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Boone County Issues Analysis

Mental Health

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Prepared for:

City of Columbia
County of Boone
Heart of Missouri United Way

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TABLE OF CONTENTS

EXECUTIVE SUMMARY 2
INTRODUCTION 4
METHODOLOGY 5
FINDINGS 6
Prevalence of Mental Health Diagnoses 6
Primary Community Level Indicator 6
Collection of Indicators 7
Prevalence of Substance Abuse 13
Primary Community Level Indicator 13
Collection of Indicators 14
Treatment Access 18
Primary Community Level Indicator 18
Treatment Access Data Sources 18
PRIORITIZATION 21
RESOURCE ASSESSMENT 22
IDENTIFYING BEST PRACTICES 26
Evidence-Based Programs and Practices 28
Collaborative Opportunities 31
Services to Purchase 31
CONCLUSION 33
APPENDIXES 34

EXECUTIVE SUMMARY

The City of Columbia, County of Boone, and the Heart of Missouri United Way (HMUW) are constantly evaluating ways to provide a more targeted approach to address the mental health needs in the community. In fiscal year 2011, they provided nearly $1 million in local mental health funding for substance abuse treatment and mental health counseling. The purpose of this report is to support the development of a targeted funding strategy that will address community needs.

Three sub-issues guide the analysis of this report. They are: the prevalence of mental health diagnoses, the prevalence of substance abuse, and treatment access. Careful understanding of these issues leads to a better understanding of mental health in Boone County. The current community level data highlight several trends, some of which mirror Missouri as a whole, while others indicate some particular problems for the County.

- The number of suicide deaths in Boone County increased from six people in 2008, to 14 people, in 2009, a 133 percent increase. At the state level, the percent increase was just 12 percent during this same time period
- The rate of emergency room visits with mental health diagnoses have decreased in Missouri and in Boone County
- The rate of hospitalizations with mental health diagnoses have increased in Missouri and in Boone County, but the rate in Boone County has increased at a faster rate
- More of Missouri hospitalizations with mental health diagnoses attribute their hospitalizations to clinical psychoses and mood disorders than in Boone County
- One quarter of all Boone County hospitalizations with mental health diagnoses are attributed to alcohol and substance abuse
- Half of all Boone County admissions to treatment report alcohol as the primary substance of abuse
- Boone County alcohol-related arrests and convictions are rising faster than Boone County drug-related arrests and convictions

Findings throughout this report highlight the persistence of co-occurring clinical psychological disorders and substance abuse disorders. Considerable work remains to improve

Boone County's understanding of treatment access due to large gaps in available data. These gaps in data prohibit a clear understanding of the local population's need and access to treatment. Boone County's homeless individuals, veterans, and the corrections population have a signification impact on the face of mental health because mental health disorders are not uncommon among these populations of interest.

This report highlights county-level trends, prioritizes issues related to mental health, and provides an inventory of mental health services in Boone County. The prioritization and scoring process allows the report's sub-issues to be ranked among other Boone County Community Services Advisory Commission and HMUW reports. Establishing a basis for comparison focuses social services funding on the county's higher priority needs. Some mental health issues are not prioritized due to gaps in available data. This does imply that non-prioritized issues are insignificant in Boone County. Rather, it calls to mind which mental health issues contain data gaps that must be filled by further research. This report concludes with a tutorial of the National Registry of Evidence-based program and practices and an inventory of potential programs that could be implemented in Boone County to improve mental health.

INTRODUCTION

The World Health Organization (WHO) defines mental health as a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to his or her community.[1] In this positive sense, mental health is the foundation for individual well-being and the effective functioning of a community. The WHO finds sound mental health is determined by multiple social, psychological, and biological factors. Persistent socio-economic pressures are recognized risks to mental health for individuals and communities. The clearest evidence is associated with indicators of poverty, including low levels of education. Poor mental health is also associated with rapid social change, stressful work conditions, gender discrimination, social exclusion, unhealthy lifestyles, and risks of violence or physical illness. Specific psychological and personality factors can also make people vulnerable to mental disorders. Finally, there are some biological causes of mental disorders including genetic factors and chemical imbalances in the brain.

The WHO supports mental health promotion involving actions which create living conditions and environments that foster mental health and allow people to adopt and maintain healthy lifestyles. Therefore, mental health policies should not be solely concerned with mental disorders, but should acknowledge and address the broader issues which promote mental health. This includes mainstreaming mental health promotion into policies and programs in government and business sectors including education, labor, justice, transportation, environmental, housing, and welfare, as well as the health sector.

In fiscal year 2011, Missouri received and spent $1.19 billion, from federal and state funding sources, on mental health services[2] – this is a decrease from $1.21 billion the previous year.[3] The Missouri mental health budget has fallen by almost seven percent between 2009 and 2012 – this is a decrease of $21 million dollars. The National Alliance on Mental Health report from 2011[4] reports Missouri's per capita state mental health spending was $86 in 2009. This is far below the national average of $122. Kansas and Iowa spent $130 and $136 of their budgets respectively on mental health spending. Budget cuts create a greater burden on local, county, and nonprofit service providers (Appendix A: Table 1).

Boone County Community Services Advisory Commission and Heart of Missouri United Way are taking steps to know more about the community's mental health so as to make wise use of future funding. The Commission and HMUW contracted with the Institute of Public Policy (IPP) of the Truman School of Public Affairs at the University of Missouri to conduct an issues analysis of mental health in Boone County. This report and analysis is intended to help guide future mental health funding decisions and inform the Commission and HMUW of pertinent areas of interest in the field of mental health services. The Commission and HMUW wish to

[1] For more information, visit http://www.who.int/mediacentre/factsheets/fs220/en/
[2] Missouri Senate Appropriations Committee 2010 Annual Fiscal Report Fiscal Year 2011
[3] Missouri Senate Appropriations Committee 2009 Annual Fiscal Report Fiscal Year 2010
[4] For more information on the National Alliance on Mental Illness Report 2011, visit http://www.nami.org/ContentManagement/ContentDisplay.cfm?ContentFileID=147763

achieve the greatest positive impact in the community at large and this report and analysis will help achieve this goal by offering sound analysis on the topic of mental health.

This report assesses the current mental health environment in Boone County. Mental health comprises three sub-issues: 1) prevalence of mental health diagnoses, 2) prevalence of substance abuse, and 3) treatment access. In addition to sharing information on sub-populations of interest, this report includes a resource inventory and descriptions of services available in Boone County to address mental health. Finally, this report includes a list of evidence-based programs that may have validity for the Boone County populations and mental health agencies.

METHODOLOGY

The National Survey on Drug Use and Health (NSDUH) is a nationwide survey conducted annually since 1971. The survey randomly samples individuals living in the U.S., age twelve and older. The survey is funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), part of the US Department of Health and Human Services (DHHS). NSDUH provides national and state-level data on the use of tobacco, alcohol, illicit drugs and mental health in the United States.[5] The primary objective of NSDUH is to provide accurate data on the level, patterns, and trends of mental health and substance abuse through scientific examination of the U.S. population. Many government agencies, private organizations, individual researchers, and the public at large use the data for a number of purposes including making estimates of the need for treatment facilities. NSDUH summary statistics[6] from 2009 highlight three important areas which serve as the sub-issues for the Boone County Mental Health Analysis:

- **Prevalence of mental health diagnoses**. The NSDUH explains that mental illness is far reaching. In 2009, it was estimated that 45.1 million U.S. adults had some type of mental illness and a quarter of these individuals were classified as having a serious mental illness.

- **Prevalence of substance abuse**. In this same survey, NSDUH reported 20.8 million U.S. adults struggle with substance abuse and 42 percent, or 8.9 million, of these individuals had a co-occurring mental illness (according to SAMHSA & NSUDH, co-occurring refers to individuals with a substance abuse condition in addition to another mental health condition at the same time).

- **Treatment access**. Of the 8.9 million adults suffering from both substance abuse and mental illness, 44 percent received substance abuse or mental health treatment, 13.5 percent received treatment for both, and 37.6 percent did not receive any treatment.

[5] For more information, visit https://nsduhweb.rti.org/
[6] Available http://www.samhsa.gov/co-occurring/topics/data/disorders.aspx#1 and accessed on June 20, 2012

Special attention is given to three groups: Boone County homeless, criminal offenders, and veterans. Data is included from three different sources for these interest groups. The Point-In-Time Count (PITC) provides annual data for the homeless population[7] at the state and county level. The Department of Corrections provides data on the institutionalized and supervised offender population.[8] The Department of Health and Senior Services oversees the Missouri Information for Community Assessment (MICA) which provides data on the veteran populations in Boone County.[9] National data from the U.S. Department of Veterans Affairs is used when there is no county or state level data available.

Prioritizing each sub-issue allows the evaluators to analyze where services should be targeted. To prioritize the sub-issues, one community level indicator was selected for each sub-issue based on the following five criteria:

1. Representative of the issue area
2. Comparable at the state and county level
3. Publically available
4. Systematically collected
5. Routinely updated

The sub-issue of treatment access does not have a community level indicator because it does not meet the necessary criteria. Therefore, the treatment access sub-issue does not qualify for a prioritization score. Community level indicators are identified for the remaining two sub-issue areas, however, only the sub-issue explaining the prevalence of mental health diagnoses is awarded a prioritization score. The reasoning for this is explained by the fact mental health data are comprised of both substance abuse and clinical psychological disorders. Separating substance abuse data from clinical psychological data for direct comparison would be challenging, if not damaging to analytical reports because co-occurring disorders are common according to the National Survey on Drug Use and Health. For this reason, substance abuse data – specifically drug and alcohol information – are reported as part of the full picture of mental health diagnoses. Thus, the prevalence of mental health diagnoses will be the only sub-issue awarded a prioritization score. This prioritization score is comparable to scores for children, youth, and families, economic opportunity, independent living, basic needs, and emergency services issues found in other Boone County issues analysis report.

FINDINGS

Prevalence of Mental Health Diagnoses

Primary Community Level Indicator: The primary community-level indicator of the prevalence of mental health diagnoses in Boone County is the rate of emergency room visits with mental health diagnoses. This measure describes those individuals who may not have access to

[7] More information about PITC can be viewed at http://www.mhdc.com/ci/point_in_time_count.htm

[8] Missouri Department of Corrections, (2010). *A profile of institutional and supervised offender population on June20, 2009*. Retrieved January 2011 from: http://doc.mo.gov/documents/publications/Offender%20Profile%20FY09.pdf

[9] MICA community level document with veteran information http://dmh.mo.gov/ada/countylinks/boone_link.htm

primary care before they enter treatment facilities. These data are collected through the Department of Health and Senior Services Missouri Information for Community Assessment (MICA).[10] These data are published regularly, made readily available at the local level and can be used by the community to monitor mental health trends.

COMMUNITY DASHBOARD: PREVALENCE OF MENTAL HEALTH DIAGNOSES						
	Boone County			Missouri		
	2001	2009		2001	2009	
Primary Community Level Indicator						
Emergency room visit rate with mental health diagnoses	7.9 per 1,000	8 per 1,000	Declining	8.5 per 1,000	11 per 1,000	Declining
Other Community Level Indicators						
Hospitalization rate with mental health diagnosis	69.2 per 10,000	72.8 per 10,000	Declining	101.9 per 10,000	120.3 per 10,000	Declining
Suicide Rate	1.32%	1.48%	Declining	1.35%	1.59%	Declining

Source: Missouri Department of Health and Senior Services (MICA)
Color Indicators – assignment based upon comparison between the 2006 and 2010
= Improving
= No change
= Declining
= No judgment

Collection of Indicators: Boone County is committed to reducing prevalence of mental health disorders and it is part of the mission of the Missouri Department of Mental Health.[11,12] In an effort to understand the Prevalence of Mental Health Diagnoses at the community level, one should examine three indicators: the rate of emergency room visits with a mental health diagnosis,[13] the rate of hospitalizations with a mental health diagnosis, and the suicide rate. These indicators are tracked by MICA, part of the Missouri Department of Health and Senior Services.

The first indicator describing the Prevalence of Mental Health Diagnoses is the rate of emergency room visits with a mental health diagnosis. This is an important indicator because it helps capture the portion of the population who may not have health insurance and therefore rely on assistance offered through emergency services. Boone County has a lower rate of emergency room visits with a mental health diagnosis than the state as a whole (Figure 1).

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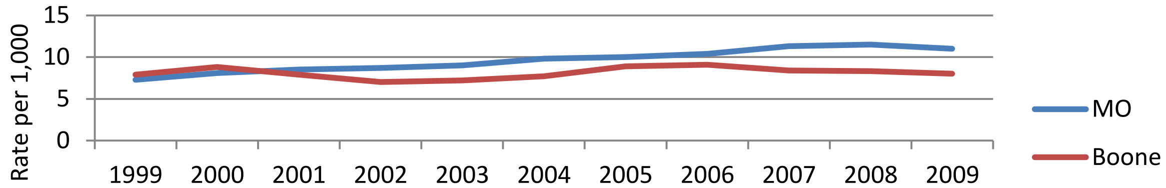
[10] MICA can be viewed at http://www.dhss.mo.gov/data/mica/MICA/

[11] Unlike the U.S. figures discussed above, substance abuse is included in this definition of mental illness. Given the distinctions between definitions and methodology the national data are not comparable to the state and local data presented in this report.

[12] Missouri Department of Mental Health Strategic Plan: 2007-2012 (June 2007) retrieved June 2012 from http://dmh.mo.gov/docs/opla/DMHStratPlan.pdf

[13] Mental Health Diagnosis can include: Alcohol and substance abuse, senility, affective disorders, psychoses, anxiety, somatoform, personality disorders, and other mental conditions including mental retardation.

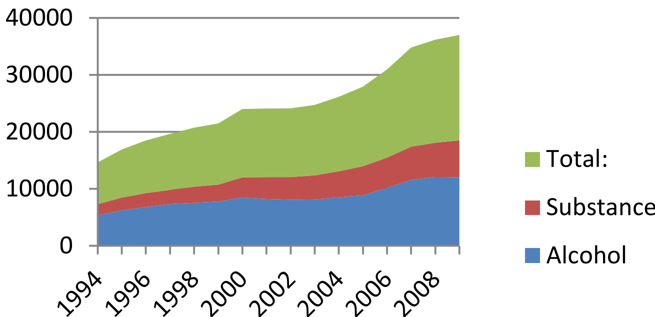
Figure 1: Emergency Room Visits with Mental Health Diagnoses



Source: Department of Health & Senior Services: MICA

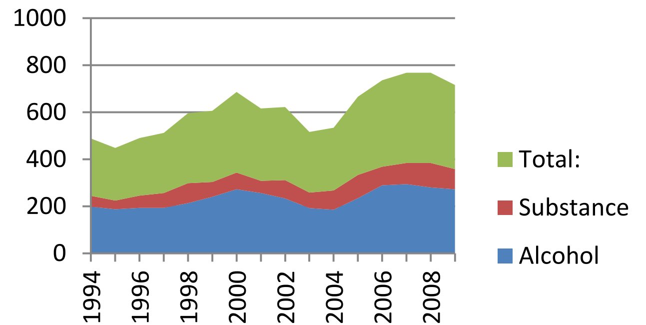
In addition, the ratio of alcohol to drug problems, when seeking assistance at a Missouri or Boone County emergency room, has been relatively consistent (Figures 2 & 3). At the county level, the rate of emergency room visits with mental diagnoses is most common for 25 to 44 year olds, females, and African Americans (Appendix A: Table 2).

Figure 2: Number of Emergency Room Visits for alcohol & substance abuse: Missouri



Source: Missouri Department of Health and Senior Services MICA

Figure 3: Number of Emergency Room Visits for alcohol & substance abuse: Boone County

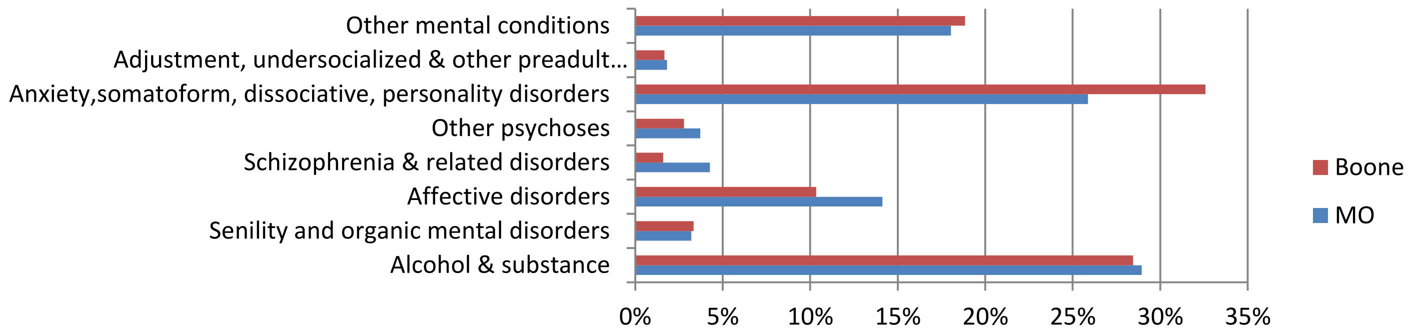


Source: Missouri Department of Health and Senior Services MICA

Of those individuals seen in a Boone County emergency room with a mental health diagnosis, 28 percent were suffering from alcohol and substance abuse, 33 percent were diagnosed with personality disorders, dissociative behavior, and anxiety, and 10 percent were suffering from affective disorder[14] (Figure 4). At the state level, results were consistent and the top two most common emergency room mental health diagnoses were for alcohol and substance abuse (29 percent) and personality disorders, dissociative behavior, and anxiety (26 percent) were the second most common occurrence (Figure 4).

[14] Affective Disorders are mood-related which can include depression

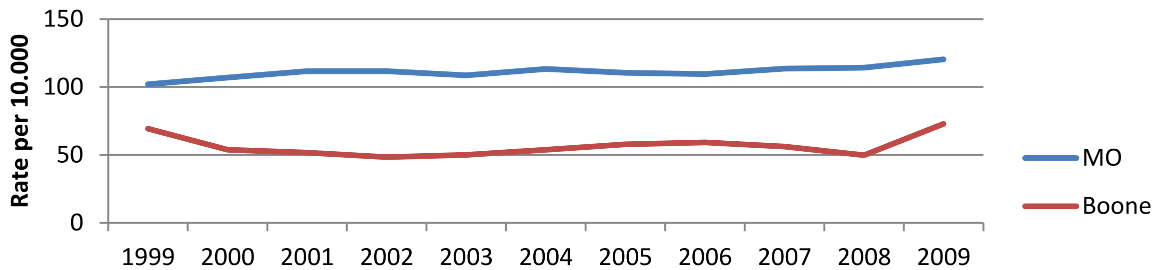
Figure 4: Emergency Room Visit Rate with Mental Health Diagnoses, MO & Boone County 2009



Source: Missouri Information Community Assessment (MICA), 2009

The second indicator describing the prevalence of mental health diagnoses is the rate of hospitalizations with mental health diagnosis, this is where the county level and state level behavior diverge. This is an important indicator because it helps to capture the portion of the population who may have health insurance and therefore bypass the emergency room services and are directly admitted to hospitalization upon the request of a primary doctor. Between 2008 and 2009, the number of Boone County residents hospitalized with a mental health diagnosis increased by 23 percent while the state of Missouri saw just a six percent increase during this same time period (Figure 5). It is important to note in Figure 5 that Boone County's rate of hospitalization with mental health diagnoses remains significantly lower than Missouri.

Figure 5: Hospitalization Rate with Mental Health Diagnoses



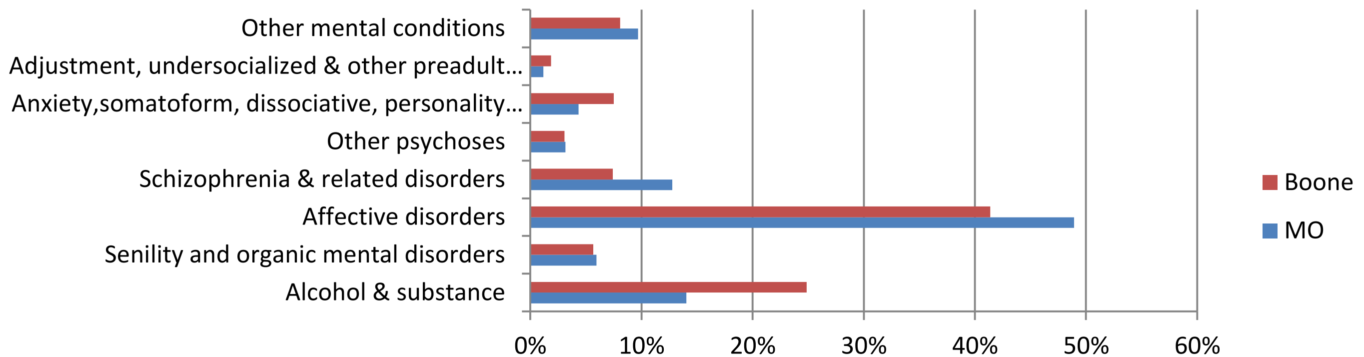
Source: Missouri Department of Health & Senior Services, Missouri Information Community Assessment (MICA)

The most common hospitalization with mental health diagnoses in the state of Missouri occurred with 15-24 year olds, but in Boone County, it was the elderly, those over the age of 65, who had the highest rate of occurrence. This may be expected, because between the 2000 and 2010 U.S. Census, Boone County has seen a rise in the elderly population. The Executive Director of the

Boone County Council on Aging[15] also notes that low cost of living and access to health care are factors contributing to growing numbers of elderly in the county.

Missouri and Boone County found African Americans to have the highest rate of hospitalizations with mental health diagnoses (Appendix A: Table 3). Of those individuals admitted into a Boone County hospital with a mental health diagnosis, 25 percent were suffering from alcohol and substance abuse, eight percent were diagnosed with personality disorders, dissociative behavior, and anxiety, and 41 percent were suffering from affective disorder (Figure 6). At the state level, results were consistent and the top two most common emergency room mental health diagnoses were for alcohol and substance abuse (14 percent), and personality disorders, dissociative behavior, and anxiety (49 percent) (Figure 6).

FIGURE 6: HOSPITALIZATION RATE WITH MENTAL HEATLH DIAGNOSES, MO & BOONE COUNTY, 2009



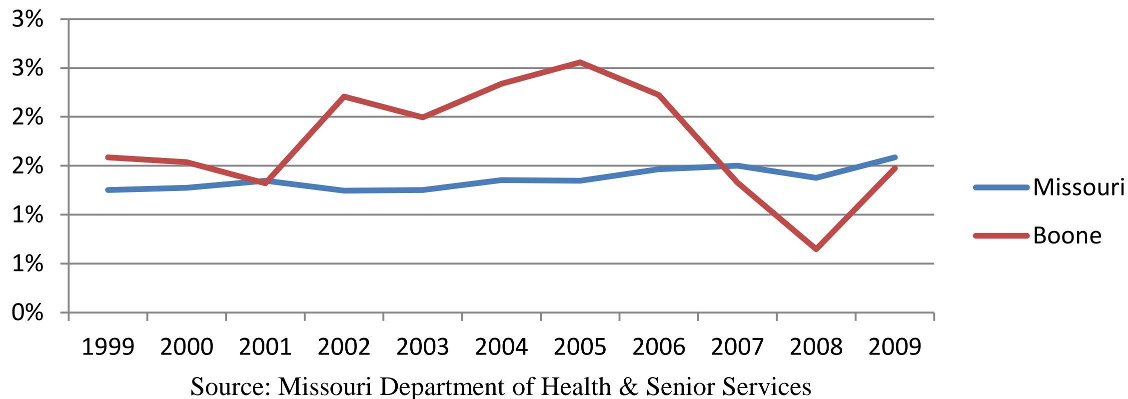
Source: Missouri Information Community Assessment (MICA), 2009

The third indicator describing the prevalence of mental health diagnoses is the suicide rate among Missourians and Boone County residents. This is an important indicator because it helps to capture the portion of the population who were casualties of their mental state. Missouri and Boone County experienced a rise in suicide rates between 2008 and 2009 (Figure 7). One contributing factor could be the economic downturn experienced during this time. The American Journal of Public Health reported, in 2011, that the overall national suicide rate increases during periods of economic recession and decreases during economic expansion. The strongest association of this statistic was found among Americans aged 25-64, the prime working years.[16]

[15] Professional correspondence with Jessica Macy, Executive Director of Boone County Council on Aging, July 2012

[16] Luo, F., Florence, C. S., Quispe-Agnoli, M., Ouyang, L., & Crosby, A. E. (2011). Impact of Business Cycles on U.S. suicide rates, 1928-2007. *American Journal of Public Health,* 101(6), 1139-1146.

Figure 7: Suicide Rate: Missouri & Boone County



Source: Missouri Department of Health & Senior Services

Figure 7 also shows a dramatic drop in suicide rates from 2005-2008. Some of this decrease could be attributed to Missouri legislation dating back to 2003, when Missourians, and the nation, recognized suicide as a public health problem. State legislation was passed directing the Department of Mental Health to partner with Department of Health and Senior Services to collaborate with community organizations to develop a new state suicide prevention plan. [17] Broad input from public health experts, mental health providers, suicide survivors and 12 town hall meetings conducted in communities across Missouri aided the plan's development. The *Missouri Suicide Prevention Plan*[18] was designed to assist stakeholders in providing services in areas with the most need and where gaps in service exist, thus avoiding duplication and competition by finding ways to coordinate activities. The intent of the *Missouri Suicide Prevention Plan* is to raise awareness of the suicide problem, not only among the agencies and groups involved in the planning process, but also among the general population.

During the plan development, stakeholders identified suicide risk factors as mental disorders (particularly mood disorders, schizophrenia, and anxiety disorders), alcohol, and other substance use disorders. Environmental risks include job or financial loss, while social risks include barriers to accessing health care, mental health care, and substance abuse treatment.[19] The *Missouri Suicide Prevention Plan* found protective factors center around assistance that makes it less likely that an individual will develop suicidal intentions. In accordance with the National Suicide Prevention Plan, protective factors include: effective clinical care for mental, physical, and substance use disorders; easy access to interventions, and support for help-seeking.

Sub-Populations: The homeless population is difficult to assess for mental illness although there is the belief among service providers that the prevalence of these indicators is on the rise.[20] In the January 2011 Point in Time Count, 17 percent of the homeless individuals counted in Boone County were suffering from mental illness, the majority of whom were

[17] Missouri House Bill no. 59 & no. 269

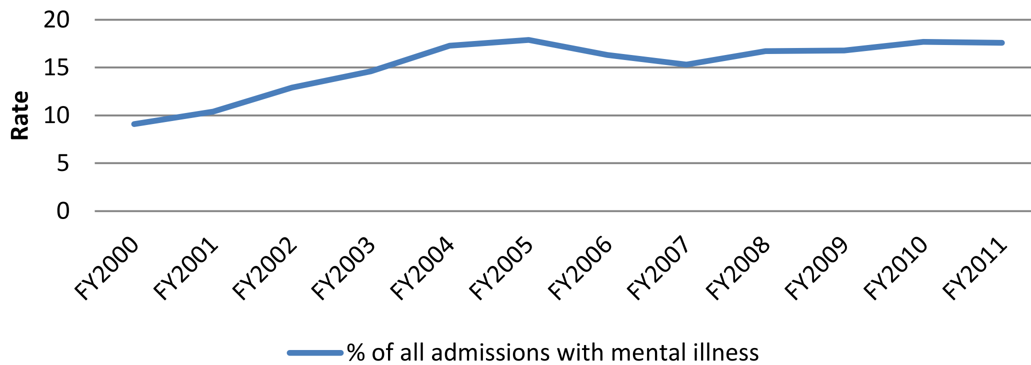
[18] Missouri's Suicide Prevention Plan 2004-2010, found http://dmh.mo.gov/docs/mentalillness/suicideplan.pdf on June 18, 2012

[19] Missouri's Suicide Prevention Plan 2004-2010, found http://dmh.mo.gov/docs/mentalillness/suicideplan.pdf on June 18, 2012

[20] Gould, T. (2002) *Homelessness in Missouri: The Rising Tide.* Retrieved January 2011 from http://www.masw.org/publications/homeless/report_text.pdf

sheltered.[21] Criminal offenders have high prevalence of mental health diagnoses. Since 2000, the admission rate of those with mental illness into the Missouri corrections population rose from nine percent to 17 percent in 2011 (Figure 8).[22] From fiscal year 2005 to fiscal year 2009, 15 offenders were released in Boone County on probation and parole had mental illness.[23]

FIGURE 8: MISSOURI CRIMINAL OFFENDERS CONSIDERED MENTALLY ILL WHEN ADMITTED



Source: Missouri Department of Corrections, Missouri Reentry Program (MPR) Baseline Results Report, 2011

According to the U.S. Department of Veteran's Affairs, there were 9,793 veterans living in Boone County in 2011, a one percent decrease from 2010. All U.S. veterans have access to the Harry S. Truman Veterans' Hospital, located in Columbia, Missouri. The hospital does not turn away any veteran on the basis of Missouri-residency and there are no requirements to access services so long a patient has veteran status. According in Jan Driskill, the Operations Manager at the Truman VA Hospital, the majority of veterans served at the Truman VA Hospital are from mid-Missouri.[24] Figure 9 shows a trend line of veteran admissions into the hospital for mental health disorders.

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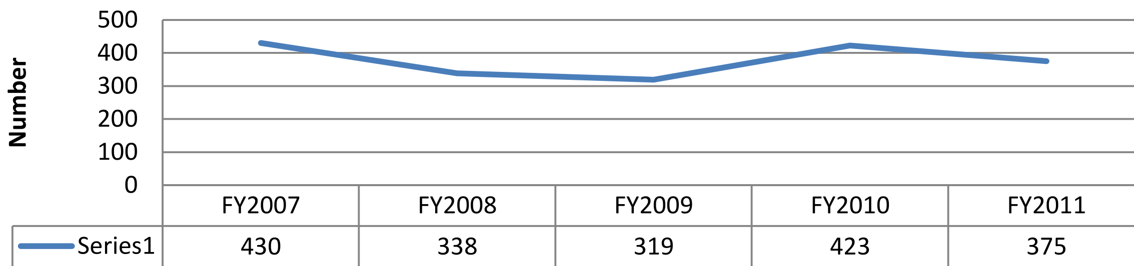
[21] Professional Correspondence with Missouri Housing Development Commission and the Missouri Association for Social Welfare, June 2012

[22] Mentally ill designation is given to offenders who score 3 to 5 on the Department of Corrections mental health classification. It is not a medical diagnosis but is given to offenders who need medication and regular clinic care and is considered to be equivalent to a mental illness diagnosis. Missouri Housing Development Commission and the Missouri Association for Social Welfare, June 2012

[23] Missouri Reentry Program. (2009). *MRP Steering Teams. Updated Baseline Outcome Results and Sentencing County Analysis.* Retrieved January 2011 from http://doc.mo.gov/documents/mrp/BaselineResults.pdf

[24] Professional correspondence with Jan Driskill, Operations Manager of the Truman VA, July 2012

FIGURE 9: VETERAN ADMISSIONS INTO TRUMAN VA HOSPTIAL FOR MENTAL HEALTH DISORDERS



	FY2007	FY2008	FY2009	FY2010	FY2011
Series1	430	338	319	423	375

Source: Truman VA Hospital Admission Data

Conclusion: The prevalence of mental health diagnoses data has shown alcohol and substance abuse make up the majority of the mental health cases seen in hospitals and emergency room visits. This suggests the need for further analysis on the topic of substance abuse in Boone County. The NSDUH 2009 national survey found that 42 percent of all mental health cases were co-occurring. According to SAMHSA, the "co-occurring" terminology means an individual with a substance use condition also has a mental health condition at the same time or vice versa. Examining the prevalence of substance abuse – specifically drug and alcohol usage in Boone County – will contribute greatly to the understanding of the state of mental health in the community.

The Prevalence of Substance Abuse

Primary Community Level Indicator: The primary community level indicator of the prevalence of substance abuse in Boone County is the number of admissions into drug and alcohol treatment programs. This measure describes those individuals in the community who are being treated for substance abuse who may have come from medical emergency room visits, direct medical hospitalizations, and had no previous medical treatment. These data are collected through the U.S. Substance Abuse and Mental Health Service Administration (SAMHSA) and the Missouri Division of Alcohol and Drug Abuse Treatment. These data are published regularly, made readily available at the local level and can be used by the community to monitor mental health trends.

COMMUNITY DASHBOARD: PREVALENCE OF SUBSTANCE ABUSE							
		Boone County			Missouri		
		2001	2009		2001	2009	
Primary Community Level Indicator							
Number of admissions into drug and alcohol treatment programs		1323 (yr. 2005)	1503	Declining	36,730 (yr. 2005)	40,049	Declining
Other Community Level Indicators							
		Per 1,000			*Per 1,000*		
Arrests	Rate of alcohol	109.1	127.3	No judgment	151.3	149.3	No judgment
	Rate of drug	103.3	117.6	No judgment	112.1	109	No judgment
Convictions	Rate of alcohol	58.9	60.4	No judgment	98.5	82.3	No judgment
	Rate of drug	256.1	397.5	No judgment	314	276	No judgment

Sources: Missouri Department of Health and Senior Services (MO Status Report), MO State Highway Patrol, MO Department of Corrections
Color Indicators – assignment based upon comparison between the 2006 and 2010
- = Improving
- = No change
- = Declining
- = No judgment

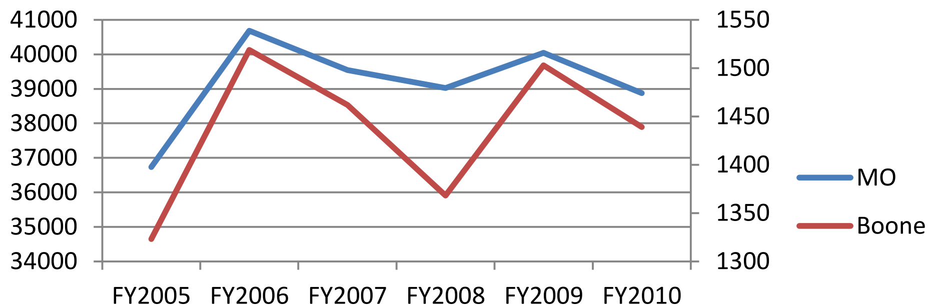
Collection of Indicators: The Bureau of Justice Statistics Drug and Crime Facts reveal that possession violations make up 80 percent of drug arrests in the nation while the remaining 20 percent account for selling and manufacturing narcotics.[25] The percentage of arrests for possession of marijuana is higher in the Midwest than in any other region.[26] According to the Nature and Extent of the Illicit Drug Problem in Missouri 2011 report,[27] prepared by the Department of Public Safety and Statistical Analysis Center,[28] marijuana is the leading drug of choice for substance abusers in Missouri (Appendix A: Table 4).

The prevalence of substance abuse in Boone County is explained by the number of admissions into treatment programs, the arrest rate for drug and alcohol violations, and the conviction rate of drug and alcohol violations. Missouri's Annual Status Report on Substance Abuse and Mental Health Problems tracks the number of individuals admitted to Division of Alcohol and Drug Abuse treatment programs.[29] The State Highway Patrol[30] and Missouri Department of Corrections[31] maintain data on arrests and convictions. Taken together, admissions numbers and arrest and conviction rates help to demonstrate the potential scope of substance abuse. However, it should be noted that law enforcement practices and criminal justice sentencing standards are a variable which is not controlled for in the data presented in this analysis.

[25] Bureau of Justice Statistics. Retrieved February 2011from http://bjs.ojp.usdoj.gov/content/dcf/enforce.cfm#
[26] Uniform Crime Reports can be viewed at: http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/persons-arrested
[27] A full report can be reviewed at: http://www.mshp.dps.missouri.gov/MSHPWeb/SAC/pdf/2011NATUREANDEXTENTREPORT.pdf
[28] Includes individuals under the age of 18
[29] Source: http://www.dmh.missouri.gov/ada/rpts/status.htm
[30] For more information, visit http://www.mshp.dps.missouri.gov/MSHPWeb/SAC/data_and_statistics_ucr.html
[31] For more information visit http://doc.mo.gov/

The first indicator describing the prevalence of substance abuse is the number of treatment admissions. Between 2005 and 2010, Missouri and Boone County followed a very similar trend in admissions numbers (Figure 10).

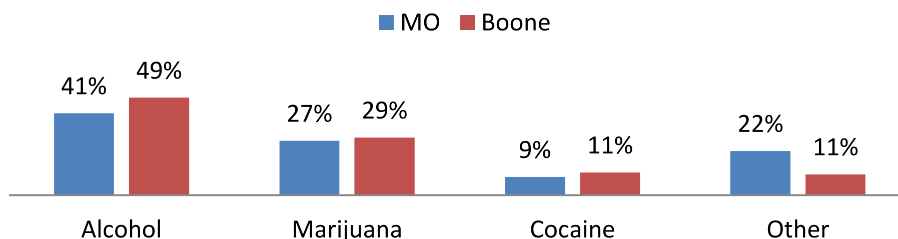
Figure 10: Alcohol and Drug Abuse Treatment Admissions: Missouri & Boone County



Source: Missouri Department of Mental Health Alcohol and Drug Admissions Reports

The most telling data examines the types of substances abused and the characteristics of the people placed in treatment. To begin, the primary problem at admission to treatment is alcohol, followed by marijuana and cocaine usage (Figure 11). In Boone County, nearly half (49%) of treatment consumers identify alcohol as their primary substance addiction (Figure 11). Methamphetamines, prescription drug abuse and heroine (referred to as "other substances") are not common substance problems seen in those who enter treatment in Boone County.

Figure 11: Primary Problem at Admission to Alcohol & Drug Abuse Treatment: Missouir and Boone County, 2010



Source: Missouri Department of Mental Health, Alcohol & Drug Treatment Admissions (2010)

The typical treatment recipient in Missouri and Boone County is male and Caucasian. As shown above, it is likely that he struggles with alcohol abuse (Figure 11). At the state level, the typical age of entry into treatment is 18 to 24, followed by 25 to 29. In Boone County, however,

the typical age at entry into treatment is 25 to 29 year olds, followed by 45-54 year olds (Appendix A: Table 5). At both the state and county level, the majority of alcohol and drug treatment consumers are referred by the court and criminal justice system (Appendix A: Table 6). When admitted into treatment, consumers are asked how old they were when they tried drugs for the first time. Boone County residents in treatment start using drugs at a slightly younger age than the rest of Missouri residents. The average age of first use is moving down, which indicates people are experimenting with drugs earlier in life (Table 1).

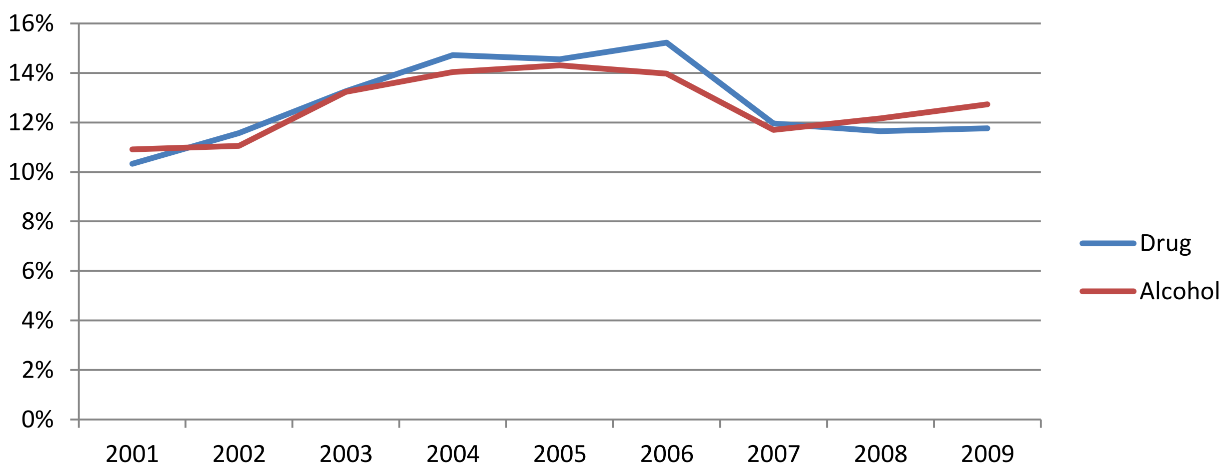
TABLE 1: AVERAGE AGE OF FIRST USE

	2008	2009	2010
MO	17.7	17.4	17.4
Boone	17.2	16.9	16.8

Source: 2010 Status Report on Missouri's Alcohol and Drug Problem

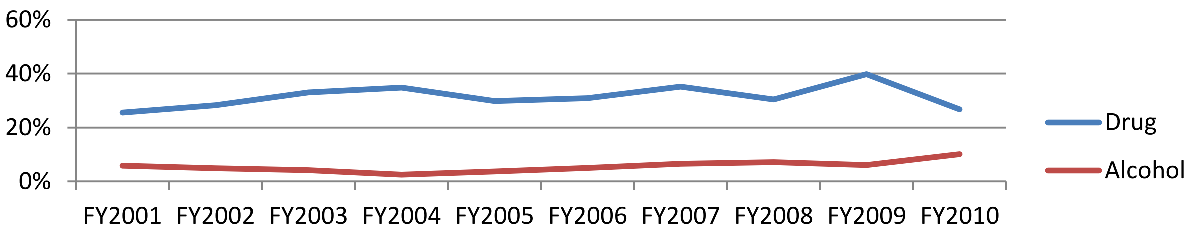
The second indicator describing the prevalence of substance abuse is the alcohol and drug arrests and convictions in Boone County. Drug-related arrests in Boone County for 2009-2010 rose just 3.5 percent since 2007-2008. However, alcohol related arrests during this same time period rose six percent (Appendix A: Table 7). Drug convictions in Boone County in 2010 decreased 15 percent since 2008 and alcohol convictions rose 36 percent during this same time period (Appendix A: Table 8). These data show that Boone County alcohol arrests and convictions are rising faster than drug-related arrests and convictions. Figures 12 and 13 examine a useful trend line for rate of drug and alcohol arrests and convictions. One can see alcohol and drug arrest rates have followed the relatively same trend for the past ten years. Drug convictions rates, however, have no pattern and vary largely by year. Alcohol conviction rate is relatively consistent with a notable increase (55 percent) beginning in 2009.

FIGURE 12: ALCOHOL AND DRUG RELATED ARREST RATES IN BOONE COUNTY



Source: Missouri Status Reports, Missouri Department of Health & Senior Services

FIGURE 13: ALCOHOL AND DRUG RELATED CONVICITON RATE IN BOONE COUNTY



Source: Missouri Status Report, Missouri Dept of Health & Senior Services

Sub-populations: Data on local Boone County homeless are difficult to track. Therefore, one would consider national data on some of the larger trends which can help gauge Boone County's state of substance abuse pertaining to its homeless population. The *DASIS Report*[32] is prepared by the Office of Applied Studies at SAMHSA and offers some good insight to this topic. Their 2009 report found alcohol was the primary substance of abuse[33] for almost half of the homeless admissions, followed by heroin, and cocaine/crack (Appendix A: Table 9). Use of marijuana, however, was much less frequent among homeless admissions compared to admissions that were not homeless (6 *vs*. 20 percent) (Appendix A: Table 9).

The *DISAIS Report* also classifies these data by race. Alcohol was the most common primary substance of abuse for white homeless admissions (51 percent) and for black homeless admissions (45 percent) (Appendix A: Table 10). The distribution of other primary abuse substances varied dramatically by race and homeless status. Methamphetamine, for example, is the primary substance abused by eight percent of white homeless people entering admissions, whereas this drug accounts for just one percent of primary abuse substance from black homeless individuals. Homeless black admissions were more likely to report primary abuse of cocaine (27 percent) than white homeless admissions (seven percent). According to the National Homeless Assessment Report[34] from 2009, there has been an increase in the number of sheltered homeless who came from substance abuse treatment facilities. In Boone County, 27 percent of the sheltered homeless individuals counted in the January 2011 Point in Time Count were substance abusers.[35]

Inmates needing substance abuse treatment made up 85 percent of the incarcerated population in Missouri admitted in fiscal year 2011.[36] Substance abuse is high among offenders

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[32]View full report at http://www.samhsa.gov/data/2k6/homeless/homeless.htm

[33] The *primary substance of abuse* is the main substance reported at the time of admission.

[34] Annual Homeless Assessment Report, 2009
http://www.hudhre.info/documents/5thHomelessAssessmentReport.pdf

[35] Professional Correspondence with Missouri Housing Development Commission and the Missouri Association for Social Welfare, June 2012

[36] Missouri Department of Corrections (2011) Offender Profile from page 45
http://doc.mo.gov/documents/publications/Offender%20Profile%20FY11.pdf

and is heavily correlated with recidivism. In Boone County, 83 percent (1,115) of individuals on probation and parole from fiscal year 2005 to fiscal year 2009 had a substance abuse disorder. [37]

The Department of Veterans Affairs (VA) projects the need for substance abuse treatment services using data on the subset of veterans who seek treatment in the VA Health System. The National Survey on Drug Use and Health (NSDUH) represents an opportunity to enhance these projections by examining epidemiological data on the veteran population, including those who previously have not accessed VA services. In a 2005 report by NSDUH,[38] estimates of substance use, dependence, and treatment were derived to provide more precise measures of differences between veterans and a nonveteran comparison group. The report found heavy use of alcohol was more prevalent among veterans than comparable nonveterans, with an estimated 7.5 percent of veterans drinking heavily in the past month compared with 6.5 percent of their nonveteran counterparts. The proportional rate of Boone County veterans participating in alcohol and drug abuse treatment programs has been falling since 2008 (Appendix A: Table 11).

Conclusion:The two Boone County measures examined here were the number of admissions into treatment programs and the rate of drug and alcohol arrests and convictions. The analysis of the data has shown alcohol abuse is the most common substance of abuse among those entering rehabilitation treatments in Boone County. The number of alcohol arrests and convictions rose faster than drug related arrests and convictions. This information establishes alcohol as a significant factor contributing to the prevalence of substance abuse in Boone County. This discovery brings about the need for further analysis on the topic of treatment access for substance abusers in Boone County.

Treatment Access

Primary Community Level Indicator: Treatment access is a difficult issue area to analyze due to the lack of current primary data in Boone County. There is no data available at the county level that accurately captures the disparity between services offered and services needed. Existing data is not published regularly, is not readily available at the local level nor is it commonly used to monitor mental health trends. Therefore, no primary community level indicator can be identified.

Treatment Access Data Sources: To understand the scope of mental health and its sub-issues (the prevalence of mental health diagnoses and the prevalence of substance abuse), one should examine treatment access. Access to alcohol and drug treatment programs lowers the prevalence of mental health diagnoses.[39] Access to treatment is explained at the national, state, and local levels by NSDUH, the Missouri Status Report on Alcohol and Drug Abuse, and a Boone County Mental Health Needs Assessment, respectively. The first data source explaining treatment access is the 2010 NSDUH[40] survey. This national survey examines a multitude of

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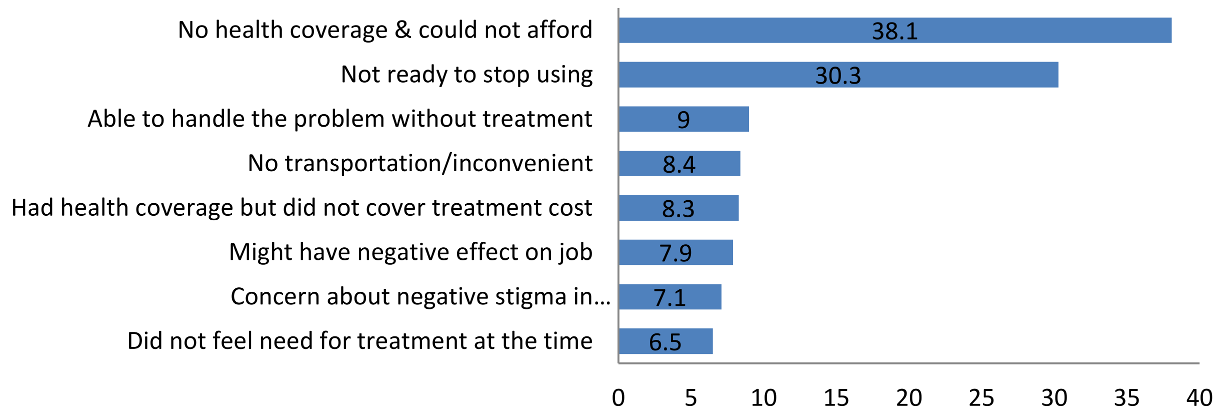
[37] Missouri Reentry Program. (2009). *MRP Steering Teams. Updated Baseline Outcome Results and Sentencing County Analysis.* Retrieved January 2011 from http://doc.mo.gov/documents/mrp/BaselineResults.pdf
[38] View full report at http://www.samhsa.gov/data//2k5/vets/vets.htm
[39] Booth, B. M., Staton, M., & Leukefeld, C. (2001). Substance use health services research. *Substance Use & Misuse*, 36(6-7), 673-685.
[40] A full report can be reviewed on the SAMHSA website at http://www.samhsa.gov/data/NSDUH/2k10NSDUH/2k10Results.htm

indicators on the topic of substance abuse including identifying the specific reasons why a person in need of mental health treatment does not receive the treatment. This includes cases where the attempt to receive treatment was made, but admission into treatment was not achieved. Findings show the lack of health coverage and no means to afford treatment were the primary reason why people do not receive treatment for illicit drug or alcohol abuse (Figure 14). Stigma concerns were at the bottom of the list followed by the belief that treatment was not needed at the time.

FIGURE 14: REPORTED REASONS FOR NOT RECEIVING TREATMENT*



Source: 2010 National Survey of Drug Use and Health
*Reasons for not receiving substance abuse treatment among persons > 12 years of age or older AND whom made an effort to get treatment BUT did not receive treatment. Data 2007-2010 combined

The second data source explaining treatment access is the 2011 Status Reports on Missouri's Alcohol and Drug Abuse Problems.[41] This report demonstrates the unmet mental health needs of Missourians and found that in 2007-2008, 322,000 and 103,000 individuals in the state went untreated for alcohol and drug abuse treatment respectively (Appendix A: Table 12 & 13). The most recent data[42] shows there was a 32 percent greater need for alcohol than drug abuse treatment in the state of Missouri.

The third data source explaining treatment access is the 2004 Needs Assessment conducted by the Boone County Mental Health Board. This was a one-time assessment which was conducted in response to decreased funding and services, and increasing treatment needs. The needs assessment aimed to study and document the specific needs for Boone County residents for mental health and alcohol and drug abuse services as well as the gaps and barriers to service delivery. The results assessment found that in 2004, roughly 5,712 adults were not receiving *appropriate* treatment for their severe mental illness. The assessment also found 1,841 adults with illicit drug problems were also not receiving *adequate* treatment at the time of this assessment. In addition, there were nearly 154 adults waiting for mental health or substance

[41] A full report can be viewed on the MO Dept. of Health & Senior Services website at http://dmh.mo.gov//ada/rpts/status.htm
[42] 2011 Status Report does not have data on treatment access beyond 2008

abuse treatment in Boone County.[43] The Mental Health Board needs assessment process asked mental health agency personnel to rank the groups they felt most likely not to have their treatment needs met. Respondents reported the following:

1. Persons who are homeless
2. Persons with physical disabilities or cognitive impairments
3. Residents of rural areas
4. Persons of African American race
5. Persons of Hispanic or Latino ethnicity
6. Persons with co-occurring disorders
7. Persons transitioning into the community from correctional system.

The analysis also found respondents reported inadequate medical subsidies, inadequate residential, and inpatient treatment and group or family therapy for Boone County residents needing mental health services. Alcohol and substance abuse services were reported by respondents as being deficient in residential treatment, inpatient treatment and detoxification – mainly for women. Finally, Boone County service professionals highlight the need for more services to meet the basic needs of those seeking treatment.

Sub-populations: The Department of Veterans Affairs (VA) and NSDUH examined access to treatment for U.S. veterans in a 2005 report.[44] They found an estimated 0.8 percent of veterans received specialty treatment[45] for a substance use disorder (alcohol or illicit drugs) in the past year compared with 0.5 percent of their nonveteran counterparts. An estimated 2.8 percent of veterans were dependent on illicit drugs or alcohol but did not receive treatment in the past year.[46] A similar proportion of comparable nonveterans went untreated. The Missouri corrections population has access to treatment based upon need at admissions. The Missouri homeless population is difficult to track on treatment access. Recalling the primary barriers to treatment, expressed at the national level by the 2010 NSDUH report, are the lack of health coverage and no means to afford treatment. These barriers to treatment may also be deterrents for Boone County homeless.

Conclusion: National, state and local data were examined as they pertain to the mental health sub-issue of treatment access. None of the data sources accurately describe treatment access for Boone County residents and therefore no primary community level indicators can be identified or used to prioritize treatment access against the other sub-issues. In addition to the call for an updated needs assessment report from the Boone County Mental Health Board, this analysis has shown there to be a great need for systematic documentation of mental health treatment access.

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[43] Mental Health Board Needs Assessment, March 2004. See page 10 http://www.showmeboone.com/MentalHealthBoard/Mental%20Health%20Board%203_23.pdf
[44] Source: http://www.samhsa.gov/data//2k5/vets/vets.htm
[45] Specialty treatment is defined as treatment received at a hospital (inpatient), rehabilitation facility (inpatient or outpatient), or mental health center to reduce or stop drug or alcohol use, or medical problems associated with drug or alcohol use.
[46] Respondents were classified as having an unmet need for substance use treatment if they were dependent on illicit drugs or alcohol and did not receive treatment at a specialty facility.

PRIORITIZATION

The sub-issues discussed in this report were chosen because of their relevance to the mental health discussion in Boone County. All issues discussed, however, are not included in the prioritization and scoring process. This exclusion in no way diminishes their relevance or questions their role in mental health analyses of the county-at-large. Rather, it calls to mind the need for more data and better practices for understanding specific issues at the county level. In this report, exclusion from prioritization is based on two criteria: 1) data limitations at the county level and 2) established scoring methods. These two criteria need to be met in order to maintain fidelity of the prioritization process, thereby allowing the mental health analysis score to have broad reaching comparison capability to other Boone County social services issues. The five criteria required for a sub-issue area to receive a prioritization score are:

1. Representative of the issue area
2. Comparable at the state and county level
3. Publically available
4. Systematically collected
5. Routinely updated

The treatment access sub-issue did not have a community level indicator that met all five criteria, and therefore was not given a prioritization score. The remaining two sub-issues had identifiable community level indicators, however, only the prevalence of mental health diagnoses was awarded a prioritization score (Appendix A: Table 14). The sub-issue explaining the prevalence of substance abuse was not awarded a prioritization score on the basis of the following rationale.

The IPP evaluators are aware that mental health data are comprised of both substance abuse and clinical psychological disorders. Separating substance abuse data from clinical psychological data would be challenging, if not damaging to analytical reports by rendering future and past reports non-comparable because the NSDUH establishes almost half of all mental health disorders as co-occurring disorders. For this reason, substance abuse data are reported as part of the greater whole of mental health diagnoses. Therefore, the prevalence of mental health diagnoses was the only sub-issue awarded a prioritization score because the substance abuse issue is naturally captured in data explaining the prevalence of mental health diagnoses (Appendix A: Table 15).

The community level indicator of the prevalence of mental health diagnosis data was used to answer a series of questions that ultimately determined the prioritization score. The series of questions (Appendix A: Table 15) pertain to the immediacy of attention required, the state trends, beneficial impacts of resolving mental health issues, the number of people directly impacted, and the availability of services in Boone County. In the scoring process, IPP utilized a consensus scoring procedure to reduce the subjectivity of the measure. A composite priority score of 2.2 was reached on a scale of 1 to 3 (Table 2).

TABLE 2: PRIORITIZATION SCORE FOR THE PREVALENCE OF MENTAL HEALTH DIAGNOSES IN BOONE COUNTY

Sub-Issue	Community Level Indicator	Prioritization Score
The prevalence of mental health diagnoses	Rate of emergency room visits with mental health diagnoses	2.2
1 = low priority, 2 = moderate priority, 3 = high priority		

The prevalence of mental health diagnoses in Boone County is best represented by the rate of emergency room visits with mental health diagnosis. At the county level, the rate of emergency room visits with mental diagnosis is most common for 25 to 44 year olds. An inventory of resources addressing this need shows that there are at least 18 services addressing this need in the community. The existing infrastructure allows for higher efficiency in addressing needs because there are services on which to build.

RESOURCE ASSESSMENT

An inventory of current resources directed at the mental health issues was conducted using United Way’s 211 information center. The resource inventory was a great start to creating a resource list for services available to Boone County residents; it was not and should not be considered a comprehensive list of all mental health services available within Boone County.

MENTAL HEALTH RESOURCES REGISTERED IN 211 DATABASE			
Agency	**Program Name**	**Service Description**	**Eligibility**
Boone Valley Hope		Provides a variety of treatment services, including medically monitored detox, residential, day-partial, outpatient and continuing care.	No restrictions
Burrell Behavioral Health Adult Services (Adult Clinic)		Burrell provides a comprehensive range of mental health services for children, adolescents, families, adults and senior adults. Each program and service is designed to offer treatment consistent with an individual's or family's unique needs.	No restrictions
Burrell Behavioral Health Adult Services (Outpatient Clinic)	Burrell Behavioral Health Adult Services	Burrell provides a comprehensive range of mental health services for children, adolescents, families, adults and senior adults. Each program and service is designed to offer treatment consistent with an individual's or family's unique needs.	No restrictions
Burrell Behavioral Health (Central Region)		The Division of Comprehensive Psychiatric Services divides Missouri into 25 service areas. Each area has a Community Mental Health Center which provides psychiatric services to individuals in need: and is designated as the division's Administrative Agent. These Administrative Agents serve as the primary entry and exit point for state mental health services.	No restrictions
Burrell Behavioral Health (Central Region)		Operates or funds programs and facilities for the treatment of psychiatric problems, developmental disabilities, drug and alcohol abuse, etc. in Missouri.	No restrictions
Columbia Boone County Department of Public Health and Human Services	In home services program	Evaluates and authorizes in home services for persons age 60 and over and-or permanently and totally disabled. Personal care, homemaker chore and respite services.	Low-Income
Daybreak Residential Treatment Center		Outpatient counseling, including drug and alcohol treatment	No restrictions

MENTAL HEALTH RESOURCES REGISTERED IN 211 DATABASE			
Agency	**Program Name**	**Service Description**	**Eligibility**
Family Counseling Center of Missouri, Inc.		Outpatient counseling, including drug and alcohol treatment	No restrictions
Daybreak Residential Treatment Center		Residential Treatment for drug and alcohol problems	Males, 18yrs+, Missouri residents. Women are eligible for outpatient treatment only.
McCambridge Center		Residential Treatment for substance use disorders	Women
New Horizons Community Support Services, Inc.	Comprehensive Psychiatric Rehabilitation for Adults	New Horizons provides psychiatric rehabilitation, homeless outreach, substance abuse treatment, and residential services to persons with disabling mental illness and co-occurring substance abuse.	No restrictions
New Horizons Community Support Services, Inc.	Substance Abuse Treatment	New Horizons provides psychiatric rehabilitation, homeless outreach, substance abuse treatment, and residential services to persons with disabling mental illness and co-occurring substance abuse.	No restrictions
Phoenix House - Detox	Detox	Social setting detoxification is provided 24 hours a day, seven days a week. This service provides emergency treatment for alcohol and other drug addictions. This treatment stabilizes individuals and prepares them for ongoing treatment.	People With Addictions
Phoenix House - Residential	Residential	Treatment includes up to 28 days of education and counseling at the Phoenix House residential facility. Primary Recovery is our residential treatment facility. There are 25 beds available. This program offers intensive treatment including education, group and individual counseling, and learning how to establish a good sobriety support system. Integrating clients into the support network of the recovering community is also a focus in this program.	People With Addictions

Mental Health Resources Registered in 211 Database			
Agency	**Program Name**	**Service Description**	**Eligibility**
Phoenix Program, Inc. - Modified Therapeutic Community	Modified Therapeutic Community	A Long-term, residential treatment program for homeless men with co-occurring mental illness and drug or alcohol addiction.	No restrictions
Phoenix Program, Inc.	Phoenix Program, Inc.	Offers a wide range of treatment for addictions on an inpatient and outpatient basis.	No restrictions
Phoenix Program, Inc. – Assertive Community Treatment (ACT)	ACT, Phoenix Program, Inc.	The Phoenix ACT program is a collaborative project to enhance and expand capacity and strengthen integrated treatment for adults and co-occurring substance abuse and mental illness (COD). The Phoenix Act treatment team works collaboratively to deliver the treatment, rehabilitation and support services required by each client to help project participants live safely and autonomously in the community.	No restrictions
Project Apex	Apex, Phoenix Programs, Inc.	Project APEX serves adolescents ages 12-20 years old who meet the criteria for a substance use disorder (SUD) and-or co-occurring substance use with a managed mental health diagnosis. Project APEX will serve adolescents from the rural region of mid-Missouri.	People With Addictions, age 12-20

IDENTIFYING BEST PRACTICES

The National Registry of Best Practices and Programs (NREPP)[47] is a searchable online registry of mental health and substance abuse interventions. The purpose of the registry is to assist the public in identifying scientifically tested means of treating and preventing substance abuse and mental health disorders. The practices and programs shared in the NREPP web inventory have been reviewed and rated by independent reviewers and are ready for dissemination in the field. NREPP and its affiliate, SAMHSA, desire to limit the lag time between scientific knowledge and its practical filed application by assimilating and dispersing best practices knowledge through a web based application. The Boone County Mental Health Analysis report shares with the Boone County Community Services Advisory Commission and HMUW the usefulness of this web-based tool. A brief tutorial of the NREPP website shares an example of how a web user identifies a best practice program in the field of mental health.

Web Image 1 shows the opening page of NREPP (http://www.nrepp.samhsa.gov/). The search box on the right of the image contains basic and advanced search tabs.

WEB IMAGE 1:

The advanced search option tab allows for the user to select detailed program specifications including: areas of interest, target age group, outcome categories, geographic locations, settings, race and gender. The IPP evaluators chose to find a program for the sub-issue of the prevalence of mental health diagnoses. Web Image 2 shows the advanced search menu with specifications selected as: mental health promotion, for females aged 18-25, suffering from a drug addition, living in an urban setting, and conducted in an outpatient setting.

[47] For more information, visit http://www.nrepp.samhsa.gov/

WEB IMAGE: 2

Home > Find an Intervention > Advanced Search

Find an Intervention - Advanced Search

Select criteria below to run an advanced search of NREPP-reviewed interventions.

Keyword
Enter keyword or phrase

Gender
- [ ] Male Only
- [x] Female Only

Areas of Interest
- [x] Mental health promotion
- [ ] Mental health treatment
- [ ] Substance abuse prevention
- [ ] Substance abuse treatment

Outcome Categories
- [ ] Alcohol
- [ ] Cost
- [ ] Crime/delinquency
- [x] Drugs

Geographic Locations
- [x] Urban
- [ ] Suburban
- [ ] Rural and/or frontier
- [ ] Tribal

Ages
- [ ] 0-5 (Early childhood)
- [ ] 6-12 (Childhood)
- [ ] 13-17 (Adolescent)
- [x] 18-25 (Young adult)

Races/Ethnicities*
- [ ] American Indian or Alaska Native
- [ ] Asian
- [ ] Black or African American
- [ ] Hispanic or Latino

Settings
- [ ] Inpatient
- [ ] Residential
- [x] Outpatient
- [ ] Correctional

- [ ] *Check here to limit your search to interventions tested with higher percentages **(50% or more)** of the selected groups.

Search

By clicking the search option, the following intervention was identified (Web Image 3) based upon the advanced search criteria.

WEB IMAGE 3:

Basic Search | Advanced Search | View All Interventions

1 Intervention(s) Found

Search criteria: 18-25 (Young adult), Mental health promotion, Outpatient, Drugs, Urban, Female Only

Your search results reflect the research NREPP reviewed for each intervention. You can further refine these results by selecting additional criteria on the left.

Intervention Title	Description
Celebrating Families!	Celebrating Families! (CF!) is a parenting skills training program designed for families in which one or both parents are in early stages of recovery from substance addiction and in which there is a high risk for domestic violence and/or child abuse.

One intervention, *Celebrating Families*, was identified in the NREPP data base. By clicking on the *Celebrating Families* link, the web user can find out detailed information about the intervention including: treatment areas of interest, outcomes of interest, outcome categories, participant age, genders, race/ethnicities, program settings, geographic locations, implementation history, National Institute of Health funding opportunities, program adaptations, and adverse effects. The synopsis also includes a review of the research conducted thus far, the program's readiness for dissemination, the cost of implementation, current replications in the field, and program contact information.

When targeted characteristics (such as setting or intervention type) are unknown, the basic search tab of the NREPP website (Web Image 1) allows the user to search for generic terms of treatment topics. Web Image 4 shows the results for a basic search of "mood disorders", whereby three results were found. These three search results are not limited by participant profile, geographic setting, or intervention method. They simply are evidence-based programs that are related to "mood disorders." More information on each of these three programs can be found by clicking the intervention name.

WEB IMAGE 4:

Basic Search | Advanced Search | View All Interventions

3 Intervention(s) Found

Search criteria: Mood Disorders

Your search results reflect the research NREPP reviewed for each intervention. You can further refine these results by selecting additional criteria on the left.

Compare

Compare	Intervention Title	Description
☐	Clinician-Based Cognitive Psychoeducational Intervention for Families	The Clinician-Based Cognitive Psychoeducational Intervention is intended for families with parents with significant mood disorder. Based on public health models, the intervention is designed to provide information about mood disorders to parents, equip parents with skills they need to communicate this information to their children, and open dialogue in families about the effects of parental depression.
☐	Interpersonal Psychotherapy for Depressed Adolescents (IPT-A)	Interpersonal Psychotherapy for Depressed Adolescents (IPT-A) is a short-term, manual-driven outpatient treatment intervention that focuses on the current interpersonal problems of adolescents (aged 12-18 years) with mild to moderate depression severity.
☐	Mindfulness-Based Cognitive Therapy (MBCT)	Mindfulness-Based Cognitive Therapy (MBCT) is a program for adults with recurrent major depressive disorder (as diagnosed by DSM-III-R or DSM-IV criteria). MBCT represents an integration of components from two interventions: Mindfulness-Based Stress Reduction, which is based on the core principle of "mindfulness" (i.e., a mental state whereby one attends to and purposefully manages one's awareness of what is happening in the moment), and cognitive behavioral therapy for depression.

Evidence-Based Programs and Practices

The NREPP search process outlined above was used by the IPP evaluators to identify evidence-based programs and practices for each corresponding sub-issue of mental health. The tables identify evidence-based programs, practices, and interventions for each sub-issue respectively. No best practices assessment was conducted for the treatment access sub-issue. Access to facilities, identifying treatment need, and inner-service networking are inherently part of the best practices listed for the other sub-issues.

EVIDENCE-BASED PROGRAMS & PRACTICES FOR THE PREVALENCE OF MENTAL HEALTH DIAGNOSES	
Intervention Name	***Intervention Link***
Acceptance and Commitment Therapy (ACT)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=191
Brief Self-Directed Gambling Treatment	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=218
Celebrating Families	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=100
Cognitive Behavioral Social Skills Training	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=149
Coping with Work and Family Stress	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=103
Critical Time Intervention	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=125
Dialectical Behavior Therapy	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=36
Dynamic Deconstructive Psychotherapy	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=240
Enhance Wellness	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=188
Eye Movement Desensitization and Reprocessing (EMDR)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=199
Familias Unidas (Families United)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=85
Family Behavior Therapy (FBT)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=113
Family Foundations	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=236
Functional Adaptation Skills Training (FAST)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=92
JOBS Program	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=170
Living in the Face of Trauma (LIFT): An Intervention for Coping With HIV and Trauma	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=202
Mindfulness-Based Cognitive Therapy (MBCT)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=239
Mindfulness-Based Stress Reduction (MBSR)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=238
New York University Caregiver Intervention (NYUCI)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=74
OQ-Analyst (OQ-A)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=22
Partners in Care (PIC)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=126
Pathways' Housing First Program	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=155
The ICCD (International Center for Clubhouse Development) Clubhouse Model	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=189

EVIDENCE-BASED PROGRAMS & PRACTICES FOR THE PREVALENCE OF SUBSTANCE ABUSE	
Intervention Name	***Intervention Link***
A Woman's Path to Recovery	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=123
Alcohol Behavioral Couple Therapy (ABCT)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=3
Behavioral Couples Therapy for Alcoholism and Drug Abuse (BCT)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=134
Brief Marijuana Dependence Counseling (BMDC)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=122
Brief Strengths-Based Case Management (SBCM) for Substance Abuse	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=58
Broad Spectrum Treatment (BST) and Naltrexone for Alcohol Dependence	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=57
Cocaine-Specific Coping Skills Training (CST)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=10
Community Trials Intervention To Reduce High-Risk Drinking	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=9
Contracts, Prompts, and Reinforcement of Substance Use Disorder Continuing Care (CPR)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=166
Forever Free	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=118
Friends Care	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=143
Healthy Workplace	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=148
Helping Women Recover: A Program for Treating Substance Abuse and Beyond Trauma	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=181
Interim Methadone Maintenance	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=19
Living in Balance (LIB)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=72
ModerateDrinking.com and Moderation Management	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=212
Motivational Enhancement Therapy (MET)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=107
Motivational Interviewing (MI)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=130
Network Support Treatment (NST) for Alcohol Dependence	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=206
Network Therapy	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=90
The Border Binge-Drinking Reduction Program	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=115
The Boston Consortium Model: Trauma-Informed Substance Abuse Treatment for Women (BCM)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=86
The Computer-Assisted System for Patient Assessment and Referral (CASPAR)	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=160

The Matrix Model	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=87
The Oxford House Model	http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=223

Collaborative Opportunities

The NREPP search process outlined above was used by the IPP evaluators to identify collaborative opportunities for each corresponding sub-issue of mental health. The tables identify collaborative opportunities for each sub-issue respectively. No collaborative opportunities search was conducted for the treatment access sub-issue. Access to facilities, identifying treatment need, and inner-service networking are inherently part of the collaborative opportunities listed for the other sub-issues.

PROGRAM SETTINGS FOR THE PREVALENCE OF MENTAL HEALTH DIAGNOSES
Home
School
Inpatient
Other community settings
Outpatient
Residential
Workplace

PROGRAM SETTINGS FOR THE PREVALENCE OF SUBSTANCE ABUSE
Correctional
Home
Homeless Shelters
Inpatient
Other community settings
Outpatient
Residential
School
Workplace

Services to Purchase

The NREPP search process outlined above was used by the IPP evaluators to identify services for purchase by Boone County for each corresponding sub-issue of mental health. The tables identify services for each sub-issue respectively. No potential services were identified for

the treatment access sub-issue. Access to facilities, identifying treatment need, and inner-service networking are inherently part of the services listed for the other sub-issues.

SERVICES FOR THE PREVALENCE OF MENTAL HEALTH DIAGNOSES
Ad hoc counseling
Behavioral homework
Collaborative care
Family inclusion treatments
Group consultations
Group sessions
Independent living skills program
Job search strategies and assistance
Larger workshops
Multi-parent group meetings
One-on-one sessions
Outpatient behavioral treatment
Psychotherapy
Recovery services
Skills training
Small groups
Substance abuse treatment
Telephone intervention

SERVICES FOR THE PREVALENCE OF SUBSTANCE ABUSE
Addiction severity index
Addiction treatment program
Aftercare intervention
Clinician-led program
Cognitive behavioral therapy
Computer-based brief intervention
Drug evaluation network system
Drug treatment program
Housing and rehabilitative support
Motivational enhancement therapy
Outpatient treatment
Social service intervention
Substance abuse prevention interventions
Substance treatment
Trauma-informed mental health services

CONCLUSION

Boone County Mental Health Analysis is a study of community level data to identify mental health needs facing Boone County. The sub-issue areas include the prevalence of mental health diagnoses, the prevalence of substance abuse, and treatment access. These areas have been examined in light of Boone County and local populations of interest. State and national level data have offered useful supplemental information for trends and context.

This analysis has connected the three sub-issues in a useful fashion and revealed how interconnected the sub-issues are to one another simply by their co-occurring nature. Not only are the data on substance abuse and clinical psychological disorders reported together, NSDUH explains that almost half of all mental health diagnoses have co-occurring disorders – that is to say, include a substance abuse problem with a psychological disorder. This is one clear reason why mental health diagnoses data are reported in a clustered fashion.

Boone County's prevalence of mental health diagnoses has been explained and prioritized by examining the primary community level indicator of emergency room visits with mental health diagnoses. A secondary community level indicator, explaining the prevalence of substance abuse, is the number of admissions into Boone County treatment facilities. Little is known about treatment access Boone County and there are no practices in place to accurately measure and understand the need or potential gaps in service. This report has provided an extensive list of services available locally, as well as an inventory of evidence-based practices and programs which may have future relevance for Boone County mental health treatment services and programming.

I. APPENDIXES

A. TABLES

TABLE 1: FY 2011 & 2012 MENTAL HEALTH SPENDING IN BOONE COUNTY

	2011				**2012**			
	Heart of Missouri United Way	*City of Columbia*	*County of Boone*	*Total Funding*	*Heart of Missouri United Way*	*City of Columbia*	*County of Boone*	*Total Funding*
Total Agency Spending for Mental Health	$144,500	$101,000	$2,850	$248,350	$144,500	$101,000	$2,850	$248,350
Total Agency Allocations for all Social Service Categories	$2,219,725	$893,556	$98,869	$3,213,150	$2,219,725	$979,794	$98,871	$3,298,390
Percent of Agency Spending for Mental Health	6.5%	11.3%	2.9%	7.73%	6.5%	10.3%	2.9%	7.5%

Source: City of Columbia Social Services Spending Report (2011 &2012) & Heart of Missouri United Way Funding FY2011&2012

TABLE 2: MENTAL HEALTH DIAGNOSES RATES FOR EMERGENCY ROOM VISITS BY DEMOGRAPHIC CHARACTERISTICS: 2009

	Missouri		Boone County	
	Rate Per 10,000	Number	Rate Per 10,000	Number
Age Range				
15 to 24	16.6	13,960	8.1	327
25 to 44	16.9	26,300	12.3	485
45 to 64	10.5	16,645	7.9	272
65 and over	5.6	4,608	7.3	107
Gender				
Male	11.4	33,050	7.5	558
Female	10.6	31,639	8.4	700
Race				
Caucasian	10.1	50,735	7.2	994
African American	16.6	11,590	16.0	220

Source: Department of Health and Senior Services: MICA

TABLE 3: MENTAL HEALTH DIAGNOSES RATES FOR HOSPITALIZATIONS BY DEMOGRAPHIC CHARACTERISTICS: 2009

	Missouri		Boone County	
	Rate Per 10,000	Number	Rate Per 10,000	Number
Age Range				
15 to 24	160.0	13,463	59.2	213
25 to 44	157.0	24,410	90.4	356
45 to 64	117.3	18,619	78.3	268
65 and over	103.2	8,490	93.8	137
Gender				
Male	125.0	36,065	72.3	511
Female	115.8	35,157	72.5	567
Race				
Caucasian	109.8	55,797	67.7	876
African American	161.1	11,134	118.2	156

Source: Department of Health and Senior Services: MICA

TABLE 4: ILLICIT DRUG USE IN MISSOURI: MENTIONS OF DRUGS IN DRUG TREATMENT ADMISSIONS IN 2010

Gender	Marijuana	Cocaine	Meth	Heroin	Hallucinogens
Male	73.6%	60.2%	55.8%	57.6%	54.0%
Female	26.3%	39.8%	44.2%	42.4%	46.0%
Race					
Caucasian	65.0%	36.1%	95.2%	74.3%	58.6%
African American	30.1%	59.9%	1.5%	23.2%	38.5%
American Indian	0.0%	0.1%	0.3%	0.1%	0.0%
Other	4.7%	3.9%	3.0%	2.3%	2.9%
Age of First Use	14.4	24.7	18.7	22.1	22.2
Region of most use (2009)	small urban MSAs and Non-MSAs	large urban MSAs	small urban MSAs and Non-MSAs	rural Non-MSAs and small urban MSAs	small and large urban MSAs and Non-MSAs
Source: Nature and Extent of the Illicit Drug Problem in Missouri 2011					

TABLE 5: ADMISSION TO ALCOHOL AND DRUG TREATMENT BY DEMOGRAPHIC CHARACTERISTICS: 2010

Gender	Missouri	Boone County
Male	70.4%	70.6%
Female	29.6%	29.7%
Age		
18 to 24	19.5%	21%
25 to 29	17.9%	18.7%
30 to 34	13.6%	13.6%
35 to 39	11.2%	12.1%
40 to 44	10.3%	10.6%
45 to54	16.7%	17.3%
55+	4.3%	3.6%
Race/Ethnicity		
Caucasian	74.6%	67.7%
African American	21.6%	38.1%
Other	2.3%	3.2%
Hispanic	1.8%	2%
Source: Missouri Division of Alcohol and Drug Treatment		

TABLE 6: ALCOHOL AND DRUG TREATMENT REFERRAL SOURCES: 2010

	Missouri	Boone County
Self/Family/Friend	27.3%	31.4% (452)
School	0.2%	0%
Mental Health Provider	1.7%	1.6% (23)
Health Care Provider	3.2%	2.8% (41)
Court/Criminal Justice	59.4%	58.9% (847)
Other	8.1%	5.1% (74)

Source: Division of Alcohol and Drug Treatment

TABLE 7: ALCOHOL & DRUG RELATED ARRESTS: BOONE COUNTY

	2007-2008	2008-2009	2009-2010
Alcohol Related Arrests	1137	1132	1207
Drug Related Arrests	1077	1083	1115

Source: Missouri Department of Mental Health

TABLE 8: ALCOHOL & DRUG RELATED CONVICTIONS: BOONE COUNTY

	FY 2008	FY 2009	FY 2010
Alcohol Convictions	43	38	59
Drug Convictions	184	205	155

Source: Missouri Department of Mental Health

TABLE 9: PRIMARY SUBSTANCE ABUSE UPON ADMISSION TO TREATMENT, BY HOMELESS STATUS: U.S

	Homeless	Not Homeless
Alcohol	49.2%	40.8%
Heroin	19.2%	13.5%
Cocaine/Crack	13.6%	8.7%
Methamphetamine	6.1%	5.7%
Marijuana/Hashish	6.0%	19.9%
Other	5.4%	10.1%
None	0.5%	1.3%

Source: Substance Abuse and Mental Health Data Archive (SAMHDA), Treatment Episode Data Set - Admissions (TEDS-A), 2009 (http://www.icpsr.umich.edu/icpsrweb/SAMHDA/sdatools/resources)

TABLE 10: HOMELESS/NOT HOMELESS ADMISSIONS, BY RACE AND PRIMARY SUBSTANCE OF ABUSE

	White		Black	
	Homeless	Not Homeless	Homeless	Not Homeless
Alcohol	51.5%	44.2%	44.9%	31.2%
Heroin	20.3%	13.0%	14.9%	14.0%
Cocaine/Crack	7.4%	6.0%	27.7%	18.8%
Methamphetamine	7.9%	6.5%	1.2%	0.8%
Marijuana/Hashish	4.7%	15.8%	8.4%	30.6%
Other	7.8%	13.3%	2.5%	3.4%
None	0.4%	1.1%	0.5%	1.2%
Total	100.0%	100.0%	100.0%	100.0%

Source: Substance Abuse and Mental Health Data Archive (SAMHDA), Treatment Episode Data Set - Admissions (TEDS-A), 2009
http://www.icpsr.umich.edu/icpsrweb/SAMHDA/sdatools/resources

TABLE 11: VETERANS AND ALCOHOL & DRUG ADMISSIONS: BOONE COUNTY

	FY 2008	FY 2009	FY 2010
Percent of Veteran Admissions	4.8% (70)	4.1% (62)	3.9% (54)

Source: Status Report on MO's Substance Abuse & Mental Health

TABLE 12: INDIVIDUALS WITH UNMET NEEDS FOR ALCOHOL ABUSE TREATMENT: MISSOURI

Age Range	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
18-25	121,000	129,000	136,000	114,000	108,000
26+	250,000	233,000	229,000	225,000	214,000
TOTAL:	371,000	362,000	365,000	339,000	322,000

Source: 2011 Status Report on Missouri's Alcohol and Drug Abuse Problems

TABLE 13: INDIVIDUALS WITH UNMET NEEDS FOR ILLICIT DRUG ABUSE TREATMENT: MISSOURI

Age Range	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
18-25	53,000	5,700	47,000	47,000	47,000
26+	54,000	5,300	51,000	56,000	56,000
TOTAL:	107,000	11,000	98,000	103,000	103,000

Source: 2011 Status Report on Missouri's Alcohol and Drug Abuse Problems

TABLE 14: SUB-ISSUES, PRIMARY INDICATORS AND PRIORITIZATION INCLUSION

Sub-Issue	Community Level Primary Indicator	Included in Prioritization
Prevalence of Mental Health Diagnosis	Emergency room visits with mental health diagnoses	Yes √
Prevalence of Substance Abuse	Admission rate into alcohol and drug treatment programs	No
Treatment Access	n/a	No

TABLE 15: THE NEED PRIORITIZATION MATRIX

Factor	Question	Parameter
1) Immediacy of attention required	Will the situation get worse if nothing is done? *Rationale:* If the trend is getting worse, it needs to be addressed.	Situation improving = 1 Situation remains steady = 2 Situation getting worse = 3
2) Immediacy of attention required relative to State trend	Is the county trend better or worse than the state trend? *Rationale:* The larger picture can put county trends into perspective.	County trend better than Missouri = 1 County trend same as Missouri = 2 County trend worse than Missouri = 3
3) Beneficial impact of resolving this need on other identified needs	Will meeting this need also solve other sub-issues? *Rationale:* Dual benefit should have higher priority	Does not cross sub-issue areas = 1 Crosses into one other sub-issue area = 2 Crosses into multiple sub-issue areas = 3
4) Number of people directly affected by need	What percent of the Boone County population is directly affected by this need (# in need/total population) *Rationale:* Scope of the problem	Lower tier = 1 Middle tier = 2 Upper tier = 3 (Tiers were determined by identifying the range and divided into thirds.)
5) Extent to which services are available	Are there services available to meet this need? *Rationale:* A need can be addressed more efficiently if there is capacity to build on	No services = 1 One service = 2 Two or more services = 3