



COVID-19 Projections and Effects on Mental Health and Addiction in Oklahoma

Updated April 23, 2020, based on newly-observed economic data

As leaders mobilize to prevent the spread of COVID-19 and its effect on Oklahomans' physical health, it becomes increasingly important to recognize and plan for the behavioral health consequences of this crisis and its fallout. This report illustrates a possible scope of the mental health and substance abuse challenges that will arise from the COVID-19 pandemic and the subsequent economic downturn. This includes mental health- and addiction-related deaths, childhood trauma, and a growing need for treatment amid stress, anxiety, and loneliness.

The mental health consequences of this crisis will be far-reaching. This report touches on an important selection of these consequences, but it is not comprehensive. Mental health effects of pandemics of this scale are not well-studied and the full scope of impending mental health needs is difficult to project. This report uses historical natural disaster evidence and the well-studied effects of economic downturns, including [projection methodologies](#) developed by the Meadows Mental Health Policy Institute. We estimate that in the next 12 months:

- **Hundreds of Oklahomans may die from behavioral health issues.** We estimate 260 additional deaths from opioid overdoses and suicides alone due to economic hardship. If unemployment reaches as high as some experts project, this number could reach 700.
- **Suicidal ideation and attempts will increase.** More than 34,000 additional Oklahomans may experience suicidal thoughts and more than 9,400 additional Oklahomans may attempt suicide. If unemployment reaches as high as some experts project, these numbers could be as high as 100,000 and 30,000, respectively.
- **Childhood mental health needs will increase substantially.** For example, as many as 30% of children involved in quarantines may experience post-traumatic stress disorder.
- **Unemployment and financial stress will increase drug addiction and alcoholism.** For example, more than 14,000 additional Oklahomans may develop a drug use disorder, and an additional 4,500 Oklahomans may develop alcohol use disorder.

These projections show that as the virus and economic downturn unfold, it is increasingly important to focus resources and policies on behavioral health treatment. A comprehensive behavioral health response will be needed. To support this, state policymakers can:

1. Prioritize funds for mental health and addiction treatment, even in a budget shortfall;
2. Ensure the treatment system that is overseen by the Oklahoma Department of Mental Health and Substance Abuse Services is empowered, without distraction, to focus fully and adequately on the growing crisis; and,
3. Support policy solutions for minimizing new behavioral health-related deaths, addiction, and trauma, such as mental health insurance parity (Senate Bill 1718).

Overview

The COVID-19 pandemic threatens the physical health of Oklahomans, but the threat of the virus and the social distancing measures that minimize its effects also will lead to increases in mental health challenges, including anxiety and loneliness.¹ In addition, the economic fallout from the pandemic will place more Oklahomans at risk for having mental health and substance use disorders, some of them resulting in death, as increasingly large numbers of people experience unemployment and financial stress.

Past studies on the relationship between unemployment and deaths from suicide and drug overdoses provide a basis for estimating the number of such deaths that will occur over the next year as unemployment rises in Oklahoma. Good data are also available for estimating the increases in the prevalence of substance use disorders that will occur as a result of unemployment in Oklahoma. This brief provides conservative estimates of increases in substance use disorders, deaths from drug overdoses, and deaths from suicide that will occur as unemployment increases in Oklahoma.²

Previous versions of this report made projections based on a recession with unemployment increases equal to the 3.8 percentage point increase experienced in the 2008 recession, and in some cases twice or three times this increase. In this updated version, we make estimates based on the most recently available data on actual, new filings for unemployment, and as an upper bound, a national estimate of potential job losses from social distancing measures. We also refine some of our estimation methodologies, taking into account differential responses to unemployment by men and women.

As a result of estimated increases in unemployment, over a 12-month period:

- From 136 to 363 more Oklahomans will die from suicide as a result of the economic fallout from COVID-19 and
- From 129 to 345 more Oklahomans will die from opioid drug overdoses alone as a result of the economic fallout from COVID-19.³

¹ In recent weeks, this point has been widely expressed in the media and in major scholarly journals. See for example: “When the Pandemic Leaves Us Alone, Anxious and Depressed,” by Andrew Solomon, April 9, 2020. <https://www.nytimes.com/2020/04/09/opinion/sunday/coronavirus-depression-anxiety.html>

Reger, M.A., Stanley, I.H., & Joiner, T.E. (2020). Suicide mortality and coronavirus disease 2019 – A perfect storm? *JAMA Psychiatry*. Published online April 10, 2020. Doi:10.1001/jamapsychiatry.2020.1060

² Oklahoma’s unemployment rate in February 2020 was 3.2%. <https://www.bls.gov/eag/eag.ok.htm>. The conservatively estimated 200,000 people who have become unemployed during the pandemic raises the unemployment rate to 14%, a 10.8 percentage point increase. <https://kfor.com/health/coronavirus/oklahoma-making-strides-in-unemployment-claims/>. The Federal Reserve Bank of St. Louis estimates a potential national unemployment rate of 32%, a 28.8 percentage point increase for Oklahoma. <https://www.stlouisfed.org/on-the-economy/2020/march/back-envelope-estimates-next-quarters-unemployment-rate>

³ The low end of the range is based on the current unemployment rate of 14%, and the high end of the range on the estimated potential for 32% unemployment.

Although the number of deaths may seem small relative to the number of people who die from COVID-19, the pressure on the mental health and substance abuse treatment systems will intensify significantly. For example, we estimate that:

- More than 14,000 Oklahomans will develop substance use disorders as a result of the economic fallout from COVID-19.

In addition, sufficient data are available to estimate the prevalence of a broader array of mental health conditions that will likely increase in Oklahoma as a result of the economic and social damage caused by the pandemic. In this brief, we also present the implications of the COVID-19 crisis for levels of suicidality among youth and adults, serious mental distress in adults, and mental health problems for children. We estimate that, because of COVID 19, the following 12-month increases in mental health problems will occur over and above pre-pandemic levels:

- Anywhere from 9,400 to 30,000 additional Oklahomans could attempt suicide.
- Anywhere from 30,000 to 100,000 additional Oklahomans could experience suicidal ideation (thoughts of suicide).
- Among the most economically vulnerable adults in Oklahoma, serious mental distress could double.
- Among children who experience quarantine because of infection with the virus (or direct contact with an adult who has it), as many as 30% will experience post-traumatic stress disorder—a rate that is seven times higher than the rate for children who do not experience quarantine.
- If unemployment among parents increases by 10.8 percentage points (based on recent unemployment claims), children’s risk for a broad array of mental health problems could increase by as much as 94%.⁴

The following sections of the brief provide more detail concerning our assumptions and findings, along with citations for the findings provided in the overview above.

Expected Economic Changes

The pandemic has led to a closure of many retail establishments⁵ and factories,⁶ and short-term unemployment rates are predicted to rise as high as 32% of the workforce. Oklahoma is also the

⁴ This does not mean that 94% of children will have a mental health problem. Rather, it means that the average amount of risk for developing a mental health problem across all children would increase by 94%.

⁵ United States Census Bureau. (2020, April 15). *Advance monthly sales for retail and food services, March 2020*. U.S. Department of Commerce.

https://www.census.gov/retail/marts/www/marts_current.pdf?mod=article_inline&mod=article_inline&mod=article_inline

⁶ Board of Governors of the Federal Reserve System. (2020, April 15). *Industrial production and capacity utilization*. https://www.federalreserve.gov/releases/g17/current/g17.pdf?mod=article_inline

state with the fourth highest production of crude oil,⁷ which is currently experiencing a precipitous decline in price and rising oil industry unemployment.

These economics shocks are very likely to lead to a recession, which will result in behavioral health problems beyond those directly related to the pandemic. We estimate or forecast the magnitude of these negative outcomes by first identifying the relationship between them and unemployment, and then applying these estimated relationships to projected levels of unemployment. We will employ three core estimated increases in unemployment. First, we will add 200,000 Oklahomans to the 58,400 unemployed in February 2020, to calculate an unemployment rate of 14%, which is a 10.8 percentage point increase over February's 3.2% rate.⁸ Second, because new claims for unemployment insurance likely underestimate the total number of people unemployed, we also estimate behavioral health outcomes for an unemployment increase of 28.8 percentage points to 32%, a figure based on the number of positions subject to unemployment because of social distancing.⁹

Unemployment and Suicide

Frasquilho et al (2016) summarize much of the academic literature on the relationship between unemployment and suicide, and report that most studies find that as the unemployment rate increases, suicide rates also increase.¹⁰ We use one effect size estimate from the literature (Phillips et al 2014),¹¹ which calculates that for each percentage point increase in unemployment, the suicide rate increases by 1.6%. Using a methodology developed by the Meadows Mental Health Policy Institute,¹² if this relationship holds for any future COVID-19-caused recession, a 10.8 percentage point increase in unemployment would result in an additional 136 deaths from suicide per year of elevated unemployment, over and above what we would have seen if not for the pandemic and its consequences. If unemployment were to rise to 32%, there could be as many as 363 additional suicides.

⁷ U.S. Energy Information Administration. (n.d.). *Rankings: Crude oil production, January 2020 (thousand barrels per day)*. <https://www.eia.gov/state/rankings/#/series/46>

⁸ U.S. Bureau of Labor Statistics. (2020, March 27). *Economy at a glance: Oklahoma*. <https://www.bls.gov/eag/eag.ok.htm>. See <https://kfor.com/health/coronavirus/oklahoma-making-strides-in-unemployment-claims/> for our source of increased unemployment in Oklahoma.

⁹ Faria-e-Castro, M. (2020, March 24). Back-of-the-envelope estimates of next quarter's unemployment rate. Federal Reserve Bank of St. Louis. <https://www.stlouisfed.org/on-the-economy/2020/march/back-envelope-estimates-next-quarters-unemployment-rate>

¹⁰ Frasquilho, D., Matos, M. G., Salonna, F., Guerreiro, D., Storti, C. C., Gaspar, T., & Caldas-de-Almeida, J. M. (2016). Mental health outcomes in times of economic recession: A systematic literature review. *BMC Public Health*, 16. <https://doi.org/10.1186/s12889-016-2720-y>

¹¹ Phillips, J. A., & Nugent, C. N. (2014). Suicide and the Great Recession of 2007–2009: The role of economic factors in the 50 U.S. states. *Social Science & Medicine*, 116:22–31. doi:10.1016/j.socscimed.2014.06.015.

¹² This section uses a forecasting methodology developed by the Meadows Mental Health Policy Institute (MMHPI). Additional details, including national and Texas projections, are available in <https://www.texasstateofmind.org/uploads/whitepapers/COVID-MHSUDIimpacts.pdf>

Effects of Unemployment on Suicidality and Serious Mental Distress

In a recent article in *JAMA Psychiatry*, Reger and colleagues noted the substantial risk during the Covid-19 pandemic not only that deaths from suicide will increase, but that suicidal thoughts and other forms of suicidality also will increase.¹³ Others have voiced similar concerns.¹⁴ For every person who dies from suicide, hundreds more attempt suicide or struggle with suicidal thoughts. For example, for each young person who dies from suicide in a given year, there are over 200 who attempt suicide, over 400 who devise a suicide plan, and more than 1,000 who struggle with suicidal thoughts.¹⁵ Among adults over age 25, the ratios are not as high, but there are still hundreds who experience some form of suicidality for each adult who dies from suicide. All of these statistics are important because when suicidality increases, the need for mental health screening and treatment increases more dramatically than what might be estimated from the projected increase in suicide-related *deaths*, alone.

Based on an unemployment increase of between 10.8 and 28.8 percentage points, we estimate that between 9,400 and 30,000 additional Oklahomans will attempt suicide over a 12-month period, over and above what we would have seen if not for the pandemic and its economic consequences. A much larger number, between 34,000 and 100,000 additional Oklahomans, will experience suicidal ideation.

In a similar vein, we know that economic strains lead to increases in serious mental distress among adults. As economists Anne Case and Angus Deaton recently documented, among American adults experiencing the highest increases in economic strain between 1997 and 2017, serious mental distress was nearly double that of other adults.¹⁶

Expected Increases in Children’s Mental Health Problems

Children are considered a vulnerable population during the pandemic and its associated economic downturn.¹⁷ While we do not yet have specific projections of the *numbers* of new mental health conditions to be expected over the coming year, in this section, we explain why

¹³ Reger, M.A., Stanley, I.H., & Joiner, T.E. (2020). Suicide mortality and coronavirus disease 2019 – A perfect storm? *JAMA Psychiatry*. Published online April 10, 2020. Doi:10.1001/jamapsychiatry.2020.1060

¹⁴ As an example, see “Providing Suicide Care During COVID-19” Retrieved April 2020 from: Zero Suicide in Health and Behavioral Health Care <http://zerosuicide.edc.org/covid-19>

¹⁵ These estimates combine 2017 and 2018 data from two national surveys—the Youth Risk Behavior Surveillance System (YRBSS) and the National Survey on Drug Use and Health (NSDUH)—that include high school age youth and young adults ages 18–25. See also: Han, B., et al. (2017). National trends in the prevalence of suicidal ideation and behavioral among young adults and receipt of mental health care among suicidal young adults. *Journal of the American Academy of Child & Adolescent Psychiatry*, 57(1), 20-27. DOI: <https://doi.org/10.1016/j.jaac.2017.10.013> When adults over the age of 25 are added to the statistics, the number of estimated suicide attempts per suicide death is 70, and the number of people with suicidal ideation is 315 for every one person who dies from suicide.

¹⁶ Case, A., & Deaton, A. (2020). *Deaths of despair*. Princeton University Press.

¹⁷ Golberstein, E., Wen, H., & Miller, B.J. (2020). Coronavirus disease 2019 (COVID-19) and mental health for children and adolescents. *JAMA Pediatrics*. Published online April 14, 2020. doi:10.1001/jamapediatrics.2020.1456

this is so and we review evidence concerning potential percentage increases in mental health problems in past pandemics or economic downturns.

Many children and youth will be directly affected by COVID-19 and most will be affected by measures taken to prevent and control the spread of this disease. The spread of the disease can disrupt the environments where they grow and develop, and the measures to stop the spread of disease can expose children to additional risks.^{18, 19} Children and youth grow and develop within a family system, they have a circle of friends, and they live within a network of community supports. The adverse experiences and ongoing stress and anxiety that may be a result of the COVID-19 pandemic can disrupt these systems and have long-lasting and harmful effects on the mental health and well-being of children, youth, and families.^{20, 21}

Adverse childhood experiences (ACEs) are traumatic or stressful events that take place in childhood and can potentially have enduring and damaging effects on a child's health and well-being. They can affect children and youth of all backgrounds, economic classes, and geographic locations.²² Furthermore, ACEs come in many forms, including parental job loss and economic hardship, abuse and neglect, neighborhood or domestic violence, growing up with a parent who has a mental illness or a substance use disorder, incarceration of a parent, or parental divorce. Nationally, economic hardship is the most commonly reported ACE.²³ A child who has endured ACEs is more likely to experience learning or behavioral issues and to develop a wide range of health problems, including obesity, alcoholism, and drug use, later in life.

The prevalence of anxiety disorders and depression in children and youth is likely to increase as the prevalence of mental health disorders among their caregivers and parents increases and as children and youth experience ACEs such as the loss of a parent, caregiver, or loved one. Economic downturns have also been shown to increase ACEs and to affect the mental health and well-being of children and youth.²⁴

¹⁸ The Alliance for Child Protection in Humanitarian Action. (n.d.). *Guidance note: Protection of children during infectious disease outbreaks.*

https://alliancecpha.org/en/system/tdf/library/attachments/cp_during_ido_guide_0.pdf?file=1&type=node&id=30184

¹⁹ The Alliance for Child Protection in Humanitarian Action. (n.d.).

²⁰ McLaughlin, K. A., Fairbank, J.A., Gruber, M.J., Jones, R.T., Lakoma, M.D., et al. (2009). Serious emotional disturbance among youth exposed to Hurricane Katrina two years post-disaster. *Journal of the American Academy of Child and Adolescent Psychiatry*, 48(11), 1069–1078.

²¹ Kessler, R. C., Galea, S., Gruber, M. J., Sampson, N. A., Ursano, R. J., & Wessely, S. (2008). Trends in mental illness and suicidality after Hurricane Katrina. *Molecular Psychiatry*, 13(4), 374–384.

²² American Academy of Pediatrics. (2014). *Adverse childhood experiences and the lifelong consequences of trauma.* https://www.aap.org/en-us/Documents/ttb_aces_consequences.pdf

²³ Sacks, V., Murphy, D., & Moore, K. (2014, July 30). Research brief—adverse childhood experiences: National and state level prevalence. *Child Trends*. Publication #2014–28.

²⁴ National Conference of State Legislatures (2018, August). Preventing and mitigating the effects of adverse childhood experiences: Health. Retrieved from

https://www.ncsl.org/Portals/1/HTML_LargeReports/ACEs_2018_32691.pdf

The Impact of Anxiety, Stress, and Fear Related to COVID-19

The spread of the COVID-19 disease can significantly impact the composition of the family and affect its short- and long-term functioning, thereby having a negative impact on the social and emotional well-being of children and youth. Parents and caregivers may be unable to provide care because of illness, death, or their own psychological distress, which can exacerbate a child's stress reaction. It is very likely that the impact of the COVID-19 pandemic and the measures and time it takes to contain its spread will expose many children and youth to toxic stress (strong, frequent, or prolonged stress). Children and youth who lack the supportive adult relationships that can act as a buffer to toxic stress are especially at an increased risk for stress-related disease and cognitive impairment well into their adult years.²⁵

- Nearly half of Americans are anxious about the possibility of getting COVID-19 and nearly 40% are anxious about dying or becoming seriously ill from the virus, according to results of a national poll released on March 25, 2020, by the American Psychiatric Association.²⁶
- Studies on the impact of pandemics on children and youth suggest that young people notice and react to stress in parents, caregivers, peers, and the community. They may worry about their future or fear that they or their family will get sick.²⁷ Similar effects have been found in children and youth following a natural disaster: When parents experienced high levels of post-disaster symptoms, their children had high levels as well.²⁸
- Outbreaks of infectious diseases have been shown to have a psychological effect on non-infected community members. Research on the SARS outbreak in Singapore in 2003 suggested that previously healthy community members developed anxiety-related conditions. These community-level impacts affect children.²⁹

Disruption to Family Income

As we have shown, unemployment has serious effects on adults, but mental health outcomes for children and youth in the U.S. also worsen during economic downturns. For example, a large study using data from the 2001–2013 National Health Interview Survey (NHIS), which included

²⁵ Harvard University Center on the Developing Child. (2020). *Toxic stress*.

<https://developingchild.harvard.edu/science/key-concepts/toxic-stress/>

²⁶ Healio Psychiatry. (2020, March 25). *APA poll shows high anxiety among Americans during the COVID-19 pandemic*. <https://www.healio.com/psychiatry/anxiety/news/online/%7B6d481c27-79de-4964-9e8d-f402b04d4ce9%7D/apa-poll-shows-high-anxiety-among-americans-during-covid-19-pandemic>

²⁷ Dym Bartlett, J., Griffin, J., & Thomson, D. (2020, March 19). Resources for supporting children's emotional well-being during the COVID-19 Pandemic. *Child Trends*. <https://www.childtrends.org/publications/resources-for-supporting-childrens-emotional-well-being-during-the-covid-19-pandemic>.

²⁸ Kousky, C. (2016, Spring). The impacts of natural disasters on children. *The Future of Children*, 26,

1. <https://files.eric.ed.gov/fulltext/EJ1101425.pdf>

²⁹ The Alliance for Child Protection in Humanitarian Action. (n.d.).

several years that followed the 2008 financial crisis, examined the degree to which children and youth's mental health improved as the economy improved.³⁰ The researchers found that:

- Even a relatively small percentage increase in the housing price index or a modest decrease in the unemployment rate led to a reduced risk for psychological problems, as measured by a standardized mental health assessment instrument. For example, *a 1.5% reduction in the unemployment rate reduced adolescents' risk for psychological problems by 13%.*
- The researchers found that utilization of special education services for emotional problems also rose as economic conditions worsened.

The authors reported their results with reference to *decreases* in unemployment, but *increases* in the unemployment rate are also associated with comparable increases in children and youth's risk for having mental health problems. If even our low estimate of the increase in unemployment that could occur from COVID-19 is correct (10.8%; see page 4 above) *we could find a substantial increase in the risk of children and youth having mental health problems—potentially as high as 94%.*³¹

The Impact of Social Distancing, Quarantine, and Isolation

Social distancing, quarantine, and isolation are important in reducing the spread of infections and preserving lives. Although these efforts are necessary and potentially life-saving, we must be prepared to address the subsequent negative mental health effects of these practices. Social interaction and play with peers are important to a child's cognitive, linguistic, and social-emotional development. It is not uncommon for adults separated from friends during quarantine and social distancing to feel sad or lonely, and children are also susceptible to these feelings.

- A post-pandemic study found that *30% of children who had been quarantined or experienced isolation met diagnostic criteria for post-traumatic stress disorder (PTSD)* and that their levels of stress were four times as high as children who had not experienced those same disease-containment measures. One in four parents who had been quarantined or socially isolated reported levels of stress that met PTSD diagnostic criteria.^{32, 33}

³⁰ Golberstein, E, Gonzales, G, & Meara, E. (2019). How do economic downturns affect the mental health of children? Evidence from the National Health Interview Survey. *Health Economics*, 28, 955–970. <https://doi.org/10.1002/hec.3885>

³¹ This estimate assumes a 13% *increase* in mental health risk for every 1.5% *increase* in unemployment, but, as we noted, it is based on findings of *decreased* risk for mental health problems associated with *decreases* in unemployment. For this reason, we chose not to estimate *precise numbers* of children/youth who will have new mental health conditions in the coming year.

³² Sprang, G., & Silman M. (2013) Posttraumatic stress disorder in parents and youth after health-related disasters. *Disaster Medicine Public Health Preparedness*, 7: 105–110.

³³ Brooks, S., Webster, R., Smith, L., Woodland, L., Wessely, W., & Greenberg, N. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395 (10277):912–920. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30460-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30460-8/fulltext)

Unemployment, Overdose Deaths, and Addiction

Recession and unemployment increases are also likely to result in increased unintentional drug overdose deaths. Hollingsworth et al³⁴ used state-level data³⁵ in estimating that a one percentage point increase in unemployment was correlated with an increase of 0.33 opioid deaths per 100,000 people.³⁶ Using this relationship as a basis for estimation, we found that an increase in unemployment by 10.8 percentage points would result in an additional 129 opioid overdose deaths in Oklahoma over the next 12 months.³⁷ Our estimation of opioid deaths is proportional to the increase in unemployment, so an increase of 28.8 percentage points in unemployment would result in an additional 345 opioid overdose deaths. Because these estimates are for opioid overdoses only, they underestimate the likely increase in total drug overdose deaths.

Many more unemployed people will experience substance use disorders (SUDs) than will experience death by overdose. Using a methodology developed by the Meadows Mental Health Policy Institute,³⁸ we estimated the increased rate of SUDs using data from the National Survey on Drug Use and Health (NSDUH, 2018).³⁹ About 10 percent (9.9%) of unemployed adults have an SUD involving an illicit drug, while the rate for employed people is only 2.7%. The difference between these rates, 7.2%, is an estimate of the increased prevalence of SUDs in people who are unemployed. Based on this difference, and unemployment increases of 10.8 and 28.8 percentage points:

- An unemployment rate increase of 10.8 percentage points would result in an additional 14,000 new cases of SUDs in Oklahoma over the next 12 months.⁴⁰
- An unemployment increase of 28.8 percentage points would result in an estimated 38,000 additional illicit drug use disorders in Oklahoma over a 12-month period.

³⁴ Hollingsworth, A., Ruhm, C. J., & Simon, K. (2017). *Macroeconomic conditions and opioid abuse working paper* [Working Paper No. 23192]. National Bureau of Economic Research.

³⁵ Hollingsworth et al. (cited above) found a smaller increase using county-level data.

³⁶ The MMHPI report cited above uses a different source to estimate all overdose deaths, and a slightly larger effect size of 0.334 overdose deaths per 100,000 people. Consistent with Hollingsworth, most of the reported overdose deaths are related to opioids. Brown, E., & Wehby, G. L. (2019). Economic conditions and drug and opioid overdose deaths. *Medical Care Research and Review*, 76(4), 462–477. <https://doi.org/10.1177/1077558717722592>

³⁷ The age range included in the statistical analysis included people ages six (6) years and older. However, the vast majority of these deaths would be among the adult population, although some of the deaths would likely include adolescents.

³⁸ This section also uses a forecasting methodology developed by MMHPI. Additional details, including national and Texas projections, are available in <https://www.texasstateofmind.org/uploads/whitepapers/COVID-MHSUDImpacts.pdf>

³⁹ Substance Abuse and Mental Health Services Administration. (2019). *Results from the 2018 National Survey on Drug Use and Health: Detailed tables* [Difference in unemployed and employed rate, NSDUH, 2018, table 5.3B illicit drug use disorder in past year among persons aged 12 or older, by age group and demographic characteristics percentages, 2017 and 2018]. Center for Behavioral Health Statistics and Quality. <https://www.samhsa.gov/data/>

⁴⁰ Although it is not possible to offer a precise timeline at this point, the economic strain Oklahoma will face from COVID-19 will likely occur for longer than 12 months.

This estimation is subject to the criticism that instead of unemployment contributing to increases in SUD rates, increased SUD rates contribute to unemployment for some unemployed people. If this were the case, the prevalence of SUDs for unemployed people would *decrease* during periods of recession, since more people would become unemployed for reasons other than SUDs, which would decrease the prevalence rate of SUDs in the population of unemployed people. Compton⁴¹ evaluated this hypothesis and found that the relationship between unemployment and SUDs did not change during the 2008 recession as compared to prior or subsequent periods, indicating that, during a recession, newly unemployed people likely will have SUD prevalence rates similar to those who are unemployed during periods of economic growth. In this case, it is plausible to estimate increased prevalence of SUDs by comparing rates in the employed and unemployed populations.

Alcohol use has a more complex relationship to unemployment than does illicit drug use. Bor et al⁴² found that during the 2008 recession, as compared to the periods before and after, the number of people in the U.S. who consumed alcohol decreased by about 880,000 per year. However, the number who engaged in binge drinking—the number who were *abusing* alcohol in that particular way—increased by about 770,000 per year.

Using NSDUH data on the difference in prevalence of alcohol abuse or dependence between employed (7.0%) and unemployed people (9.3%),⁴³ an increase in the unemployment rate by 10.8 percentage points would result in 4,585 more people with an alcohol use disorder in Oklahoma over a 12-month period. An increase in unemployment of 28.8 percentage points would result in 12,226 additional cases of alcohol abuse or dependence.

Behavioral Health Effects on Petroleum Extraction Workers

During the third quarter of 2019, 45,872 people were employed in Oklahoma in oil and gas extraction enterprises (subsectors 211 & 213).⁴⁴ This sector has experienced a precipitous drop in price, with negative spot market prices and lack of capacity to store unwanted oil.⁴⁵ This is resulting in existing wells being shut down, a lack of investment in new capacity, and oil field worker layoffs.

⁴¹ Compton, W. M., Gfroerer, J., Conway, K. P., & Finger, M. S. (2014). Unemployment and substance outcomes in the United States 2002–2010. *Drug and Alcohol Dependence*, 142, 350–353.

⁴² Bor, J., Basu, S., Coutts, A., McKee, M., & Stuckler, D. (2013). Alcohol use during the Great Recession of 2008–2009. *Alcohol and Alcoholism*, 48(3), 343–348. <https://doi.org/10.1093/alcalc/agt002>

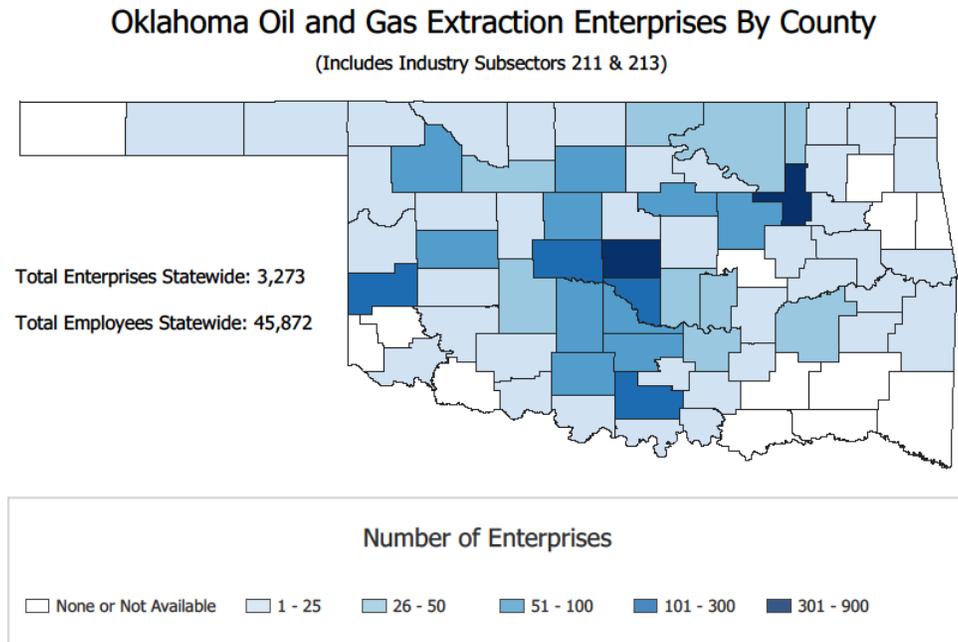
⁴³ Substance Abuse and Mental Health Services Administration. (2019).

⁴⁴ Bureau of Labor Statistics. (2020, April 17). *Industries at a glance, oil and gas extraction: NAICS 211*. <https://www.bls.gov/iag/tgs/iag211.htm>

⁴⁵ Dezember, R. (2020, April 21). U.S. oil costs less than zero after a sharp Monday selloff. *The Wall Street Journal*. https://www.wsj.com/articles/why-oil-is-11-a-barrel-now-but-three-times-that-in-autumn-11587392745?mod=hp_lead_pos1

Assuming a 50% unemployment rate, and the same relationship between unemployment and behavioral health issues that we used with the broader economy, we project that economic threats to the petroleum industry in Oklahoma will lead to five additional suicides, eight additional overdose deaths, 1,651 additional cases of SUDs involving illicit drugs, and 528 additional cases of alcohol abuse or dependence annually. These are yearly increases based on the assumption of a 50% unemployment rate among these workers. Although the numbers cited above may not seem large to some, they suggest the importance of targeting mental health screening and treatment resources to the geographical areas of Oklahoma that would be most affected.

Because oil and gas production are not uniformly spread across Oklahoma, petroleum-related unemployment and the resulting increase in behavioral health needs will be concentrated in some counties. In the map below, we display the variation in the number of oil and gas extraction enterprises in Oklahoma, by county.



Conclusion

The COVID-19 pandemic will result in direct loss of life from the disease itself. Credible sources have estimated that the total number of Oklahoma deaths from the disease could range from 1,150⁴⁶ to tens of thousands.⁴⁷ In order to estimate the full consequences of the pandemic and the resulting strain on medical services, it is also important to estimate the magnitude of lives

⁴⁶ Institute for Health Metrics and Evaluation. (2020). *COVID-19 projections: Oklahoma*. Retrieved March 30, 2020 <https://COVID-19.healthdata.org/projections>

⁴⁷ Oklahoma Governor’s Office

lost or otherwise negatively affected from an increase in behavioral health conditions that result from the pandemic and its economic fallout.

As Oklahoma policy makers weigh their responses to the COVID-19 pandemic, we recommend that they consider the estimate of at least 136 additional suicide deaths and 129 opioid deaths per year of 10.8 percentage points of elevated unemployment, and many times that number of increased cases of substance use disorders and serious mental distress.

The significance of these estimates for behavioral health planning is that Oklahoma will need to examine ways in which it can increase appropriate, early detection of behavioral health problems and promote adequate treatment and prevention strategies. These data show Oklahoma would benefit from increased focus on this issue, possibly including a comprehensive behavioral health response with strategies developed by appropriate behavioral health leaders and experts. From a legislative policy perspective, we further recommend:

- Maximizing funding for mental health and substance abuse services through state appropriations and federal funding options;
- Promoting parity in mental health and physical health care;
- Avoiding excessive disruptions in the administration of the Oklahoma Department of Mental Health and Substance Abuse Services that would distract from providing services during a statewide mental health crisis;
- Supporting the Oklahoma Prevention and Needs Assessment in schools, which will allow them to identify emerging needs and target resources to address them; and
- Promoting the integration of behavioral health services into schools, primary health care, and emergency health care settings.

These recommendations are not intended as a comprehensive state response to behavioral health challenges caused by COVID-19. Rather, they are a legislatively-focused starting point for understanding the scope of response that likely will be needed. Failure to address COVID-19's behavioral health consequences will mean that, over time, many more Oklahomans will suffer or die from behavioral health disorders or be incapable of succeeding in school or contributing effectively to the workforce.

Who We Are

Healthy Minds Policy Initiative is a nonpartisan, dedicated team of policy and mental health experts who collaborate with state and local leaders to develop and advance innovative, data-informed policies and capacity-building approaches in the prevention and treatment of mental illness and substance use disorders for Oklahomans. Funded by The Anne and Henry Zarrow Foundation, the initiative launched in 2019.