FOCUS ON SOUTH DAKOTA
A Picture of Health

THE LEONA M. AND HARRY B.
HELMSLEY
CHARITABLE TRUST

IN COOPERATION WITH:

OREGON HEALTH & SCIENCE UNIVERSITY

PROVIDENCE Health & Services

NDSU NORTH DAKOTA STATE UNIVERSITY
The Rural Healthcare Program of The Leona M. and Harry B. Helmsley Charitable Trust is excited to present the findings from “Focus on South Dakota-A Picture of Health.” This survey was conducted to understand the current picture of health in our state—a current and complete representation—so we can learn and improve the future picture of health in South Dakota.

In The Trust’s work throughout the state over the past five years, we have heard from various stakeholders that had concerns that many issues existed, yet there were no accurate estimates of all healthcare needs, including unmet mental health needs, in rural areas. A baseline is needed to instigate communication and cooperation among stakeholders, prioritize projects, implement effective services, and measure impact.

This report gives an in-depth look at the survey findings. We encourage you to review the information, ask questions and talk with your colleagues about the results. A few of the key findings include:

- Compared to national rates, South Dakota may have a higher prevalence of anxiety, post-traumatic stress disorder and alcohol misuse.
- Hospital utilization for mental health care is high.
- Individuals present at emergency rooms at high rates with mental health concerns.
- Isolated and reservation communities face access problems for receiving primary care.
- County-level data shows pockets of high prevalence rates of depression, heavy alcohol misuse, unmet medical needs and adverse childhood experiences.

We would like these survey findings to serve as a catalyst to start a conversation amongst city, county, and state governments, organizations, and individual stakeholders in our state who strive to improve access to care, mental health care delivery, and substance abuse treatment. We look at this as an opportunity for stakeholders to research and implement proven, evidence based models to provide better services in rural areas. We know that one group alone cannot solve the health care issues our state faces and we encourage government, nonprofits, healthcare providers, and funders to work together to find solutions that work best for the populations being served.

Many thanks to the research team from Oregon Health and Science University and especially to project lead K. John McConnell, PhD. His entire team, the team from Providence, and Dr. Warne from NDSU were amazing to work with as we pursued our first population survey effort. We are happy to have started this journey with them and excitedly await their further analysis and publications on these findings.

We look forward to sharing this information and being a part of the discussions as we all strive to improve the picture of health of South Dakotans.

Walter Panzirer
Trustee
Focus on South Dakota: A Picture of Health

MAY 2015

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*Not all counties are included due to Reservation areas
Executive Summary

South Dakota and other largely rural states face many challenges in meeting the health care needs of rural and underserved communities, in part because data to guide improvement is often limited or unavailable. The South Dakota Health Survey provides unprecedented statewide survey data on regional patterns of behavioral health prevalence and access to care. The findings are intended to help local stakeholders plan and implement health service interventions that meet the needs of South Dakota communities.

The South Dakota Health Survey was a statewide health needs assessment designed to provide an in-depth picture of county and statewide health and health care needs, including representation of rural and American Indian subpopulations. We used mail, telephone, and in-person data collection approaches to collect surveys from a total of 7,675 randomly selected households. An additional 519 supplemental surveys were completed with homeless, immigrant and refugee, and housing insecure populations. Data were collected from November 2013 to October 2014. Responses were analyzed to assess statewide differences between urban, rural, isolated, and reservation areas after controlling for participant age and gender. Findings are further presented to describe variation at the county-level, by American Indian respondents, and among key subpopulations (i.e., homeless, housing insecure, and immigrant/refugee).

**Key Statewide Results**

**Prevalence of Mental Health and Substance Use Conditions.** We found similar prevalence rates of behavioral health conditions between the urban, rural, isolated, and reservation areas of the state (Table 1). Statewide, 5.6% of respondents screened positive for current symptoms of depression, 7.5% for anxiety, and 6.0% for post-traumatic stress disorder (PTSD). Statewide prevalence estimates based on self-reported diagnosis were 17.0% for depression, 17.6% for anxiety, 3.4% for PTSD, 1.7% for bipolar disorder, and 2.5% for other mental health disorders. Based on clinical screening results, 42.4% of the respondents screened positive for alcohol misuse. Less than 10% of the statewide respondents (8.3%) reported the use of any drug within the past year; marijuana use was the most prevalent reported substance (7.3% of respondents reporting use within the past year).

**Health Care Access and Utilization.** We found significant geographic differences in respondents’ reported need for physical and behavioral health care as well as access to services. In the past year, 75.1% of respondents perceived a need for medical care, 79.5% for prescription medications, 9.7% for mental health care, and 1.6% for substance-use treatment. Compared to urban areas, respondents from isolated and reservation areas reported more limited access to care. Uninsured respondents were more likely to perceive a need for mental health care and less likely to receive all the care they needed compared to those with coverage. The majority of respondents (77.4%) indicated that they had a primary care provider; however, respondents from isolated and reservation areas were significantly less likely to have a primary care provider compared to their urban counterparts. Contrary to the low reported rates of perceived need, we found relatively high rates of hospital utilization for behavioral health conditions.

**Barriers to Accessing Care.** Respondents who reported going without needed behavioral health care identified multiple reasons for doing so, with the relative importance of these barriers varying between geographic areas. Cost-related reasons, including a lack of insurance coverage and concerns about the high cost of care, were the most frequently reported barriers for both mental health and substance use care. More than
EXECUTIVE SUMMARY

half of all respondents reported they would have to travel over 20 miles to receive mental health care (55.5%) or substance-use treatment (62.5%); respondents from rural, isolated, and reservation areas reported significantly farther distances than their urban counterparts. Stigma, or negative beliefs and perceptions around seeking care, may also be a barrier to accessing behavioral health treatment in South Dakota, although findings in this area were mixed.

Adverse Childhood Experiences. A growing body of research indicates that adverse childhood experiences (ACEs) of abuse, neglect, and household dysfunction are linked to both short- and long-term physical and behavioral health consequences. Similar to other national and state studies, ACEs were common among respondents on the South Dakota Health Survey (53% reported one or more ACE). There were small differences in the prevalence of ACEs reported by respondents in rural and isolated areas compared to urban areas; however, reservation areas showed significantly higher prevalence in most domains of abuse, neglect, and household dysfunction compared to urban areas. We found a positive association between respondents’ ACE scores and behavioral/physical conditions: individuals with more ACEs were more likely to screen positive for depression, anxiety, or PTSD or report a chronic health condition.

Perceived Need for Care. Many respondents who screened positive for a behavioral health condition did not identify a need for care. We conducted follow-up interviews with a focused
sample of South Dakota Health Survey respondents to better understand what might contribute to this discrepancy. The interviews indicated that the discordance between health screening results and perceived need for care was related to how participants defined mental health conditions, alcohol, and drug abuse. Many interview participants indicated mental health and substance-use conditions were a “normal” part of life in these communities. Substance abuse was associated with harm of others, neglecting responsibilities, or getting into trouble with the law. Seeking treatment for these conditions was seen as the result of an individual’s willpower, and often triggered by a life event (e.g., having a child). Participants indicated support for community-level interventions (e.g., education, enhanced opportunities) as well as improved access to care as mechanisms to improve treatment and prevention of behavioral health conditions in South Dakota.

County-Level Results
County-level analyses identified pockets of high prevalence of depression, anxiety, PTSD, alcohol abuse, and drug use. We also found counties where unmet medical need was notably high, with as many as 63% of respondents in the county reporting unmet need compared to the statewide average of 13%. By comparing the locations of behavioral health service providers and respondents’ report of distance to treatment options, we were able to identify counties where residents may lack awareness of services that currently exist in their region. Additionally, “hotspot” maps depicting multiple measures of behavioral health need on a single map identified counties that had high need but low access to needed services. In a series of one-page county summary reports, we present each county’s individual results alongside the statewide metrics. Together, the county-level maps and summary reports provide a picture of the distinct profile of health and health needs of each participating county in South Dakota.

Key Subpopulation Results
American Indian (N=521). Prevalence rates of behavioral health conditions, Adverse Childhood Events (ACEs), and barriers to accessing care were high among the 521 respondents from the statewide household survey who self-identified their race/ethnicity as American Indian. Based on clinical screening questions, 9.5% of American Indian respondents screened positive for depression, 8.1% screened positive for anxiety, and 13.2% screened positive for PTSD. ACE rates were significantly higher for American Indian respondents compared to non-American Indian respondents: 23.5% of American Indian respondents had an ACE Score of five or more compared to 7.0% of non-American Indian respondents. Less than half (43.4%) of the American Indian respondents reported that they had a primary care provider (Table 2).

In addition to our address-based survey, we collected data from three priority sub-populations using an in-person convenience sampling approach. Key findings from the homeless, housing insecure, and immigrant/refugee convenience samples appear to the right (Table 2).

Homeless (N=298). Respondents from the homeless subpopulation convenience sample showed considerable unmet health care needs with high prevalence of behavioral health conditions and limited access to care. Homeless respondents screened positive on clinical screenings as follows: 29.3% depression, 32.1% anxiety, and 33.7% PTSD. Over half of the homeless respondents (54.3%) reported use of any drug within the past year. The perceived need for care was also relatively high among homeless respondents, but much of this need was unmet; only 35.0% of homeless respondents received all the mental health care they needed and only 32.9% received all the substance-use treatment they needed.
**Housing Insecure (N=120).** The respondents from the housing insecure subpopulation convenience sample (i.e. households with multiple families or “couch surfers” in residence) displayed a high prevalence of mental health conditions as well as challenges accessing health care. Based on clinical screening questions, 19.3% screened positive for depression, 25.7% for anxiety, and 19.5% for PTSD. Less than half (42.9%) of the respondents reported that they had a primary care provider. Rates of hospital utilization for mental health conditions were high in the housing insecure sample, with 34.2% reporting one or more emergency department visits in the past year and 15.3% reporting one or more inpatient stays.

**Immigrant and Refugee (N=101).** Respondents from the immigrant and refugee subpopulation convenience sample showed high prevalence of some mental health conditions, low prevalence of health risk behaviors, and limited access to health care services. Immigrant and refugee respondents screened positive on clinical screenings as follows: 19.5% depression, 21.4% anxiety, and 5.6% PTSD. Only 40.6% of respondents reported that they had a primary care provider. Knowledge of behavioral health care options was also limited; 36.6% of immigrant and refugee respondents knew where to go for mental health care, and 14.9% knew where to go for substance-use treatment.

### Table 2. Prevalence of Mental Health Conditions, Substance Use, and Access to Care Among Key Subpopulations

<table>
<thead>
<tr>
<th></th>
<th>American Indian (n=521)</th>
<th>Homeless (n=298)</th>
<th>Housing Insecure (n=120)</th>
<th>Refugee/Immigrant (n=101)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mental Health: Screen Positive for Current Symptoms</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>9.5%</td>
<td>29.3%</td>
<td>19.3%</td>
<td>19.5%</td>
</tr>
<tr>
<td>Anxiety</td>
<td>8.1%</td>
<td>32.1%</td>
<td>25.7%</td>
<td>21.4%</td>
</tr>
<tr>
<td>PTSD</td>
<td>13.2%</td>
<td>33.7%</td>
<td>19.5%</td>
<td>5.6%</td>
</tr>
<tr>
<td><strong>Substance Use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol Misuse²</td>
<td>40.2%</td>
<td>47.9%</td>
<td>41.0%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Severe Misuse²</td>
<td>15.6%</td>
<td>30.9%</td>
<td>22.6%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Any Illegal Drug Use</td>
<td>8.3%</td>
<td>54.3%</td>
<td>37.5%</td>
<td>11.8%</td>
</tr>
<tr>
<td><strong>Access to Care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have Primary Care Provider</td>
<td>43.4%</td>
<td>36.9%</td>
<td>42.9%</td>
<td>40.6%</td>
</tr>
<tr>
<td>Received all needed medical care</td>
<td>63.2%</td>
<td>42.1%</td>
<td>56.7%</td>
<td>55.6%</td>
</tr>
<tr>
<td>Received all needed mental health care</td>
<td>30.4%</td>
<td>35.0%</td>
<td>48.0%</td>
<td>40.9%</td>
</tr>
<tr>
<td>Received all needed substance use care</td>
<td>73.4%</td>
<td>32.9%</td>
<td>63.6%</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

(1) American Indian subpopulation results are from the statewide survey; homeless, housing insecure, and refugee/immigrant results are from supplemental convenience samples.

(2) AUDIT-C positive screen for alcohol misuse was defined as a score of 4 or more for males and 3 or more for females based on responses to the three-item AUDIT-C questionnaire. Severe misuse was defined as scoring 6 or more.
About the study

The South Dakota Health Survey is a statewide health needs assessment conducted from November 2013 to October 2014. With over 8,000 responses representing the state’s population, this study provides an in-depth picture of health and health care needs in South Dakota. Findings are reported at the level of the state and by geographic areas (i.e., urban, rural, isolated, and reservation) after controlling for participant age and gender. Results are also used to describe variation at the county-level, by American Indian respondents, and among key subpopulations (i.e., homeless, housing insecure, and immigrant/refugee).

Why was the South Dakota Health Survey conducted?

The South Dakota Health Survey was designed to gather high-quality statewide data to assess use of and access to healthcare services, the prevalence of various mental and behavioral health conditions in the population, and identify key barriers to access to care. South Dakota and other largely rural states face many challenges in meeting the health care needs of rural and underserved communities, and data to guide improvement is often limited or unavailable. Mental illness and substance use conditions—often referred to collectively as behavioral health conditions—are a leading cause of disability in the U.S. and thus represent an important health care issue facing communities. National data indicate that almost half (46%) of all adults will develop a behavioral health condition in their lifetime, yet the majority of those in need do not receive any treatment. These unmet behavioral health needs may be even more severe in rural areas, which tend to have limited access to health care services and are relatively understudied.

While effective delivery models and interventions exist, local service providers, policy makers, and funders are in need of community-level data to plan and implement interventions that meet the specific health needs of the communities they serve.

The Helmsley Charitable Trust Rural Healthcare Program partnered with research teams from Oregon Health & Science University (OHSU), Providence Health & Services Center for Outcomes Research and Education (CORE), and Donald Warne, MD, MPH from North Dakota State University to conduct the South Dakota Health Survey to help close this knowledge gap. The South Dakota Health Survey provides unprecedented statewide survey data to address five key questions:

- What is the prevalence of common health and behavioral health conditions at the state and county level?
- How do South Dakotans access the health and behavioral health services they need?
- What barriers prevent individuals from getting care?
- How do social and community factors relate to health and behavioral health?
- How do these health issues vary among subpopulations in the state?

Ultimately, this study aims to provide The Helmsley Charitable Trust Rural Healthcare Program and stakeholders throughout the state with data that can describe regional behavioral health disparities, inform improvements in access to care, ensure better quality care, and tailor effective care models to local needs.
Who was included in this study?

The study was designed to provide representative statewide data for use in county and statewide estimates, including representation of rural and American Indian subpopulations. We used address-based sampling to randomly select 17,341 households to receive the survey. In order to collect enough data for subpopulation analyses, we set a minimum number of individuals for selection within each of the following geographic clusters: South Dakota’s 66 counties, the metropolitan areas of Sioux Falls and Rapid City, regional population centers with at least 10,000 residents, and participating American Indian reservations. We removed 1,340 invalid addresses from the initial sample to create a final sample size of 16,001 households. A total of 7,675 households, 48% of the sample, completed the survey (see Table 3 for respondent demographic characteristics). Prior to data collection, we conducted outreach to the Tribal Councils and/or identified leadership at each of the nine American Indian tribes in the state and conducted a stakeholder listening tour to engage service providers and

Table 3. Respondent Characteristics for Statewide Household Sample (does not include supplemental sample data from homeless, immigrant/refugee, and housing insecure sub-populations)

<table>
<thead>
<tr>
<th></th>
<th>SD Health Survey (weighted) n=7,675</th>
<th>SD Census Population¹</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-34</td>
<td>30.3%</td>
<td>23.2%</td>
</tr>
<tr>
<td>35-64</td>
<td>50.6%</td>
<td>37.4%</td>
</tr>
<tr>
<td>65 and older</td>
<td>19.1%</td>
<td>14.8%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>42.6%</td>
<td>49.8%</td>
</tr>
<tr>
<td>Female</td>
<td>57.4%</td>
<td>50.2%</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>1.0%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>88.7%</td>
<td>83.4%</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>0.2%</td>
<td>1.5%</td>
</tr>
<tr>
<td>American Indian</td>
<td>9.3%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Other</td>
<td>0.8%</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>Employment Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not employed</td>
<td>9.6%</td>
<td>15.3%</td>
</tr>
<tr>
<td>Employed part time</td>
<td>18.9%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Employed full time</td>
<td>54.1%</td>
<td>65.3%</td>
</tr>
<tr>
<td>Retired</td>
<td>17.4%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Rural/Urban Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>44.4%</td>
<td>39.1%</td>
</tr>
<tr>
<td>Large Rural</td>
<td>26.3%</td>
<td>25.2%</td>
</tr>
<tr>
<td>Small Rural</td>
<td>7.0%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Isolated</td>
<td>17.6%</td>
<td>26.6%</td>
</tr>
<tr>
<td>Reservation</td>
<td>4.7%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>3.9%</td>
<td>13.4%</td>
</tr>
<tr>
<td>High school diploma or GED</td>
<td>33.1%</td>
<td>31.3%</td>
</tr>
<tr>
<td>Vocational or 2-yr. degree</td>
<td>23.9%</td>
<td>11.4%</td>
</tr>
<tr>
<td>4-year college degree</td>
<td>25.4%</td>
<td>18.9%</td>
</tr>
<tr>
<td>Advanced or graduate degree</td>
<td>13.8%</td>
<td>7.6%</td>
</tr>
</tbody>
</table>

health service leaders in South Dakota. Seven of the nine tribes granted formal approval of the research study—an unprecedented level of tribal research participation in the state. The survey was only conducted in the reservation areas where approval was granted.

In addition to the random household sample, we included supplemental samples for several subpopulations that are considered hard to reach using address-based methods: individuals experiencing homelessness, individuals with housing insecurity (i.e. households with multiple families or “couch surfers” in residence), and non-English speaking immigrant and refugee individuals. For these supplemental samples we collected surveys from a convenience sample of 298 homeless individuals in Rapid City and Sioux Falls, 120 “housing insecure” individuals in reservation communities and Rapid City, and 101 immigrant/refugee individuals in the Sioux Falls area (see Subpopulations section for demographic characteristics).

How were the data collected?

We used multiple modes of data collection, including mail, telephone, and in-person surveys, to achieve high response rates and to engage underrepresented populations in the study.

**Address-Based Sampling.** Using a list of addresses from the U.S. Postal Service, we selected a representative random sample of households in South Dakota, clustered by geography. Randomly selected households first received a postcard to raise awareness of the study and to test addresses. This was followed by two waves of survey mailings and automated reminder calls. Respondents could complete the survey on paper and return by prepaid mail or on a web-based survey. Households that did not respond to the mail survey received a series of telephone follow-up calls over a several week period.

After the mail and telephone data collection, households in reservation areas that had not responded were advanced to an in-person follow-up. This approach was based on input from regional stakeholders, who indicated that in-person contacts would be more successful than mail and telephone attempts. We hired and trained local research assistants to approach households in reservation communities and Rapid City with the survey. As research assistants completed the in-person follow-up, they also collected surveys from “housing insecure” respondents if the primary respondent indicated there were multiple families or additional adults outside of the primary household living in the residence. All respondents received a modest cash stipend for their time.

**Supplemental Convenience Sampling of Homeless, Housing Insecure, and Immigrant/Refugee Populations.** Trained research assistants in Rapid City and Sioux Falls conducted surveys with homeless and immigrant/refugees at a variety of local service agencies identified through local stakeholder input. Research assistants completed surveys with homeless individuals at seven locations in Sioux Falls and ten locations in Rapid City, representing a mix of shelters, day centers, and transitional housing (e.g. motels). We partnered with Lutheran Social Services Center for New Americans in Sioux Falls, a local agency providing services for refugees and immigrants, to complete surveys with current and former clients. Language interpretation services and translated surveys were available for these respondents.
In-person surveys were collected over a four-month period. Respondents had the option to complete the in-person survey in private or to receive assistance as needed from the research assistant. We paid a modest cash stipend to all respondents in appreciation for their time.

What did the survey measure?

The survey instrument was designed to provide a comprehensive assessment of unmet health and behavioral health needs. Where possible, we used nationally validated questions and response scales to ensure the measures were sound and would allow for comparisons with other similar research studies. Appendix A provides additional information about survey measures. We completed a stakeholder listening tour to ensure questions were locally relevant in South Dakota communities, and refined the survey based on stakeholder input. Survey questions addressed the following domains:

- **Prevalence of physical and behavioral health conditions**: Mental health status was measured using evidence-based screening tools for depression, anxiety, and post-traumatic stress disorder (PTSD). Alcohol use disorder screening and drug use screening measures were used to assess substance use prevalence. Questions also assessed self-reported diagnoses of common physical chronic illnesses, such as diabetes, asthma, or heart disease, and mental illness diagnoses such as depression, anxiety, PTSD, or bipolar disorder.
- **Access to care**: These questions assessed perceived need for medical care, prescription medications, mental health services, and substance-use treatment and the ability of individuals to access the services they needed. Participants were also asked to identify specific barriers to access where they exist.
- **Health care utilization**: These questions assessed how often and where respondents go for different types of care.
- **Health insurance and medical costs**: These questions assessed the insurance status of respondents as well as the financial burden associated with “out of pocket” costs for care.
- **Social support and stigma**: These questions assessed the amount and type of informal support individuals have in dealing with their health needs as well as the social acceptability of seeking treatment for behavioral health conditions.
- **Adverse childhood experiences (ACE)**: We used the standardized ACE questionnaire to assess the prevalence of childhood abuse, neglect, and household dysfunction and the role of these experiences as drivers of behavioral health needs.
- **Demographics**: Our survey collected information on household size and income, employment status, self-identified race and ethnicity, age, and gender.

How were the data analyzed?

Responses from the random address-based household sample were weighted to represent the state’s true population distribution. We then produced statewide, county, and subpopulation prevalence estimates.

To examine statewide differences between urban and rural areas, we used rural-urban commuting area (RUCA) codes, which classify zip codes using measures of population density, urbanization, and daily commuting. We categorized zip codes into four mutually exclusive categories:

- **Urban**: Metropolitan areas with commuting patterns within population centers of 50,000 or more.
• Rural: Micropolitan areas with commuting patterns to or within population centers of 2,500-49,000. We combined small (2,500-9,999) and large (10,000-49,999) micropolitan areas because our analyses showed similar responses from the two categories and there were a small number of small micropolitan areas.
• Isolated: Commuting patterns to areas without population centers of 2,500 or more and no commuting flow to urban areas.
• Reservation: Zip code fully or partially overlapping with tribal land of an American Indian tribe. Includes respondents who identified their race/ethnicity as American Indian (64.4%) as well as respondents who identified their race/ethnicity as non-Hispanic White (34.4%) or other categories (1.2%).

We used weighted logistic regression to test if differences between the urban areas and the different categories of rural areas were statistically significant, after adjusting for age and gender. Throughout the report we use an asterisk (*) to indicate statistical significance at the 95% confidence level.

Responses from the supplemental samples of homeless, immigrant/refugee, and housing insecure individuals were analyzed separately; results appear in the Subpopulations section.
I. Statewide (N=7,675)

In this section we present the statewide prevalence of behavioral health conditions, along with results for urban, rural, isolated, and reservation areas using data from the address-based sampling. We also explore results around health care access and utilization, barriers to accessing care, adverse childhood experiences, and perceptions of need for care.

Overview of Key Findings

Our findings suggest that behavioral health prevalence is similar between the urban and rural areas of the state. However, we found significant geographic differences in respondents’ reported need for and access to key health care services, with isolated and reservation areas showing limited access to care. Cost was the most common barrier to getting behavioral health care, but other barriers varied in importance across different areas of the state. Adverse childhood experiences (ACEs) were common statewide, with the highest rates in reservation areas; we found evidence that these early life events increased respondents’ risk for mental and physical health conditions in adulthood.

We also found that many participants who screened positive for a behavioral health condition did not identify a need for care. Follow-up qualitative interviews with a sub-sample of survey respondents provided additional insight into how mental health, alcohol, and drug use are viewed in South Dakota communities and what factors enable respondents to access the care they need.

Prevalence of Mental Health Conditions

We measured the prevalence of behavioral health conditions in two ways:

A) Clinical Screenings: A set of standardized clinical screening questions designed to assess current mental health status by assessing the presence of symptoms associated with common mental health conditions. This measure is best used to capture uncontrolled or undiagnosed conditions.

B) Self-Report of Diagnosis: A series of self-report questions asking respondents whether they have ever received any of a particular set of mental health diagnoses from a doctor or other medical professional. This measure is best used to reflect the overall proportion of the population who have struggled with a given condition over time, but it represents a conservative estimate, because it does not include those who have never been diagnosed.

Prevalence of Current Symptoms: Statewide, 5.6% of respondents screened positive for symptoms of active depression, 7.5% screened positive for anxiety, and 6.0% screened positive for PTSD, with no significant differences in prevalence across geographic categories (Exhibit A).

Diagnostic Prevalence: Statewide prevalence estimates based on self-reported diagnosis suggest that 17.0% of residents have been
diagnosed with depression at some point, 17.6% for anxiety, 3.4% for PTSD, 1.7% for bipolar disorder, and 2.5% for some other mental health disorder. Rural and isolated areas showed significantly lower rates of diagnoses than urban areas on several measures. Because we did not see significant differences in our assessment of symptoms prevalence, this may represent “underdiagnoses” of certain conditions in rural and isolated areas (Table 4).

Comparison to National Estimates: South Dakota respondents reported similar rates of depression, but higher rates of anxiety and PTSD, compared to national prevalence estimates from the National Comorbidity Survey Replication, which uses comparable symptoms screeners as our survey, and the National Behavioral Risk Factor Surveillance System (BRFSS), which includes comparable self-reported diagnosis questions (Table 4).

Substance Use Prevalence
We measured alcohol and drug use with two commonly employed sets of questionnaire items: 1) Alcohol Use: The AUDIT-C scale is a validated screening questionnaire for alcohol misuse; it uses a series of questions to produce a score representing severity of alcohol misuse. Scores of four or more for males and three or more for females are considered an indicator of potential “problem drinking.” We use a higher threshold of six or more to identify potential “severe misuse.”

2) Drug Use: A series of questions based on the National Survey of Drug Use and Health (NSDUH) are designed to determine whether respondents have used a variety of drugs, including marijuana, methamphetamines, prescription pain relievers (for non-approved use), and other illegal drugs.

Alcohol Use Prevalence: Using the typical threshold for “problem drinking” we found that 42.4% of respondents statewide screened positive for alcohol misuse (Table 5). More than one in ten (11.5%) respondents screened positive for a higher threshold of “severe misuse,” with scores of six or higher on the AUDIT-C scale. We observed statistically higher rates of “severe misuse” among those living in reservation areas (17.6%, vs. an 11.5% statewide average). Statewide, 3.9%
of respondents reported drinking over weekly recommended limits of eight or more drinks per week for women or 15 or more drinks per week for men. Two out of five respondents (39.1%) reported binge drinking, defined as drinking more than five drinks on one occasion, at least once in the past year. Only 2.6% of the respondents self-reported they had a diagnosis for addiction issues.

**Drug Use Prevalence:** Less than 10% of the statewide respondents (8.3%) reported using any drug within the past year. Marijuana use was the most prevalent of reported substances, with 7.3% of respondents reporting use within the past year. Other substances were very rarely reported: 1.3% reported using prescription painkillers for non-medical use, 0.4% reported methamphetamine use, and less than 0.01% of the survey respondents reported using cocaine, bath salts, inhalants, or other street drugs. Comparisons of drug use across the four distinct geographic areas showed marijuana and methamphetamine use rates were significantly higher for reservation areas compared to urban areas (Table 5).

**National Comparisons:** Compared to national prevalence estimates using the AUDIT-C, respondents had similar rates of alcohol misuse, higher rates of binge drinking, and lower rates of drinking above weekly recommended limits. Compared to national prevalence estimates from the National Survey on Drug Use and Health, South Dakota respondents reported lower rates of marijuana use and non-medical use of prescription pain relievers, and comparable rates of methamphetamine use (Table 5).

### Table 5. Substance Use Prevalence

<table>
<thead>
<tr>
<th>Drug Use</th>
<th>Statewide (n=7,675)</th>
<th>Urban (n=1,346)</th>
<th>Rural (n=1,989)</th>
<th>Isolated (n=3,198)</th>
<th>Reservation (n=1,142)</th>
<th>National Benchmark(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alcohol Use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol Misuse</td>
<td>42.4%</td>
<td>42.8%</td>
<td>45.5%</td>
<td>35.8%*</td>
<td>40.6%</td>
<td>n/a</td>
</tr>
<tr>
<td>Alcohol misuse, Males</td>
<td>42.3%</td>
<td>42.1%</td>
<td>44.7%</td>
<td>38.8%</td>
<td>43.0%</td>
<td>45.9%</td>
</tr>
<tr>
<td>Alcohol misuse, Females</td>
<td>42.5%</td>
<td>43.4%</td>
<td>46.1%</td>
<td>33.2%*</td>
<td>39.2%</td>
<td>34.8%</td>
</tr>
<tr>
<td>Severe misuse</td>
<td>11.5%</td>
<td>11.4%</td>
<td>11.6%</td>
<td>9.8%</td>
<td>17.6%*</td>
<td>10.9%</td>
</tr>
<tr>
<td>Heavy drinking</td>
<td>3.9%</td>
<td>3.4%</td>
<td>5.0%</td>
<td>3.0%</td>
<td>4.1%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Binge drinking</td>
<td>39.1%</td>
<td>38.6%</td>
<td>41.6%</td>
<td>34.9%</td>
<td>41.6%</td>
<td>17.5%</td>
</tr>
<tr>
<td><strong>Drug Like</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any illegal drug</td>
<td>8.3%</td>
<td>9.5%</td>
<td>6.2%</td>
<td>6.4%</td>
<td>21.4%*</td>
<td>n/a</td>
</tr>
<tr>
<td>Marijuana</td>
<td>6.7%</td>
<td>8.0%</td>
<td>4.5%</td>
<td>5.0%</td>
<td>18.7%*</td>
<td>12.5%</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>0.4%</td>
<td>0.2%</td>
<td>0.3%</td>
<td>0.6%</td>
<td>1.7%*</td>
<td>0.5%</td>
</tr>
<tr>
<td>Prescription pain reliever</td>
<td>1.3%</td>
<td>1.2%</td>
<td>1.3%</td>
<td>1.4%</td>
<td>2.8%</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

*Significantly different from urban population, adjusted for age and gender (P<0.05)
(1) AUDIT-C positive screen for alcohol misuse was defined as a score of 4 or more for males and 3 or more for females based on responses to the three-item AUDIT-C questionnaire. Severe misuse was defined as scoring 6 or more.
(2) Heavy drinking was defined as drinking over weekly recommended limits or an average of 8 or more drinks per week for women or 15 or more drinks per week for men.
(3) Binge drinking was defined as drinking 5 or more drinks on any one occasion in the past year.
Health Care Need, Access & Utilization
We measured access to and utilization of care using a series of survey questions derived from the CAHPS (Consumer Assessment of Health Providers & Systems) surveys. We explored need for and access to medical care, prescription medications, mental health care, and substance use care. Overall, we found significant geographic differences in respondents’ reported need for physical or behavioral health care and access to services. Compared to urban areas, respondents from isolated and reservation areas reported more limited access to care.

Need for Care: Statewide, 75.1% of respondents perceived a need for medical care within the past year, 79.5% perceived a need for prescription medications, 9.7% perceived a need for mental health care, and 1.6% perceived a need for substance-use treatment (Figure 1). Compared to urban areas, respondents from isolated and rural areas were less likely to report needing care, but the absolute differences were small.

RESULTS
Perceived Need for Care vs. Screening Results: Across all regions, many respondents did not perceive a need for mental health and substance-use care, even when the results from clinical screens used in our survey were positive and suggested that they may have had a behavioral health condition that could benefit from treatment.

*Significantly different from urban respondents, adjusted for age and gender (P<0.05)
RESULTS

Access to Care: For individuals who reported a perceived need for care, 87.0% of respondents statewide received all the medical care they needed, 93.6% received all the prescription medications they needed, 64.2% received all the mental health care they needed, and 54.4% received all the substance use care they needed (Figure 2). Respondents from reservation areas were significantly less likely to receive all the medical care, prescription medications, or mental health care they needed compared to respondents from urban areas.

Connections to Primary Care: Having a primary care provider (PCP) is an important access point for health care of all kinds, since PCPs are the first point of contact and screening for many people, and may also facilitate access (through referrals) to specialty care for mental health or substance use services. The majority of respondents statewide (77.4%) indicated having a personal doctor or health care provider; however, respondents from isolated and reservation areas were significantly less likely to have a primary care provider than their urban counterparts (Figure 3).

*Significantly different from urban respondents, adjusted for age and gender (P<0.05)
Knowledge of Resources: We asked respondents if they knew where they would go in the event that they needed mental health or substance use resources. Statewide, more respondents knew where they could go to receive mental health treatment than substance-use treatment: 62.0% compared to 51.4%. Respondents from isolated areas were less likely to report knowing where to go for treatment than urban respondents (Figure 4).

Hospital Utilization for Behavioral Health Care: We found relatively high rates of hospital utilization for behavioral health conditions, contrary to the low rates of perceived need for care for these conditions (Figure 5). Specifically, 11.2% of all respondents report one or more emergency department visit for mental health issues in the past year, and 5.7% report one or more inpatient hospital stays for mental health issues in the past year. The rate of emergency department utilization for mental health issues was also significantly higher for reservation areas (21.0%) than urban areas (11.8%).
**RESULTS**

Figure 4. Knowledge of Treatment Options: Respondents who know where they could go if they were to need treatment for a mental health or substance use condition.

- Significantly different from urban respondents, adjusted for age and gender (*P*<0.05)

Figure 5. Hospital Utilization for Mental Health or Substance Use within the Past 12 Months (1 or more visits).

- Significantly different from urban respondents, adjusted for age and gender (*P*<0.05)
RESULTS

* Significant association based on Rao-Scott Chi-Square tests of association between those who reported insurance type compared to those who reported not having that insurance type (P<0.05)

(1) Different insurance types are not mutually exclusive (e.g., a respondent may have both military and private, employer based insurance).

Figure 6. Perceived Need for Care by Insurance Type: Respondents who reported a need for mental health care or substance-use treatment within the past 12 months¹

Figure 7. Receipt of All Needed Care by Insurance Type: Respondents who reported a perceived need for care and received all the care they needed¹

* Significant association based on Rao-Scott Chi-Square tests of association between those who reported insurance type compared to those who reported not having that insurance type (P<0.05)

(1) Different insurance types are not mutually exclusive (e.g., a respondent may have both military and private, employer based insurance).
Insurance Coverage and Access: Insurance coverage also played an important role in access to care in South Dakota. The perceived need for care and receipt of needed care differed by respondents’ health insurance type (Figures 6 & 7). Being uninsured or having Indian Health Service coverage was positively associated with perceiving a need for mental health or substance-use treatment; Medicaid coverage was also associated with perceiving a need for mental health treatment. Having private employer-based insurance was negatively associated with perceiving a need for mental health or substance-use treatment. Among respondents who needed care, being uninsured was associated with poorer access to mental health care than those with any form of coverage. Among the 17.9% of uninsured respondents who perceived a need for mental health care, 40.3% reported receiving all the care they needed. Respondents with Medicare or military health coverage were more likely to receive all the mental health care they needed; 79.9% and 91.9% of needed care, respectively.

Barriers to Accessing Care
Respondents who reported going without needed behavioral health care identified multiple reasons for doing so, with the relative importance of these barriers varying between geographic areas. Cost-related reasons, including a lack of insurance coverage and concerns about the high cost of care, were the most frequently reported barrier statewide for both mental health and substance-use care (Figures 8 & 9). Among respondents who reported they went without needed mental health care, 19.0% did so for reasons associated with cost, 12.4% for reasons of personal choice, 11.2% for availability reasons, 7.0% for reasons related to stigma and fear, 3.8% for logistical reasons, and 5.0% for some other reason (Figure 8). Of all the respondents who reported they needed substance use care but went without care, 13.3% did so for reasons associated with cost, 8.2% for availability reasons, 4.0% for reasons of personal choice, 3.1% for reasons related to stigma and fear, 1.8% for logistical reasons, and 2.1% for some other reason (Figure 9). Respondents from rural and isolated areas were more likely than respondents from urban areas to forgo mental health care due to cost, while respondents in reservation areas were more likely to forgo mental health care due to availability and logistical reasons.
RESULTS

Proximity as a Barrier to Care: Proximity to care was also a concern among survey respondents. Statewide, more than half of all respondents reported they would have to travel over 20 miles to receive mental health care (55.5%) or substance-use treatment (62.5%). Compared to respondents from urban areas, those from rural, isolated, and reservation areas were significantly more likely to report having to travel more than 20 miles to access both mental health and substance use care (Figure 10). In the County-Level Variation section we use geospatial analysis to compare respondents’ reported distance to care to the actual distance to the nearest treatment location.

*Significantly different from urban respondents, adjusted for age and gender (P<0.05)

Figure 9. Main Reasons for Going Without Needed Substance-Use Treatment

Figure 10. Perceived Distance to Treatment
**RESULTS**

*Stigma as a Barrier to Care:* Stigma, or negative beliefs and perceptions held by a community, may also be a barrier to accessing treatment for behavioral health conditions in South Dakota, although findings in this area were mixed. A relatively small proportion of the statewide respondents reported that they would avoid treatment for mental illness, alcohol abuse, or drug abuse because they were afraid of what others would think: 9.4%, 6.5%, and 7.0%, respectively (Figure 11). However, many respondents indicated that they agree or somewhat agree that most people in their community would think badly of someone who received care for mental illness (38.4%), alcohol abuse (41.9%), or drug abuse (49.5%) (Figure 12).

![Figure 11. Care Avoidance Due to Stigma: Respondents who reported they would avoid treatment because they are afraid of what others would think](image1)

![Figure 12. Public Stigma: Respondents who agree or somewhat agree that most people think badly of someone who receives behavioral health treatment](image2)

*Significantly different from urban respondents, adjusted for age and gender (P<0.05)*
Adverse Childhood Experiences  
A growing body of research has shown that adverse childhood experiences (ACEs) of abuse, neglect, and household dysfunction are linked to both short- and long-term negative consequences. Using questions adapted from previous ACE research, we assessed 10 categories of ACEs, including emotional, physical, and sexual abuse; emotional and physical neglect; and five categories of household dysfunction.

Prevalence of Adverse Childhood Experiences:  
Similar to the findings from other national and state studies, results from the South Dakota Health Survey show that ACEs are common. Over half of all respondents (53%) reported one or more ACE. Statewide, 18.6% of respondents experienced emotional abuse, 13.4% experienced physical abuse, and 10.1% experienced sexual abuse; 15.1% experienced emotional neglect and 4.0% experienced physical neglect (Figure 13).

In the domains of household dysfunction, 7.1% experienced their mother being treated violently, 24.1% lived with someone who had substance abuse problems, 14.9% lived with someone who had a mental illness or attempted suicide, 23.9% had parents who separated or divorced, and 5.5% had an incarcerated household member (Figure 14). There were small differences in prevalence of ACEs in rural and isolated areas compared to urban settings; however, reservation areas showed significantly higher prevalence in most domains of abuse, neglect, and household dysfunction compared to urban areas. Additionally, respondents in isolated areas were significantly less likely to report parental separation or divorce than their urban counterparts.
RESULTS

Figure 13. Prevalence of Childhood Experiences of Abuse and Neglect

*Significantly different from urban respondents, adjusted for age and gender (P<0.05)

Figure 14. Prevalence of Childhood Experiences of Household Dysfunction

*Significantly different from urban respondents, adjusted for age and gender (P<0.05)
ACE Scores & Associations with Health Conditions:
A yes response in each of the above 10 categories was attributed one point, responses were summed, resulting in ACE score ranging from 0-10 (Figure 15). We used the ACE score to assess the correlation between adult physical and behavioral health conditions and the cumulative exposure to stress experienced during childhood. We found a positive correlation between ACE scores and screening positive for depression, anxiety, or PTSD, or of reporting a chronic health condition (Table 6). For every point increase in an ACE score, the odds of screening positive for depression increased by a factor of 1.6 and the odds of screening positive for anxiety or PTSD increased by a factor of 1.5. In other words, compared to someone with an ACE score of zero, the odds were 4.1 times higher for screening positive for depression and 3.4 times higher for screening positive for anxiety or PTSD for respondents with an ACE score of three. Higher ACE scores were also associated with an increased likelihood of reporting the physical chronic conditions of asthma, high blood pressure, heart disease, high cholesterol, and chronic obstructive pulmonary disease (COPD).

Table 6. Statewide Associations Between Adverse Childhood Experiences and Physical and Behavioral Health Conditions*

<table>
<thead>
<tr>
<th>Behavioral health condition (positive screen)</th>
<th>Odds Ratio</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>1.57</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.47</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>PTSD</td>
<td>1.48</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>Alcohol misuse</td>
<td>1.03</td>
<td>0.18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical chronic illnesses (self-reported medical diagnosis)</th>
<th>Odds Ratio</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>1.07</td>
<td>0.07</td>
</tr>
<tr>
<td>Asthma</td>
<td>1.12</td>
<td>0.003*</td>
</tr>
<tr>
<td>High blood pressure</td>
<td>1.12</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>Heart disease</td>
<td>1.15</td>
<td>0.0003*</td>
</tr>
<tr>
<td>High cholesterol</td>
<td>1.06</td>
<td>0.03*</td>
</tr>
<tr>
<td>COPD</td>
<td>1.31</td>
<td>&lt; 0.0001*</td>
</tr>
<tr>
<td>Cancer</td>
<td>1.08</td>
<td>0.11</td>
</tr>
</tbody>
</table>

*Significant association
a Adjusted for age, gender, and race/ethnicity

Figure 15. Number of Adverse Childhood Experiences (ACE Score)
Perceptions of Need for Care (Qualitative Follow-up)

Many participants who screened positive for a behavioral health condition did not identify a need for care. Although 12.2% of the respondents screened positive for a mental health condition, only 36.2% of those with a positive screen perceived a need for mental health care. The discordance was larger for respondents who screened positive for substance use issues. Of the 42.3% of respondents who screened positive for substance use conditions, only 1.9% perceived a need for substance-use treatment. Additionally, only 9.6% of respondents replied that they needed mental health care in the past year, yet 11.2% respondents reported they went to the hospital emergency department one or more times for mental health issues in the same time period.

To better understand what might contribute to this discrepancy between clinical screening and perceived need, we conducted follow-up interviews with a sub-sample of survey respondents. Specifically, we engaged 35 of the survey respondents who screened positive for a mental health or substance use condition and indicated an interest in participating in additional studies. To include diverse perspectives we selected interviewees from different demographic backgrounds and geographic areas, with most (82%) interviewees living in rural or isolated areas (Table 7). The phone interviews included open-ended questions to explore how mental health, alcohol, and drug use are viewed in South Dakota communities and what factors enable or hinder individuals in receiving care. We analyzed the interviews to identify patterns associated with access to and receipt of care.

The follow-up interviews revealed that the discrepancy between health screening results and perceived need for care was related to how participants defined mental health conditions, alcohol, and drug abuse. Many participants viewed mental health conditions as a normal part of life, a reaction to a specific event, or a “personal problem” rather than diseases that required treatment. Some participants viewed excessive alcohol consumption as a normal part of life in South Dakota communities; in order for participants to define excessive consumption as abuse, the behavior had to be associated with harm of others, neglecting responsibilities, or getting into trouble with the law.

Table 7. Interview Participant Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>18-34</td>
<td>5 (14.3%)</td>
</tr>
<tr>
<td>35-64</td>
<td>23 (65.7%)</td>
</tr>
<tr>
<td>65 and older</td>
<td>7 (20.0%)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>14 (40.0%)</td>
</tr>
<tr>
<td>Female</td>
<td>21 (60.0%)</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>23 (65.7%)</td>
</tr>
<tr>
<td>American Indian</td>
<td>10 (28.6%)</td>
</tr>
<tr>
<td>Other</td>
<td>2 (5.7%)</td>
</tr>
<tr>
<td><strong>Geography</strong></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>6 (17.1%)</td>
</tr>
<tr>
<td>Rural</td>
<td>11 (31.4%)</td>
</tr>
<tr>
<td>Isolated</td>
<td>10 (28.6%)</td>
</tr>
<tr>
<td>Reservation</td>
<td>8 (22.9%)</td>
</tr>
<tr>
<td><strong>Screening Status</strong></td>
<td></td>
</tr>
<tr>
<td>Mental Health only</td>
<td>18 (51.4%)</td>
</tr>
<tr>
<td>Substance Abuse Only</td>
<td>9 (25.7%)</td>
</tr>
<tr>
<td>Co-occurring</td>
<td>6 (17.1%)</td>
</tr>
<tr>
<td>Negative Screen</td>
<td>2 (5.7%)</td>
</tr>
</tbody>
</table>
RESULTS

For drugs, about half of participants viewed any use of drugs as abuse, while others viewed it more similarly to alcohol, only considering it abuse if it interferes with an individual’s ability to function. Table 8 provides examples of participant quotes to illustrate these themes.

Many interview participants viewed coping with a mental health issue or maintaining sobriety as the result of an individual’s willpower, although family, friends, and court-mandated treatment could play a role in suggesting needed treatment. Participants frequently identified that the trigger for seeking care related to a substantial life event, like the birth of a child. Stigma was a prominent concern related to seeking mental health or substance-use treatment.

Participants suggested improving access and quality of care as well as community-level interventions to improve treatment and prevention of behavioral health conditions in South Dakota. Participants recommended community education about mental health and substance-use disorders, the effectiveness of treatment, and how to get help. Context was also noted as an important component of prevention and treatment, and participants felt improvements could be made specifically by addressing systemic issues that can contribute to behavioral health conditions.
## RESULTS

### Table 8. Themes and Illustrative Quotes from Follow-up Interviews

<table>
<thead>
<tr>
<th>Key Themes</th>
<th>Illustrative Quotes</th>
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<tr>
<td><strong>Defining mental health conditions</strong></td>
<td>“I got an ex-wife — something’s the matter with her, but that’s been that way forever and I don’t even know what it is. It’s just a personality quirk. It’s all right, just so long as the neighbors don’t find out. There’s a lot of people that way who have been brought up like me but just can’t cope with the real world.”</td>
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<td><strong>Defining alcohol use problems</strong></td>
<td>“I think some of it is like, ‘Oh, I’ve never gotten in trouble with the law and when I do drink I’m at home...I’m not out and about, causing problems or going out and driving around.’ And like I say, I haven’t viewed it as a problem.”</td>
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<tr>
<td><strong>Defining drug use problems</strong></td>
<td>“Once you start using [drugs] it’s so mind-altering. You’re abusing it the second you start.”</td>
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<td><strong>Individual willpower</strong></td>
<td>“I was drinking too much and I’d get blackouts and I decided one day, it was on my birthday and was drinking with friends and I just decided that day I was done and I quit drinking and never had a drop for 5 years. It just got to be too much, I was drinking too much and so I decided on my own I was going to quit, so I did. Same way I quit cigarettes.”</td>
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<td><strong>Tipping points</strong></td>
<td>“I’d seen my mom quit, and a few other family members quit drinking. I was the only one still making an ass out of myself. And then I had kids.”</td>
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<td><strong>Stigma</strong></td>
<td>“I think the community in general doesn’t accept drug abuse at all. I mean its taboo and if it gets to be known that they’re using drugs and whatnot I think the community in general shuns them.”</td>
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<td></td>
<td>“[A barrier is] everybody knowing. [It’s a] small community. It doesn’t take long for word to get around. A matter of fact, if I take an ambulance run by the time I get back half the town knows about it – in detail. I mean it surprises the heck out of me how we can run to [larger city] and back which takes about 4-1/2 hours and I’ll get back and go to the grocery store and people will ask me ‘well, how’s so and so doing?’”</td>
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<td><strong>Recommendations for improvement</strong></td>
<td>“I feel that if we had things that would be supportive of a healthy lifestyle – because when people go to treatment they come from that environment back into the old environment, and if there’s nothing there for support, you’re going to go right back in with your friends, whatever. If there was a support system that helped a person to continue to get outpatient treatment, help them get a job, if they needed some life skills to have that education there for them [this would help].”</td>
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