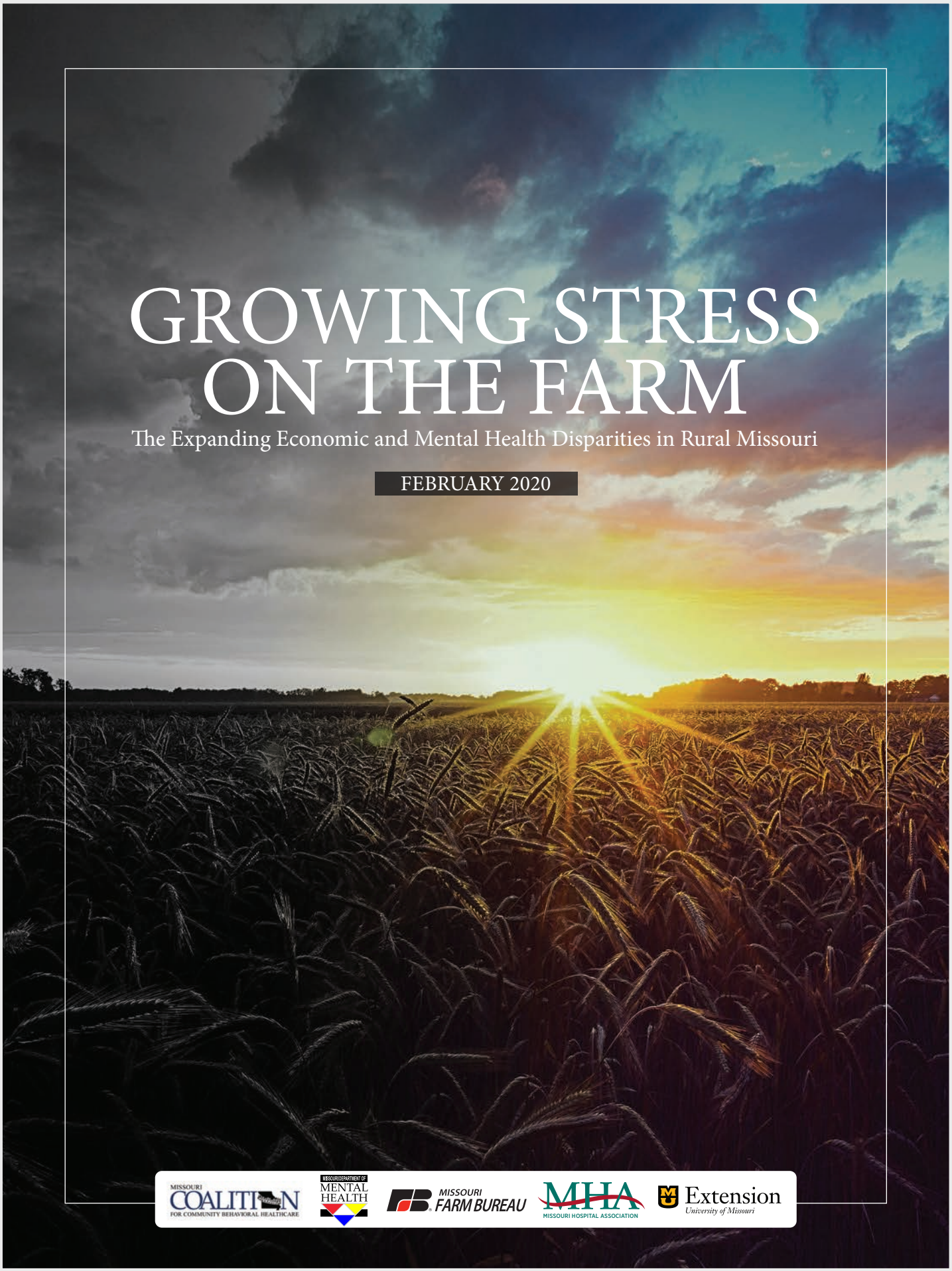


GROWING STRESS ON THE FARM

The Expanding Economic and Mental Health Disparities in Rural Missouri

FEBRUARY 2020

Missouri Coalition for Community Behavioral Healthcare · Missouri Department of Mental Health · Missouri Farm Bureau · MHA Missouri Hospital Association · MU Extension, University of Missouri

WARNING SIGNS OF SUICIDE

> Talking about wanting to die

> Looking for a way to kill oneself

> Talking about feeling hopeless or having no purpose

> Talking about feeling trapped or in unbearable pain

> Talking about being a burden to others

> Increasing the use of alcohol or drugs

> Acting anxious, agitated or recklessly

> Sleeping too little or too much

> Withdrawing or feeling isolated

> Showing rage or talking about seeking revenge

> Displaying extreme mood swings

The more of these signs a person shows, the greater the risk. Warning signs are associated with suicide but may not be what causes suicide.

WHAT TO DO

If someone you know exhibits warning signs of suicide:

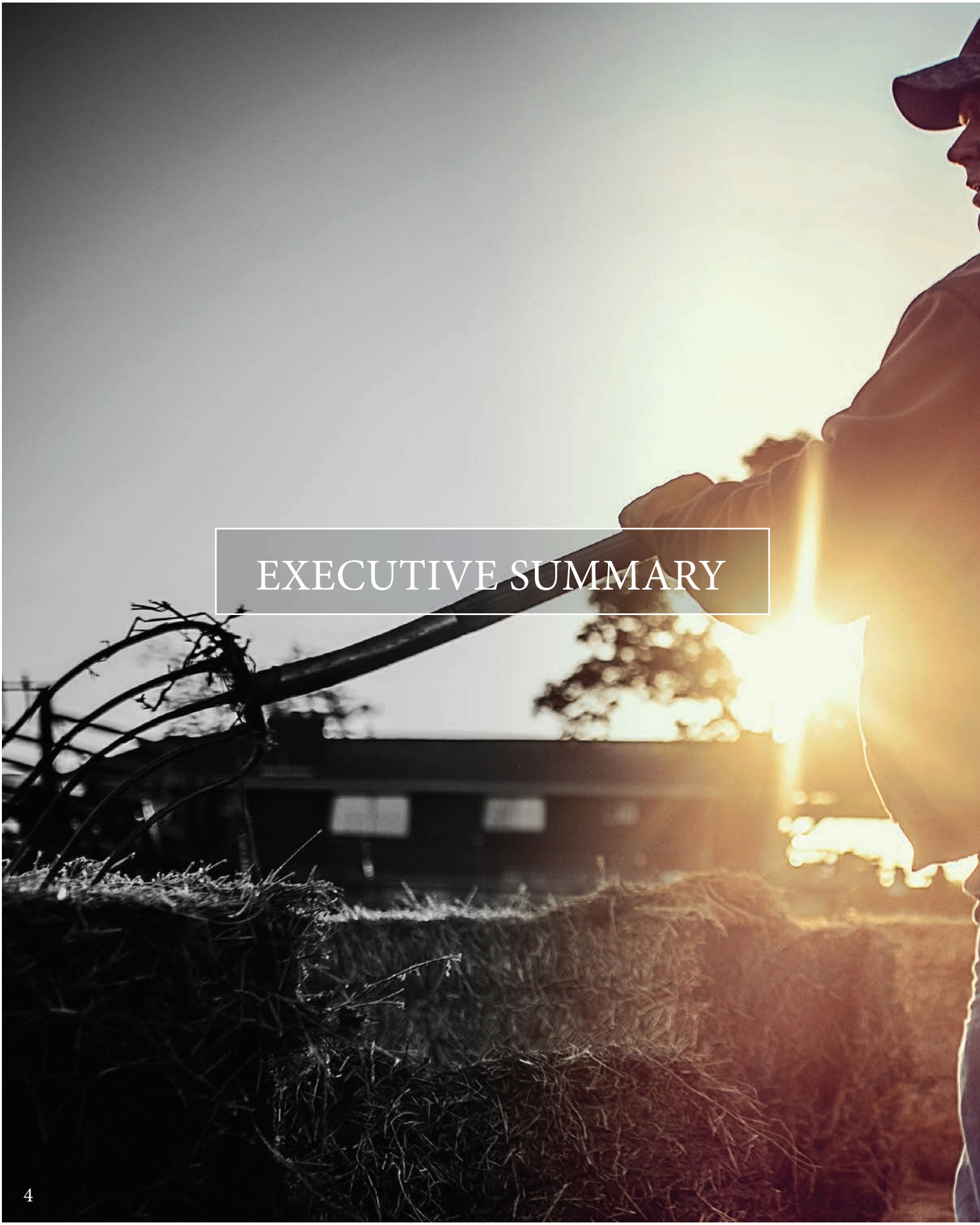
> Do not leave the person alone

> Remove any firearms, alcohol, drugs or sharp objects that could be used in a suicide attempt

> Call the U.S. National Suicide Prevention Lifeline at 800-273-TALK (8255)

> Take the person to an emergency room, or seek help from a medical or mental health professional

TABLE OF CONTENTS



EXECUTIVE SUMMARY

The mental health crisis in rural Missouri is more challenging than in urban communities, but may be particularly severe for the agricultural community. Recent studies, media coverage and congressional action suggest the unique set of external challenges faced by farmers and ranchers are resulting in extremely adverse mental health outcomes in agricultural communities. Contributing to mental health challenges on the farm, recent extreme weather events, economic pressure and foreign trade policies have combined to produce a series of lean years for agricultural producers not seen since the farm crisis of the 1980s.

While the U.S. economy has experienced quarter-over-quarter growth since the end of the recession in 2008-2009, the farm sector has experienced six periods of recession.

Missouri has nearly 16,000 fewer family farms today compared to 20 years ago, and bankruptcies are on the rise. Bushel prices have fallen by 47% since 2012, while farm income and credit conditions have deteriorated.

Pervasive stigma and geographic barriers to accessing mental health care can prevent all who seek behavioral health services in rural Missouri from seeking help for stress, anxiety and depression. Each of Missouri's 99 rural counties is a designated Mental Health Professional Shortage Area, and with just 3.7% of the recommended supply filled, Missouri faces the largest shortage of behavioral health care providers in the U.S.

Suicide is growing at an alarming rate in rural Missouri. Between 2003 and 2017, the suicide rate among rural Missourians grew by 78%, and throughout the last decade, their hospital emergency department visits for suicide attempt or ideation increased 177%. Rural men between the ages of 35 and 44 have triple the statewide suicide mortality rate.

Missouri is home to multiple innovative programs designed to improve mental health access and outcomes for rural residents, but additional investments are needed.

Jason Medows,
Pharm.D.,
Founder of Ag State of Mind,
Rancher and Pharmacist

My name is Jason Medows, and I was born and raised in Crawford County, Mo., on a cow-calf operation. I grew up passively involved in agriculture. I would do my part in helping my dad feed cows in the winter and put up hay in the summer. I also would show animals at the county fair in the summertime. However, in my formative years, agriculture was never something I was truly passionate about. I was more interested in sports and girls. :)

In 2002, I graduated from high school and moved to St. Louis to attend pharmacy school. Ironically (or maybe not), it was this move to the city that made me realize how much I enjoyed life in the country. Soon after I began my second year of college, my dad encouraged me to secure a first-time farmer loan to buy my first set of cows. My dad fed the cows during the week in the winter while I was at school, and in exchange, I would come home each weekend and school break to help him full-time. Needless to say, I was involved in year-round education of some sort.

I graduated pharmacy school in 2008 and came directly back home to the farm in Crawford County. I began working as a pharmacist at what was then Phelps County Regional Medical Center in Rolla, Mo. Soon after moving home, I met my wife-to-be Keri, a recently graduated R.N. Now, close to 12 years later, we have a home with four boys – Levi, Carter, Cooper and Boone – and a cow-calf operation of our own.

After graduating college and returning to the farm, I got an up close and personal view of the stresses involved in agriculture. I believe my mom and dad did a very good job of insulating me from these types of issues growing up, so I did not expect this. I found myself struggling with the management of finances, cattle, a town job, and my new role as a husband and father. I bought a farm in 2014 when cattle prices were at their peak, and soon after, the bottom dropped out. This

▲ Above: The Medows family at home on their farm northwest of Cuba, Mo., in 2019. Left to Right: Cooper, Levi, Boone, Keri, Duke, Jason and Carter Medows. Photo credit, Che Headman.

caused even greater stress and anxiety for me, and it manifested in me not showing up and being the best husband, father, pharmacist and cattleman I could be. I spent the better part of five years coming to grips with my anxiety and depression. I found out that the only way to get better was to approach it head on.

I've done everything from taking anti-anxiety medications and seeking behavioral therapy to practicing meditation and increasing my exercise regimen. All of these things have combined to make me a better version of myself. This isn't to say that there are not times that I don't still struggle with anxiety. There are still times that it can get pretty dark for me. However, I've found that utilizing all of these tools has helped me climb out of the depths before it gets severe.

My advice to anyone struggling is to reach out. There are so many people who are willing to help. Just a few weeks ago, I was struggling myself. I reached out to a few Twitter friends and let them know what I was going through. The response I received was overwhelmingly positive. I got messages from so many different people telling me they know where I've been and were willing to walk me through the darkness. Chances are, whatever you're going through, someone else has been there, too. Whether it be a close friend, a pastor, a counselor or someone on the internet, there are people there to help. You just have to be willing to ask!" *See page 25 for more information on Jason and his outreach to farmers and ranchers struggling with mental health.*

BACKGROUND

Farmers can face seemingly insurmountable challenges in fulfilling their missions of producing food and fiber. Driven by a strong sense of duty to the multigenerational legacy of the farm, farmers face external pressures that are beyond their control. Successful harvests, herds and continuation of that legacy depend largely on natural and manmade conditions that yield bumper or lean years. Most recently, extreme weather events, economic pressure and foreign trade policies have combined to produce a series of lean years not seen since the farm crisis of the 1980s.[i] These factors have resulted in unsustainably low commodity prices,[ii] a constrained farm credit market,[iii] soaring farm bankruptcies[iv] and a growing mental health crisis in agricultural communities.[v]

The urban-rural divide in life expectancy diverged sharply in the U.S. during the 1980s and continues to expand today.[vi] Driven by what have come to be known as "deaths of despair," life expectancy for rural Americans is more than two years shorter than their urban counterparts,[vii] largely due to higher rates of drug overdoses, alcohol-related diseases and suicide.[viii] As a leading cause of death in rural America, suicide has a particularly devastating effect on farm families.[ix]

It is a well-established fact that in Missouri, rural residents have significantly higher rates of depression, experience increased difficulty in receiving mental health care and have higher rates of deaths from suicide.[x] However, experts suggest other stressors unique to the agricultural community create rural mental health disparities that are even more profound for farmers.

At its core, farming is both a profession and a cultural identity steeped in strength of character, self-reliance and independence that can make it difficult to first recognize and then seek help when needed. In addition, farming is a stressful business that typically requires long hours in predominantly isolated working conditions. Farmers tend to live in communities where access to mental health care is limited by distance, stigma or cost due to insurance status — farm owners tend to be self-employed and carry limited or no health insurance coverage. Finally, the success of their business is not solely dependent on their individual talent or work ethic; success in farming is significantly influenced by external factors.[xi] Compounding all of these factors, farmers tend to have unhindered access to lethal means.[ix]

The aim of this report is to elevate awareness of disparities in economic factors for farmers and mental health outcomes for rural Missourians. Doing so acknowledges the scope of challenges facing Missouri's farmers and confirms the struggle is not unique to any single individual. The report also presents policy opportunities designed to expand access to mental health services, reduce stigma and improve mental health outcomes for rural Missourians.

The healthiest bodies can be impacted by physical illnesses like cancer. Similarly, the healthiest minds can be affected by mental illnesses like anxiety, stress, depression, and thoughts of hopelessness or even suicide. There is no difference, yet societal misconceptions can perceive a cancer diagnosis and remission as a badge of honor, while mental health diagnoses can be perceived as a failure of character.

This perception is beginning to change. Mental health is no more controllable than physical health, flooding, drought or daily commodities market reports. It's crucially important to discuss mental health openly and to seek help when needed. As the data presented in this report confirm, individuals working to improve their mental health are far from alone in rural Missouri.

DATA AND ANALYSIS:

Multiple sources of data were used to evaluate upstream factors contributing to downstream mental health outcomes for agricultural communities and rural populations in Missouri. Economic data on prices and overall output for the farm sector compared to all private industries were gathered from the U.S. Bureau of Economic Analysis,[xii] the U.S. Bureau of Labor Statistics[xiii] and the U.S. Department of Agriculture.[xiv] Farm finance data were gathered from the Federal Reserve Bank of Kansas City's Agricultural Finance Databook.[xv]

Data on farmers' perceptions of natural events influencing crop conditions were gathered from the Federal Reserve Bank of Kansas City's survey of farm borrowers[xvi] and the U.S. Department of Agriculture's National Agricultural Statistics Service and Census of Agriculture.[xiv]

Data on access to psychologists and psychiatrists at the county level in Missouri were gathered from Nielsen Pop Facts Premier data, and Mental Health Professional Shortage Area counties and clinic locations in Missouri were taken from the U.S. Health Resources and Services Administration's HPSA Find Database.[xvii]

Mental health outcomes data on suicide rates for rural and nonrural Missourians were gathered from the U.S. Centers for Disease Control and Prevention's WONDER database,[xviii] and hospital utilization data for mental health, substance use disorder and suicidality were gathered from the Hospital Industry Data Institute's inpatient and outpatient hospital discharge databases.

Categorical definitions of rural and nonrural counties were provided by the Missouri Department of Health and Senior Services' Office of Rural Health and Primary Care.[x]

Economic and Financial Stressors for the Farm Community:

The farm sector has faced a very different trajectory of recovery compared to the broader economy since the great recession of 2008. During that time, quarterly annualized gross domestic product for the farm sector fell from $130 billion in the first quarter of 2008 to $98 billion in the first and second quarters of 2009, a 25% decrease. During the same period, quarterly annualized GDP for all private industries declined by just 3% ($12.7 trillion in the first quarter of 2008 to $12.3 trillion in the second quarter of 2009). During the first four years of recovery, farm sector GDP grew by 98%, outpacing the larger economy by more than 80 percentage points and reaching a high mark of $194 billion during the second quarter of 2013 (Figure 1).

Since that time, GDP for the farm sector fell 34%, while the larger private sector economy experienced 30% growth. Since the end of the great recession in the second quarter of 2009, private sector GDP experienced growth during 39 out of 40 quarters, while the farm sector has seen 22 quarters of contraction. This included six periods of consecutive quarterly declines, a commonly used benchmark to identify economic recession. Overall, farm sector GDP has returned to its prerecession levels at $128 billion during the second quarter of 2019, while the private sector grew more than $6 trillion in total value added.

> At a time when the overall U.S. economy continues to boom, the U.S. agricultural sector has continued to struggle amid falling farm income and deteriorating agricultural credit conditions. Over the past five years, U.S. economic growth has continued to strengthen. The growth in U.S. real gross domestic product (GDP) has averaged 2.4 percent per quarter since 2013. Down on the farm, though, conditions have been far from robust. From 2013 to 2017, net farm income — considered to be a broad measure of farm profitability — fell 39 percent, from $123.8 billion to $75.5 billion."
>
> — A Tale of Two Economies:
> Farmers Struggle Despite Strong U.S. Economy,
> St. Louis Federal Reserve Bank[ii]

Figure 1: U.S. Gross Domestic Product for All Private Industries and the Farm Sector, 2015 Q1 - 2019 Q2

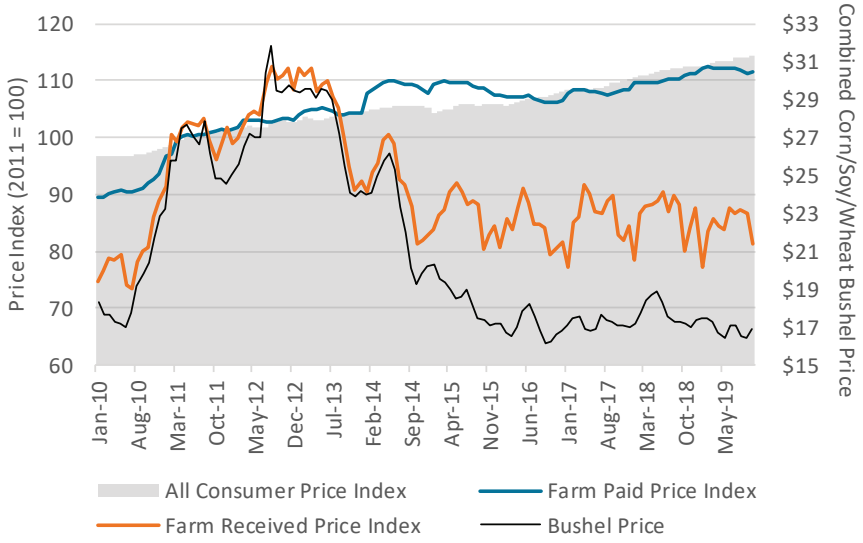
Source: U.S. Bureau of Economic Analysis

Dubbed "A Tale of Two Economies" by the Federal Reserve, several factors have contributed to the lagging recovery of the farm sector. In 2012, a severe drought, coupled with strong domestic and foreign demand, led to peaks in crop prices, net farm income and profitability in 2013. The following years saw favorable growing conditions, increased acres harvested and higher yields, which were combined with domestic trade policies that were met with retaliatory tariffs from China and North American trade partners to produce near record-level stockpiles of crops and livestock.[ii] Particularly impactful for crop producers in the Midwest, these conditions resulted in extremely low bushel prices, a 40% reduction in net farm income since 2013 and a squeezed farm credit market at a time when family farms are forced to rely on lenders for solvency.[ii] Compounded by poor crop conditions in many areas of the state during 2018 and 2019, Missouri farmers have experienced the sharpest declines in net farm income in the Midwest.[iii]

During the 2012 drought, combined corn, soybean and wheat bushel prices peaked at nearly $32 in August of that year. By October 2019, combined bushel prices fell to $16.89, a 47% reduction. During the same period, production prices paid by farmers increased 8.5%, slightly lower than all consumer prices; however, prices received by farmers dropped by 28% (Figure 2).

Figure 2:

Monthly Prices Received and Paid by Crop Farmers in the U.S. Compared to all Consumer Prices, 2010 - 2019



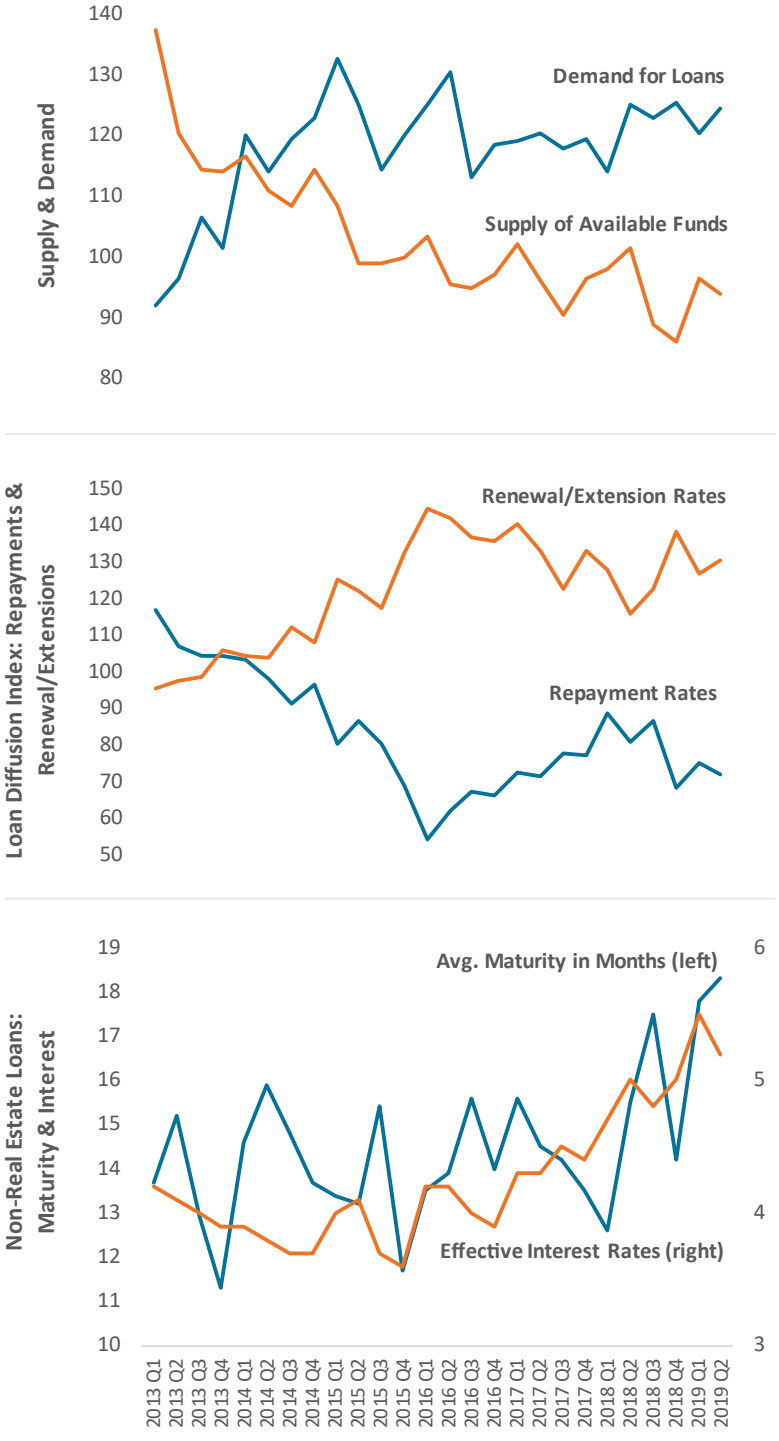
Sources: U.S. Department of Agriculture, National Agricultural Statistics Service and U.S. Bureau of Labor Statistics, CPI for all Urban Consumers

These conditions also help explain the tightening of the farm credit market during the same time period. Deteriorating farm income has resulted in increased demand for farm loans since 2013. At the same time, income losses also resulted in decreased loan repayment rates, and increased requests for loan renewals or extensions, which have reduced the supply of available funds and farm lenders' willingness to accept the associated risk. As a result, the average maturity of farm loans and effective interest rates were at or near six-year high marks during 2019 (Figure 3).

Natural Stressors for the Farm Community:

Extreme weather events and more frequent flooding have exacerbated the financial distress for many of Missouri's farmers in recent years. During the previous decade, Missouri experienced major flooding events in 2010, 2011, winter of 2015-16, 2017, fall of 2018, and 2019. Spring flooding in 2019 resulted in more than 100 topped or breached levees, and 1.4 million prevented plant acres in Missouri. In addition, weather prognosticators are predicting major flooding in Missouri for the spring of 2020 due to current river levels, soil saturation, and snowpack in the northern reaches of the Missouri and Mississippi River basins.[xx]

Figure 3: Farm Credit Characteristics Reported by Banks in the St. Louis and Kansas City Federal Reserve Districts, 2013 Q1 - 2019 Q2



Source: Kansas City Federal Reserve Bank, Agricultural Finance Databook, Oct 17, 2019. Bankers responded by indicating whether conditions during the current quarter were higher than, lower than or the same as in the year earlier period. Diffusion indices are computed by subtracting the percentage of bankers who responded "lower" from the percentage who responded "higher" and adding 100.

“Those of us in the mental health profession know we will likely never have enough mental health professionals to provide the services with the volume of those who need the care. As a result, many of these individuals end up getting their care from family medicine or primary care providers, or in some cases, from pediatricians. At times, these providers may see patients that are beyond their expertise or skillset, yet getting them referred or making an appointment with a psychiatrist is next to impossible. That’s why technology-enabled peer-to-peer programs like Show-Me ECHO and MO-CPAP are so critical. They enable providers without behavioral health training to consult directly with colleagues in behavioral medicine to ensure the best care for their patients.”

– Alan Greimann,
Executive Vice President,
Compass Health Network,
and President and CEO,
Royal Oaks Hospital

> “The land means everything to farmers. Ownership of a family farm is the triumphant result of the struggles of multiple generations of immigrants to America. Losing the family farm is the ultimate loss...farming has always been a stressful occupation because many of the factors that affect agricultural production are largely beyond the control of the producers, such as weather, disease, government policy and changing supply/demand. The emotional well-being of family farmers and ranchers is intimately intertwined with these changes.”
>
> – Behavioral Health Care of the Agricultural Population: A Brief History, Michael R. Rossman[xxii]

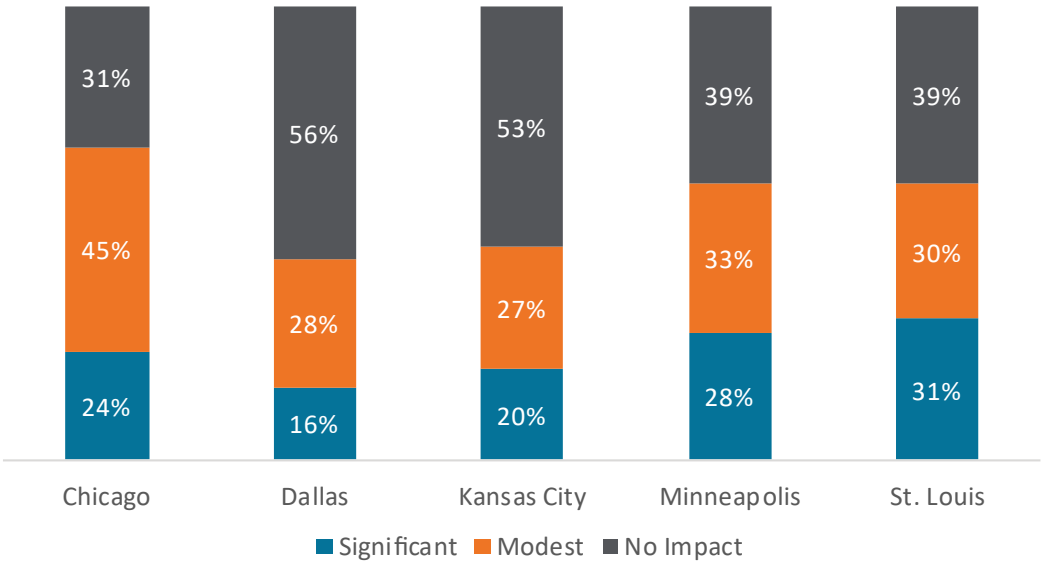
During the first six months of 2019, more than half of farm borrowers in the St. Louis Federal Reserve Bank District reported that their operations had been modestly to significantly impacted by extreme weather and flooding events. Less than 40% of farms in the Chicago, Minneapolis and St. Louis Districts reported being unimpacted by weather events during the first half of 2019 (Figure 4).

Today, Missouri is home to nearly 16,000 fewer family farms compared to two decades ago. A major consequence of the extreme natural and manmade pressures faced by farm operations, family farms are increasingly swallowed up by consolidation and bankruptcy. According to the Census of Agriculture, there were 110,986 farms operating in Missouri in 1997. By 2017, the number had fallen to 95,320 — a 14% decline and 15,666 families that were unable to maintain the legacy of their farms.[xxi]

Access to Mental Health Care in Rural Missouri:

Compounding issues related to stress and stigma in the farming community are geographic barriers to accessing mental health care in rural Missouri. The prevalence of mental health needs among rural residents is similar to their urban counterparts, yet rural populations utilize behavioral health care less frequently due to several barriers unique to country living: shortages of behavioral health providers and specialty care, higher rates of uninsured or underinsured, less anonymity, and cultural perceptions of mental health.[xxiii]

Figure 4: Percent of Farm Borrowers Affected by Extreme Weather and Flooding Events by Federal Reserve Bank Districts, January-June 2019



Source: Kansas City Federal Reserve Bank, 2019

“Within a mile of Ray County Memorial Hospital’s emergency room doors, we have an Orscheln Farm and Home; a Walmart Supercenter; a lumber yard; the high school, middle school and elementary; an animal shelter; 18 holes of golf; and around 50 fields and pastures, but there isn’t a single practicing psychiatrist or psychologist in the entire county. As a result, we’ve been seeing an increasing number of psychiatric patients coming to our emergency room for care.

As a critical access hospital, we have limited resources to provide these patients the care they need. Those limitations can put added strain on the patients and the hospital staff. To ensure our behavioral health patients’ safety, we also provide one-on-one care the entire time they are in the ER, until our assessment team determines whether the patient should be transferred, admitted or discharged home with a safety plan and follow-up community-based care. During the first nine months of 2019, we spent close to 500 hours on one-on-one care for behavioral health patients. This is far from ideal for the hospital or the patients; it took us 88 hours of one-on-one time with a recent patient before we were able to find an open psychiatric bed for transfer.

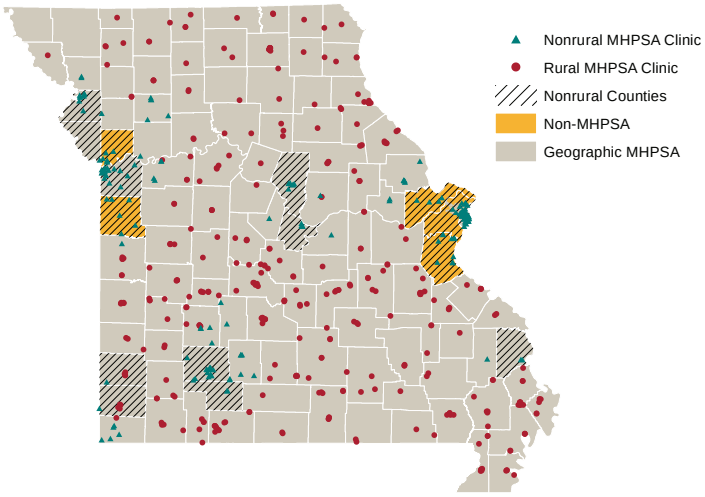
We’re also alarmed by the growing number of patients with suicide attempts and ideations. We’re able to keep them safe and deescalate the crisis, and even develop safety plans before discharge. A better system is needed. The health care system fails mental health patients every single day. Emergency departments are not designed to be the safety net for the growing number of patients with suicidal attempts or ideations. Collaboration at the state and federal levels for improved standards of care for mental health should be a top priority. These patients have to know that suicide is never the answer, but they need to have help available to them when needed. Aside from ensuring their near-term safety, it can be counterproductive for behavioral health patients to sit in an ED for days waiting for appropriate care to open up. The experience could make them less inclined to come back during their next crisis. And as a society, we need to view mental health like any other medical condition without any stigma associated with it.”

– Stacy Davidson, R.N., Emergency Department Supervisor, Ray County Memorial Hospital, Richmond, Mo.

> “Unfortunately, barriers to access due to stigma are common in rural Missouri. Farmers are less likely to seek out mental health care even if they do live near a behavioral health clinic. Everyone in town knows what your truck looks like, and they put two and two together when it’s parked out front.”
>
> – Brent McGinty, President and CEO,
> Missouri Coalition for Community Behavioral Healthcare

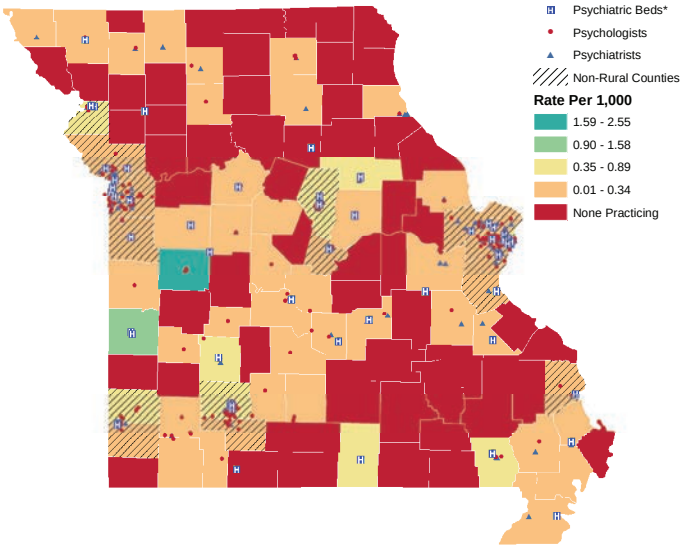
According to HRSA, every one of Missouri’s 99 rural counties has a shortage of mental health professionals (Figure 5). In addition, there are 57 rural counties in Missouri without a licensed psychologist or psychiatrist, leaving large swaths of mental health deserts throughout rural areas of the state (Figure 6). These geographic barriers to access result in many rural populations forgoing care altogether or depending on hospital emergency rooms and other nontraditional services for their behavioral health needs.[xxiii] Farming households are disproportionately affected by shortages of mental health professionals in rural areas, with farmers being three times as likely to live in a Mental Health HPSA.[xxiv] With 266 Mental Health HPSAs in 2019, Missouri has the fifth-highest number of designated Mental Health HPSAs in the country. And with just 3.7% of the need for mental health professionals met in the state, Missouri has the largest shortage in the country.[xxv]

Figure 5: Mental Health Professional Shortage Areas and Clinics in Missouri, 2019



Sources: U.S. Health Resources & Services Administration, HPSA Find Database, and Missouri Department of Health and Senior Services, Bureau of Health Care Analysis and Data Dissemination

Figure 6: Psychologists & Psychiatrists Per 1,000 Residents by County in Missouri



Sources: 2015 Neilsen Population Data; 2017 Annual Licensing Survey; MHA Membership Database.
** Hospitals with geriatric, adult and/or pediatric psychiatric care beds.*

Disparate Mental Health Outcomes for Rural Missourians:

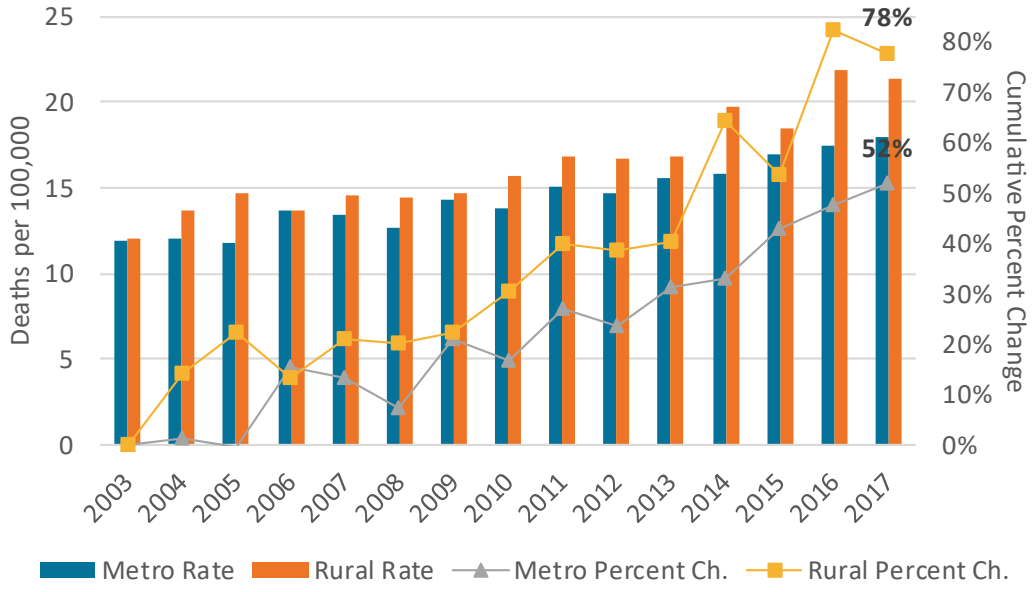
The culmination of these factors is resulting in a growing mental health crisis in rural Missouri. While information on occupation is not available in national datasets on suicide-related mortality or in hospital utilization data, recent studies, media coverage and congressional action suggest the crisis is particularly severe for farmers and agricultural workers. However, due to limitations on available data, the following analysis is based on the rural population in Missouri, of which the majority of the state's farmers and agricultural workers are a subgroup.

Rural Suicide Deaths in Missouri:

Between 2003 and 2017 — the most recent 15 years of available data — 3,780 rural Missourians died by suicide. In 2003, Missouri's 180 rural suicides marked an age-adjusted rate of 12 deaths per 100,000 residents, slightly higher than the nonrural rate of 11.9. However, in 2004, a significant gap in the rate of suicides for rural Missourians emerged that persists today. By 2017, the rural rate of suicide deaths had increased by 78% to 21.3 per 100,000, while the nonrural rate increased 52% to 18.0 per 100,000 (Figure 7). Combined, the latest data from CDC signal the rate of rural suicide deaths in Missouri is 18% higher than the nonrural rate — and it's growing 50% faster.

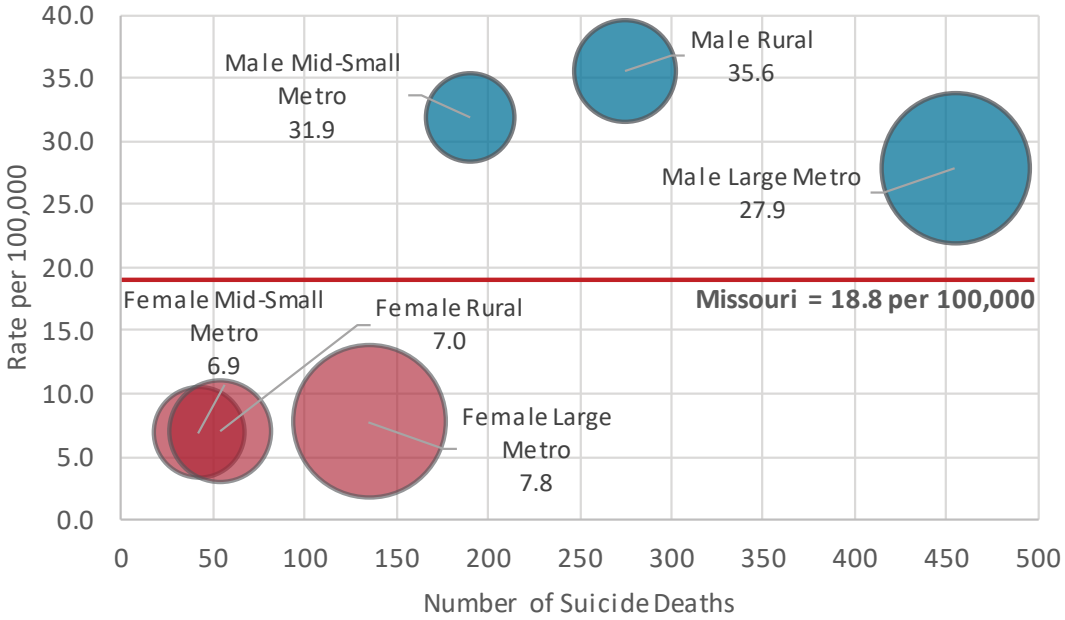
Suicide deaths in Missouri are not evenly distributed across demographic subgroups. Aside from imbalances for the rural population as a whole, significant age and gender disparities in suicide also exist. Regardless of where they live, males in Missouri have significantly higher rates of death from suicide compared to females. Stratified by gender and urbanization, rural males have the highest rate of suicide deaths in the state at 35.6 per 100,000 residents (Figure 8). This is nearly double the statewide rate of 18.8 and more than five times the rate of suicide deaths for rural females. During 2017, there were 329 suicide deaths in rural Missouri, of which males accounted for 84%.

Figure 7: Suicide Deaths in Missouri per 100,000 for Rural and Nonrural Residents, 2003-2017



Source: U.S. Centers for Disease Control and Prevention WONDER Data

Figure 8: 2017 Suicide Deaths and Rates in Missouri by Gender and Urbanization (bubble size reflects population size)

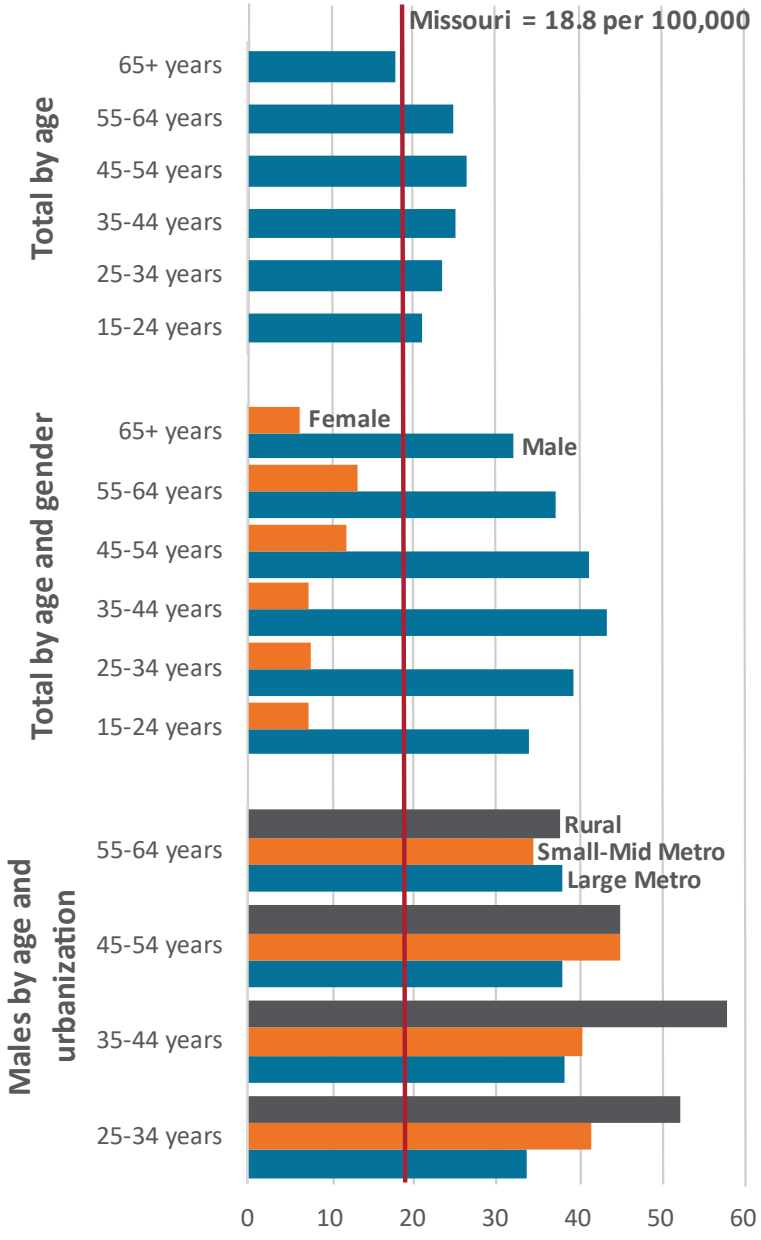


Source: U.S. Centers for Disease Control and Prevention WONDER Data

“Given the limited formal behavioral health services in rural areas, rural consumers are most likely to access services through primary care providers (including Rural Health Clinics and Federally Qualified Health Centers); general acute care hospital emergency, inpatient and outpatient settings; schools; the criminal justice system; and faith-based organizations. Travel distance to services limits rural access to all services, including behavioral health treatment.”

– Behavioral Health in Rural America: Challenges and Opportunities, RUPRI [xxiii]

Figure 9: 2017 Suicide Rates in Missouri by Age, Gender and Urbanization



Source: U.S. Centers for Disease Control and Prevention WONDER Data

Men between the ages of 35 and 44 had the highest rate of suicide across all age categories at 43.4 deaths per 100,000 during 2017. However, for rural men in this age group, the rate was 57.9 per 100,000 — triple the statewide rate (Figure 9). Taken as a whole, males accounted for 48.6% of the Missouri population, but 80% of the 1,139 suicide deaths in the state during 2017.

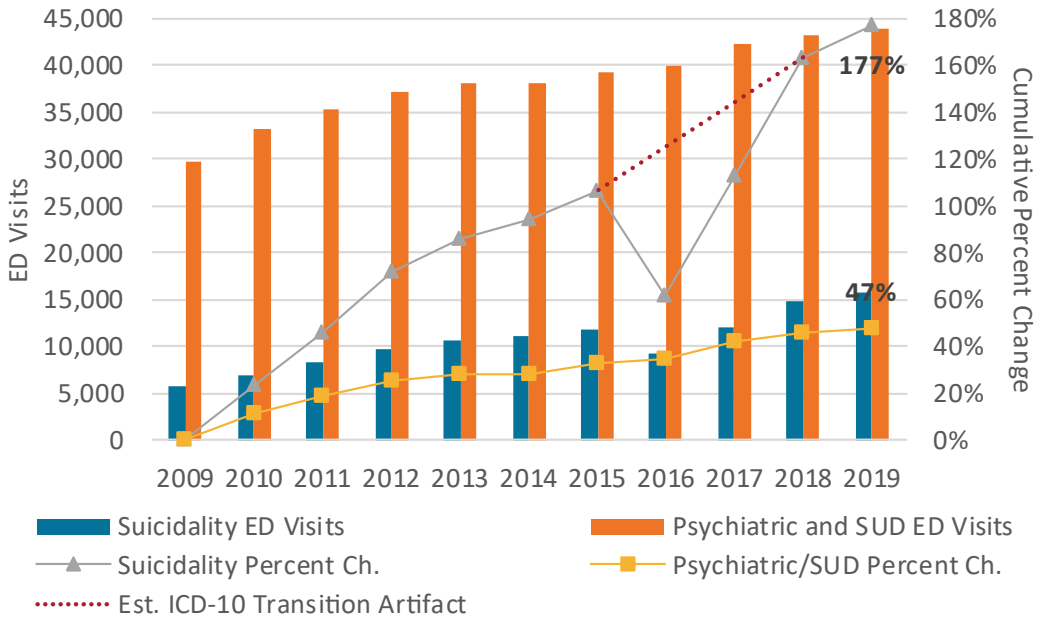
Again, while it is not possible to detect differences for occupational groups within the CDC data on suicide deaths, it is concerning that rural prime-aged working males, many of whom are employed in agriculture, face such stark differences in mental health outcomes related to suicide in Missouri.

Rural Hospital Utilization for Mental Health in Missouri:

Because of known limitations related to access to mental health care in formal settings, rural Missourians often rely on access to hospital emergency rooms for behavioral care. As a result, the number of behavioral health-related emergency department visits for rural Missourians has grown significantly throughout the previous decade (Figure 10).

Since 2009, the number of hospital ED visits for mental health and SUDs by residents of Missouri's rural counties has grown by more than 14,000 additional visits per year. During 2019, rural Missourians accounted for nearly 44,000 behavioral health-related ED visits, marking a 47% increase over 2009 (Figure 10). Hospital ED visits for suicide attempt or ideation by rural Missourians increased more dramatically during the same period. In 2009, there were 5,654 ED visits by rural Missourians for suicidality. By 2019, the number had nearly tripled, growing to 15,806 during the year, a 177% percent increase (Figure 10, the drop seen in fiscal year 2016 is likely a result of the conversion to ICD-10 diagnostic coding that year).

Figure 10: Hospital Emergency Department Visits by Rural Missourians for Psychiatric Disorders, SUD and Suicidality, Fiscal Years 2009-2019



Source: Hospital Industry Data Institute Inpatient and Outpatient Data

At the county level, the rate of ED visits for suicidality per 1,000 residents ranged from a high of 15.5 in Butler County in southeast Missouri to a low of 2.6 per 1,000 residents in northeastern Missouri's Schuyler County. The statewide rate during 2019 was 8.3 ED visits for suicidality per 1,000 residents. Fifteen rural counties were among the 20 highest county-level rates observed in the state during the year (Figure 11).

Several clusters of geographically contiguous rural counties with high rates of ED utilization for suicidality were detected, including St. Francois, Iron and Madison counties that each had more than 10 visits per 1,000 residents during 2019. In other areas, neighboring counties largely shared different outcomes, such as Howell and Taney counties that each had rates over 10, compared to their shared neighbor Ozark County that had just 3.2 ED visits for suicidality per 1,000 residents.

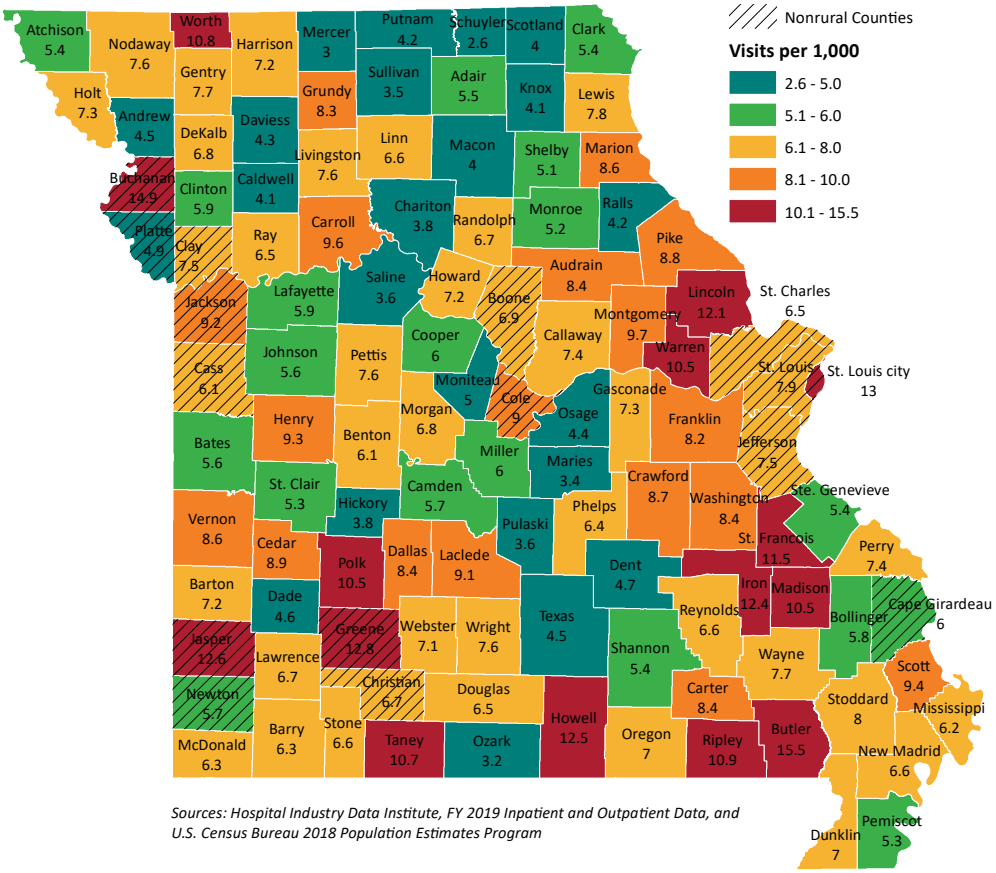
The characteristics of rural and urban patients with an ED visit for suicidality during FY 2019 were similar, with the exception of distance travelled for care and race (Table 1). On average, the 11,775 distinct rural patients with an ED visit for suicide attempt or ideation were 34 years old, 92.5% were white and slightly more than half were male. The majority of visits (62.5%) were covered by Medicaid, or the patient was uninsured. At 25.3 miles on average, rural patients travelled 2.6 times the distance from home to the hospital for emergency care, and they also had slightly fewer ED visits for suicidality compared to nonrural patients.

Table 1: Characteristics of Missouri Patients with an ED Visit for Suicide Attempt or Ideation, FY 2019

	Rural	Urban	Total
Number of Visits	15,806	35,654	51,460
Unique Patients	11,775	24,673	35,952
Average Visits per Patient	1.34	1.45	1.43
Average Distance Travelled from Home	25.34	9.75	14.56
Average Age	34.1	34.7	34.5
Female	48.2%	44.5%	45.6%
Male	51.8%	55.5%	54.4%
White	92.5%	70.3%	77.1%
Black or African American	4.3%	24.3%	18.1%
Other Race	3.2%	5.5%	4.8%
Medicare	17.2%	15.6%	16.1%
Medicaid	36.1%	35.3%	35.5%
Commercial	17.2%	21.7%	20.3%
Uninsured	26.4%	25.8%	26.0%
Other Payer	3.1%	1.7%	2.1%

Source: Hospital Industry Data Institute Inpatient and Outpatient Data

Figure 11: Emergency Department Visits for Suicidality per 1,000 Residents by County, FY 2019



Sources: Hospital Industry Data Institute, FY 2019 Inpatient and Outpatient Data, and U.S. Census Bureau 2018 Population Estimates Program

> “Missouri agriculture has faced many challenges over the last few years: depressed prices, drought and flooding. These challenges have shown us how agriculture and our rural communities are resilient and come together in times of need. Working with partners like the Missouri Department of Mental Health, we want to encourage farmers facing hard times and facing increased stress to reach out for help. We look forward to continuing to work with our industry and state agency partners to bring light to these issues.”

– Chris Chinn,
Director of the Missouri Department of Agriculture

RESOURCES

The data on the farm economy and trends in mental health outcomes for rural Missourians are daunting, but it's critical to understand that individuals struggling with mental health are not alone, and help is always available. From national suicide prevention hotlines, to state and local resources, to other farmers and ranchers who have been there, the first step is choosing to talk to someone who can help.

Other Farmers Who Have Been There:

Jason Medows is a pharmacist at Phelps Health in Rolla, Mo., and the owner-operator of a 700-acre cattle ranch in Cuba, Mo. The drought of 2012 and its impact on beef prices took more than a toll on Jason's farm finances in 2013. Depressed and suffering from severe anxiety, he reached out for help through online support communities, and he began exercising and actively working to improve his mental health. With help from others, he realized his legacy was his wife and four sons, not a 700-acre parcel of land. But Jason wanted to do more.

Combining his unique experience and perspectives in health care and agriculture with his personal struggles with anxiety and depression, Jason decided to take action to help his fellow agricultural producers begin a conversation about mental health on the farm. He decided to start yet a third career as a prolific blogger and podcaster on mental health in the agricultural community. His goal was initiating a cultural shift that would enable farmers and ranchers to discuss mental health as openly as they might converse on weather, feeder cattle futures, corn prices, high school sports or the upcoming county fair. According to Jason, "I believe this is a lofty goal. However, we have to begin the conversation. We have to make this a normal part of our dialogue."

Jason's weekly podcast, "Ag State of Mind with Jason Medows," is available on the Global Ag Network at https://globalagnetwork.com/ag-state-of-mind-with-jason-medows/podcast. Participate in the conversation on Jason's blog at https://agstateofmind.health.blog/, or on Facebook, Instagram or Twitter @AGStateofMind1.

“DMH is working hard to integrate the Zero Suicide model into multiple health systems, with 47 organizations being trained thus far. These ongoing efforts are improving care coordination across all health sectors. To go further, we knew we needed to bring together partners statewide to help guide suicide prevention planning in Missouri. We are excited about the direction of the Missouri Suicide Prevention Network and hopeful about our work together to reduce suicides in Missouri.”

– Mark Stringer, Director,
Missouri Department of Mental Health

MISSOURI DEPARTMENT OF MENTAL HEALTH

The Missouri Department of Mental Health provides multiple resources for individuals struggling with stress, anxiety, depression and suicide ideation, in addition to offering resources for friends and loved ones, health care providers, and others.

With the **HELPHIMSTAY** campaign, DMH is working to promote help-seeking to prevent suicide among rural, middle-aged males – the demographic group most impacted by suicide in Missouri. The campaign consists of statewide radio advertisements, billboards, social media advertisements and informational handouts targeted throughout rural Missouri. The campaign directs viewers to www.helphimstay.org, which offers a wealth of resources and educational fact sheets, or to the National Suicide Prevention Lifeline at 1-800-273-TALK (8255). DMH is implementing additional out-of-the-box ways to reach rural Missourians, such as having resource cards available for individuals to easily and discreetly pick up when visiting local places like gas stations, farm bureaus, grocery stores, barber shops, dentist or doctor's offices, and local feed supply companies.

Since 2014, DMH has been engaging with Missouri's hospitals and health systems in the National **Zero Suicide** framework, which provides a practical, continuous quality improvement initiative for transforming suicide prevention in health and behavioral health systems. To date, 47 organizations have attended Zero Suicide Academies and have begun implementing suicide safer care practices. With the recently awarded Zero Suicide in Health Systems grant, these efforts are being expanded to include additional primary care providers and hospitals throughout Missouri.

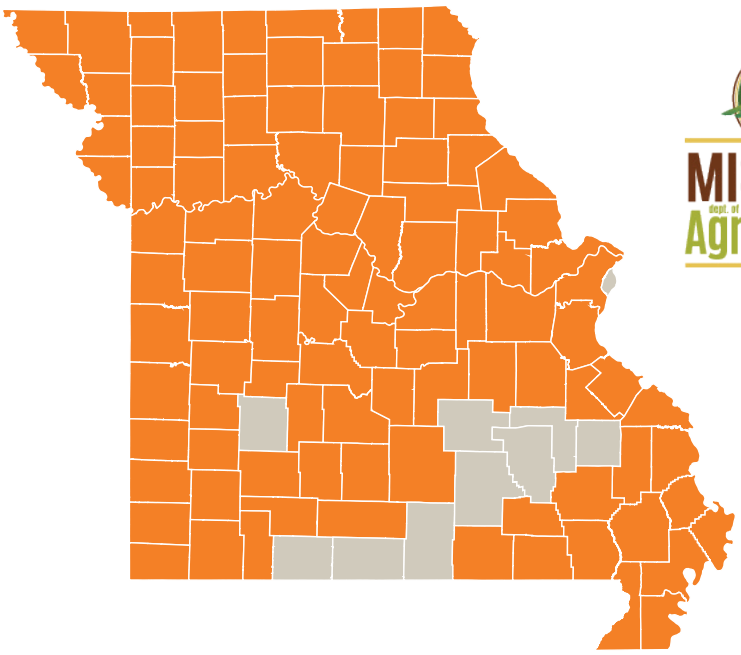
The **Missouri Suicide Prevention Network**, established in 2018 by DMH and the Missouri Coalition for Community Behavioral Healthcare, consists of representatives of varying organizations and interests across the state who are passionate about preventing suicide. MSPN is working to reduce the suicide rate in Missouri through increased coordination of efforts and implementing best practices for suicide prevention statewide. MSPN includes representatives from the Missouri Department of Agriculture, Missouri Hospital Association, Missouri Coalition for Community Behavioral Healthcare, Missouri Primary Care Association, Missouri Department of Elementary and Secondary Education, Missouri Institute of Mental Health, and more, as well as team members who focus on veteran's services and prevention. This group is working to update Missouri's State Suicide Prevention Plan utilizing a public health approach, establish a robust data collection and reporting system, identify and coordinate training needs, and institute statewide school-based suicide prevention programs.

When there is a presidentially declared disaster for individual assistance, DMH applies for and, if granted, runs a Federal Emergency Management Agency/Substance Abuse and Mental Health Services Administration Crisis Counseling Program for up to 15 months, depending on the disaster severity. Missouri is well-versed in CCP programs and has responded to events from regional tornadoes and flooding, including the devastating Joplin tornado in 2011 and the statewide floods of 1993. The CCP offers community-based outreach, counseling and other mental health services to all survivors in the impacted communities of natural and human-caused disasters. This includes rural areas of Missouri with a focus on producers who work or reside in a declared area or county. The CCP is an anonymous program that is strengths-based, outreach-oriented, conducted in nontraditional settings and designed to strengthen existing community support systems. The program also has an assessment and referral mechanism in place should the survivor need mental health services that extend beyond what the crisis counselors can offer.

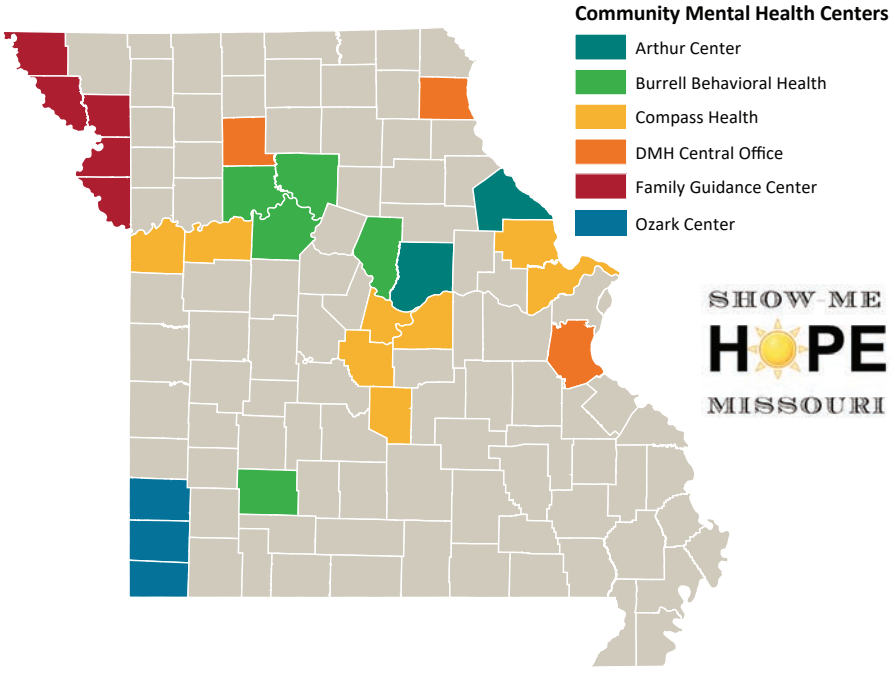
To address the 2019 flooding, DMH currently operates a CCP known as Show-Me Hope. The CCP is offered in 26 Missouri counties and will run until August 2020. These floods are different, with some farmland flooding to the extent not seen since 1993. Levees are damaged, and discussions of when to fix them and who will do so are ongoing and prove to be major stressors. Mitigation efforts since 1993 have worked, but tributaries and secondary channels, rivers, and streams are flooded. The CCP staff in these counties are working to reach producers through door-to-door canvasing, feed store locations, local USDA offices, diners and other locations where producers are known to frequent. The CCP staff are hired by the local Community Mental Health Center to work in their impacted communities. In addition, the CCP and DMH staff collaborate with the Missouri Department of Agriculture, as well as producer associations and agricultural media agencies, to obtain additional needs assessment data, deliver public education on coping resources, and provide relevant information and training for crisis counselors and rural community members and leaders. One challenge is that current federally approved disasters comprise different counties for FEMA/SAMHSA and USDA. In general, Missouri's strong disaster collaboration foundation is based upon The Governor's Partnership started in 1993, which continues to be an active and successful model today.[xxvi]

The Missouri Departments of Agriculture and Mental Health are working together to spread the message that crisis programs and services are available to rural communities in 2020. As depicted in the maps, the counties available for services differ by federal agency. On the top, USDA-declared counties qualify to receive assistance from the USDA's Farm Service Agency. On the bottom, FEMA individual assistance counties receive crisis counseling from DMH.

USDA Secretarial Disaster Counties
(Primary and Contiguous)



2019 Tornado/Flood Individual Assistance Granted Counties



MISSOURI COALITION FOR COMMUNITY BEHAVIORAL HEALTHCARE

The Missouri Coalition for Community Behavioral Healthcare is comprised of 33 member behavioral health organizations staffed with more than 9,500 caring and capable individuals providing treatment and supportive services to approximately 250,000 Missourians every year. Through the years, Community Mental Health Centers have consistently worked with rural communities through the businesses, schools, juvenile justice system, disaster response teams, special populations, and numerous government and private agencies in developing a variety of innovative outcome- and evidence-based programs, which have been implemented both locally and statewide. CMHCs utilize the continuum of care model, which offers served individuals the benefits of receiving individualized types and levels of treatment while progressing through a total quality, cost-effective, least-restrictive system of care.

As designated administrative agents of DMH, the Coalition and Missouri's CMHCs work closely with the department on designing and deploying innovative models such as Zero Suicide, the Missouri Suicide Prevention Network and Crisis Counseling Programs.

The Coalition also works closely with its member organizations and DMH on the Certified Community Behavioral Health Clinics demonstration under Section 223 of the Protecting Access to Medicare Act, which established a demonstration program based on the Excellence in Mental Health Act.

One of only eight states selected to participate, the Excellence Act is a two-year demonstration to expand access to mental health and addiction care in community-based settings. The Excellence Act established a federal definition and criteria for CCBHCs and establishes enhanced Medicaid reimbursement-based prospective costs of care, including expanded staffing and technology such as telehealth services. The CCBHC demonstration has been extended multiple times by Congress.

CCBHCs are responsible for directly providing nine required types of services, with an emphasis on the provision of 24-hour crisis care, utilization of evidence-based practices, care coordination and integration with physical health care. Ultimately, the demonstration program is expected to infuse more than $1.1 billion into community-based services, making it the largest investment in mental health and addiction care in generations.

Nearly half of the Coalition's members participate in the CCBHC demonstration, and with 201 individual clinic locations throughout the state, Missouri has more than twice the number of CCBHC locations compared to the seven other participating states. During the first two years of operation, Missouri's CCBHCs delivered integrated care to more than 146,000 individual Missourians. By expanding staffing, encouraging walk-ins, and streamlining assessment and referral processes, participating CCBHCs have increased statewide client volume by 20% with one rural CCBHC serving 85% more individuals by year two of the demonstration.[xxvii]

Through this and other innovative behavioral care delivery models like the Emergency Room Enhancement Program, the Coalition, CMHCs and partner organizations are working to improve access to mental health care and create positive outcomes for Missourians throughout the state.

"About 20 years ago when visiting my hometown in rural Kansas, I went to the barber for a haircut. If you wanted to know what was going on in a small town, get a haircut. Barbers have a captive audience. In the course of a trim, a barber or beautician can fill you in on local sports, hunting, politics — really, all or any small-town gossip.

I've worked in health policy my entire adult life. As we were chatting, I brought up the issues of rural health and behavioral health. At that point, the conversation took an eye-opening turn.

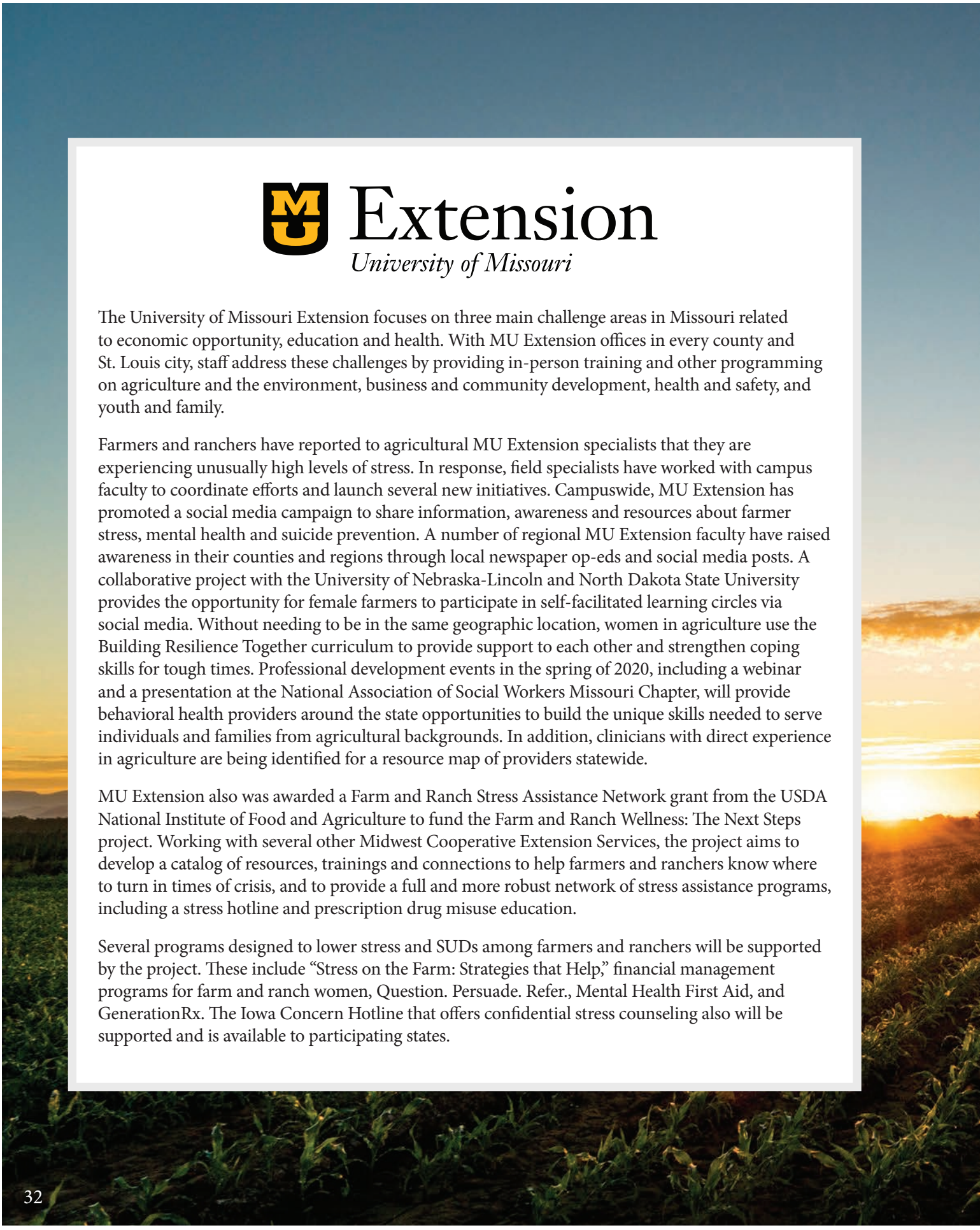
The barber confided in me that he had struggled with behavioral health issues. He has often found himself walking the streets of our town, struggling to understand his feelings, looking for meaning and wondering what people would think if they knew he was troubled. He was afraid of the stigma of addressing these issues locally, because he — of all of the members of the community — understood the local grapevine.

Fortunately, he had found help. Unfortunately, because of the perceived stigma attached to behavioral health needs, he felt compelled to receive it in another town not far from my home.

I remember him telling me that no one judged members of the community who needed help for a broken arm or leg. There was no shame in having heart trouble or chronic arthritis. However, if you felt broken in your brain or your heart, you had a sense that members of the community would view you as a failure or weak.

Twenty years later, we've made some progress toward reducing the stigma of behavioral health care. However, rural communities — with their more traditional values, reduced anonymity and limited access to dedicated mental health resources — lag behind."

– Herb B. Kuhn, President and CEO, Missouri Hospital Association



Extension

University of Missouri

The University of Missouri Extension focuses on three main challenge areas in Missouri related to economic opportunity, education and health. With MU Extension offices in every county and St. Louis city, staff address these challenges by providing in-person training and other programming on agriculture and the environment, business and community development, health and safety, and youth and family.

Farmers and ranchers have reported to agricultural MU Extension specialists that they are experiencing unusually high levels of stress. In response, field specialists have worked with campus faculty to coordinate efforts and launch several new initiatives. Campuswide, MU Extension has promoted a social media campaign to share information, awareness and resources about farmer stress, mental health and suicide prevention. A number of regional MU Extension faculty have raised awareness in their counties and regions through local newspaper op-eds and social media posts. A collaborative project with the University of Nebraska-Lincoln and North Dakota State University provides the opportunity for female farmers to participate in self-facilitated learning circles via social media. Without needing to be in the same geographic location, women in agriculture use the Building Resilience Together curriculum to provide support to each other and strengthen coping skills for tough times. Professional development events in the spring of 2020, including a webinar and a presentation at the National Association of Social Workers Missouri Chapter, will provide behavioral health providers around the state opportunities to build the unique skills needed to serve individuals and families from agricultural backgrounds. In addition, clinicians with direct experience in agriculture are being identified for a resource map of providers statewide.

MU Extension also was awarded a Farm and Ranch Stress Assistance Network grant from the USDA National Institute of Food and Agriculture to fund the Farm and Ranch Wellness: The Next Steps project. Working with several other Midwest Cooperative Extension Services, the project aims to develop a catalog of resources, trainings and connections to help farmers and ranchers know where to turn in times of crisis, and to provide a full and more robust network of stress assistance programs, including a stress hotline and prescription drug misuse education.

Several programs designed to lower stress and SUDs among farmers and ranchers will be supported by the project. These include "Stress on the Farm: Strategies that Help," financial management programs for farm and ranch women, Question. Persuade. Refer., Mental Health First Aid, and GenerationRx. The Iowa Concern Hotline that offers confidential stress counseling also will be supported and is available to participating states.

> **Farmers report they faced unusually high pressure from floods, rains, late planting, and uncertain commodity prices and trade disputes in 2019. Research from OSHA also shows farming to be in the top 10 stressful occupations.**
>
> **Farming is tough physical work sunup to sundown, rain or shine, day in and day out. It is also tough mental work. Issues beyond a farmer's control can weigh heavily and lead to depression, anxiety and suicide even in a typical farm season. Debt, illness and injury also add to pressures.**
>
> **Farmers, because of their strong and independent nature, often are reluctant to talk about these issues. Fortunately, resources are available to help facilitate those difficult conversations from the MU Extension and other mental health stakeholders across the state."**
>
> **– Karen Funkenbusch, University of Missouri Extension**

Each participating university will have an interlinked online site designated to farm and ranch wellness that lists available resources and publications. An online catalog of stress assistance programs then will be completed and made available regionwide.

If you need help or know of someone who needs help, reach out. MU Extension offers resources at https://extension2.missouri.edu/programs/agrability and on the Show-Me Strong Farm Families Facebook at https://www.facebook.com/ShowMeStrongFarmFamilies/. Mental Health First Aid classes also are offered by MU Extension to identify, understand and respond to signs of mental illnesses and SUDs in communities. For more information about initiatives related to behavioral health providers, please contact Dr. Sarah Myers Tlapek at tlapeks@missouri.edu.

MU Extension offers these suggestions for farmers, ranchers and their families.

- Know the warning signs of stress. Physical signs include headaches, back and neck muscle aches, fatigue, labored breathing, weight gain, rising blood pressure, stomach issues, and sweating. Emotional signs include anger, restlessness, irritability, inability to sleep and relax, increased alcohol or drug use, and withdrawal from others.
- Slow down.
- Get a physical checkup.
- Seek local resources, including clergy, medical professionals or others. Talk with other farm families and neighbors.
- Exercise daily. Take regular breaks throughout the day.

ADDITIONAL OPPORTUNITIES:

Rural communities — and farmers in particular — face unique barriers to mental health related to social factors, prevalence and access.[xxiii] Social determinants such as income, economy, cultural misconceptions and geographic isolation result in higher rates of mental health and SUDs for rural populations. Limited access to behavioral health care arising from workforce shortages, affordability and stigma compounds rural disparities in prevalence, resulting in higher rates of suicide for rural communities. These challenges are well known — in November 2019, Gov. Mike Parson formed a behavioral health task force to mediate issues related to Mental Health HPSAs in rural Missouri. While workforce is a major component, the solution is far more complex. Moving the needle on rural mental health in Missouri will require interrelated investments in infrastructure, workforce, access to care and culture change.[xxviii]

Infrastructure Investments:

More than half of Missouri's 2 million rural residents do not have access to high-speed internet.[xxix] This poses a significant rate limiting factor on new and emerging technologies related to the exchange of clinical information and telehealth. Many of the gaps in rural access to mental health care related to provider shortages and stigma could be ameliorated with telemental health solutions, which require internet and/or cellular data bandwidth.[xxx] A large and growing body of evidence finds that telemental health increases access, is accepted by varied patient segments including elderly and rural patients, is efficient and effective, improves medication adherence, and reduces costs.[xxxi] In addition, access to remote telemental health within the privacy of homes offers significant promise to help overcome issues related to stigma in accessing mental health care for rural and agricultural communities. In his 2020 State of the State address, Parson recommended $5 million in continued matching grants for broadband access in rural Missouri to be administered through the Missouri Broadband Grant Program.[xxxii] The state could work to secure additional resources through federal funding opportunities such as the Federal Communication Commission's $20.4 billion Rural Digital Opportunities Fund.[xxxiii]

Workforce Investments:

Similar to its commitment to rural infrastructure, investing in the rural health care workforce is another priority of the Parson administration. Missouri has the largest deficit of mental health providers in the U.S. Incentives designed to entice physicians and therapists to work in rural areas remain insufficient to close this gap. In addition to technology-based solutions to moderate the effects of Mental Health HPSAs, several policy options have significant potential to assuage the problem. Missouri's participation in the Interstate Medical Licensure Compact would enable behavioral health providers licensed in other states to provide traditional or telemental health care to rural Missourians.[xxxiv] Additional investments are needed to promote integrated primary and behavioral health care training, in addition to expanding privileges for certain types of providers, such as advanced practice registered nurses, in Missouri. Policy considerations also are needed to streamline credentialing standards to ensure providers new to rural areas can bill insurance companies in a timely manner.

The Mercy Virtual Care Center was designed specifically to support the delivery of telehealth services. Located in Chesterfield, Mo., it is the command center for the nation's largest electronic intensive care unit and other telehealth services, including vMentalWellness.

"Telehealth services help bridge gaps in care when health services are not easily accessible, especially within rural communities. This is true for mental health, given the significant shortage of psychiatrists, advanced practice professionals and mental health specialists. Mercy Virtual's vMentalWellness team has a goal to improve access to care by utilizing technology to bridge the distance toward the delivery of timely, high-quality care.

Psychiatric services, including initial evaluation and diagnosis as well as counseling and support to primary care providers, can be delivered either in the office or in the home, on one's own phone or tablet. Currently, the vMentalWellness team collaborates with Mercy primary care physicians and advanced practice professionals to serve Mercy patients in a variety of settings to include providing their mental health care through a video application on an iPad or smart phone. In the future, we'll expand our reach to include working directly with payers across all of our communities and around the globe.

There are several barriers to highlight around reaching rural communities, such as the lack of access to high-speed internet. The growth of telehealth will require a significant investment at the state and federal levels so that this form of health care can be provided now and into the future. Another barrier is related to poor reimbursement by insurers for both mental health and virtual services. Due to insufficient reimbursement for mental health services, many psychiatrists and mental health specialists have abandoned accepting insurance for a cash-only practices. A final barrier to providing timely telehealth care for patients in need of psychiatric care, is that mental health care has been separated, or carved out, by most insurance companies. While these companies are responsible for providing necessary mental health care, in many instances, there is a disconnect between the patient, primary care physician, psychiatrist and mental health care insurer. These hurdles are not insurmountable but will require significant focus to achieve solutions that help increase access to telehealth services as this modality gains popularity."

– Kyle S. John, MD, Medical Director vMentalWellness
Medical Director — Mercy East Region Behavioral health

Access Investments:

Facilitating investments in infrastructure and workforce will greatly expand access to behavioral health care in rural Missouri. At the same time, additional policy supports are needed to ensure the effectiveness of those investments. For example, the state's infrastructure investments to expand rural access to care through telemedicine will not yield returns in the absence of policies supporting reimbursement for care delivered remotely. Another opportunity exists in the integration of primary and behavioral health. Combined primary and mental health clinics are designed to treat patients as whole persons, addressing individuals' unique and intertwined physical, mental and social factors that affect health and wellness. Leveraging resources and funding to promote integrated care from the SAMHSA and HRSA should be prioritized to improve mental and physical health in rural Missouri. Federal matching funds also can be drawn down through the Medicaid program with optional state waivers. These resources could be used to facilitate partnerships and integration of CCBHCs, RHCs and FQHCs. Additional federal funding also could be leveraged to expand the MO HealthNet Division's pioneering success in patient-centered health home models and other best-practice efforts currently operating in Missouri, such as expanded Mental Health First Aid and Zero Suicide Academy training for front-line personnel in rural EDs. Finally, the 21st Century Missouri Patient Education Task Force[xxxv] should prioritize innovative strategies aimed at reducing stigma and incubating safe and open dialogues on mental health in rural Missouri.

Continued Investments in Best and Promising Practices:

Several organizations and programs, including psychiatric hospitals, systems and medical schools, are working to moderate the shortage of behavioral health providers across Missouri. The Compass Health Network is the largest nonprofit mental health system in the state. Compass Health employs 71 psychiatrists and 26 mid-level practitioners certified in mental health. During 2019, Compass Health provided more than 94,000 psychiatry visits, with nearly half completed via telehealth. Several Compass Health clinics offer integrated care models as FQHCs, or through partnerships with neighboring FQHCs. At these locations, patients can access behavioral health, primary care and dental services in the same clinic. Compass Health also works with medical and nursing schools across the state to provide training, residencies, internships, practicums and preceptorships in psychiatry, psychology, social work, counseling and nursing.

Compass Health has collaborated with DMH and the Missouri Foundation for Health to provide the financial support needed to increase the annual number of psychiatry resident slots at the University of Missouri from six to 10. By selecting residents from medical schools in Missouri, the goal of the program is to train and retain more practicing psychiatrists in the state.

Missouri also is home to the National Psychology Training Consortium, which is the nation's second largest organized psychology internship and residency training consortium, behind the Veterans Health Administration. Since its inception in 2002, the NPTC has trained more than 350 psychologists, including 99 licensed psychologists currently practicing in Missouri, and another 74 currently participate in training.

As early as 1999, some agencies began using telehealth as a means to deliver care to rural areas, but the quality of that service was compromised by lack of internet infrastructure

to the small rural communities. Additionally, very few payers would reimburse providers in the early days of telehealth services. The Centers for Medicare & Medicaid Services was one of the first agencies to develop reimbursement policies for care delivered via telehealth. In 2012, the Missouri General Assembly enacted a law that required all insurance companies in Missouri to reimburse for telehealth services in the same manner as in-person services with the exception of self-insured plans, which were exempted by the law.

Maturing with the rate of broadband coverage in Missouri, telehealth as a means of providing behavioral health services in rural communities has dramatically improved the accessibility of services in mental health clinics, FQHCs and RHCs. It is being utilized by some hospital EDs for consultation purposes and by law enforcement in the field that can consult a mental health professional when interacting with individuals who are in crisis.

While care delivered via telehealth has advanced quickly in Missouri, several barriers remain in place that could be assuaged with legislative action. One barrier is the federal Ryan Haight Act of 2007 that was originally intended to prevent inappropriate filling of prescription medications by internet-based pharmacies. This act continues to require an in-person visit to initiate several psychotropic medications. The U.S. Drug Enforcement Agency recognized this limitation on telehealth and developed a registration process for qualified telehealth providers to circumvent the in-person requirements; however, implementation of this certification has been slow. The Missouri Department of Health and Senior Services has taken action to certify clinics delivering telehealth, but certification is a long process, and this continues to be a barrier in the accessibility of care.

In addition to infrastructure and policy-related hindrances to the full potential of telehealth, changes to federal loan repayment and forgiveness programs are needed to accommodate participating providers delivering care to rural areas via telehealth, in addition to requiring all health plans to reimburse providers for services rendered remotely.

> **Missouri is extremely fortunate to have U.S. Sen. Roy Blunt as a legislative champion of behavioral health improvement. Blunt has been a tireless advocate for mental health services and spearheaded enactment of the federal "Center of Excellence in Mental Health Act." The legislation created new and innovative opportunities for funding and delivering behavioral health care. His support has been so vital to us and others, and it truly has made a difference for thousands of individuals with behavioral health needs."**
>
> **– Alan Greimann,**
> **Executive VP, Compass Health Network,**
> **and President and CEO, Royal Oaks Hospital**

“I know there’s something missing from the rural mental health care continuum when my 25-bed critical access hospital in rural Clay County is seeing such an alarming increase in patients admitted for care related to suicide attempts in our emergency room. My first impression as a mother is how very heartbreaking it is that the pressures of the world have caused people, especially our youth, such pain — that life is not worth living — that too frequently, dying might seem like a better option.

But as a CEO and a trained therapist, I realize we can’t just accept this heartbreak, we need to act now to improve the system. And that really starts with removing the stigma surrounding mental health, especially in rural communities like ours. Emotions run high when suicide is the topic, but at Excelsior Springs Hospital, we’re confident that addressing the problem head on and reducing that stigma will most certainly influence future outcomes. Our team provides more than their clinical knowledge and expertise — they provide hope, options and direction toward interventional pathways that lead to recovery.

We have a close partnership with Tri-County Mental Health Services to ensure our patients have access to behavioral health care, with assessments and a care plan initiated within minutes. We also partner with the Northland Health Alliance to assess and improve the mental health and well-being of our community. This alliance includes key decision-makers from countless organizations, all focused on one goal — getting access to care to those in need.

Our actions today provide a solid platform for a future, which validates that life is absolutely worth living.”

– Kristen T. DeHart, CEO, Excelsior Springs Hospital

Investing in Innovative Models of Community-Based Behavioral Care:

To receive Center of Excellence status, CCBHCs are required to demonstrate expanded access to services. This has resulted in many CCBHCs adopting open access entry point models that simulate primary care delivery. Typically, individuals seeking behavioral care in traditional models are placed on waitlists that can be six weeks to three months out for an appointment. Under the open access model, individuals can arrive at clinics without needing an appointment and will be seen by a qualified mental health professional at that time for an initial assessment and triage. Patients in crisis are immediately engaged in services that include psychiatry, and clinical and community supports. In addition, SUD patients are rapidly evaluated for targeted services, including medication-assisted treatment and rehabilitation therapy.

With support from DMH, Missouri CCBHCs also are engaged with a number of hospitals across the state in a program called Emergency Room Enhancement. Through this program, CCBHCs provide behavioral health consultations to participating hospitals for patients who frequent the ED in mental health crisis. Through the consultation, the patient is rapidly engaged in community-based behavioral health and social supportive services that can assist with housing, food insecurity and medications, among other supports. The ERE program has demonstrated effectiveness in reducing preventable ED utilization at participating hospitals; however, not all hospitals are able to participate due to funding limitations. Parson's proposed 2020 budget includes additional funding for the ERE. If approved, this funding would help coordinate care in rural communities where the local hospital ED is the only option for residents in crisis, but lacks the resources required to effectively provide behavioral health care.

Due to behavioral health provider shortages, primary care providers and pediatricians are often on the front lines of mental health for their patients, regardless of their professional training in psychiatric services. When faced with challenges that are beyond their individual skill levels, these providers can access consultative services from behavioral health specialists and earn continued medical education credits through programs offered by Missouri Telehealth Network's Show-Me ECHO or the Missouri Child Psychiatry Access Project. These innovative online peer-to-peer programs are designed to provide opportunities for case reviews, consultations and professional education to physicians and practitioners not trained in psychiatry. However, these programs are not utilized to their fullest extent due to limited resources and awareness.

In many other rural areas and social settings, community members without any clinical training are front-line responders to family and friends dealing with a mental health crisis. As a result, many of Missouri's schools, churches and community civic organizations have adopted and moved forward with Mental Health First Aid training, a program dedicated to teaching kids and adults to be aware of someone who might be having mental health problems and to reach out to others to get help. Targeted outreach to participate in Mental Health First Aid at agriculture-based organizations, such as feed stores, grain elevators, even local coffee shops or barber shops in rural areas, may be an effective strategy to reduce stigma and grow the rural knowledge base on how to identify and assist someone who may be struggling or thinking of suicide.

“Behavioral health medical professionals are scarce across the state, but especially so in rural areas. As a family practice physician, I am often on the front lines, both for my patients’ physical health but also their mental well-being. In my home community, we have a visiting psychiatrist once a month. Even with this access, the need for psychiatric services significantly outpaces the availability. As a result, prescribing and managing medication for my patients’ mental health well-being is part of my day-to-day role as their family physician.

Counseling is also a great need in rural communities. In our community, we have a group therapy program for senior adults, but additional counseling resources are often out of reach for our other patients due to geographical distance, wait time for appointments or cost.

My colleagues and I work together to provide the best care possible for our patients that need mental health resources, but there is no doubt that it is a challenge in rural Missouri.”

– Aron Burke, M.D.,
Family Practice Physician,
Community Hospital-Fairfax

CONCLUSION:

Mental health and suicide among farmers and ranchers is a growing public health concern. Missouri's farm sector has been disproportionately affected by recent weather events, economic factors and foreign trade policies, resulting in growing stress for the state's farmers and ranchers. Formidable structural and cultural barriers limit access to mental health care for agricultural producers in Missouri. While several individuals and organizations are working to moderate these limiting factors, additional resources are needed to reverse trends in rural suicide and ED utilization for mental health in Missouri. Investments in infrastructure, telehealth technology, workforce and access to mental health care are needed to promote mental health and well-being in rural Missouri. In addition, investments in culture change are needed to overcome pervasive stigma surrounding mental health in agricultural communities. Societal perceptions of mental health should be no different from perceptions of physical health.

REFERENCES:

[i] Key, N., Burns, C. & Lyons, G. (2019, October). *Financial Conditions in the U.S. Agricultural Sector: Historical Comparisons*, EIB-211. U.S. Department of Agriculture, Economic Research Service. Retrieved from https://www.ers.usda.gov/webdocs/publications/95238/eib-211.pdf?v=8745.1

[ii] Jenkins, S. & Kauffman, N. (2018). *A Tale of Two Economies: Farmers Struggle Despite Strong U.S. Economy*. Federal Reserve Bank of Kansas City. Retrieved from https://www.kansascityfed.org/~/media/files/publicat/research/regionaleconomy/ag/a-tale-of-two-economies-9-28-18.pdf

[iii] Kauffman, N. & Kreitman, T. (2019, November 14). *Farm Finances Continue to Weaken Amid Ongoing Uncertainty*. Kansas City Federal Reserve Bank. Retrieved from https://www.kansascityfed.org/research/indicatorsdata/agcreditsurvey/articles/2019/11-14-2019/farm-finances-continue-to-weaken-amid-ongoing-uncertainty

[iv] Newton, J. (2019, October 30). *Farm Bankruptcies Rise Again*. American Farm Bureau. Retrieved from https://www.fb.org/market-intel/farm-bankruptcies-rise-again

[v] See for example:
Dunlap, C. (2019, October 26). Trade war, weather, low prices increase farmer calls to Extension suicide hotline. *Columbia Daily Tribune*. Retrieved from https://www.columbiatribune.com/news/20191026/trade-war-weather-low-prices-increase-farmer-calls-to-extension-suicide-hotline

Gowen, A. (2019, November 9). 'I'm gonna lose everything.' *The Washington Post*. Retrieved from https://www.washingtonpost.com/nation/2019/11/09/im-gonna-lose-everything/?arc404=true

Weingarten, D. (2018, December 11). Why are America's farmers killing themselves? *The Guardian*. Retrieved from https://www.theguardian.com/us-news/2017/dec/06/why-are-americas-farmers-killing-themselves-in-record-numbers

Robinson, W. & Smith, R. (2019, October 31). *In Rural MO: 'The People on the Front Lines Aren't Necessarily the Mental Health Professionals.'* KBIA. Retrieved from https://www.kbia.org/post/rural-mo-people-front-lines-arent-necessarily-mental-health-professionals#stream/0

Murphree, J. & Foster, L. (2019, May 22). *Tell-Tale Signs of a Mental Health Crisis for Farmers and Ranchers*. American Farm Bureau. Retrieved from https://www.fb.org/viewpoints/tell-tale-signs-of-a-mental-health-crisis-for-farmers-and-ranchers

Tipps, R. (2019, July 29). *Farmer mental health comes to the forefront as pressing rural need*. Ag Daily. Retrieved from https://www.agdaily.com/insights/aaea-panelists-discuss-farmer-mental-health

Glidden, M. (2019, February 26). *Farm Aid speaks to "Psychology Today" about farmer mental health*. Farm Aid. Retrieved from https://www.farmaid.org/blog/farm-aid-speaks-to-psychology-today-about-farmer-mental-health/

Vinopal, C. (2018, Nov. 5). *For farmers, talking about mental health used to be taboo. Now there's #AgTwitter*. PBS NewsHour. Retrieved from https://www.pbs.org/newshour/nation/for-farmers-talking-about-mental-health-used-to-be-taboo-now-theres-agtwitter

Smith, T. (2018, February 27). *As Milk Prices Decline, Worries About Dairy Farmer Suicides Rise*. NPR. Retrieved from https://www.npr.org/2018/02/27/586586267/as-milk-prices-decline-worries-about-dairy-farmer-suicides-rise

Gutierrez, L. (2019, December 28). Kansas farmers die by suicide at an 'alarming' rate. State steps in to help them cope. *The Kansas City Star*. Retrieved from https://www.kansascity.com/news/business/health-care/article238474058.html

Gowen, A. (2019, December 26). In Trump Country, a season of need on family farms. *The Washington Post*. Retrieved from https://www.washingtonpost.com/national/in-trump-country-a-season-of-need-on-family-farms/2019/12/26/fcb71262-2377-11ea-86f3-3b5019d451db_story.html

[vi] James, W. L. (2014). All rural places are not created equal: Revisiting the rural mortality penalty in the United States. *American Journal of Public Health, 104*(11), 2122-2129. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/25211763

[vii] Singh, G. K. & Siahpush, M. (2014). Widening rural-urban disparities in life expectancy, U.S., 1969-2009. *American Journal of Preventive Medicine, 46*(2), e19-29. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/24439358

[viii] Stein, E. M., Gennuso, K. P., Ugboaja, D. C. & Remington, P. L. (2017). The epidemic of despair among white Americans: Trends in the leading causes of premature death, 1999-2015. *American Journal of Public Health, 107*(10), 1541-1547. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/28817333

[ix] Ringgenberg, W., Peek-Asa, C., Donham, K. & Ramirez, M. (2018). Trends and characteristics of occupational suicide and homicide in farmers and agricultural workers, 1992-2010. *Journal of Rural Health, 34*(3), 246-253. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/28464402

[x] Missouri Department of Health and Senior Services, Office of Rural Health and Primary Care. (2019). *Health in Rural Missouri, Biennial Report 2018-2019*. Retrieved from https://health.mo.gov/living/families/ruralhealth/pdf/biennial2019.pdf

[xi] Farm Aid. (2018, March 28). *Why Farmers Face Unique Threats for Stress*. Retrieved from https://www.farmaid.org/blog/fact-sheet/why-farmers-face-unique-threats-from-stress/

[xii] U.S. Bureau of Economic Analysis. (2019). Value Added by Industry, Seasonally Adjusted at Annual Rates. Retrieved from https://apps.bea.gov/iTable/index_industry_gdpIndy.cfm

[xiii] U.S. Bureau of Labor Statistics. (2019). CPI for All Urban Consumers, Nonseasonally Adjusted. Retrieved from https://www.bls.gov/cpi/data.htm

[xiv] U.S. Department of Agriculture, National Agricultural Statistics Service. (2019). Agricultural Prices, Prices Paid and Received. Retrieved from https://www.nass.usda.gov/Charts_and_Maps/Agricultural_Prices/index.php

[xv] Federal Reserve Bank of Kansas City. (2019). Ag Finance Databook. Retrieved from https://www.kansascityfed.org/research/indicatorsdata/agfinancedatabook

[xvi] Cowley, C. & Kreitman, T. (2019, October 17). *Farm lending slows but remains high*. Federal Reserve Bank of Kansas City. Retrieved from https://www.kansascityfed.org/research/indicatorsdata/agfinancedatabook/articles/2019/10-17-19/ag-finance-dbk-10-17-2019

[xvii] Health Resources and Services Administration. (2019). HPSA Find. Retrieved from https://data.hrsa.gov/tools/shortage-area/hpsa-find

[xviii] Centers for Disease Control and Prevention, National Center for Health Statistics. (2018, December). Multiple Cause of Death, 1999-2017. CDC WONDER Online Database. Retrieved from http://wonder.cdc.gov/mcd-icd10.html

[xix] Missouri Department of Public Safety, State Emergency Management Agency. (2020). Declared Disasters in Missouri. Retrieved from https://sema.dps.mo.gov/maps_and_disasters/disasters/

[xx] Salter, J. (2019, November 29). *River Watchers Already Wary About 2020 Spring Flooding*. Associated Press. Retrieved from https://www.usnews.com/news/us/articles/2019-11-29/river-watchers-already-wary-about-2020-spring-flooding

[xxi] U.S. Department of Agriculture, National Agricultural Statistics Service. (2017). Census of Agriculture. Missouri, Table 1. Historical Highlights: 2017 and Earlier Census Years. Retrieved from https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Volume_1,_Chapter_1_State_Level/Missouri/

[xxii] Rosmann, M. R. (2008). Behavioral health care of the agricultural population: A brief history. *Journal of Rural Mental Health, 32*(1), 39-48. Retrieved from https://idph.iowa.gov/Portals/1/Files/IowaHealthWorkforce/06%20agricultural_population.pdf

[xxiii] Gale, J., Janis, J., Coburn, A. & Rochford, H. (2019, December). *Behavioral Health in Rural America: Challenges and Opportunities*. Rural Policy Research Institute. Retrieved from http://www.rupri.org/wp-content/uploads/Behavioral-Health-in-Rural-America-Challenges-and-Opportunities.pdf

[xxiv] Jones, C. A., Parker, T. S., Ahearn, M., Mishra, A. K. & Variyam, J. N. (2009, August). *Health Status and Health Care Access of Farm and Rural Populations*, EIB-57 U.S. Department of Agriculture, Economic Research Service. Retrieved from https://www.ers.usda.gov/webdocs/publications/44424/9371_eib57_1_.pdf

[xxv] Kaiser Family Foundation. (2019). Mental Health Care Professional Shortage Areas (HPSAs). Timeframe: As of September 30, 2019. Retrieved from https://www.kff.org/other/state-indicator/mental-health-care-health-professional-shortage-areas-hpsas/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

[xxvi] Missouri Department of Public Safety, State Emergency Management Agency. (2020). Governor's Faith-Based & Community Service Partnership for Disaster Recovery. Retrieved from https://sema.dps.mo.gov/programs/thepartnership.php

[xxvii] Missouri Coalition for Community Behavioral Healthcare. (2020). *Certified Community Behavioral Health Clinics*. Retrieved from https://41e56e24-d282-42b5-b0f1-f16abf1bc04b.filesusr.com/ugd/6dadf9_540312935fa045658f3271e488ca8ee4.pdf

[xxviii] Missouri Hospital Association. (2020). Reimagine Rural Health. Retrieved from https://web.mhanet.com/reimagine-rural-health.aspx

[xxix] University of Missouri Extension, Center for Applied Research in Engagement Systems. (2019). Missouri Broadband Access, the State of Broadband in Missouri. Retrieved from https://apps.cares.missouri.edu/portal/apps/MapSeries/index.html?appid=d4a2252250db472e985a6ead1a1d4ed7

[xxx] Rural Health Information Hub. (2020). Telehealth Models for Increasing Access to Behavioral and Mental Health Treatment. Retrieved from https://www.ruralhealthinfo.org/toolkits/telehealth/2/specific-populations/behavioral-health

[xxxi] Bashshur, R. L., Shannon, G. W., Bashshur, N. & Yellowlees, P. M. (2016). The Empirical Evidence for Telemedicine Interventions in Mental Disorders. *Telemedicine Journal and e-Health, 22*(2), 87-113. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4744872/

[xxxii] Missouri Department of Economic Development. (2020). Missouri Broadband Grant Program. Retrieved from https://ded.mo.gov/content/missouri-broadband-grant-program

[xxxiii] U.S. Federal Communications Commission. (2019). *FCC Chairman Pai Announces Major Initiatives to Promote U.S. Leadership On 5G and Connect Rural Americans to High-Speed Internet at White House Event*. Retrieved from https://docs.fcc.gov/public/attachments/DOC-356995A1.pdf

[xxxiv] Interstate Medical Licensure Compact. (2020). The IMLC. Retrieved from https://imlcc.org/

[xxxv] Missouri House of Representatives, 100th General Assembly. (2020). House Bill No. 735. Retrieved from https://house.mo.gov/billtracking/bills191/hlrbillspdf/1594H.03I.pdf

AUTHOR LIST:

Mat Reidhead, MA,
Vice President of Research and Analytics,
Missouri Hospital Association, Hospital Industry Data Institute

Jason Medows, Pharm.D.,
Founder of Ag State of Mind,
Rancher and Pharmacist

Kathy Dothage, MS,
Extension Professor and Education Director, Home and Family,
University of Missouri Extension

Karen Funkenbusch, MS,
Assistant Extension Professional, Health, Safety, and Wellness,
University of Missouri

Cindy Davis,
Director of Health Services,
Missouri Coalition for Community Behavioral Healthcare

Stacey Williams, LCSW,
Suicide Prevention Coordinator,
Missouri Department of Mental Health,
Division of Behavioral Health

Richard N. Gowdy, Ph.D.,
Director, Division of Behavioral Health,
Missouri Department of Mental Health

Alan Greimann,
Executive VP, Compass Health Network, and President and
CEO, Royal Oaks Hospital

Suggested Citation

Reidhead, M., Medows, J., Dothage, K., Funkenbusch, K., Davis, C., Williams, S., Gowdy, R. N. & Greimann, A. (2020, February).
Growing Stress on the Farm: The Expanding Economic and Mental Health Disparities in Rural Missouri. Available at http://bit.ly/GrowingStressOnTheFarm

---