuse, according to the report.<sup>9</sup>

This alludes to the potential that people living in neighborhoods with poor living conditions are at greater risk of COVID-19 related stress. Evidence suggests that access to parks, playgrounds, and greenspace can ameliorate stress.<sup>10</sup> There also is evidence from a random designed study showing an association between fewer reports of domestic abuse and access to green space.<sup>11</sup> This is an important health equity consideration as nearly 18% of Texans in 2019 lacked complete kitchen or plumbing facilities or faced overcrowding or high rents according to America's Health Rankings.<sup>12</sup>

COVID-related increases in domestic abuse have potential long-term effects on physical and mental health. Victims of domestic abuse are at risk of developing posttraumatic stress disorder (PTSD), which can persist for months or years.<sup>13</sup> As an adverse childhood experience, research shows that child abuse is associated with negative physical and behavioral health outcomes well into adulthood.<sup>14</sup>



PTSD is one of the largest risk factors for anxiety and depressive symptoms, initiation or increase of substance use, and suicide ideation during the COVID-19 pandemic.

## Trauma

CDC survey data from June 2020 estimate that 26.3% of adults have some symptoms associated with COVID-related symptoms of trauma and related stress disorders. These include symptoms associated with a wide variety of trauma related disorders including posttraumatic stress disorder (PTSD), acute stress disorder (ASD), and adjustment disorders (ADs). Trauma related disorders like PTSD can co-occur with or lead to clinical depression and other behavioral health problems.<sup>15,16</sup> As seen in Figure 3, prior treatment for PTSD is one of the largest risk factors for anxiety and depressive symptoms, initiation or increase of substance use, and suicide ideation during the COVID-19 pandemic.

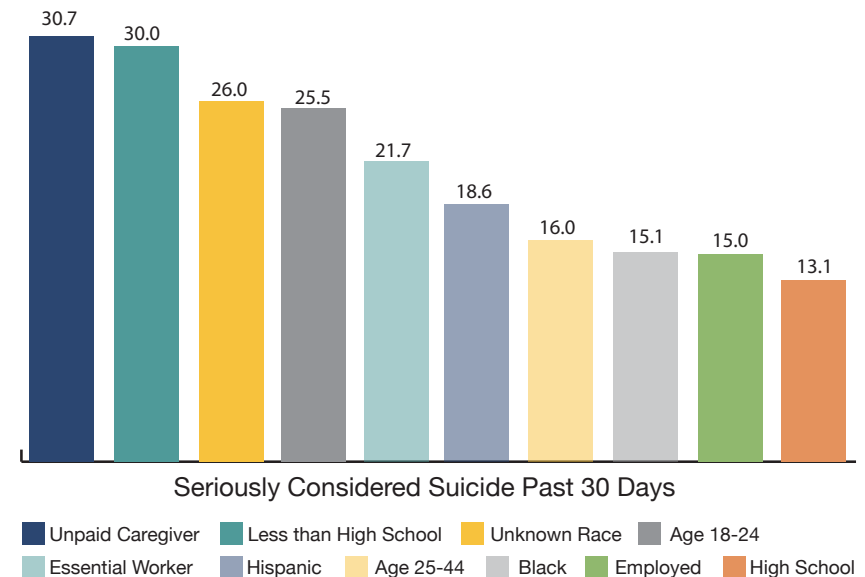
Given the lingering effects of trauma and its tendency to co-occur or induce other disorders, efforts to address COVID-related trauma could reduce the incidence of future mental illness and potential mental health disparities. Persons who have already experienced trauma prior to the pandemic may be especially at risk. Many people who experience homelessness, substance disorder, or living with HIV have a history of trauma and are especially at risk during the pandemic. This highlights the importance for health systems to implement trauma informed care during the pandemic.



## Suicide

Researchers are predicting that COVID-19 is creating a “perfect storm” for suicide. Pandemic related stress, social isolation, decreased access to community and religious support, barriers to mental health treatment, and illness and medical problems are all prominent risk factors for suicide.<sup>17</sup> Nationally, CDC reports that 10.7% of adults have considered suicide in the past 30 days based on a June 2020 survey.<sup>18</sup> In comparison, only 4% of adults in 2018 considered suicide over the past 12 months.<sup>19</sup>

Figure 4. Top Ten Sociodemographic Characteristics of Adults Reporting Suicide Ideation During the COVID-19 Pandemic (%)



Source: Morbidity and Mortality Weekly Report. August 14, 2020, 69(32);1049–1057  
Note: Data are based on a web-based survey of 5,412 (54.7%) of 9,896 eligible invited adults administered of June 24–30, 2020. Quota sampling and survey weighting were employed to improve cohort representativeness of the U.S. population by gender, age, and race/ethnicity.

Similar state-level data were unavailable for this issue brief. However, prior to the pandemic, Texas suicide mortality trends have followed the US’s upward trend. The suicide mortality rate for Texas rose from 12.1 to 13.8 per 100,000 from 2012 to 2018.<sup>20</sup> The same pandemic related drivers of suicide ideation operate in Texas as well, especially the

economic hardship from increased unemployment. Recent estimates from the Meadows Mental Health Policy Institute project that for every 5-percentage point increase in unemployment in Texas during the COVID recession across a year, an additional 725 Texans could die each year from suicide (300) and drug overdose (425).<sup>21</sup>

This not only portends higher suicide rates but a different sociodemographic profile among those who do attempt suicide. The June survey of US adults reveals striking differences in suicide ideation by sociodemographic groups. The top five (see Figure 4) include unpaid adult caregivers, persons with less than a high school diploma, persons of an unknown reported race, adults ages 18 to 24, and essential workers.

According to the American Association of Retired Persons and the National Alliance for Caregiving, there were 43.5 million unpaid caregivers in 2015.<sup>22</sup> We lack an analogous statistic for Texas, although the Texas Department of State Health Services reports 1.4 million Texans gave unpaid care for persons with Alzheimer’s disease.<sup>23</sup> This represents a staggering number of people likely at elevated risk of suicide during the pandemic and highlights the burden of unpaid caregivers, including parents who must work while simultaneously teaching and caring for children.

The data suggest that young adults, those with less than a high school diploma, and essential workers might also be at elevated risk of suicide. This is indicative of the role of socioeconomic status on COVID-19 related suicide risk and mental illness generally. Targeted outreach to these sociodemographic groups during the pandemic may improve ongoing suicide prevention efforts.

## Barriers to Access to Care in Texas

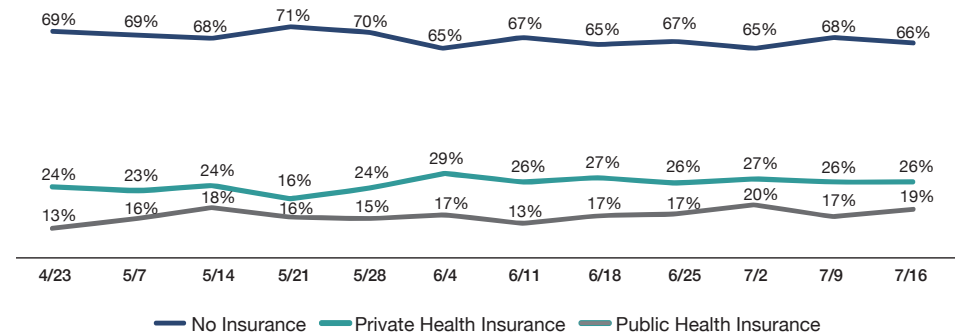
Behavioral healthcare services fail to meet the demand in America because of lack of access. According to the National Council for Behavioral Health, “Mental health services in the U.S. are insufficient despite more than half of Americans seeking help. Limited options and long waits are the norm.”<sup>24</sup> That is especially true, if not more so,

in Texas. We identified five key barriers to behavioral health services in Texas that will need to be addressed to meet the challenge of the increased mental healthcare needs resulting from the pandemic.

### Lack of Health Insurance Coverage

Individual and small group health insurance plans (including Marketplace plans), and Medicaid Alternative Benefit plans all, by law, must cover mental health and substance abuse disorder services. Thus, health insurance coverage is a key determinant of access to mental healthcare. Unfortunately, Texas has the highest rate of uninsured in the country. It ranks at the bottom (50 out of 51) for adults with any mental illness who are uninsured in the Mental Health America state rankings.<sup>25</sup>

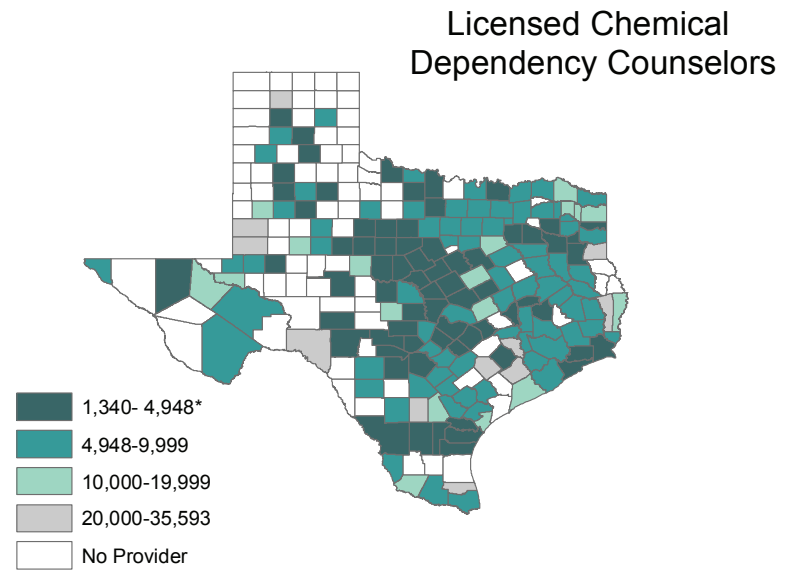
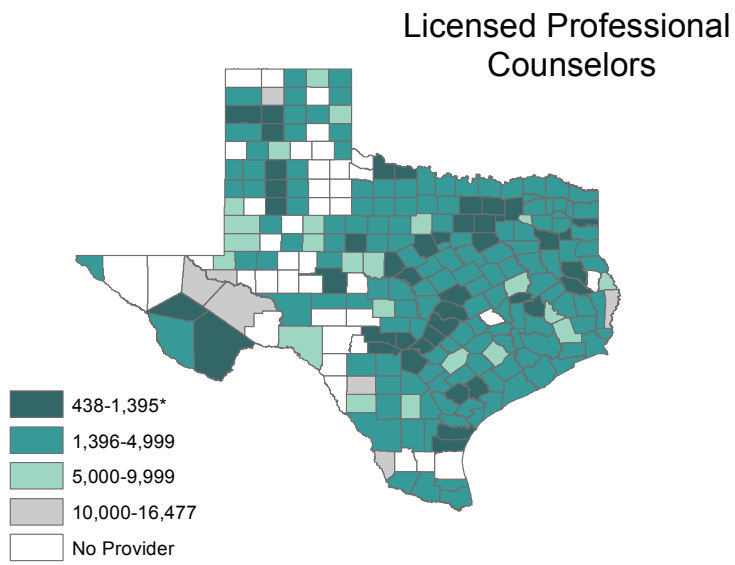
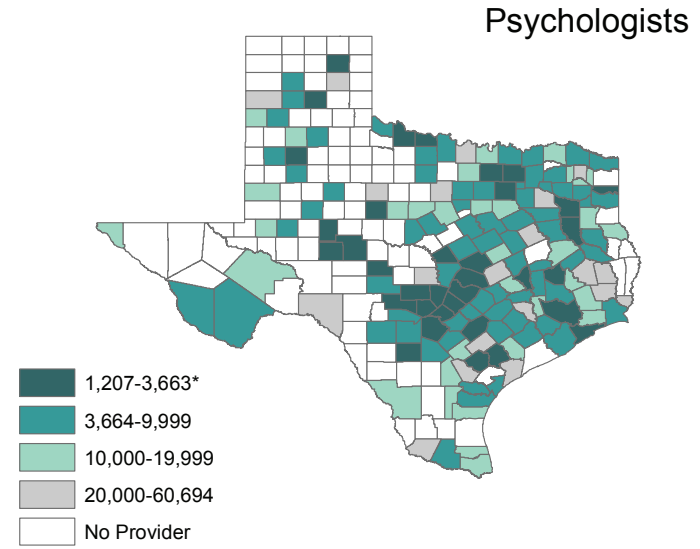
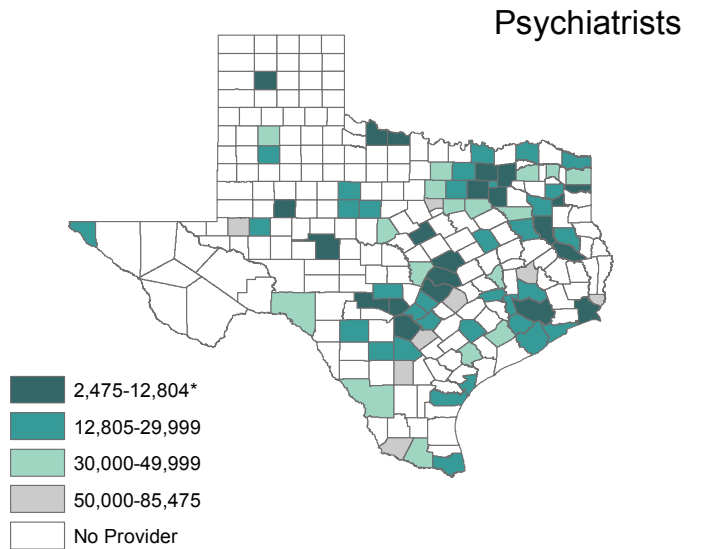
Figure 5. Texas Insurance Trends During the COVID-19 Pandemic



Source: U.S. Census Bureau, Household Pulse Survey, 2020

Because health insurance is tied to employment, the COVID-19 recession has likely increased the number of uninsured in Texas. The number of persons with no insurance rose from 24% the week of April 23 to a peak of 29% during the week of June 4 before declining to 26% by the end of July. During that time, the number of individuals on public insurance rose to 19% from a low of 13% in April. The extent to which insurance rates return to pre-COVID rates depends on the extent of the recovery and whether the recovery produces jobs that offer health insurance.

Figure 6. County Population to Mental Health Professional Ratio



\*represents state average



## Limited Clinician Availability

Even with health insurance, many find it difficult to access a mental health professional in the community. Nearly 80 percent of Texas counties are experiencing a shortage of mental health professionals.<sup>26</sup> Texas geography is a unique factor limiting the availability of health professionals (see Figure 8). Of the 254 counties in Texas, 173 counties lack a psychiatrist, which equates to three million Texans without a local psychiatrist. In addition, 94 counties lack psychologists, 40 counties lack licensed professional counselors, and 78 counties lack licensed chemical dependency counselors.

A 2018 Texas Department of State Health Services report highlights regional healthcare disparities arising from mental health workforce shortages. The Gulf Coast, South Texas and West Texas will likely experience growing psychiatrist shortages by 2030. In particular, the Gulf Coast is anticipated to experience the largest deficit in 2030 at 198 full-time equivalents.<sup>27</sup>

Local mental health authorities (LMHAs) offer publicly supported mental health services in Texas. They accept payment from both public and private insurance while providing mental healthcare to the uninsured on a sliding scale. The state contracts with 37 LMHAs and two local behavioral health authorities (LBHAs) to deliver mental health services in communities across Texas.

These LMHA/LBHAs make up the frontline of behavioral health services in Texas and cover counties lacking behavioral health professionals. Because of the distance, and the difficulty of recruiting mental health professionals in rural and border communities, telehealth has become an important strategy for addressing access in rural and border communities.

## Mental Health Stigma

The World Health Organization defines stigma as a “mark of shame, disgrace or disapproval which results in an individual being rejected, discriminated against, and excluded from participating in a number of different areas of society.”<sup>28</sup> The stigma association with mental illness causes people to minimize mental disorders as valid, treatable health conditions. As a result, people with symptoms of behavioral

health disorders like anxiety or depression often fail to seek treatment or adhere to treatment regimens once provided. The failure to seek treatment, in turn, may subsequently reinforce patterns of isolation, hopelessness, and low self-esteem. A recent meta-analysis of stigma in diverse communities concluded that mental illness stigma is higher among racial/ethnic minorities versus racial majorities. This is partly the result of the history of discriminatory policies and practices among mental health professionals and institutions.<sup>29</sup>



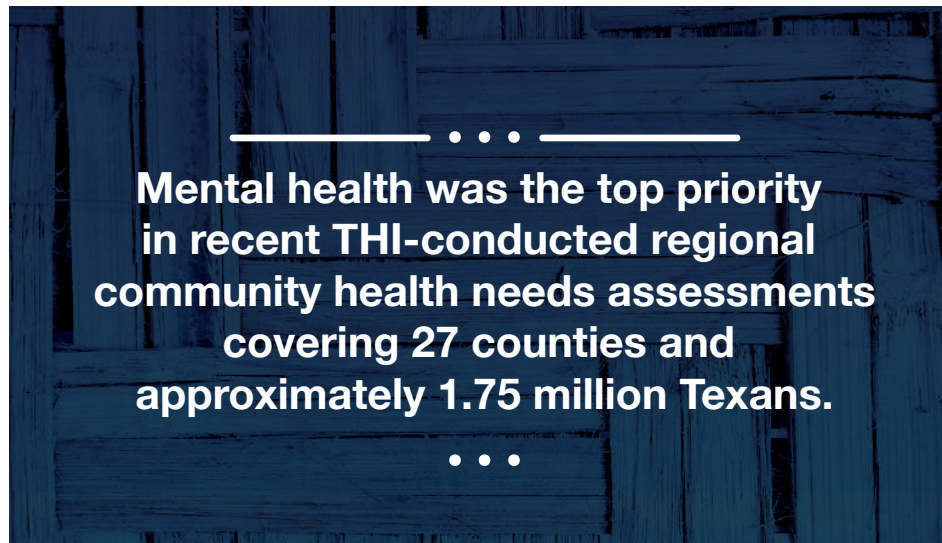
Stigma plays a significant role at reducing access to behavioral health services in Texas. Estimates reveal that 9 in 10 Texans think it is harder for people to talk about a mental health condition than a physical health condition.<sup>30</sup> During a period of time where so many people are experiencing mental health symptoms that could lead to a mental health diagnosis or substance use, stigma must be tackled head-on. Designing anti-stigma education, however, is complicated by cultural variation in mental health stigma.<sup>31</sup> Given the diversity of the Texas population, cultural and linguistic competency is a necessary condition for effective anti-stigma education.

## Need for Culturally and Linguistically Competent Care

Creating a culturally and linguistically competent health workforce is critical to being able to meet the needs of Texas' diverse population. Currently, Texas psychiatrists are majority white at 59.5% followed by 9.2% Hispanic and 6.5% black.<sup>32</sup> These rates are poor in comparison to the US, where Census data show that 41.2% of psychiatrists are white, 39.7% are Hispanic, and 12.9% are black.<sup>33</sup> Psychology also lacks diversity in Texas. For example, whereas 41.3% of the Texas population was white in 2019, 79.1% of licensed psychologists in Texas were white. Hispanics were especially under-represented among psychologists with only 10.3% of psychologists of Hispanic origin in a state where Hispanics represent 39.6% of the population.<sup>34</sup>

COVID-19 has the potential to exacerbate existing racial, ethnic, and linguistic disparities in access to behavioral health services. According to a 2015 SAMSHA report, 48% of white population received behavioral healthcare services in comparison to 31% of blacks and Hispanics, and 22% of Asians who had the same level of need.<sup>35</sup>

Having a diverse workforce can help reduce these disparities. A diverse mental health workforce can help remove language barriers to treatment, improve understanding cultural values, improve treatment adherence, and reduce the stigma associated with mental illness among minority populations.<sup>36</sup>



## Medicaid Reimbursement Rates and Practices

Behavioral health providers often do not accept patients covered under Medicaid because of the lower reimbursement rates under Medicaid. Additionally, the time and infrastructure costs for Medicaid billing are far too extensive for many private behavioral providers. One result is that many behavioral health providers, including those in mental health shortage areas, will only accept payment in cash. This was a consistent theme in interviews THI conducted in Texas, and it further reduces access as many cannot afford private rates.

Medicaid is the largest funder of behavioral health services in Texas. Medicaid behavioral health services are offered to patients through Medicaid managed care plans. However, despite parity laws, plans may have gaps in behavioral services because of providers choosing not to opt into networks with low reimbursement rates.

## Recommendations

Our analysis of key trends and barriers to access to care, reveal a worsening burden of behavioral health needs in Texas and that necessitates systems focused solutions. However, the pandemic's immediate impact on behavioral health needs in Texas require immediate support and solutions. To that end, with the community at the center and given the important role of Local Mental Health Authorities at the forefront of providing behavioral health services in the community, THI conducted focused discussions to identify recommended actions to address these growing needs and access barriers that have been exacerbated by the pandemic.

### Recommendation 1: Utilize peer support specialists for outreach and education

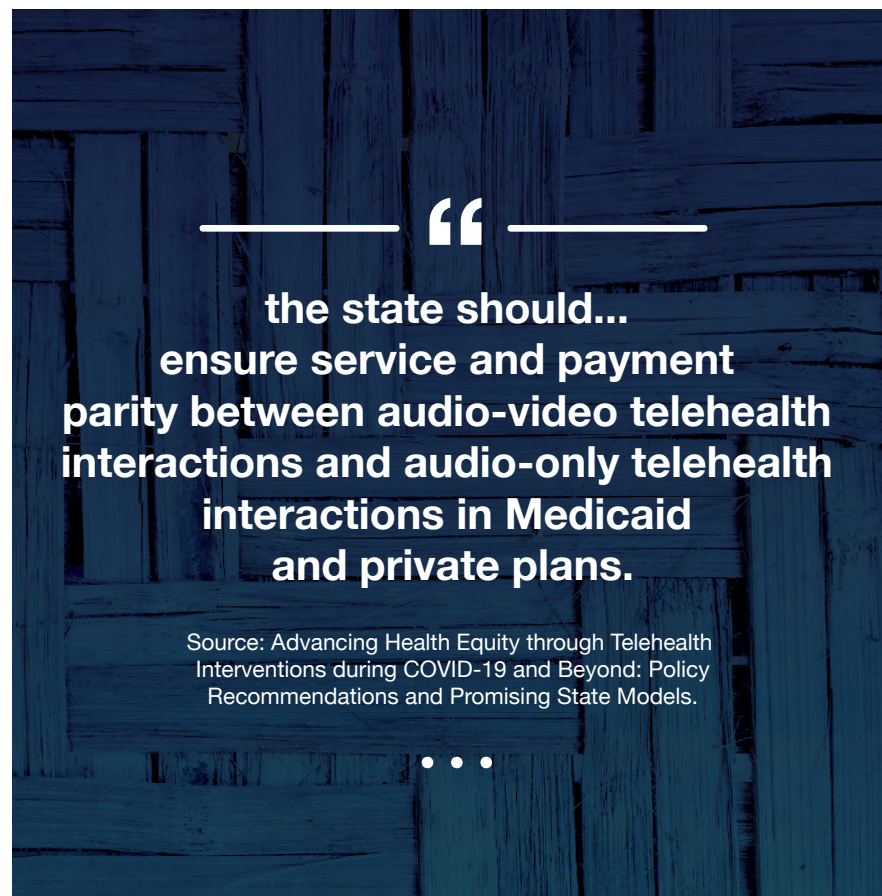
Organizations across the state have quickly implemented COVID-19 crisis hotlines and support services. However, the inability of call center staff to relate to individuals seeking assistance is a major barrier to mitigating mental health distress. Calls to crisis hotlines are extremely personal. They require adequate rapport as well as cultural and linguistic competency. People who have shared similar experiences of being diagnosed with mental health conditions are often best capable communicating with and supporting those newly struggling with mental health symptoms. A peer approach is a preferred model for outreach and health education during the pandemic as it helps promote mutual connection and inspire hope.<sup>37</sup> Peer support specialists are instrumental in providing assistance with goal-setting, linking individuals to useful tools and resources, and increasing social support and social functioning.<sup>38</sup>

### Recommendation 2: Remove barriers to telehealth and increase Medicaid reimbursement rates

Behavioral health providers across the state have implemented new provisions within their organization to continue offering mental health services amid the pandemic. For example, Governor Abbott's temporary waiver restrictions on telehealth have allowed mental health

care providers and local mental health authorities to broadly expand services and collect Medicare and Medicaid reimbursement for key behavioral services such as psychotherapy, psychiatric diagnostic evaluation, substance use disorder services, etc.

These approaches can be effective and scalable in the short-term. However, rural residents, older populations, limited literacy individuals, and people of color have less reliable internet and telecommunications access. Additionally, these populations find remote communication more challenging than face-to face interactions which might disengage them from treatment.<sup>39</sup> Nevertheless, telehealth is a valuable tool for reducing travel time and related transportation barriers to providers, which many might find more appealing.



During the pandemic, organizations that serve predominately vulnerable populations (i.e. rural communities, low income, and etc.) have been able to increase access to behavioral services by via telehealth. THI focused discussions with LMHAs revealed that the initial drop in service use after the COVID declaration of emergency was compensated for by an uptick in telehealth services. However, the lack of audio-only reimbursement for Medicaid services otherwise covered by audio-video telehealth is biased against those lacking adequate broadband and internet services.

One recommendation to improve long-term equity to mental health services among vulnerable populations is that “the state should not only ensure payment parity between in-person services and telehealth services but also enact regulations to ensure service and payment parity between audio-video telehealth interactions and audio-only telehealth interactions in Medicaid and private plans.”<sup>40</sup>

Additionally, Medicaid reimbursement rates should be increased. It has been years since Medicaid reimbursement has been increased. Texas’ Medicaid to Medicare fee index ranks nationally in the bottom 15.<sup>41</sup> The Medicaid to Medicare fee index for primary care services in Texas is 0.58. That is, for every \$1 of Medicare reimbursement the same level of care is reimbursed at 58 cents for Medicaid patients.<sup>42</sup> This inadequacy in reimbursement is highlighted now more than ever by the pandemic and spurred HHSC in April 2020 to request increased Medicaid reimbursement for services.

### **Recommendation 3: Implement best practices known to reduce COVID-related morbidity and mortality**

Existing research demonstrates the success of the Collaborative Care Model (CoCM) at reducing depression, bipolar and anxiety disorders, substance use disorders (SUD), suicidal ideation, and suicide completion.<sup>43</sup> Similarly, Medication-Assisted Treatment has been demonstrated to successfully treat opioid addictions, particularly with counseling and behavioral therapies.

Research from the Meadows Mental Health Policy Institute developed a model to estimate how increased access to Medication-Assisted Treatment and services under the Collaborative Care model would

prevent behavioral health related morbidity and mortality arising from the pandemic. Their research estimates universal access to collaborative care to treat major depression would reduce the number of suicide deaths by between 725 and 1,100 deaths per year in Texas.<sup>44</sup> Expansion of both collaborative care and Medication-Assisted Treatment (MAT) has the potential to cause a net decline in suicide and drug overdose deaths greater than the projected increases in suicide and drug overdose deaths resulting from the COVID-19 pandemic. These results demonstrate the value of expanding access to MAT, training providers on the CoCM, and advancing strategies that foster greater adoption of these practices.

### **Recommendation 4: A call to action to address mental health stigma and increase the diversity of the behavioral health workforce**

COVID-19 provides the perfect opportunity for educating the public about anxiety and depression, as everyone has been impacted by social distancing, sheltering in place, and other stressful events in 2020. Behavioral health stakeholders, including advocacy organizations, philanthropy, providers, local government, and community-based organizations should collaborate to tackle issues around mental health stigma through initiatives around preventative and early intervention education and dissemination of local resources. This could include direct outreach as well as a mass communications campaign through social and broadcast media.

The state government should work collaboratively with philanthropy and academic institutions for coordinated action to improve the diversity of the behavioral health workforce. This can include new initiatives including diversity and pipeline programs and scholarships for disadvantaged students.

## **Conclusion**

This issue brief highlights only a few elements of the complex dynamics of behavioral health during COVID-19. Texas Health Institute will continue to monitor these issues and engage with behavioral health providers, patients, leaders, and advocates to find ways to improve health equity and more effective systems.

## Acknowledgements

THI is grateful for local, regional, and state level mental health stakeholders who provided invaluable insights through focused discussions to contribute to the development of this brief.

## Recommended Citation

Smith, KD, Barge, S., Jones, C. (2020). "COVID-19 in Texas: An Analysis of Behavioral Health Needs to Advance Response Efforts" Texas Health Institute. <https://www.texashealthinstitute.org/>.

## About THI

Texas Health Institute (THI) is a non-profit, non-partisan public health institute with a mission to advance the health of all. Since 1964, THI has served as a trusted, leading voice on public health and healthcare issues in Texas and the nation. THI's expertise, strategies, and nimble approach makes them an integral and essential partner in driving systems change efforts. THI works across and within sectors to lead collaborative efforts and facilitate connections to foster systems that provide the opportunity for everyone to lead a healthy life.

## References

- <sup>1</sup> We utilize the Substance Abuse and Mental Health Services Administration's definition of Behavioral: The term "behavioral health" in this context means the promotion of mental health, resilience and wellbeing; the treatment of mental and substance use disorders; and the support of those who experience and/or are in recovery from these conditions, along with their families and communities. See: <https://www.samhsa.gov/sites/default/files/samhsa-behavioral-health-integration.pdf>
- <sup>2</sup> Meadows Mental Health Policy Institute. (2020, April 28). COVID-19 Response Briefing: MHSUD Impacts v.1: Effects of COVID Recession. Retrieved from <https://www.texasstateofmind.org/uploads/whitepapers/COVID-MHSUDImpacts.pdf>
- <sup>3</sup> Czeisler, M. É., Lane, R. I., Petrosky, E., Wiley, J. F., Christensen, A., Njai, R., ... & Czeisler, C. A. (2020). Mental health, substance use, and suicidal ideation during the COVID-19 pandemic—United States, June 24–30, 2020. *Morbidity and Mortality Weekly Report*, 69(32), 1049.
- <sup>4</sup> Ibid.
- <sup>5</sup> Galea, S., Merchant, R. M., & Lurie, N. (2020). The mental health consequences of COVID-19 and physical distancing: The need for prevention and early intervention. *JAMA internal medicine*, 180(6), 817-818.
- <sup>6</sup> Solis, N. (2020, March 24). Cook Children's sees spike in child abuse cases likely from COVID-19 stress. FOX 4 News Dallas-Fort Worth. Retrieved from <https://www.fox4news.com/news/cook-childrens-sees-spike-in-child-abuse-cases-likely-from-covid-19-stress>
- <sup>7</sup> Asch, S. (2020, July 17). Texas child advocates warn of hidden signs of abuse amid quarantine. *Statesman*. Retrieved from <https://www.statesman.com/news/20200717/texas-child-advocates-warn-of-hidden-signs-of-abuse-amid-quarantine>
- <sup>8</sup> Dellinger, H. (2020, August 15). Domestic violence cases continue to rise during pandemic, data shows. *HoustonChronicle.Com*. Retrieved from <https://www.houstonchronicle.com/news/houston-texas/houston/article/domestic-violence-continue-to-rise-pandemic-covid-15475751.php>
- <sup>9</sup> Women, U. N. (2020). COVID-19 and ending violence against women and girls. Retrieved from <https://www.unwomen.org/en/digital-library/publications/2020/04/issue-brief-covid-19-and-ending-violence-against-women-and-girls>
- <sup>10</sup> Roe, J. J., Thompson, C. W., Aspinall, P. A., Brewer, M. J., Duff, E. I., Miller, D., ... & Clow, A. (2013). Green space and stress: evidence from cortisol measures in deprived urban communities. *International journal of environmental research and public health*, 10(9), 4086-4103.
- <sup>11</sup> Kuo, F. E., & Sullivan, W. C. (2001). Aggression and violence in the inner city: Effects of environment via mental fatigue. *Environment and behavior*, 33(4), 543-571.
- <sup>12</sup> America's Health Rankings. (2019). Texas Sever Housing Problems. Retrieved from [https://www.americashealthrankings.org/explore/annual/measure/severe\\_housing\\_problems/state/TX](https://www.americashealthrankings.org/explore/annual/measure/severe_housing_problems/state/TX)
- <sup>13</sup> Babcock, J. C., Roseman, A., Green, C. E., & Ross, J. M. (2008). Intimate partner abuse and PTSD symptomatology: Examining mediators and moderators of the abuse-trauma link. *Journal of Family Psychology*, 22(6), 809.
- <sup>14</sup> Dube, S. R., Anda, R. F., Felitti, V. J., Chapman, D. P., Williamson, D. F., & Giles, W. H. (2001). Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the life span: findings from the Adverse Childhood Experiences Study. *Jama*, 286(24), 3089-3096.
- <sup>15</sup> Rytwinski, N. K., Scur, M. D., Feeny, N. C., & Youngstrom, E. A. (2013). The co-occurrence of major depressive disorder among individuals with posttraumatic stress disorder: A meta-analysis. *Journal of traumatic stress*, 26(3), 299-309.
- <sup>16</sup> Back, S. E. (2010). Toward an improved model of treating co-occurring PTSD and substance use disorders.
- <sup>17</sup> Poindexter, E. K., Mitchell, S. M., Jahn, D. R., Smith, P. N., Hirsch, J. K., & Cukrowicz, K. C. (2015). PTSD symptoms and suicide ideation: Testing the conditional indirect effects of thwarted interpersonal needs and using substances to cope. *Personality and Individual Differences*, 77, 167-172.
- <sup>18</sup> Czeisler, M. É., Lane, R. I., Petrosky, E., Wiley, J. F., Christensen, A., Njai, R., ... & Czeisler, C. A. (2020). Mental health, substance use, and suicidal ideation during the COVID-19 pandemic—United States, June 24–30, 2020. *Morbidity and Mortality Weekly Report*, 69(32), 1049.
- <sup>19</sup> Substance Abuse and Mental Health Services Administration. Key substance use and mental health indicators in the United States: results from the 2018 National Survey on Drug Use and Health. Rockville, MD: US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration; 2018. Retrieved from <https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHNationalFindingsReport2018/NSDUHNationalFindingsReport2018.pdf>
- <sup>20</sup> Texas Health and Human Services Commission. (2020, May). Report on Suicide and Suicide Prevention in Texas. Retrieved from <https://hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/suicide-prevention-texas-may-2020.pdf>
- <sup>21</sup> Meadows Mental Health Policy Institute. (2020, April 28). COVID-19 Response Briefing: MHSUD Impacts v.1: Effects of COVID Recession. Retrieved from <https://www.texasstateofmind.org/uploads/whitepapers/>

[COVID-MHSUDImpacts.pdf](#)

<sup>22</sup> Family Caregiver Alliance. (2019, April 17). Caregiver Statistics: Demographics. Retrieved from <https://www.caregiver.org/caregiver-statistics-demographics>

<sup>23</sup> Alzheimer's Disease Statistics. (2020). Texas Department of State Health Services. Retrieved from <https://www.dshs.texas.gov/alzheimers/statistics.shtm>

<sup>24</sup> New Study Reveals Lack of Access as Root Cause for Mental Health Crisis in America. (2018). National Council for Behavioral Health. Retrieved from <https://www.thenationalcouncil.org/press-releases/new-study-reveals-lack-of-access-as-root-cause-for-mental-health-crisis-in-america/>

<sup>25</sup> Overall Ranking. (2020). Mental Health America. Retrieved from <https://www.mhanational.org/issues/ranking-states>

<sup>26</sup> Roser, M. (2020). Responding to a Behavioral Health Care Shortage. Texas Hospitals Magazine. Texas Hospital Association. Retrieved from <https://www.tha.org/Publications/Texas-Hospitals-Magazine/Texas-Hospitals-March-April-2019/Behavioral-Health-Care-Shortage>

<sup>27</sup> Texas Health and Human Services, Department of State Health Services. (2018). Texas Projections of Supply and Demand for Primary Care Physicians and Psychiatrists, 2017 -2030. Retrieved from <https://www.dshs.state.tx.us/CHS/hprc/Publications/>

<sup>28</sup> Gopalkrishnan, N. (2018, June 19). Cultural Diversity and Mental Health: Considerations for Policy and Practice. Frontiers in Public Health. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6018386/>

<sup>29</sup> Eylem, O. et al. (2020, June 8). Stigma for common mental disorders in racial minorities and majorities a systematic review and meta-analysis. BioMed Central. Retrieved from <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-08964-3>

<sup>30</sup> Meadows Mental Health Policy Institute. (2015). Texas State of Mind. The Mental Health Landscape. Retrieved from [https://www.texasstateofmind.org/wp-content/uploads/2015/11/TSOM\\_MentalHealthLandscape\\_inforgraphic.pdf](https://www.texasstateofmind.org/wp-content/uploads/2015/11/TSOM_MentalHealthLandscape_inforgraphic.pdf)

<sup>31</sup> Abdullah, T., Brown, T.L. (2011). Mental illness stigma and ethnocultural beliefs, values, and norms: an integrative review. Clinical Psychology Review, 31: 934-948.

<sup>32</sup> Texas Health and Human Services, Department of State Health Services.

(2018). Texas Projections of Supply and Demand for Primary Care Physicians and Psychiatrists, 2017 -2030. Retrieved from <https://www.dshs.state.tx.us/CHS/hprc/Publications/>

<sup>33</sup> US Census Bureau (2019). QuickFacts Texas. Retrieved from <https://www.census.gov/quickfacts/TX>

<sup>34</sup> Texas Health Professional Resource Center. Trends, Distributions, and Demographics: Licensed Psychologists. Retrieved from <https://www.dshs.state.tx.us/chs/hprc/>

<sup>35</sup> American Psychiatric Association. (2017). Mental Health Disparities: Diverse Populations. Retrieved from <https://www.psychiatry.org/psychiatrists/cultural-competency/education/mental-health-facts>

<sup>36</sup> Ibid.

<sup>37</sup> Substance Abuse and Mental Health Services Administration (2017). Value of Peers. Retrieved from [https://www.samhsa.gov/sites/default/files/programs\\_campaigns/brss\\_tacs/value-of-peers-2017.pdf](https://www.samhsa.gov/sites/default/files/programs_campaigns/brss_tacs/value-of-peers-2017.pdf)

<sup>38</sup> Ibid.

<sup>39</sup> Moreno, C. et al. (2020). How mental health care should change as a consequence of the COVID-19 pandemic. Lancet Psychiatry. Retrieved from <https://www.thelancet.com/action/showPdf?pii=S2215-0366%2820%2930307-2>

<sup>40</sup> Taylor-Penn, L., & Ruff, E. (2020). Advancing Health Equity through Telehealth Interventions during COVID-19 and Beyond: Policy Recommendations and Promising State Models. Families USA. Retrieved from [https://familiesusa.org/wp-content/uploads/2020/07/HE-98\\_Policy-PCORI-Telehealth\\_Issue-Brief\\_7-22-20.pdf](https://familiesusa.org/wp-content/uploads/2020/07/HE-98_Policy-PCORI-Telehealth_Issue-Brief_7-22-20.pdf)

<sup>41</sup> Medicaid Physician Fee Index. (2016). Kaiser Family Foundation. Retrieved from: <https://www.kff.org/medicaid/state-indicator/medicaid-fee-index/?currentTimeframe=0&sortModel=%257B%2522colId%2522:%2522All%2520Services%2522,%2522sort%2522:%2522desc%2522%257D>

<sup>42</sup> Medicaid-to-Medicare Fee Index. (2016). Kaiser Family Foundation. Retrieved from <https://www.kff.org/medicaid/state-indicator/medicaid-to-medicare-fee-index/?currentTimeframe=0&sortModel=%257B%2522colId%2522:%2522Location%2522,%2522sort%2522:%2522asc%2522%257D>

<sup>43</sup> Meadows Mental Health Policy Institute. (2020, August 6). COVID-19 Briefing: Modeling the Effects of Collaborative Care and Medication-Assisted