

Barriers to Rural Mental Health Care:  
A Mixed Methods Investigation of Mental Health Outcomes, Services, and Help-Seeking

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Emily Jordan Jensen

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Tai J. Mendenhall, Ph.D., LMFT  
Advisor

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## **Dedication**

This dissertation is dedicated to my first – and my best – friend, Kelsey Jo Olson. This project, like all the work I endeavor to do in this field, is my small attempt to make some light in the space you used to occupy. The candle keeps burning.

## Abstract

Existing rural mental research points to several concerns regarding symptoms and outcomes (e.g., mental health status, mental health symptoms, suicide rates). Research also identifies several barriers that inhibit rural residents from accessing quality mental health services (e.g., factors influencing the availability of services, accessibility of services, and acceptability of services). Investigations that compare rural mental health outcomes and help-seeking to urban counterparts are limited; what does exist points to mixed findings about differences between groups.

The research presented here aims to elucidate the limited understanding of barriers to mental health care in rural communities via a two-study, mixed-methods investigation. Study 1 is an analysis of an existing dataset collected in eight counties in Northern Minnesota and Wisconsin in 2015. The survey includes questions about behaviors, outcomes, and social determinants of health and mental health and includes (N = 6,976) responses. Chi-square and logistic regression analyses were used to assess the impact of geographic location (measured by RUCA codes) on mental health symptoms, help-seeking behaviors, and specific barriers to seeking help. Demographic covariates – including age, education level, gender, and income – were also considered. Results reveal some variation between the chi-square and logistic regression analyses, and hypotheses for the disparities are discussed. Findings from the logistic regression analyses revealed no significant differences across rural and urban groups for indication of mental health symptoms, though age and gender did account for some variance. The rural group was more likely to indicate delayed or forgone help-seeking behaviors, and the urban group was more likely to indicate attitudinal barriers to seeking mental health care.

Study 2 is a qualitative study that followed a Hermeneutic phenomenological design. The goal of this study was to increase understanding of barriers to rural mental health care via rich descriptions of lived experiences with those barriers. Thirteen (N = 13) family physicians who practice in the same geographic area as the dataset in Study 1 were recruited using convenience and snowball sampling techniques. Family physicians were chosen for these key informant interviews because existing research suggests that primary care often serves as the front line of mental health care in rural communities. Their ability to speak to their own experiences, and to the experiences of their patients, also facilitated the gathering of a range of perspectives and rich descriptions. Findings were organized into seven overarching themes; key ideas therein pointed to both the presence of structural and attitudinal barriers to mental health care, and to ideas physicians have for overcoming them.

Implications from the two studies point to the need for continued investigation into the presence of barriers to mental health care for rural communities, and ideas for maximizing existing resources. Differences between structural and attitudinal barriers are discussed alongside findings from these two studies, and future research should continue to investigate the differences between these categories of barriers. Increased understanding of what prevents rural communities from accessing needed mental health care will increase the efficiency and efficacy of future interventions aimed at reducing barriers and increasing access to care.

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## **Introduction**

Rural residents make up almost 20% of the United States' population (U.S. Census Bureau, 2010). However, funding for rural mental health research has trailed behind that for other groups for whom health disparities are well-documented (e.g., by race/ethnicity). This is concerning because significant differences across mental illness rates, severity, and outcomes persist for rural residents (Smalley & Warren, 2012). Compared to urban counterparts, rural respondents are more likely to describe their global mental health status as poor (Ziller, Anderson, & Coburn, 2010). They are also more likely to report higher levels of depression, suicide, substance abuse, domestic violence, and child abuse (Eberhardt & Pamuk, 2004; Smalley, Yancey, Warren, Naufel, Ryan, & Pugh, 2010). Researchers have identified three principal categories of barriers that block access to care in these communities: accessibility of services (e.g., cost, insurance status, travel distance), availability of services (e.g., amount of professionals), and acceptability of help-seeking (e.g., stigma, trust in service providers, family/community disapproval) (Human & Wasem, 1991; Smalley & Warren, 2012; Jensen & Mendenhall, 2018).

### **Inadequate Availability of Mental Health Services**

It is estimated that 62% of identified Mental Health Professional Shortage Areas are situated in rural areas (United States Department of Health and Human Services, 2017). Additionally, several professional and ethical issues, such as decreased resources for professional collaboration and referrals, lack of professional supervision, challenges in practicing as a generalist (versus a specialist), and struggles in receiving appropriate compensation have been identified as problematic for rural practitioners (Mohatt,

Bradley, Adams, & Morris, 2006; Robinson et al., 2012; Weigel & Baker, 2002). Unique ethical challenges for practitioners in rural practice stem from the small social circles inherent to rural communities, and include encounters with dual relationships and difficulties maintaining confidentiality (Gonyea, Wright, & Earl-Kulkosky, 2014; Ryan-Nichols & Haggarty, 2007; Weigel & Baker, 2002). If rural practitioners live in the same communities in which they work, their clients will likely be members of their churches, their children's teachers, their spouses' colleagues, and – in some cases – their own friends, neighbors, and acquaintances. Rural communities are often located far away from other populated areas, so many therapists who would reside rurally do not have the option of setting up a practice in a neighboring community. Limited social and cultural outlets have also been cited as reasons why rural communities have trouble recruiting mental health practitioners (Mohatt et al., 2006). These and related challenges keep many practitioners away from rural areas.

### **Limited Accessibility of Mental Health Services**

Two primary issues related to the accessibility of mental health services in rural areas include (a) physical distance between patients/clients and services and (b) financial burdens paired with mental health care (Robinson et al., 2012). Many rural residents need to travel long distances to receive care, which brings time and financial burdens. Including the costs of missed work, gasoline, co-pays (if insured at all), and medications, the financial burdens associated with mental health care can be a significant deterrent. These barriers can be especially pronounced, insofar as more than 18% of rural adults live below the federal poverty line (Economic Research Service, 2014). Patients of lower socio-economic status and older age (of which there are many in rural areas) often

experience insurance limitations. Programs like Medicare and Medicaid have strict guidelines about which types of mental health providers are in and out of network with these plans. Part of the accessibility problem may mean that providers are available, but they are not in-network with these plans (e.g., Marriage and Family Therapists are not currently reimbursed by Medicare plans).

### **Low Social Acceptability for Seeking Mental Health Services**

Acceptability of mental health services is influenced by negative attitudes towards mental illness that are commonplace in rural areas; this includes the effects that stigma, lack of anonymity, lack of trust for services, and values regarding self-reliance have on help-seeking behaviors (Smalley & Warren, 2012). While the lack of accessibility and availability of mental health services are barriers that are easily measured and identified, the barrier of acceptability – though strongly felt – is more difficult to operationalize. This barrier exists psychologically and interpersonally, and has cultural implications across individual-, family-, and community- levels.

Although problems with the acceptability of mental health care exist everywhere, its effects are arguably worse in rural areas because of high levels of “social proximity” and decreased levels of anonymity (Larson, Corrigan, & Cothran, 2012, p. 53). While urban settings can be experienced as physically proximate but socially distant, rural communities are frequently the opposite: physically distant, but socially proximate. Due to this social proximity, rural residents facing mental illness may be hesitant to seek care vis-à-vis fear that their treatment would not remain anonymous. For example, they may worry that an acquaintance would recognize their vehicle parked outside a counselor’s

office, whereupon the whole community would soon find out and perceive them as weak, sick, or otherwise damaged via the small-town rumor-mill (Smalley & Warren, 2012).

The aversive effects of stigma on seeking mental health services in rural areas are well documented (e.g., Cremers, Cogan, & Twamley, 2014; Polaha, Williams, Heflinger, & Studts 2015; Pullman, Vanhooser, Hoffman, & Heflinger, 2009; Robinson et al., 2012; Williams & Polaha, 2014). Pullman et al. (2010), for example, found increased stigma to be linked to close-knit communities and small towns. In their qualitative study, respondents expressed that increased “public surveillance” meant that the community would be aware of anything a family is involved with, including mental health care. This lack of anonymity is connected to potential embarrassment, humiliation, and a sense of shame about not being able to handle one’s problems independently. In a similar study (Cremers, Cogan, and Twamley, 2014), a mother living with mental illness described her community as “so narrow-minded. It would be exactly like . . . ‘Oh she’s a bit not right in the head’, ‘not the full shilling’”. She thereby maintained that, “I wouldn’t let anyone think I couldn’t cope . . . that it’s something I can’t deal with” (p. 101). This type of stigma, too, has serious consequences – including reductions in self-esteem and self-efficacy (Larson, Corrigan, & Cothran, 2012), feelings of social distancing (Mukolo & Heflinger, 2010), and deferred and delayed help-seeking behaviors (Franz, Carter, Leiner, Bergner, Thompson, & Compton, 2010).

In addition to lack of anonymity, rural cultural values regarding self-sufficiency may contribute to low social acceptability for help-seeking behaviors and a lack of trust for service providers. These cultural values may have developed in rural communities because of the geographic remoteness and isolation that rural living can involve (Smalley

& Warren, 2012). Physical distance from community resources of all kinds means that self-reliance can be requisite for survival. Rural residents may fear that needing help is a signal of weakness, or that reaching out could be perceived as a burden to others (Smalley & Warren, 2012). Therefore, seeking out help from a professional may be considered a countercultural act that contradicts deeply held values, and may contribute to a general lack of trust for outside professionals.

### **Lack of Precision and Measurement for “Rurality”**

There is no consistent definition or method for measuring rurality in extant literature. There is no standardization of the term “rural”, or the population size and density it could be referring to. Using “rural” as a catchall phrase for anything that is “not urban” limits it to a dichotomous characterization that obscures much of the nuance that is present in communities of varying levels of rurality and urbanicity. Using it as a stand-alone term to describe a unique culture and its inherent implications for mental healthcare, however, is not sufficient either. Ultimately, this lack of precision makes generalizability difficult, and renders analyses and comparisons across studies impossible (Jensen & Mendenhall, 2018). For that reason, the present investigation used standardized measures of rurality/urbanicity in the form of Rural Urban Commuting Area (RUCA) codes (Economic Research Service [ERS], 2016) in both Study 1 and Study 2. Further discussion of and rationale for this measurement are provided below.

### **Significance**

While we have identified what these barriers are, little is known about their respective prevalence, geographic patterning, and impacts. Finding answers to these questions is an imperative step toward developing interventions that target barriers

preventing rural patients, families, and communities from receiving care. Study 1 increases understanding of the patterning and prevalence of mental health outcomes and barriers through quantitative analysis. As a consequence of these barriers, many rural residents rely on primary care providers (physicians) in medical settings for mental health care (Mohatt et al., 2006). This fact provides part of the rationale for the intention behind Study 2 in this investigation (described below). Study 2, a qualitative interview study of rural family physicians, increases understanding about the lived experiences of individuals in these communities from the perspectives of physicians.

In tandem, these discoveries provide a deeper and more contextualized understanding of the causes and functions of barriers to mental health care in several rural communities. The findings also provide insights for the development of future inquiry and eventual interventions in these areas.

## **Theory**

Theory provides an important grounding for the conceptualization, methods, and interpretation of the investigations at hand. The primary theory for the conceptualization of the two studies presented here is human ecology theory (Bronfenbrenner, 1979). The Andersen behavioral model of health service use (Andersen & Newman, 1973; Andersen et al., 2014) has also guided specific methods and interpretation of findings. The Andersen model and human ecology theory have several overlapping ideas and provided guidance and insight at all stages of the research process. Specific concepts and assumptions from these theories that were especially suited to these studies are described and explored in further detail below.

**Human ecology theory.** Human ecology theory explains the bidirectional effects and relationships between humans and their environments (Bronfenbrenner, 1979). The theory considers ways in which these effects occur across the Situational Environment (context, location, time), Social Environment (interactions and impacts of family and social community), and Personality Environment (individual differences and attributes) (Keefe, 2015). This theory, which often goes by names such as social ecology theory and socioecological theory, has been used as a guide in other rural mental health studies (e.g., Mann & Heflinger, 2016; Mukolo & Heflinger, 2011; Murry, Heflinger, Suitor, & Brody, 2011) and rural health studies (e.g., Fahs, Pribulick, Williams, James, Rovynak, Siebold-Simpson, 2012; Garrison, 1998). Human ecology theory appears to be fairly common in rural studies, and is a good fit when investigating the interactions between individuals, communities, and physical locations, as rural studies within several fields do.

Study 1 of this investigation is concerned with situational environment effects. Based on location (degree of rurality), I investigated which communities are most impacted by barriers to mental health, and which barriers to care are most present in which areas. Study 2 also considers the situational environment, and is concerned with the social environment, the impacts of interaction with family and community. Interviewing family practice doctors gave a window into the lives of specific families and communities who face mental illness in rural areas. Both studies also investigated the individual level, or personality environment. The survey data in Study 1 provided information from individuals about help-seeking and which barriers were experienced. Responses to these questions provided insight into individual and personality effects on help-seeking outcomes. In Study 2, the personality environment was explored as

individual physicians were interviewed and speak not only to their own experiences, but also to the experiences of individual patients they serve. I also asked them about family involvement in treatment and about the general culture and attitudes of their communities. These questions were designed to learn more about the social environment and its impacts on individual behavior.

One assumption of human ecology theory is that environments do not necessarily determine human behavior, but they do pose limitations and constraints (as well as possibilities and opportunities) for individuals and families (Bubolz & Sontag, 1993). This assumption is key to the conceptualization of these studies. I am interested in gaining a clearer understanding of rural environments specifically to increase awareness of the limitations, constraints, possibilities, and opportunities related to mental health care that are shaped therein. Better understanding these elements of the environment will not provide a causal connection for understanding behaviors, but it will increase the way we understand mental health help-seeking behavior to be influenced by the limitations and opportunities of the rural environment.

A second assumption of human ecology theory that is key to these studies is that human systems need to be understood as they move through space and time (Keefe, 2015). Although understanding the context of space is a key component that is inherently integrated into each stage of this investigation, time, though less explicit, is an important factor for interpretation. For Study 1, I have only one time point from which to analyze data, but understanding time through a social context (i.e., what it means to experience mental health symptoms in 2015 when these data were collected), is an important consideration. Time also informed the questions and interpretations of findings for the

interviews with rural physicians in Study 2. Several physicians had been in practice for multiple decades, and the element of time, and how systems have changed over time, were central in the meaning they were making of their contexts. Their reflections on how attitudes and behaviors have changed across their years provided an added level to understanding.

**Andersen behavioral model of health service use.** The Andersen model was first advanced in the 1960s; it provided a framework for conceptualizing reasons that individuals do and do not seek health care. The original model posited that three primary factors – including predisposing individual characteristics (e.g., age, race, personality, sex), enabling factors (e.g., community resources, family support), and need (actual and perceived) – are predictive of health behaviors (e.g., attending scheduled appointments, making positive health choices, seeking out professional care in the first place) (Andersen & Newman, 1973). Revised models include contextual and environmental dimensions as their own factors (Andersen, 1995; Andersen, Davidson & Baumeister, 2014). These dimensions consider environmental factors like community resources and cultural norms alongside individual factors.

Though not explicitly stated by Andersen, with the inclusion of environmental factors, this model seems to overlap with several ideas in human ecology theory. Predisposing characteristics are very similar to Keefe's (2015) concept of the personality environment; both are concerned with individual differences and behaviors. Enabling factors are very similar to the human ecology idea of the social environment; both are concerned with social interactions with family and community. Finally, the inclusion of contextual and environmental dimensions into the Andersen model provides a very

similar to the concept of the situational environment; consideration of structural factors and larger societal impacts.

For the purposes of this investigation, the healthcare-specific focus of the Andersen model has been helpful alongside the guidance provided by human ecology theory. The Andersen model has been used by several investigations exploring predictors of mental and behavioral health access (e.g., Fasoli, Glickman, & Eisman 2010; Graham, Hasking, Brooker, Clarke, & Meadows, 2017; Lillienthal, Possemato, Funderburk, Wade, Eaker, & Beehler, 2017). The language from the model was helpful in the framing of the interview questions used with rural physicians, and was also helpful in organizing categories and subcategories during the analysis of the qualitative data in Study 2. This model has also been helpful in the conceptualization of findings from both studies.

### **Guiding Research Questions**

The existing state of knowledge in this burgeoning field of inquiry, and the review of the current literature explored above, have informed the development of the following guiding research questions for the two studies at hand:

#### **Study 1:**

1) Are there significant differences between rural and urban populations in rates

of:

- a) mental health symptoms
- b) mental health help-seeking behaviors
- c) specific barriers that prevent help-seeking behaviors?

2) When other demographic variables are controlled for, are there still significant differences between rural and urban populations in rates of:

- a) mental health symptoms
- b) mental health help-seeking behaviors?

**Study 2:**

- 1) What experiences and observations of barriers to mental health care amongst patients and their families do rural physicians witness in their practices?
- 2) What ideas do rural physicians have for overcoming barriers to mental health care?

Combined, these two studies will provide a clearer mapping of the impacts of location on mental health concerns and barriers, and will provide insight into lived experiences with mental health symptoms and resources in rural communities. The combination of quantitative and qualitative analyses in this mixed-methods design will provide unique insights into the phenomena occurring in these rural communities. The quantitative study provides the ability to gain insight from a large sample that includes both rural and urban perspectives. Following up with in-depth interviews with physicians in the same geographic region allows for more nuanced perspectives and rich descriptions of the trends that emerge from the quantitative analyses. Combined, these studies have significant findings that will shape future research and clinical practice.

## Article 1

Rural Urban Comparison of Mental Health Symptoms and Barriers to Effective Care

Emily Jordan Jensen, MA, LMFT

Dissertation Article 1

Submitted in Partial Fulfillment of the Requirements of the

Degree of Ph.D. In Family Social Science

University of Minnesota Twin Cities

Correspondence regarding this article should be directed to Emily Jordan Jensen, MA, LMFT; Department of Family Social Science; University of Minnesota; 290 McNeal Hall; 1985 Buford Ave; Saint Paul, MN 55108; Email: [jorda675@umn.edu](mailto:jorda675@umn.edu)

## Synopsis

**Introduction:** Research that compares rural and urban groups across mental health-related measures is limited and points to varied outcomes. Concerns for mental health outcomes and service availability persist for rural communities. This investigation was designed to elucidate the relationship between geographic location and mental health symptoms, help-seeking behaviors, and specific barriers to mental health care.

**Method:** Analyses on an existing dataset (N = 6,976) were conducted to assess the impact of geographic location (rural vs. urban) on mental health outcome variables. Chi-square analyses and logistic regression analyses were completed with a regional sample that contained both urban and rural residents. Covariates of age, income, gender, and education level were also considered.

**Results:** In the chi-square analyses, the urban group was more likely to indicate all mental health symptoms. In the logistic regression analyses, no significance was observed for the effects of location on mental health symptoms. Logistic regression did indicate the impact of urban location on increased likelihood of indicating the barriers to help-seeking of, feeling nervous or afraid, viewing problems as not serious enough to warrant professional attention, and not knowing where to find help. Significance was observed for the impact of rural location on help-seeking behaviors in that the rural group was more likely to indicate delayed or forgone help-seeking than the urban group. Other demographic covariates (age, gender, income, and education level) were also found to be indicative of mental health symptoms and help-seeking behaviors.

**Discussion:** Findings from this investigation have implications for future research and measurement of mental health and location-based constructs. The differing results in the chi-square and logistic regression analyses speak to the need for improved validity in measures used for conceptualizing rural and urban locations. Implications for mental health measures are also considered.

Keywords: *barriers to mental health care, help-seeking, rural mental health, rural urban comparison*

Interest in and understanding of mental health care and outcomes in rural communities has been increasing over the past decade. Much of what is known points to concerns about disparate outcomes for mental health (e.g., poorer mental health status and higher levels of depression, and suicide (Ziller, Anderson, & Coburn, 2010)), and for psychosocial outcomes (e.g., substance abuse, domestic violence, and child abuse (Eberhardt & Pamuk, 2004; Smalley, Yancey, Warren, Naufel, Ryan, & Pugh, 2010)). Present research also points to concerns, too, about disparities in availability of mental health treatment. An estimated 62% of identified Mental Health Professional Shortage Areas are situated in rural areas (United States Department of Health and Human Services, 2017). There are also discrepancies in rates at which rural residents are able to access treatment (Chavez, Kelleher, Matson, Wickizer, & Chisholm, 2018; Jensen, Mendenhall, & Wieling, in press; Reif, Whetten, Ostermann, & Raper, 2006; Robinson et al., 2012).

Although there is existing research on rural mental health outcomes, few studies have included urban comparison groups when investigating mental health outcomes and service use in rural communities. Many that have used comparison groups have done so when investigating specific sub-populations, e.g., elders (Hayslip, Maiden, Thomison, & Temple, 2010), patients with HIV (Basta, Shacham, & Reece, 2009; Reif et al., 2006), veterans (McCarthy, Blow, Ignacio, Ilgen, Austin, & Valenstein, 2012), and young adults (Chavez et al., 2018). Findings from these comparison studies suggest lower treatment rates, less positive attitudes towards mental health care, and increased instances of negative mental health outcomes in rural communities compared to urban counterparts. A large amount of research that compares rural and urban groups has also been conducted

in countries other than the United States, e.g., Australia (Lyons, Hosking, & Rozbroj, 2015), China (Wei, Zhang, Deng, Sun, & Guo, 2018), and Scotland (Levin, 2014). Findings from international studies suggest a mix of significant and insignificant rural/urban differences in mental health treatment and outcomes. While these findings are insightful, both local and international generalizability of findings for a location-based variable like rural/urban comparison should be approached cautiously.

Human Ecology Theory (Bronfenbrenner, 1979) and the Andersen Behavioral Model of Health Service Use (Andersen, 1995; Andersen et al., 2014) provide theoretical backing and conceptualization of the variables in the study presented here. Human ecology theory posits that humans and their environments, both physical and human-made, have reciprocal influence upon each other (Bronfenbrenner, 1979). The Andersen model provides an explanation for health help-seeking behaviors specifically, and predicts that health outcomes are influenced by personal factors (e.g., predisposing characteristics, enabling resources, and need) and contextual factors (e.g., external environment and health care system). The present investigation was designed to increase understanding about the impacts of physical geographic location (environmental and contextual factors) on individual mental health outcomes and on help-seeking behaviors. The consideration of other demographic variables will aid in the understanding of the role personality environment factors (or predisposing characteristics) play in predicting health behavior outcomes. The guiding research questions are:

- 1) Are there significant differences between rural and urban populations in rates of:
  - a) mental health symptoms

- b) mental health help-seeking behaviors
- c) specific barriers that prevent help-seeking behaviors?

2) When other demographic variables are controlled for, are there still significant differences between rural and urban populations in rates of:

- a) mental health symptoms
- b) mental health help-seeking behaviors?

Findings will add to a growing understanding of the relationship between location and mental health symptoms, in addition to shedding light on the influence of location on mental health help-seeking behaviors.

### **Methods**

This study used two different analyses to answer the two research questions at hand. Both analyses were based on information collected from the same secondary dataset.

### **Data**

This study analyzed an existing dataset called the 2015 *Bridge to Health Survey*, which includes information collected in eight counties in Northern Minnesota and one county in Wisconsin (Kjos, Kinney, Finch, & Peterson, 2015). The dataset reflects responses from 6,976 individuals about experiences relating to health care and mental health care, and was organized by a collective effort involving several regional hospitals, clinics, health systems, health plans, non-profit organizations, government agencies, foundations, and institutes of higher education. The original purpose of the survey was to gain a regional-level understanding of key health indicators that can help improve health care delivery at the county and community levels (Kjos et al., 2015). The dataset is de-

identified and publically accessible, as are reports from 1995, 2000, 2005, and 2010 when different iterations of the survey were administered. This study was regarded exempt by the University of Minnesota's Institutional Review Board for these reasons.

### **Sampling Strategy**

Stratified sampling techniques were used to ensure representation from each of the nine counties included in the survey. One county, which contains a major metropolitan area, was divided into two sections for a total of 10 distinct survey areas. A randomized sample of 2,250 addresses for each survey area was purchased from a national sampling vendor. This randomization ensured an equal chance of being included for all residents in a survey area. Paper surveys were mailed to 2,250 home addresses for each survey area with the instructions that the adult resident with the "most recent birthday" should be the person to fill it out. Postcard reminders were mailed two weeks after the initial survey packets were mailed, and then ten days after that another full survey packet was mailed to the home addresses. In total, the 6,008 surveys that were completed and returned resulted in a total response rate of 28.6% (Kjos et al., 2015).

### **Sample Demographics**

Survey participants ranged in residence across levels of rurality. According to zip code-level measurements as outlined by Rural Urban Commuting Area (RUCA) codes (Economic Research Service [ERS], 2016), 44.6% of respondents resided in urban areas and 55.4% of respondents resided in rural areas. Using RUCA stratification, rural areas can be further broken down into the categories of "large rural city or town" (12.5% of respondents), "small rural town" (19% of respondents) and "isolated small rural town" (23.9% of respondents). Sixty-six percent (66%) were female, 79.5% were over the age

of 55 years (mean = 63 years), and 29.2% lived in poverty. Ninety-five percent (95.2%) of the respondents identified as white, and 53% reported earning at least a technical or associate degree beyond high school.

## **Measures**

The independent variable in these two analyses is location, as measured by RUCA codes. This zip code-level, 10-point stratification system takes proximity to urban areas into account, alongside population density. Proximity to urban centers may be an important measure in rural mental health research, as distance to urban areas may be indicative of distance to mental health professionals and other health resources (Jensen & Mendenhall, 2018). Additionally, RUCA codes account for commuting patterns (where people travel for employment). These patterns may also be indicative of where individuals travel to receive mental health care. A large benefit of using RUCA codes as opposed to other stratified measures of location is that they provide more granular and specific measurements by using zip code-level instead of county-level measures (as Urban Influence Codes (UIC) and Rural-Urban Continuum Codes (RUCC) use (US Department of Agriculture, 2013a; US Department of Agriculture, 2013b) As there are only eight counties represented in this dataset, analyzing the data at the county level would obscure much of the meaning that is able to emerge by instead analyzing the 154 distinct zip codes that are represented in this dataset.

Zip code data for each participant were truncated to include the basic five-digit code (as opposed to the nine-digit code originally provided), and then transformed into corresponding RUCA codes (1-10) to give a specific location measurement for each participant. For purposes of analysis, the 10-code scheme was broken into dichotomous

groups to compare rural and urban populations. The dichotomous breakdown was recommended via personal communication with Gary Hart, Ph.D., one the creators of RUCA codes (Hart, 2018) and can be viewed in Appendix A. The principal rationale for the dichotomous breakdown was for efficiency in analytic comparisons. A more granular breakdown was considered, which broke the rural group into three categories resulting in four categories for RUCA codes. However, group sizes were quite disparate with this breakdown (middle groups were small), and more similar sizes were achieved with the dichotomous breakdown. The breakdown based on Dr. Hart's recommendation included all metropolitan and metropolitan-adjacent communities in the urban group, and all smaller and more-remote communities in the rural group. The dichotomous breakdown for this dataset is Urban (44.6%) and Rural (55.4%), at (N = 6,976).

Dependent variables in these two analyses were based upon responses to queries generated by the creators of the original survey. They were not based upon validated scales or existing measures. (For a list of original survey questions used for these analyses, view Appendix B). For analysis one, the dependent variables included mental health symptoms, as measured by the following three survey questions: "*Have you ever been told by a physician that you have: Depression? Anxiety? Other mental health symptoms?*" Although this question could be interpreted as asking about official diagnoses, the construct is labeled "mental health symptoms" to provide more room for capturing the diverse ways that respondents could have interpreted the question. Perhaps a physician told them they may have symptoms of anxiety or depression, for example, but did not give them an official diagnosis. Framing the variable as "mental health symptoms" is likely most accurate. The other two dependent variables were help-seeking

behaviors, as measured by the question: “*During the past 12 months, was there a time when you wanted to talk with or seek help from a health professional about mental health problems such as stress, depression, excess worry, troubling thoughts, or emotional problems but did not go or delayed talking with someone*”?, and specific reasons for delayed or forgone help-seeking (barriers to care) as measured by the question: “*Which reason(s) caused you to delay or avoid talking with someone?*” Answer choices included: (a) *insurance did not cover it*; (b) *co-pay was too expensive*; (c) *transportation problems*; (d) *no insurance*; (e) *could not get an appointment*; (f) *deductible was too expensive*; (g) *did not know where to go*; (h) *care cost too much*; (i) *too nervous or afraid*; and/or (j) *did not think it was serious enough*. This question was asked only to respondents who indicated “yes” to the question about delayed-forgone help-seeking. This subgroup of the dataset (n = 902) was used for all analyses that observed these specific barriers (a-j) as outcome variables.

### **Covariates**

In analysis two, other demographic variables were included as covariates to assess for the true impact of the rural/urban location variable on the mental health outcome variables. These covariates included the following: Age, as measured by reported birth year, ranged from 1915 (100) to 1997 (18) and was treated as a continuous variable. Gender was measured by the following question, “*Do you identify as Male? Female? Transgender/Other?*” Two respondents in the dataset identified as Transgender/Other. This group was too small to serve as its own comparison group, but wanting to include their responses, the two cases were collapsed into the “male” group, because it was the next smallest group, resulting in a dichotomous variable for gender. “Female” was treated

as the reference group, and the combined “Male” category as the comparison group. Income was also included as a continuous covariate. The survey responses for income ranged from an annual income of “\$23,000 and below” to “\$100,000 and above” across ten groups of approximately \$8,000 ranges each. This variable was not ordinal, as the groups varied in income ranges, and was treated as a continuous variable because the underlying information, income level, is continuous. Education level, which was broken into “high school diploma or equivalent and below”, “some college to associate’s degree,” and “bachelor’s degree and above,” was included as a covariate as well. “High school diploma or equivalent and below” was treated as the reference group, and the two categories were then treated as dichotomous comparisons. Correlations were calculated amongst the covariates to assess for co-linearity. Although some correlations were statistically significant, there were none that signaled a need to remove one of the covariates from the analysis. The correlation matrix can be viewed in Table 1.

[Insert Table 1 here]

### **Weighting and Rationale for Selected Covariates**

Gender, age, and education were included as covariates because the original dataset offered optional weighting that attempted to adjust for these variables to make the sample more representative of the population. The researchers who created the weights also attempted to account for over-sampling of single-person residences and attempted to make the responses for each county proportionate to their contribution to the population of the region (Kjos et al., 2015). For these analyses, I chose to not use the weighted sample because the unit of measure for location in these analyses is zip code level, not county level, and applying weights that account for county level differences could have

interfered with the analyses. Over-representation of single-person households also did not impact the relationships between the variables I was interested in. Yet, still wanting to account for the over-sampling of the other three demographic variables, I have included them as covariates in the logistic regression analyses to attempt to control for some of the impact they may have on findings. Income was also included as a covariate in this analysis as rural and urban differences in income level have been reported nationally (United States Department of Agriculture, 2016), and may account for some of the variance observed in mental health outcomes for the study.

### **Analyses**

Statistical analyses were computed using IBM SPSS Statistics Version 23. Chi-square tests of independence were used to examine the relationship between the independent categorical variable of location (rural vs. urban), and the categorical outcome variables of mental health symptoms, help-seeking behaviors, and reasons for delayed/forgone help-seeking. Logistic regression was used to further investigate the role location plays as a predictor of the mental health outcome variables by accounting for other possibly confounding demographic variables. These other variables were included as covariates in the analysis and included age, education, gender, and income. Logistic regression was selected because the outcome variables (mental health symptoms, help-seeking behaviors, and reasons for delayed/forgone help-seeking) were all dichotomous variables asked as yes/no questions. All missing data were managed via listwise deletion in both analyses. For all variables in the analyses, 8% or less data were missing, with income having the highest rate at 8%. Little's Missing Completely at Random (MCAR) test was used to assess for patterns in the missing data for all of the variables in the

analysis. The test yielded significance, which means that there is a chance that the data used for these analyses were not missing completely at random. Due to the low rate of missing data, it was determined that proceeding with listwise deletion was a sufficiently robust strategy for managing the missing data in these analyses.

## **Results**

Results for the chi-square analyses are presented in Tables 2 and 4 and results for the logistic regression analyses are presented in Tables 3, 5, and 6.

### **Demographics**

Significant differences between the rural and urban groups were observed for gender, (with males more likely to appear in the rural population ( $\chi^2 = 12.311$ )), and for age, (with the rural population significantly older ( $\chi^2 = 165.552$ )). Significance was also observed for differences across education levels, with the urban population significantly more likely to have reported obtaining post-secondary education ( $\chi^2 = 20.574$ ). No significant difference was observed between groups for income.

### **Mental Health Symptoms**

Chi-square analyses revealed that the urban group was significantly more likely to indicate “depression” ( $\chi^2 = 10.598$ ), “anxiety” ( $\chi^2 = 9.528$ ), and “other mental health symptoms” ( $\chi^2 = 4.390$ ). Logistic regression analyses, which accounted for the effects of other demographic variables on mental health symptoms, revealed no significance for the effects of the rural/urban location variable on the outcome variables of depression, anxiety, or other mental health symptoms.

[Insert Table 2 here]

Logistic regression analyses found some significance for the impact of gender (women 56% more likely to say yes; OR = 1.560, CI = 1.36 - 1.79, p = .000), income (individuals 13% less likely to say yes for approximately every \$8,000 increase in annual income; OR = .877, CI = .858 - .897, p = .000), and age (2.1% more likely to say yes for each increase in birth year (decrease in age); OR = 1.021, CI = 1.017-1.025, p = .000) on depression. Significance was detected for the impact of gender (women 49.9% more likely to indicate symptoms OR = 1.499, CI = 1.289 – 1.744, p = .000), income (12% less likely to say yes for approximately every \$8,000 increase in annual income; OR = .88, CI = .86 - .9, p = .000), age (3.3% more likely to say yes for each increase in birth year (decrease in age); OR = 1.033, CI = 1.029 – 1.038, p = .000), and having a bachelor's degree and above (bachelor's degree and above more 22.5% more likely to indicate symptoms than those with high school and below; OR = 1.225, CI = 1.007 – 1.491, p = .043) on anxiety symptoms. The factors that had a significant impact on other mental health symptoms were age (2.7% more likely to say yes for each increase in birth year (decrease in age); OR = 1.027, CI = 1.020-1.033, p = .000) and income (19.91% less likely to say yes for approximately every \$8,000 increase in annual income; OR = .808, CI = .776-.842, p = .000).

[Insert Table 3 Here]

### **Help-Seeking Behaviors**

Chi-square analysis for the impact of rural/urban location on mental health help-seeking behaviors in the past year revealed that the urban group was significantly more likely to indicate “yes”, that they wished they had spoken about mental health concerns with a professional but had not ( $\chi^2 = 29.828$ ). (Chi-square results can be viewed in Table

4) In the logistic regression, when other factors were accounted for, some significance was found for the impact of location on help-seeking behaviors, but in the opposite direction of what the chi-square found. In this case, the rural group was slightly more likely to report delayed help-seeking than was the urban group (rural group was 22.4% more likely to say yes than urban group; OR = 1.224, CI = 1.045-1.435,  $p = .012$ ). Other factors that were also predictive of help-seeking were age, gender, and income; respective significance data for these factors is presented in Table 5.

[Insert Table 4 here]

[Insert Table 5 here]

### **Specific Barriers to Mental Health Care**

For the full dataset, the two specific barriers to mental health care that were indicated most frequently were “I did not think it was serious enough” (39.6% of respondents who delayed/forwent help) and “I was too nervous or afraid” (36.7% of respondents who delayed/forwent help). See Figure 1 for full results. Chi-square analyses found that across all possible barriers, there were significant differences between the rural and urban groups for three barriers. The urban group was more likely to indicate, “I was too nervous or afraid” ( $\chi^2 = 17.277$ ), “I did not think it was serious enough” ( $\chi^2 = 18.323$ ), and “I did not know where to go” ( $\chi^2 = 17.871$ ). These barriers were chosen for logistic regression analyses because they were the only ones for which significant rural/urban differences were indicated by chi-square analyses. Significance was found for the impact of location on each of these barriers, and the urban group was more likely in all instances to indicate them – confirming the findings from the chi-square analyses. Results from these logistic regression analyses can be viewed in Table 6.

[Insert Table 6 here]

## **Discussion**

Although the number of studies comparing mental health symptoms between rural and urban populations is relatively small, the findings from the chi-square analyses that found the urban group more likely to indicate diagnoses of depression, anxiety, and other mental health symptoms were somewhat surprising based on existing research (e.g., Basta et al., 2009; Levin, 2014; Zimmerman et al., 2010). Existing findings have supported the idea that rural groups are less likely to receive mental health treatment (Chavez et al., 2018; Hayslip et al., 2010; Reif et al., 2006), yet the analyses in this study revealed conflicting findings (i.e., the chi-square analysis revealed that the rural group was less likely to delay or forgo help-seeking for mental health concerns, whereas the logistic regression revealed the opposite). Analyzing the content of the survey questions, and further analysis of the logistic regression results, will help to add meaning and context to these findings.

### **Mental Health Symptoms**

The mental health constructs being measured are subject to limitations in the way the survey was written. Survey items for mental health conditions were not based on scales that measure symptoms (e.g., PHQ-9 or GAD-7), but rather with singular yes/no self-report questions about specific diagnoses, (Survey questions can be viewed in Appendix B). Similarly, the survey question that was used to analyze help-seeking behaviors was not based on an existing validated scale, but instead on a singular self-report yes/no question. It should not be assumed that these singular questions can fully and accurately measure the constructs of mental health symptoms and help-seeking

behaviors. The language of the questions themselves should be attended to when interpreting results. It is possible that social desirability bias and stigma for mental health conditions could have prevented survey participants from honestly indicating specific mental health symptoms on the survey.

Findings from the logistic regression analyses add a further level of context and clarity to these findings. When accounting for other demographic factors, there was no significant difference for geographic location's impact upon mental health symptoms. There were significant impacts from age, income, gender, and for the anxiety variable, education was significant. Using the lens of the Andersen behavioral model of health service use (Andersen, 1995), these significant impacts may indicate that for this population, personality factors may have a larger impact on indicating mental health symptoms than do contextual (environmental) factors. When demographic variables (predisposing characteristics) are controlled for, all that is left in "rural" or "urban" identifiers are the physical and contextual components of communities and their resources (contextual factors). Perhaps contextual factors like mental health provider availability, distance to, and cost of services are not as predictive of mental health symptoms as are personal factors like age, gender, income, and education level.

### **Help-Seeking Behaviors**

Chi-square and logistic regression analyses revealed conflicting results for the impact of location on help-seeking behaviors. Both found location to be a significant factor, but the chi-square found the urban group to be more likely to indicate delayed/forgone help-seeking, and the logistic regression found the rural group to be more likely to indicate it. The logistic regression allows for a more nuanced exploration

by taking other factors into account, and these factors may shed light on why this difference appeared. Age, gender, and income all accounted for variance in help-seeking behaviors. Older respondents were more likely to indicate delayed/forgone help-seeking, as were women and those with higher incomes. Based on the chi-square analyses for demographic variables, the rural group was more likely to have older respondents and more likely to have male respondents. It is possible that the initial chi-square analysis of rural/urban impact on help-seeking could have obscured the role gender played when it suggested that rural groups were less likely to indicate delayed/forgone help-seeking. The rural group was also more likely to have older respondents, so this does not help explain the different findings between analyses.

The question that is used to analyze help-seeking: *“During the past 12 months, was there a time when you wanted to talk with or seek help from a health professional about mental health problems such as stress, depression, excess worry, troubling thoughts, or emotional problems but did not go or delayed talking with someone?”* should be viewed as a potential limitation in these analyses. It inherently assumes that talking about mental health concerns would be a positive activity that the respondent would want to do. It does not measure whether or not a participant would have benefitted from treatment, but rather their attitude towards talking about mental health problems in general. For an individual who has a lack of trust for mental health professionals or lack of desire for talking about concerns, this question would have likely been answered “no” regardless of the actual benefit services could have provided. These attitudinal differences may account for the somewhat surprising and contrasting findings from the chi-square and logistic regression analyses.

## **Specific Barriers to Mental Health Care**

Differences in attitudes are also supported by the findings from specific barriers to talking about mental health with a professional that were indicated by survey participants. By a significant margin, the two barriers most frequently indicated were “I was too nervous or afraid,” and “I did not think it was serious enough.” These barriers are attitudinal and personal in nature, while all others listed had more to do with logistical and contextual concerns (e.g., “The care I needed cost too much,” or “I had transportation problems”). Chi-square analyses found that these two barriers, alongside “I did not know where to go,” were the only ones for which there was statistical significance in the rural/urban comparison, and for all three the urban group was more likely to indicate them. Logistic regression revealed that after accounting for other demographic variables, location had a significant effect on the attitudinal barriers (urban group more likely to indicate). It also found a significant effect on the barrier, “I did not know where to go,” with the urban group slightly more likely to indicate it as well. Location seemed to have an impact on attitudinal variables, and on contextual (environmental) variables that could influence mental health care (like not knowing where to find services).

These findings may also suggest a potential strength to mental health care in rural communities. Perhaps in smaller rural communities, even if fewer resources exist, those existing resources may be more visible and known than they would be in urban settings. This visibility could help explain why the rural group was less likely to indicate that they did not know where to go, and may be a potential strength to build upon in the future.

Although more detailed analysis found that rural/urban differences did not have the same effect on mental health symptoms that demographic variables did, it is not to

say that rural and urban populations should be treated the same when it comes to future research and mental health interventions. These findings tell us that demographic variables (like age, gender, education level, and income) do impact mental health symptoms and help-seeking, and that they vary considerably between rural and urban locations. In this dataset, the rural group was significantly older, had less education, and had a higher rate of male respondents – all factors that influenced mental health outcomes. There was no significant difference between income levels in this dataset, but nationally, rural populations tend to experience more poverty than do urban ones (USDA, 2016). Income was a significant predictor of mental health symptoms and help-seeking behavior in this analysis, and rural poverty as a predictor for mental health outcomes should remain a focus of inquiry and a consideration in future interventions.

### **Limitations**

One limitation to consider in this rural/urban comparison study is the possible lack of contrast between the groups. Although the granular, standardized measure for location used for these analyses (RUCA codes) is a strength of the study, the urban comparison group may be somewhat skewed based on the culture and geographic limitations of where the dataset originated. The urban comparison group in this dataset measures as the most urban classification based on RUCA codes, but comes from a mid-sized Upper-Midwest city with a population of 86,000 people. The city is largely industrial and is fairly isolated from similar-sized and larger cities. When attempting to compare attitudes and personal factors specifically, it is possible that differences between this urban group and the rural group were not as disparate as they would have been had the urban comparison group originated in a much larger metro area.

Another limitation is that the measures used for the constructs of mental health symptoms and help-seeking behaviors were limited to single questions that were not based on validated scales. This is often a limitation in secondary data analysis, and results should thereby be interpreted with caution. Future research should consider using specific measures for mental health symptoms and help-seeking behaviors to improve the validity of measurement. It would also be advised to use validated scales for measuring help-seeking behaviors.

Finally, the missing data strategy employed for these analyses could have represented another limitation. Although the rate at which data were missing was quite low, the variables did not pass the MCAR test, and the possibility existed that the variables were not missing at random. Multiple imputation is a better strategy for data that is not missing at random, and employing it could have impacted the results and led to more accurate findings.

### **Future Directions**

Future research should continue expanding rural/urban comparisons to better understand the impact that location has on mental health outcomes and help-seeking behaviors. Investigations aimed at increasing understanding of attitudes towards mental health care in rural areas would be helpful in generating effective interventions, and would move the field beyond its present understanding of the differences that is largely based on outcomes and service availability alone. Attitudes towards mental health care may be a key predisposing characteristic (as described by the Anderson model) that is predictive of ultimate health behaviors. Attitudes may be shaped by age, gender, income, education level, and geographic location, as the findings from this study suggest. There

may be many other factors at play in the shaping and perpetuating of attitudes towards mental health care in rural areas, and gaining a better understanding of these processes may yield key insights for future interventions.

### **Conclusion**

Findings from this study suggest that geographic location, alongside age, gender, income, and education status, are significant predictors of mental health symptoms, help-seeking behaviors, and specific barriers to care. Future research that attempts to compare the effects of rural and urban residence on mental health attitudes and service use will build upon these findings and help clarify the causes for disparities that are observed in rural populations. Rural communities have unique demographic makeups, as well as distinct strengths and limitations. Increasing understanding of these unique characteristics will result in increased and more effective mental health care for this often overlooked population.

## Article 2

Family Physicians' Perspectives of Rural Mental Health Care and Ideas for Increasing  
Access to Quality Services

Emily Jordan Jensen, MA, LMFT

Dissertation Article 2

Submitted in Partial Fulfillment of the Requirements of the  
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University of Minnesota Twin Cities

Correspondence regarding this article should be directed to Emily Jordan Jensen, MA,  
LMFT; Department of Family Social Science; University of Minnesota; 290 McNeal  
Hall; 1985 Buford Ave; Saint Paul, MN 55108; Email: [jorda675@umn.edu](mailto:jorda675@umn.edu)

## Synopsis

**Introduction:** Existing research suggests that primary care settings often function as the front lines for mental health services in rural areas. The lack of mental health care in rural areas is also well documented. Rural family practice physicians were interviewed in this study about their experiences with and ideas for overcoming barriers to mental health care in their communities.

**Method:** Thirteen (N = 13) family practice physicians in rural locations in a Northern US State participated in in-depth semi-structured interviews. Interview questions focused on experiences with mental health care in their practices and communities, and about ideas for overcoming barriers to mental health care. Interviews were transcribed, coded, and analyzed following a Hermeneutic phenomenological design.

**Results:** Findings from the study point to seven overarching themes, including (a) Family physicians are intentional in their choices to practice in rural communities, (b) Rural culture is unique, and presents challenges and opportunities for mental health, (c) A range of mental health concerns persist for rural communities, (d) Existing mental health services are often insufficient or disconnected from healthcare, (e) Several persisting barriers prevent patients from accessing existing mental health care, (f) Family physicians have unique roles in rural practice, and (g) rural family physicians have unique ideas for increasing access to mental health care. Categories and sub-categories were also identified under each overarching theme.

**Discussion:** Findings from this study expand on existing research on rural mental health service delivery. Physicians in the study report a lack of quality mental health services and challenges for integrating and collaborating with those that do exist. Several unique ideas for increasing access to and efficiency of existing services are discussed. These ideas have implications for future research and interventions.

Keywords: *behavioral health, family medicine, integrated care, phenomenology, qualitative methods, rural health, rural mental health*

Existing evidence indicates that there is a shortage of mental health professionals practicing in rural areas (Mohatt et al., 2006; Thomas, MacDowell, & Glasser, 2012). As of 2017, 62% of designated mental health shortage areas were situated in rural contexts (United States Department of Health and Human Services, 2017). This is noteworthy because significant concerns relating to mental health rates, severity, and outcomes of persist for rural communities (Smalley & Warren, 2012; Ziller, Anderson, & Coburn, 2010).

A growing body of research has been investigating the overlap of mental health care in primary care settings, and has found promising indications of the efficacy of care and increased accessibility in these contexts (e.g., Fitzpatrick, Perkins, Luland, Brown, & Covan, 2017; Mohatt et al., 2006; Taylor, Glasser, Hinkle, Miller, Jannings, & Bocker, 2016; Williams, Eckstrom, Avery, & Unutze, 2015). While rates of psychiatrists per capita rapidly decrease as levels of rurality increase, the rate of family practice physicians providing mental health care significantly increases in rural settings (Xierali, Tong, Petterson, Puffer, Philips, & Bazemore, 2013). Similarly, Miller, Petterson, Levey, Payne-Murphy, Moore, and Bazemore (2013) indicated that as rurality increased, the prevalence of mental health care services being co-located within primary care settings also increased. It has also been suggested that primary care physician availability is associated with better mental health ratings for rural communities (Peterson, Tsai, & Litaker, 2009).

In an earlier study of hospitals that integrated mental health services in 22 U.S. states, Bird, Lambert, Hartley, Beeson, and Coburn (1998) proposed a model of four ways in which behavioral health care was integrated within primary care: (a)

diversification (mental health care provided directly onsite), (b) linkage (an independent mental health practitioner or agency operates onsite), (c) referral (formal or informal arrangements made for patients to see offsite mental health professionals), and (d) enhancement (training primary care physicians to recognize, diagnose, and treat mental health concerns independently). Examples of each of these models were present in the primary care settings represented in this investigation. Much research on integrated care and updated models has been proposed (e.g., Heath, Wise Romero, & Reynolds, 2013; Peek, 2007). Bird et al. (1998), though an older model, was developed specifically for rural contexts and serves as a helpful model for this investigation.

There is a growing body of research regarding the presence and function of barriers to mental health care (e.g., Jensen, Wieling, & Mendenhall, (in press); Smalley & Warren, 2012; Thomas et al., 2012). Penchansky and Thomas (1981) proposed a model for conceptualizing barriers to healthcare that outlines dimensions of access: (a) affordability of care, (b) accessibility of care (location), (c) availability of care (number of providers), (d) acceptability of care (attitudes), and (e) accommodation (the relationships between the way services are organized and patients' abilities to integrate these services into their schedules and lives). These factors are related to the concept of enabling factors, from the Anderson behavioral model of health service use that explains relationships between the variables of need, predisposing factors and enabling factors on health outcomes (Andersen et al., 2014). However, this model focuses more specifically on "fit" between the patient and the healthcare system (Penchansky & Thomas, 1981, p. 128). These concepts have been revised and adapted in rural mental health research, and the factors have appeared as a consolidated list of three: availability of services,

accessibility of services, and acceptability of services (Human & Wasem, 1991; Smalley & Warren, 2012; Jensen & Mendenhall, 2018). Further understanding of the presence and function of these barriers is explored in the present investigation.

### **Theoretical Guidance**

This study has been guided by an integration of human ecology theory (Bronfenbrenner, 1979; Keefe, 2015) and the Andersen behavioral model of health service use (Andersen, 1995; Andersen et al., 2014). Human Ecology Theory is largely concerned with the recursive, bidirectional relationships between human behavior and the environments in which behaviors occur. The human behavior under investigation is the way rural residents interact with mental health concerns and services, and the environment under investigation is rural communities. The Andersen behavioral model of health service use (Andersen et al., 2014) is concerned with similar interactions, but is specifically focused the impact of predisposing human factors and enabling environmental factors on health behaviors and service usage. This specific focus on health behaviors and service usage helped guide the research methods and interpretation of findings related to understanding barriers to mental health care in the context of rural environments.

### **Research Questions**

The present study is positioned to address a knowledge gap that exists in our understanding about how barriers to mental health care function for rural patient populations.

The two grand tour questions that guided this investigation are:

- 1) What experiences and observations of barriers to mental health care amongst patients and their families do rural physicians witness in their practices?
- 2) What ideas do rural physicians have for overcoming barriers to mental health care?

By interviewing family practice physicians, this investigation will also elucidate existing strategies that are working and not working, and contribute to ideas of what steps are next in terms of inquiry and intervention aimed at reducing barriers to rural mental health care.

## **Method**

### **Research Design**

The present study followed a Hermeneutic phenomenological research design, which follows the study of experiential meanings and phenomena as they are lived out and present themselves in human consciousness (van Manen, 1990). This approach contributes to the understanding of observed phenomenon via rich descriptions of personal and professional experiences of individuals who are immersed in said phenomenon as it is occurring. The little-understood phenomena under investigation here are the experiences that rural communities have with barriers to mental health care. This phenomenological research design used semi-structured, in-depth interviews with family practice physicians who work with rural patient populations.

Semi-structured interview questions were created through consulting existing research, and were also influenced by both human ecology theory (Bronfenbrenner, 1979; Keefe, 2015) and the Andersen model of health service use (Andersen, 1995; Andersen et al., 2014). The human ecology model proposed by Keefe (2015) posits that interactions

between humans and their environments are dynamic and are constantly changing over time. Although the data for this investigation were collected only at a singular time point, the element of change over time was reflected in the questions that asked physicians to reflect on experiences throughout their careers. Enabling factors, the community-level Andersen model concept (Andersen et al., 2014) informed questions about barriers to mental health care, and questions about the role family played in impacting patient treatment. The human ecology assumption that “Environments do not predict human behavior, but rather pose limitations and opportunities” (Bubolz & Sontag, 1993, p. 426) informed interview questions related to perspectives on barriers to care and ideas physicians had for increasing access to mental health care in their practices.

An initial interview schedule was revised after a practice interview was conducted with a rural family physician who practiced outside of the sampling region for this study. A full list of the questions used for the interviews can be viewed in Appendix C. Interviews were conducted via telephone or online video-conferencing, (depending on the physicians’ access and preferences), and lasted approximately 30 minutes. This length of time was decided upon as a way to increase participation and respect the busy schedules of rural family practice doctors. Interviews were audio-recorded, and then transcribed verbatim. I then reviewed and edited each transcript to ensure it was ready for analysis.

### **Sampling and Recruitment**

Convenience and snowball-sampling techniques were used to recruit the 13 participants in this study. Potential participants were identified by creating a list of every zip code contained in a nine-county area of the Upper Midwest. This region was previously identified by an analysis of a secondary dataset that surveyed this specific

region (Jensen, 2019a), which found that of a rural population that delayed or forwent seeking mental health services in a one-year window, 86% of them did see a primary care physician in that same time. The Minnesota Department of Human (MDH) Services Provider Directory (MDH, 2018) and the Wisconsin Medical Society (WMS) Physician Directory (WMS, 2019) were used to search for family medicine physicians in each respective zip code. The search revealed a total of 172 family medicine physicians that practiced in the range of zip codes represented by the nine-county area. As the scope of this investigation was on the experiences of rural communities, 71 potential participants were initially removed from the list because they practiced in the zip codes that covered two large cities, leaving 101 potential physicians to be recruited. The list of 101 potential physicians was initially sent to the director of the University of Minnesota Medical School's Rural Physician Apprenticeship Program (RPAP) to be surveyed for familiar names that may make strong contacts. The director's perusal resulted in a list of seven names, which became the first wave of recruitment. Public listings for physicians included addresses and phone numbers for general hospital systems, specific clinics, and/or individual departments. A recruitment script was created (Appendix D), and a my adviser cold-called all of the names on the list. Many times, numbers were found to be incorrect or out of date (i.e., physicians either never practiced at designated sites, or were no longer practicing at said sites). In several cases, staff members who answered the phones had never heard of the physicians that we were inquiring about. In successful instances, phone calls resulted in connections with direct lines for the physicians' nurses and schedulers, whereupon messages were left that explained the scope of the study and

invited physicians to participate. Once initial contacts were made, the first author followed up with participants and scheduled interviews.

After the first wave of recruits had been contacted, a second wave of potential participants was identified based on the level of rurality in which they practiced. Rurality was measured using Rural Urban Commuting Area (RUCA) codes (US Department of Agriculture, 2016), and the intention was to prioritize recruiting participants who were experiencing the greatest degree of rural practice to best understand the phenomenon at hand. Three waves of phone-based recruitment were identified using this RUCA-based method for a total of four recruitment waves. Eleven participants were recruited through this method. One was recruited through a personal connection of the first author, and one by snowball sampling. Before physicians participated in interviews, they were sent consent forms (Appendix E) that outlined more details of the study and explained their rights as participants.

### **Sample Demographics**

Thirteen (N = 13) physicians participated in the study. They ranged in years of post-residency experience from less than two years in practice to 48 years in practice, resulting in a mean of 20.27 years of experience. Most of the physicians had been at their present locations for the vast majority of their careers, and all but one had been in rural settings for their entire careers. Seven physicians were female; six were male. Although this does not represent the gender breakdown for physicians in Minnesota – i.e., 34% female, 66% male (Kaiser Family Foundation, 2019) – it may be more reflective of the family practice specialty, rural practice (generally), or of self-selection and willingness to take part in such research. While all physicians were trained in family medicine, four

were currently located at least partially in emergency room settings. All were associated with hospitals, clinics, or community health centers. All were from Minnesota and represented a range of communities within the designated recruitment area. One county in the recruitment area was in Wisconsin, however, all searchable family physicians in that county were associated with a metropolitan hospital and were excluded from the eligible recruitment list. One participant was located many miles south of the designated recruitment area, and even though his Department of Human Services listing specified that he practiced in a community within range, he reported that he had never practiced there and was likely listed by mistake. RUCA codes for the participants ranged from 10 (the most rural possible) to 4.1 (4 is the cut-off for rural/urban breakdown and falls within the rural range). The 4.1 indicates that while the community is rural, it is adjacent to a larger metro area and based on commuting patterns is actually classified as an urban area. The mean RUCA code for the sample was seven. The participant who practiced outside of the recruitment area and another participant who was located on a Native American Reservation both coded as 4.1, meaning their communities are adjacent to urban areas, but because of the rural populations they serve, they were kept in the study. View Table 7 for demographic details on the survey participants.

[Insert Table 7 here]

## **Analysis**

Following a Hermeneutic coding protocol, three waves of coding analysis – holistic, detailed, and interpretive – were employed (van Manen, 1990, 2014). The purpose of these waves was to distill and extract meaning from the pages of text and identify themes within and across the interviews. During the first wave of coding,

transcripts were read through by all three members of the research team in their entirety, and coded using selective highlighting to distinguish meaning-rich passages of text. At the completion of the first wave, holistic summaries of the interviews were created. During the second wave, the interviews were read through again, and this time sententious/holistic coding was employed to synthesize and describe chunks of meaningful text at an immediate level. During this wave, codes followed as closely to the language used by the participants as possible. The third wave of coding was interpretive in nature, and efforts were made to ascribe meaning to the distilled ideas and tie them to the emerging themes from the rest of the interviews. During the entire coding process, ongoing analytic memos were written down to reflect emerging ideas about potential themes and to note personal biases that could influence objectivity. After the first four interviews were coded, preliminary codes and recurring ideas were noted, and after each subsequent interview was coded, revisions and additions were made to the list. I coded all 13 interviews, my adviser coded six interviews, and an undergraduate research assistant coded three – all followed this exact coding protocol. Reconciliation meetings amongst the researchers were conducted throughout the coding process and were used to identify differences in interpretations, refine the coding protocol, and discuss emerging themes. At the end of the coding process, the list of emerging themes, categories, and subcategories was reorganized, revised, and run through peer-checks (with fellow researchers) and member-checks (with interviewees) to ensure that interpretations the data were representative and generated through high levels of trustworthiness.

### **Trustworthiness**

Due to the interpretive and sometimes subjective nature of analysis using a

Hermeneutic phenomenological approach, additional measures were taken to enhance trustworthiness of findings throughout the entire process. These included:

**Self of the researcher.** As the primary collector and interpreter of these data, examining my own position and biases is an important step in enhancing the trustworthiness of findings. Having grown up in a small rural community not far from the geographic area represented by this dataset, I approached this process with somewhat of an emic perspective. Much of the language (e.g., colloquial references and slang terms) used by participants was familiar to me, and common experiences likely enhanced my rapport with participants. Yet, for approximately a decade, I have lived in urban, academic environments and have come to adopt a lifestyle that is more representative of urban culture than that of rural culture. This likely results in a predominantly etic perspective on the described phenomena. My professional experiences and training as a mental health professional also likely enhanced my rapport with and understanding of the experiences shared by the healthcare professionals in this study. I was familiar with the language and acronyms they used and the experiences they were describing.

An important note that I made during the analysis process was that my position as a mental health professional could have shaped participants' responses through social desirability bias. During phone recruitment, potential participants were introduced to the idea that I am a mental health professional. My professional identity was not explicitly named in most interviews, but in about half of them it became a topic of conversation. Typically this did not happen until the end of the interviews, but for those who found out earlier, knowing my profession could have shaped their responses.

**Reflexivity.** Reflexivity is a process for acknowledging and bracketing the impacts that personal biases and experiences can have on qualitative research. Several strategies were employed to enhance reflexivity throughout the data collection and analysis processes. The first strategy was memoing. Notes about my opinions, emerging ideas, hypotheses, and personal responses were kept throughout the data collection and analysis phases. These notes were discussed throughout the research process during weekly research meetings with my adviser and fellow research team member. Ongoing analytic memos were kept in the coding documents to mark specific instances where perceived subjectivity or lack of certainty could be influencing data analysis. These instances were also discussed in research meetings. I also kept an ongoing paper trail to log research activity, decisions, and milestones throughout the entire research process. This detailed paper trail can be seen in Appendix F.

One important example of reflexivity was my acknowledgement of the way my position as a mental health professional could influence my interpretation of the data. I inherently think that mental health services are beneficial, and that good therapy can and should be a component of treatment for anyone experiencing mental health symptoms. In conducting and analyzing the interviews, I found that I would periodically have reactions to responses that touted the need for more medications (sans talk therapy) or failed to mention the benefits of preventative and ongoing treatment. Memoing my reactions to these responses and discussing them in research meetings was a helpful way of staying more objective and true to the data. Interpretation and analysis is always shaped by personal bias in qualitative research (Holstein & Gubrium, 2011). Strong biases and opinions like this one have the potential to obscure more true and objective meanings

from emerging from data if they are not held in check. Identifying this bias in particular, and discussing it in research meetings, helped me increase accountability to the data and subsequent objectivity in the findings.

This reflexivity has also helped me to think more globally about the role that therapy can and should play in decreasing mental health symptoms for rural communities. Ultimately, talk therapy is not a panacea, and from a practical standpoint, it may not be feasible to increase its availability in all areas. Improving mental health in rural areas will likely take creative, holistic, and resourceful ideas that call on several areas of intervention. Bracketing this professional bias towards the efficacy of therapy is helpful in freeing my mind to appreciate the ideas presented in this dataset.

**Peer checking.** My adviser blind coded six interviews, and my research assistant coded three – both following the outlined coding protocol. During coding reconciliation meetings, their codes were compared line by line with my codes, and discrepancies were discussed and resolved. These meetings also led to analytic discussions about emerging themes and served as a key strategy in increasing the trustworthiness of findings. Reconciliation meetings happened throughout the coding process and aided in improving coding accuracy at all stages. My adviser has a strong medical background, which added a distinct view into the interpretation of findings. My research assistant has more of an outsider's objective perspective, which helped challenge and correct codes that were influenced by assumptions or biases.

**Member checking.** Once a list of emergent themes, categories, and subcategories was revised and finalized, all participants in the study were contacted to take part in a member-checking process. This allowed participants the opportunity to review findings

and offer their feedback, overall impressions, additions, and revisions to the findings. Seven of the 13 participants responded with feedback. Four replied to say that the list looked thorough and complete. Two respondents reiterated that the most pressing issue in their community is lack of emergency response for mental health crises, and one responded to suggest that future research should include interviews with rural community members (i.e., patients) themselves. This feedback was recorded and integrated into the final list of themes, categories, and subcategories.

## **Results**

Through the analytic process, findings from the 13 transcribed interviews were synthesized into seven overarching themes, each with respective categories and subcategories. A full list of themes, categories, and subcategories is presented in Appendix G. What follows here are reported data on demographics and descriptions of each theme. Quotes from all 13 interviews are present in this manuscript. Identifying information in the quotes has been altered to protect participant anonymity.

### **Demographics**

Participants were asked to report on the demographics of the communities they served, and they shared impressions of the racial, age, and socio-economic make-ups of their patient populations. Reports were consistent across interviews and confirmed U.S. Census Bureau data about the geographic region from which participants were recruited (US Census Bureau, 2018). The only discrepancy in participant reports was that some physicians practice in communities that are adjacent to Native American reservations, and one physician practiced in a reservation clinic. These participants reported treating

larger Native American populations, but other respondents primarily reported that their communities were largely white, mainly lower socio-economic status, and of older age.

Some physicians practiced in communities where tourism was a major industry. These communities reportedly experienced differences in the level of retirees and greater discrepancy in income levels due to these trends. One physician from this type of community responded:

I mean we have a pretty wide range as far as socioeconomic stuff, there is a fair amount of poverty, although a lot of it gets to be kind of relative poverty because this is a tourist location and our community actually expands about 10 times its size regularly on the weekends and the summer. As part of that we have a big retirement community. A lot of people retire up here. And a lot of those people tend to be on the wealthier side of this spectrum. But the cost of living is a little bit higher, so what poverty we have is exacerbated by that.

Physicians reported that the type of care they provided was largely impacted by the age breakdown of their communities (many speaking to the preponderance of elderly health and mental health care). Several also mentioned the implications of poverty and low socio-economic status on health outcomes and patients' abilities to seek out appropriate care. Demographics consistently shaped respondents' impressions of their communities and their work, and all other findings are contextualized by these findings.

### **Family Physicians are Intentional in their Choices to Practice in Rural Communities**

Physicians were asked to share about their reasons for choosing rural practice, and though there was a range in responses, all reflected a sense of intention. Most had been in their current practice locations for the majority of their careers. For those that had

changed locations, all but one had been in rural areas for the entirety of their years in practice. Reasons for rural practice ranged from personal (e.g., grew up in rural areas, had family in rural communities, liked small towns, spouse wanted to live in a rural area) to professional (e.g., family medicine was suited to rural practice, family medicine allowed physicians to practice an extensive range of medicine with a varied population, loan repayment programs were available). One physician with both personal and professional reasons for choosing rural practice reported:

I think a big factor was that I, that is where, I grew up in small towns in [two North Central states], so that is probably one of the bigger factors. I trained in family medicine, which is better suited for small towns than it is, I think, in urban areas. That is my perspective on that. So, we can practice a wide range of medicine in, for a broad population. Those are probably the two biggest factors.

Physicians tended to express a general affinity for their communities and for the geographic areas and nature that surrounded them. Beyond intention for choosing rural practice, there was often a strong sense of liking it as well, especially amongst those who had lived there for many years. Speaking to the culture of their small community, one physician stated, “So, the thing that some people find creepy is that you go to the grocery store and everyone knows who you are. I find it fascinating. Comforting.” These reflections about their respective communities often segued into ideas about the culture of the communities themselves.

### **Rural Culture Presents Challenges and Opportunities for Mental Health**

Respondents reported on several unique features that made the cultures of their communities distinct. One that came up frequently had to do with the tight-knit, interconnected nature of rural communities.

I think there is more of a community atmosphere in a rural area like this where people know each other. We know our neighbors. We go to a church near here and it's very community-oriented. Everybody knows everybody else and works together.

Another shared, "I always joked that you had to be nice to everyone because something will break in your house and your friend's ex-brother-in-law will be the only one who could fix it." Comments about everyone knowing everyone else came up many times, as did reflections on the interrelated nature of these communities. Physicians discussed implications for healthcare and shared that they often end up treating entire families within their practices.

Another factor that came up when physicians were asked to describe their communities was the importance and centrality of industry. Farming, logging, mining, paper mills, and tourism were all mentioned as being key employers, and in turn, shapers of the communities. Several of these industries have experienced recent challenges, and subsequently, many of these communities have been adversely impacted. One physician shared that:

There used to be a really solid manufacturing base. There is a paper plant in town, which now is employing maybe half of the people that it once did. It used to be you would come out of high school and if you were willing to work hard you

would just knock on the door of the paper plant and you would have a great job for your whole life, and that is no longer the case.

Several participants mentioned job loss and economic insecurity as causes for family instability and mental health concerns. Poverty was often described as both a cause for mental health and health concerns, and as a barrier for seeking and receiving appropriate treatment.

Another unique feature of rural communities that was described as a barrier to receiving care was a general fear or mistrust of cities and of outsiders coming into the communities. One physician described this as “tribalism”, and went on to say:

We have a lot of people that are fearful of going through to the big city of [large city name], or even, [mid-sized city name]. We have a lot of people who have never traveled on an airplane or, y’know, met a lot of people outside of their own racial group or their own socioeconomic group.

Another physician shared about specific treatment implications for patients’ resistance to traveling outside of their town:

People do not want to drive to the next town, which is 20 minutes away, if they don’t have to. They want everything as close as possible. Which always kind of cracks me up, so like, the local pharmacy is not open on Sundays so if they come in with a UTI and have symptoms they will wait until the next day to pick up their prescription because they do not want to drive to [town 20 minutes away].

These, and other cultural factors (including how the presence of Native American reservations and historic immigrant communities shape culture, and the effects of remote

location of these communities) were described towards the beginning of interviews, and referenced frequently as they discussed implications for mental health.

### **A Range of Mental Health Concerns Persist for Rural Communities**

Physicians discussed several mental health concerns that persist for their patient populations, and several shared ideas about specific factors that cause and/or exacerbate presenting symptoms. All physicians mentioned the presence of anxiety and depression amongst their patients, and many discussed the prevalence of substance abuse as a co-occurring and sometimes separate concern. The Opioid crisis was mentioned by some respondents, but not all. It seems that it must impact communities differently, even in a similar geographic region. One physician shared, “The opioid epidemic is alive and well. A lot of heroin abuse. A lot of prescription drug abuse. A lot of deaths related to that.”

Deaths by suicide and emergency mental health situations were described by several physicians, especially those physicians located primarily in emergency rooms. One explained that mental health concerns and suicide rates may be inflated not by residents of the community, but by individuals who travel to the area as a destination for escaping perceived problems and carrying out suicide plans:

Another thing that I have noticed too is that when, this is a beautiful area, and a lot of people come here to try to address some of the psychiatric issues that they have been having. Like, people who are very anxious, depressed, they want to go to a beautiful place where it can be quiet, and they can be in a better place, whether they are coming to just visit or coming to move and live here. But kind of time and time again people get here, they get isolated and it aggravates whatever they brought with them. The other thing that I was not aware of, and has been an

unfortunate reality of being here is, I forget the exact term they've dubbed it, but "suicide tourism", where people will come here and commit suicide.

Other mental health concerns were mentioned with lower frequency, but often reflected concerns with specific age groups. Aging-related concerns for elderly patients, such as dementia, were mentioned, as were concerns over the dearth of care available for child psychiatry and children's mental health services. One physician practiced obstetrics and mentioned that she sees a lot of post-partum depression in her practice, though other physicians mentioned a lack of obstetric care as they primarily served elderly populations.

Physicians often thought holistically about their patients' circumstances and offered several hypotheses about the causes for mental health concerns in their communities. Ideas included aging, family instability and stress, historic trauma and oppression, isolation, lack of employment, and poverty. With physicians who saw younger patients, stressors brought on by social media were mentioned as primary causes for mental health symptoms amongst youth.

### **Existing Services are often Insufficient or Disconnected from Health Care**

Physicians described a range of existing mental health resources that varied across the nine communities that they represent. Existing resources included medication management (handled by nurse practitioners, family practice doctors, and – in rare cases – psychiatrists), emergency room services for crises, some private and community mental health services. In some cases integrated social work and counseling services, crisis response teams, and telehealth services for emergency assessment (and in a minority of cases, ongoing telehealth therapy services) were also present. Some communities had

more resources than others, but several themes emerged across the interviews that described similarities in the concerns with existing mental health services.

**Limited availability.** One consistent trend across interviews was that there were simply not enough mental health providers in their communities. Lack of availability of services (for counseling and medication management) came up frequently. One physician described that an added consequence of having an insufficient number of providers is that wait times can be high, which can be a major deterrent for patients following through with help-seeking.

The pure availability, even though we do have a few around, it sometimes can be a wait to get in to see someone. The nature of things, I think, part of the obstacle is people's hesitancy to want to necessarily re-tell to those services, and it's difficult. Oftentimes when they are at a low point and they're really willing and interested in reaching out, sometimes they're told it'll be two to four to six weeks or longer to get in to be seen, and then by that point sometimes the follow up isn't real good because the heat of the crisis is over and people start second guessing what they want to do.

**Inconsistent availability.** Another ubiquitous trend amongst the interviews was that mental health services seem to be inconsistent in these communities. Often when physicians were describing community mental health resources, they would use past tense to name services that used to be available but subsequently left due to lack of funding and lack of ability to recruit and maintain professionals. One physician described their community as having a "revolving door" of therapists and medication prescribers. Another described the implications of the lack of consistency:

Some people just get fed up with the fact that they can't keep a stable person and so they quit going instead of figuring out, 'well I need to go to a different organization in order to get more consistent counseling'. That isn't enough for them to process. So, we need some kind of continuity tool and I don't know what that would even be, but for people to be able to see the same person on a consistent basis so they can form a relationship because you don't just go to some stranger and start spilling your guts, it doesn't happen that way.

**Lack of quality care.** A couple of the participants mentioned that a major concern they have is for the quality of mental health services that are available. Even if they have professionals, sometimes there is a lack of trust for the quality of care they provide. One physician described having a lack of trust for a nurse practitioner's medication management practices, and another voiced a lack of perceived efficacy in the types of counseling services available in their community:

There is still, there is an access problem to some degree. But I would frame it more as a quality problem so, it's not that hard to get in to see somebody, but it is harder to get in to see somebody who provides quality care.

**Lack of emergency services and inpatient care.** One of the largest and most emphatically expressed concerns in the interviews was the lack of resources for emergency mental health situations and the lack of in-patient facilities available. Most physicians described rural hospital emergency rooms as being the front lines for these situations. When commenting on a local mental health clinic, one physician who works in the emergency room, shared, "They are great from nine to five, y'know? But if they see a patient in the office who is in crisis, they send them to me – which I find interesting."

Several shared that they perceived a lack in protocol and training for the assessment and triage of emergency situations when they do present in emergency rooms. Some hospitals used telehealth services that connected patients in crisis to mental health assessment teams located in metro areas, and physicians reported mixed success with these services. Lack of emergency room space and staffing were mentioned several times, but one of the most consistent findings across interviews was concern over the lack of inpatient psychiatric care in the region.

So, but again, the distance thing, so I am about three-and-a-half to four hours from [large metro area]. And, when my patients are hospitalized, if they can't get into [closer metro area], which is about an hour and a half away, they go four hours to the [large metro area], four hours to [smaller metro area], four hours or even farther, and that's really a problem with coordinating care and working with families.

Stories like this one were common, and several physicians spoke about the implications of the only available inpatient care existing hours away. Time spent waiting for beds to open up meant more time waiting in emergency rooms using limited resources there. The distance itself created major concerns for transportation. One physician explained, "We used to have help from the sheriff's department would transport people, but they are understaffed as well and can't commit to an eight-hour road trip. Unless the person is hostile or threatening or handcuffed and they will involved." Another concerning implication was that the distance interrupted reintegration processes after inpatient care had concluded. Coordinating care with outpatient services, primary care, and housing options became nearly impossible, and patients would frequently end up

back in their home communities after hospitalization with no coordination of follow-up care. Physicians in the member-check process wanted to reiterate the importance of this concern, as the lack of inpatient services creates several ripple effects that place added burdens on existing health and mental healthcare services.

**Lack of collaboration with existing services.** Several physicians expressed that a disconnect exists in their communities between primary care and mental health services. Many indicated that they simply did not know which private and community mental health services were available for referral, and some expressed frustration with the lack of collaboration that exists. One explained that community resources can be helpful, but unless they can share notes and treatment plans, they “fracture” care.

Sometimes there is not a great follow up plan, where the patient goes [to an outside clinic] and does not really know what happens after that. So, I guess you could say there is probably a communication barrier and the fact that we are all on different electronic medical records.

Many physicians expressed a desire to share medical records and a desire to move towards a more collaborative, integrative approach with existing mental health providers.

In sum, most physicians were concerned about the availability of mental health services. In rare cases, some expressed that mental health resources had improved over time in their communities. More frequently, they expressed concern for the fact that services had often left their communities, and that there were several limitations with the services that did exist.

**Several Persisting Barriers Prevent Patients from Accessing Existing Care**

Although all physicians identified resources that are available in their communities, they also all named barriers that prevent patients from accessing said resources. Several barriers related to availability of providers were described in the preceding section, but many others persist, including cost and lack of insurance, distance to services, patients not wanting to take the time to go to appointments, and symptoms from mental health concerns inhibiting patients' abilities to attend appointments. Other, more frequently mentioned barriers had to do with patients' attitudes towards and perceptions of mental health concerns and services.

**Lack of trust for providers.** One barrier that was mentioned by physicians was a lack of trust for mental health providers. Some described patients' hesitance opening up to strangers about personal issues, and others described a lack of trust based on the perception of mental health providers more globally. One physician described a patient who had a strong preconception of what therapists were like:

“They’re all democrats.” Yeah, so she saw a counselor once and she walked in and she thought, “You look so granola,” it was funny. She was supposed to get counseling with her husband, who is in the public eye who didn’t want to go because he thought they were all democrats, so she thought it was funny that she walked in and this person was extremely democratic based on the way she looked I guess, I don’t know what that is.

Perceived difference, or perceived outsider status, appeared to be a barrier between rural residents and therapists working in those communities. Many of the physicians had the benefit of working in their communities for a long time and, with that, a level of trust was able to develop with patients. According to respondents, this same

level of trust does not always apply to mental health professionals, who are often more transient and less consistent.

I feel like people are scared to build a relationship with someone else. They don't know the behavioral health therapist, they don't know, like, who is on the other end, and so if they have already built this relationship with you [the physician] they felt that they want to stay with you or, there is that fear of sharing or opening up to someone else again.

**Lack of anonymity.** The barrier of lack of trust for providers seemed to have dual implications, because another barrier that was often described by physicians was that a lack of anonymity in the small communities prevented patients from seeking mental health services. If mental health providers were too well known or integrated with the communities, this presented a concern as well. One physician shared a situation that occurred with a mental health professional who was established and well-connected in the community:

It's even come up where the counselors felt uncomfortable with some things.

There was one episode where she was counseling a parent at a child visit, well it turns out that the counselor's kid had bit her kid the day prior at daycare. So, there is just a lot of that.

Lack of anonymity was also described as a barrier for patients who would benefit from or otherwise consider area support groups. Physicians explained that patients often expressed fear about their information being made public if they shared in these contexts as well. Participants explained that the rural cultural component of interconnectedness and interrelatedness played out in this barrier to a large extent.

**Mental health stigma.** While many physicians mentioned that stigma for mental health concerns and services was an active barrier in their communities, a common trend was that its impacts have reduced over time. Especially for those physicians who had been in practice for many years, there was a sense that mental health has become more accepted and less stigmatized. One physician shared, “Certainly, that is a change that I have noticed in my 26 years of practice, there is just more awareness about these issues.” When asked about where increased awareness and lack of stigma came from, many physicians noted that they think media has a lot to do with the change. Some mentioned television programs, and others described that even advertisements for psychiatric medications have increased peoples’ awareness and acceptance. A few physicians mentioned that there are generational differences in perceptions of mental health stigma. One physician shared, “That [mental health stigma] seems to be settling down with the younger generation. It’s not anywhere near stigmatizing as it is maybe for people in their 60s and older.” Although this difference was commonly mentioned, it was not described uniformly. One physician explained that there is no difference between ages, and another thought that elders are actually less likely to be impacted by mental health stigma than younger patients.

Another trend connected to awareness and acceptance of mental health concerns that the physicians discussed was the language their patients used when describing mental health concerns. As a common trend, most physicians explained that their patients readily used diagnostic language like, “I’m feeling depressed,” or “I think I may have anxiety,” when coming in for appointments. Most noted that this had been a change over time, and that the ability to search symptoms on the Internet has possibly accounted for the change.

Some also noted that this type of language is more common with younger patients than with older patients. It was also noted that many patients, (men and older patients in particular) are more apt to describe physical symptoms, and that physicians have to probe and decipher to learn if mental health concerns were possibly at play.

I think anybody who has been diagnosed in any way previously certainly uses the right lingo because they've learned it. Ones who have not been diagnosed and who are new to the system will describe it in any kind of term you can think of. Being tired, being sick of being around, being a burden to their families, those are the kind of things we hear.

Another physician explained that sometimes the appointments that take the longest are when patients are not forthright with mental health concerns, or are possibly not aware of them. They explained, "Especially when the complaints don't all fit together and it, you have a feeling that it's more somatic than some other real true illness."

Physicians described many barriers over the course of their interviews. Often, it was more attitudinal barriers, like lack of trust, lack of anonymity, and mental health stigma that they spent the most time describing. Structural barriers were definitely present, but attitudinal barriers were often a primary focus of the interviews.

### **Family Physicians have Unique Roles in Rural Practice**

As described by one participant, family physicians are the "front lines" for all health care in rural communities, mental health care included. This position in the rural healthcare system means that family physicians often take on unique roles and duties in the treatment of mental health concerns for their patients. Some described by participants in this study included assessment and triage of all mental health concerns, basic

behavioral therapy interventions, de-stigmatizing mental health concerns and services, and psychiatric medication management. Several physicians also explained that their unique roles in family practice result in an awareness of the ways family dynamics and stressors can impact patient treatment and mental health.

**Family involvement.** Some participants described ways that family involvement was helpful for patient mental health, and in some cases even facilitated treatment.

I think if a family member comes in with somebody and is encouraging them to get counseling they are much more likely to get it, honestly. They are much more likely to say yes. Whether it's a spouse or a parent. Or even a friend. So actually, that helps a lot. A lot of people who come in, they come in alone, you know they don't want anybody to know that they are depressed or anxious. If they have opened up to somebody I think it's actually helpful.

A few physicians mentioned that spousal involvement for male patients was especially helpful. One physician articulated how this looked different over the life course:

A lot of time, say if I walked in a room and there is a guy I have been caring for, for 10 years and his female partner is with him, if he is elderly that is usually a sign that he has dementia that I have to pick up on. If he is middle-aged there is usually a sign that there is something behavioral health or emotional or mental health problem that he has been embarrassed to talk about or has self-identified or you know his partner wants to make sure we get the right information.

Another physician echoed this idea in stating, “I get a lot of women and they are pretty in tune with how they are feeling. If it’s the man, it’s often the woman with them and they’ll say, ‘he’s depressed’”.

Physicians also explained that family involvement can be detrimental to patient mental health outcomes, and at times family stress is the source of the concerns. A few physicians indicated that in the case of substance abuse especially, family denial or enmeshment can be an inhibiting factor for patient treatment. Physicians also mentioned that family physical and emotional abuse can present causes for patient mental health concerns, and that in those cases, family involvement is not a helpful factor.

Ultimately, most physicians indicated that in almost all situations, family involvement is a helpful thing. If not directly helpful to the patient, having the families involved in treatment can often be a helpful diagnostic tool or treatment opportunity for the professionals involved. One physician explained that:

family is a positive not a negative because the other side of it is, even if they are not just helpful and supportive they may be the problem, and there may be a solution in having them be involved as part of the, “okay you are doing this to your spouse, you see yourself doing this, it has real impact.” You have to involve, you have to involve family, for good or bad.

**Medication management.** Medication management, and challenges and opportunities with prescribing psychiatric medications were frequently addressed ideas by the physicians in this study. Some expressed a sense of efficacy with prescribing practices, but mostly, they expressed hesitation about the prescribing they are called to

do, a lack of trust for other providers' prescribing practices, and a strong desire to increase the number of psychiatrists who are able to work with their patient populations.

One physician explained, "The prescriber shortage is huge. I feel like I am forced as a family doc to do way, way more mental health prescribing, than I should." Others expressed concerns about keeping up with off-label medications, and concerns for managing medications for patients experiencing severe and persistent mental illness. Some physicians felt like they had received sufficient training for managing mental health medications, and others did not. Speaking to the challenges and opportunities, one physician explained:

One thing that I have noticed – it is both an advantage, but also kind of a scary thing as a provider up here is, we don't have, I mean in any area of medicine we do not have any specialists that are here. So, it is family physicians and nurse practitioners that are managing everything. And we are regularly going out of our comfort zone, but, we have the advantage of, "we are it", and so all patients' medical issues, including their mental health, comes into play and we are aware of that and working with them, and we can kind of help them work through what needs to be worked through.

A few physicians expressed concerns about the prescribing practices of other professionals in their communities. One physician explained:

One of the MD providers in the area has people on a lot of benzodiazepine, which I am like, "gosh, why do you have all these people on benzos?" And then some of the stuff they're doing, I am not familiar with, so I think, "gosh that sounds like a lot of medications for this person, and maybe they should try, y'know, eating

healthy and exercising,” but you know I’m not a mental health provider so maybe, I don’t even know.

Others expressed concerns for the perceived popularity of mental health medications amongst patients. One physician said, “You know a lot of times people are a lot quicker to want to take a pill and not necessarily want to work through some of the issues.” Another explained that she thought the main reason patients discuss mental health symptoms with her is to access medications. “They know that’s what we do,” she said, “they mention these symptoms because they know we can prescribe.”

When describing their unique roles, most physicians expressed a strong sense of duty to their patients. Several named challenges and areas where increased training, providers, and resources would ease some of the difficulties and pressures they experience, but as a whole they seemed resourceful and committed to providing the best care with the limited resources they had.

### **Rural Family Physicians’ Unique Ideas for Increasing Access to Mental Health Care**

All physicians had ideas for ways to increase mental health care in rural communities. Several shared ideas of things they were already trying out, and everyone shared ideas of strategies they think would help in the future. One shared that her impression is that each small community has its own “niche” and she wishes there were more opportunities for collaborating and sharing best practices.

Some of the ideas already being employed by the communities represented in the study involved strategies for increasing the reach of existing mental health professionals. Some communities approach this by sharing social workers and counselors between clinics. A few small clinics in the study cannot afford fulltime professionals on their own,

so they collaborate with other small clinics in their areas and are able to meet needs that way. To increase the reach of limited psychiatrists, one clinic has monthly, scheduled video consultations where all family physicians can bring cases to consult with a psychiatrist about medications, diagnoses, and treatment plans. Two other physicians mentioned that they also have consistent phone access with a regional psychiatrist and are able to consult that way.

Another creative strategy was employed by a small hospital when they added a mental health professional to their team.

When we integrated a behavioral health worker in our clinic, there was a concern that you can't just walk in the waiting room and say, you know, "the therapist will see you now." So we had to create an anonymous way to call people back like they were just regular clinic patients so they could be comfortable. We are just trying to be cautious about that because it is an issue in a small town.

This strategy was designed to combat the barriers of lack of anonymity and mental health stigma in their community. Like the strategies for increases the reaches of professionals, it does not cost extra money or take more time. These strategies are aimed at increasing the effectiveness of existing resources.

**Telehealth.** Nearly all participants mentioned telehealth, or telemedicine, technology for mental health services. Several mentioned it as a strategy they were already using, and others named it as a strategy they think their communities should adopt. One physician described that her hospital uses telehealth technology for other health specialties, so the resource is already there, but it has not yet been used for mental health. She went on to say, "I think mental health is unusually well suited for telehealth

so you know, even if those people are all in [major city] and are telehealth-ing us, great.” Another expressed a lack of patience for the rate of adoption. “I do see that telemedicine is going to be playing more of a part in increasing access. And I am a little frustrated that we haven’t advanced quicker.”

Physicians who had experience with telehealth services described a range of ways it has been integrated. These included adult psychiatry, child psychiatry, emergency triage, and ongoing mental health counseling. For physicians who had experience with the technology, many spoke to its benefits, and some mentioned limitations. For two providers, telehealth services for mental health are available to patients, but in clinics that are not directly located in their towns, so the barrier of distance still exists for them. Another explained that the room in their clinic where telehealth appointments takes place is not well concealed and that patients experience a certain stigma being seen near that room. One ER physician explained that telehealth services for emergency assessment and triage sometimes “encumber” the ER physicians and slow down their processes.

As a whole, there seemed to be definite interest and hope in the potential for telehealth mental health services for rural communities. Some who had experience expressed concerns and described areas for improvement, but nearly everyone viewed it as a helpful tool for increasing access and quality of care.

Physicians described a range of potential ideas they thought would help their respective communities, and all rural communities increase access to care. Some included better physician training for mental health concerns, rural training programs for mental health professionals, increases in collaboration with existing resources, culturally appropriate treatment, and numbers of professionals who are able to prescribe

medications, programs to aid in patient transportation to appointments, and school-programs aimed at prevention. One commonly mentioned idea was increasing community awareness of mental health concerns and services through education and outreach. One physician saw outreach as part of his own role in the community, and explained:

Sometimes it's hard to get people to reach out in the first place and then they're often presenting to us as the first connection because sometimes the other services aren't as obvious, and they feel more comfortable talking to us physicians. Maybe starting off with [primary care] and then trying to get them into counseling.

Another idea that many physicians discussed was increasing funding for mental health services. One said, "It's always about the money," and another expressed, "So that is another issue that our society needs to grapple with – are we going to pay for mental health services, are we going to treat mental health issues like other illnesses or not." Parity for mental health care was described on the insurance level (insurance companies needing to reimburse at higher rates) and at the professional level (psychiatry being reimbursed at lower rates than other specialties, mental health professionals not being fairly compensated). One physician expressed that the way to increase to mental health access is to start compensating mental health professionals better.

So basically what they do is they employ these people at low-end wages and parasitically use them in systems. They are out there getting their notes done on the weekend and at home and all that and that is unfortunate too. I think there has got to be a better way to get people to a professional level, compensated appropriately and not worked like a wrecking mule.

Increasing access and increasing funding seemed to go hand-in-hand for many of the physicians. Several spoke about the necessity for federal, state, and local administrative agencies to pay attention to the concerns of these communities.

Physicians shared about their ideas for improving access to care towards the ends of interviews, and their responses were always based in the stories and ideas they had shared earlier on when describing what mental health care looks like in their communities and their practices. Although some selection bias may be present in the physicians who agreed to participate in this particular study, it was clear that they care deeply about these issues. Many expressed gratitude for the opportunity to describe the concerns they had for their communities, and the ideas they had for improving care and outcomes.

### **Discussion**

Several noteworthy findings emerged from these interviews. The seven themes described above are an attempt to provide some meaning and structure for distilling the range of ideas shared by the rural physicians. One key finding that largely confirmed existing research is that mental health care is integrated within primary care in these rural communities (though to varied degrees and through varied means). All respondents described mental health services and resources that are available to patients and, alongside these descriptions, several strengths and weaknesses of available services emerged. The four methods of mental health integration described by Bird et al. (1998) model (diversification, linkage, referral, and enhancement) were all described as models these communities are using or have used in the past. For each, specific, associated barriers to the method of integration were also identified. For diversification (integrating behavioral health professionals directly onsite), lack of funding, lack of providers,

inconsistency, inability to meet demand, and lack of trust for providers were all listed as barriers. For linkage (integrating independent, outside professionals and agencies onsite), the barriers of funding, lack of providers, and inconsistency were mentioned. As an opportunity, some clinics integrated outside agencies via telehealth technology. For the model of referral (formal and informal arrangements for care with outside professionals) the barriers of lack of availability of providers, lack of quality providers, stigma, distance, cost, lack of communication and collaboration with health care, and lack of awareness of existing community resources were all mentioned as barriers. Finally, for the model of enhancement (training primary care professionals to identify, diagnose, and treat mental health concerns) (Bird et al., 1998) the only barrier mentioned was a lack of training. Several identified this integration model as a future idea for increasing access to care.

Referral to outside mental health sources may be the most apparent integration method, but was also the method associated with the most barriers based on the physicians' reports. Lack of provider availability in rural areas and challenges for existing rural mental health providers have been well documented (Gonyea et al., 2014; Jensen et al., in press; US Department of Health and Human Services, 2017). These findings, combined with evidence from existing literature, suggest that more effective strategies for increasing access to mental health care in rural communities may involve integrating and maximizing existing resources instead of creating space for and recruiting new services to these areas.

These methods would connect to the Human Ecology concept of adaption – changing behavior patterns in light of interaction with changes in the environment (Bronfenbrenner, 1979). Situational factors in rural communities described by

physicians (e.g., lack of anonymity, lack of funding, lack of trust for outside professionals, and small populations) may inhibit the acceptance of and access to traditional outpatient mental health services that find success in urban and suburban environments. For that reason, more creative interventions that adapt to and build upon the strengths of rural contexts (e.g., integrating mental health care with primary care settings, expanding telehealth services, and increasing consultation opportunities and training for primary care physicians) are likely to be more successful based on the situational factors of these environments.

Another key finding, related to the Human Ecology concept of personality factors (Keefe, 2015), or the Andersen model concept of predisposing characteristics (Andersen, 1995), is that the presence and impact of mental health stigma has been decreasing according to physicians in the present investigation. This finding is in line with some research (e.g., Polaha, Williams, Heflinger, & Studts, 2015), but contradicts more established ideas of stigma as a barrier to mental health care (Ahmedani, 2011; Larson & Corrigan, 2008; Larson et al., 2012, Taylor et al., 2016). Though it was still mentioned as a barrier by physicians, the main takeaway in this study was that its presence and impact have diminished over time. This finding makes sense in the context of the Human Ecology assumption that interactions are shaped by space and time (Keefe, 2015). Physicians hypothesized that media has played a large role in normalizing mental health concerns and services; if this trend continues, stigma may be a smaller barrier to overcome as time goes on. Despite this trend, the presence of mental health stigma was still mentioned as a barrier by nearly every physician. If physical health care carries less

stigma than mental health care (Mukolo & Heflinger, 2010), increased integration of mental health within primary care settings would also likely help address these barriers.

### **Strengths and Limitations**

Rural family physicians have participated in surveys and a mixed methods investigation about perspectives on mental health before (e.g., Taylor et al., 2016), but this qualitative study is the first that used in-depth interviews with family physicians about their perspectives on mental health care in rural communities. The range of perspectives and opinions brought forth by participants represent an important contribution to our understanding of mental health barriers from the perspectives of professionals situated in primary care contexts. Attention to practices of trustworthiness and reflexivity are strengths of this study that contribute to the accuracy of findings. Attention to the geographic location of respondents (using RUCA code measurements) also ensured that participants were representing geographically rural communities, not just small towns or colloquially “rural” areas.

Several limitations of this study are important to consider. First, recruitment methods relied on convenience and snowball sampling strategies. This population was small to begin with, and ended up being difficult to access. Ideally a larger sample would have provided more insight, though high levels of saturation did occur across the 13 interviews. Second, self-selection may have shaped participants’ responses. It is probable that physicians who already had an interest in mental health concerns were most likely to self-select to participate in the interviews. Third, and social desirability biases could have impacted physicians’ responses. Some may have wanted to appear more open to and supportive of outside mental health resources knowing my background. Others may have

wanted to help their communities or healthcare services appear more favorably than they really are.

Finally, while generalizability is not a primary goal of qualitative research, it should be noted that all responses came from a seven-county region in a North Central US State. As a location-based variable, rurality is difficult to operationalize and generalize across studies. These responses reflect rural culture for their specific region, but it should be noted that rural culture (i.e., situational and contextual factors for each region) varies depending on location. Study findings presented in this paper should be interpreted with understanding and awareness regarding these limitations.

### **Next Steps for Research and Intervention**

Future research should continue to explore the efficacy of strategies for integration of mental health services within primary care locations. It would be beneficial to interview and survey residents of rural communities who do not have professional or medical backgrounds as well. Though it can be difficult to access patients as research participants, their voices and experiences will be invaluable in shaping appropriate and effective interventions. The respondents in this study have specific views as physicians, and it makes sense that integration with primary care services would be a key focus of their ideas for improving care.

Future investigations should also consider the possibility of integrating mental health services with other community institutions (e.g., first responders, churches, and schools). There was a high level of focus on the dearth of emergency services, but not much attention on preventative mental health care in the responses from physicians. It is likely that as the front lines for mental health emergencies, exacerbated conditions,

assessment, triage, and treatment were more salient in their responses. However, preventative approaches would probably lead to lower costs and better outcomes (Rishel, 2007). It is likely that rural residents are interfacing with other community institutions more regularly and long before they access healthcare systems. More research is needed to understand ways access to preventative care (e.g., public education and school programs designed to teach about positive mental health behaviors or mindfulness-based classroom interventions) could be increased through resources within existing community systems.

### **Conclusion**

This investigation represents a unique contribution to the existing literature about barriers to rural mental health care, and regarding the integration of mental health care into primary care settings. Experiences from a range of family practice physicians in a specific rural region revealed several challenges and opportunities for mental health care. Key findings suggest that barriers to mental health care services are experienced differently depending on the type of services and level of integration with health care that is available. Future research is needed to continue exploring best practices for integrating mental health care within primary care settings in addition to other community institutions in rural communities. Future research should also consider strategies for bolstering and maximizing the efficiency of existing mental health resources in rural healthcare systems.

## **Global Implications of the Two Studies**

In tandem, these two studies have uncovered several findings and insights, some surprising, some more expected. Each has expanded and taken on a life of its own that has exceeded the expectations I had when I first proposed the plan to conduct this mixed-methods investigation. Although each study could stand alone, and likely will for publication, there are key areas in which findings from these studies have informed and communicated with one another.

One major area of insight each of the studies has contributed to is our understanding of attitudinal barriers to mental health care. These are barriers that would traditionally fit under the umbrella of acceptability of services, and refer to the impact of predisposing characteristics or personality environment factors on help-seeking behaviors (e.g., awareness of services, beliefs about mental health, perceived stigma, trust in providers). Much of the existing literature has focused primarily on the impact of stigma as a barrier to mental health care, but a key finding from Study 2 indicates that stigma is actually decreasing (and that it is not as large of a concern as it once was). According to the physicians, this may be due to increased media coverage and broader cultural shifts in conversations around mental health. If this trend continues, the perceived barrier of mental health stigma may become less of a concern.

According to findings from these studies, decreased stigma does not mean attitudinal barriers are no longer a concern. Findings from the Study 1 indicated that by a large margin, the barriers that were most impactful for those who delayed/forwent talking about mental health concerns were, “I did not think it was serious enough,” “I was too nervous or afraid,” and “I did not know where to go.” Structural barriers (like lack of

insurance and providers), were indicated with much less frequency. While the survey did not have a question about stigma, these items are perhaps more indicative of the role of attitudinal barriers today. “I did not think it was serious enough” or “I did not know where to go” speak to a lack of awareness about mental health symptoms and treatment. If community members do not know what mental health symptoms are, that they are treatable, and where they can go to receive treatment, they are unlikely to access beneficial care. “I was too nervous or afraid” also speaks to a lack of awareness, or possibly to a lack of trust for existing services, even if they are known.

Physicians in Study 2 largely confirmed that these attitudinal factors were major barriers, but they also tended to discuss structural barriers as key reasons for lack of care. This makes sense considering their positions. They are located within structures that can provide mental health care and, from their vantage point, lack of resources is a major concern for patients as well. However, an important finding from Study 1 suggests that of the group of respondents who indicated delayed or forgone help-seeking behaviors for mental health care in the past year, 87.5% of them had seen a primary care professional in that same year (87.7% in the rural-only group). This means that the majority of individuals who wished they had discussed mental health concerns were accessing the healthcare system, and still, some barriers prevented them from receiving the help they needed.

It is likely that for these individuals, structural barriers were not the main concern. It is possible that they got to their physician’s offices, and once they were there, attitudinal barriers prevented them from addressing their mental health concerns. We need to continue understanding the impact of attitudinal barriers to mental health care.

## **Future Directions**

Pursuing integrated care options in rural communities could help to maximize existing resources and address several barriers indicated in both of these studies. However, attitudinal barriers will still likely be at play regardless of where and how services are being offered, and future inquiry should continue to investigate their nature and impacts. Tools such as the Barriers to Access to Care Evaluation (BACE) Scale (Clement, Brohan, Jeffery, Henderson, Hatch, & Thornicroft, 2012) should be employed to assist in more valid and reliable measurements of barriers to mental health care. A limitation of Study 1 is the lack of questions regarding attitudinal barriers to care, and the lack of validation for the questions that were available. These findings point to possible impacts from these barriers, and future research should build on those findings and extend our knowledge on the impacts of attitudes on help-seeking behaviors.

Future research questions that could advance present understanding of barriers to mental health care in rural communities include: What experiences with and attitudes towards mental health services do residents of rural communities have? What are common predisposing characteristics for rural citizens who readily access mental health care? What are common enabling factors for rural communities with high levels of mental health care usage? What are the costs associated with mental health emergencies in rural areas? What are the costs associated with preventative and ongoing mental health care in rural areas? Each of these questions would aid in generating a clearer understanding of the presence and function of existing barriers to mental health care through unique perspectives. Viewpoints of rural community members are needed, and

increased understanding of costs and financial implications may generate useful findings that are tangible and motivating for policymakers and stakeholders of many kinds.

Future research questions designed to increase understanding of integrating behavioral health care in rural communities include: What is known about existing integrated care models that are functioning in urban areas? Are integrated care models predictive of increased mental health help-seeking and reduced mental health symptoms? What challenges and opportunities exist for integrating mental health care within rural institutions such as churches, schools, and police forces? These and other questions like them would greatly enhance knowledge about the strengths and limitations of integrating mental health care in rural communities, and would represent several contributions that would move the field closer to effective interventions.

### **Conclusion**

Each of these studies has provided unique challenges and growth opportunities that have pushed me as a scholar and a clinician. Although the findings from these studies have their respective limitations, and more inquiry is needed, together they serve as a significant contribution in this burgeoning field of inquiry. It is clear that there is a great need for increased understanding of and resources for mental health concerns in rural communities. I am encouraged by the work others are doing in this field, and by the reports from the physicians that point to the creativity and determination with which they are approaching these concerns. I am excited to be a part of this unfolding process, and look forward to making future contributions towards such a meaningful cause.

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Table 1  
*Pearson Correlation Matrix for Logistic Regression Covariates*

	<b>Rural/Urban</b>	<b>Age</b>	<b>Gender</b>	<b>Some College</b>	<b>Bachelor's Degree and Above</b>	<b>Income</b>
<b>Rural/Urban</b>	1	-.122**	-.039**	-.009	-.036	.000
<b>Age</b>	-.122**	1	.129**	.072**	.142**	.208**
<b>Gender</b>	-.039**	.129**	1	.018	-.023	-.032*
<b>Some College</b>	-.009	.072**	.018	1	-.591**	-.075**
<b>Bachelor's Degree and Above</b>	-.036	.142**	-.023	-.591**	1	.374**
<b>Income</b>	.000	-.032*	-.032*	-.075**	.374**	1

\*\* Significant at .01, \* Significant at .05

Table 2  
*Chi-Square Analysis: Rural-Urban Differences in Mental Health Symptoms*

<b>Variable</b>	<b>Rural N (%)</b>	<b>Urban N (%)</b>	<b>Total N (%)</b>	<b><math>\chi^2</math></b>
A physician has told me I have depression				10.598***
Yes	869 (23.7)	809 (27.2)	1678	
No	2796 (76.2)	2165 (72.7)	4961 (74.7)	
A physician has told me I have anxiety				9.528***
Yes	711 (19.5)	669 (22.6)	1380	
No	2942 (80.5)	2296 (77.4)	5238 (79.1)	
A physician has told me I have other mental health problems				4.390*
Yes	256 (7.0)	248 (8.4)	504 (7.7)	
No	3378 (93.0)	2695 (91.6)	6073 (92.3)	

Table 3  
*Logistic Regression Analyses of Mental Health Symptoms*

Covariates	Mental Health Symptoms		
	Depression	Anxiety/Panic Attacks	Other Mental Health Symptoms
Rural/Urban	OR: .925 95% CI: .817-1.047 Sig: .215	OR: .969 95% CI: .847-1.109 Sig: .65	OR: .899 95% CI: .730-1.106 Sig: .314
Age	OR: 1.021 95% CI: 1.017-1.025 Sig: .000**	OR: 1.033 95% CI: 1.029-1.038 Sig: .000**	OR: 1.027 95% CI: 1.020-1.033 Sig: .000**
Gender	OR: 1.56 95% CI: 1.359-1.79 Sig: .000**	OR: 1.499 95% CI: 1.289-1.744 Sig: .000**	OR: .906 95% CI: .726-1.130 Sig: .382
Some College	OR: .946 95% CI: .806-1.109 Sig: .491	OR: 1.013 95% CI: .853-1.202 Sig: .886	OR: 1.261 95% CI: .98-1.622 Sig: .071
Bachelor's Degree and Above	OR: 1.012 95% CI: .845-1.211 Sig: .898	OR: 1.225 95% CI: 1.007-1.491 Sig: .043*	OR: 1.171 95% CI: .875-1.568 Sig: .289
Income	OR: .877 95% CI: .858-.897 Sig: .000**	OR: .88 95% CI: .86-.901 Sig: .000**	OR: .797 95% CI: .765-.831 Sig: .000***

Table 4

*Chi-Square Analysis of Help-Seeking Behaviors*

<b>Variable</b>	<b>Rural</b> N (%)	<b>Urban</b> N (%)	<b>Total</b> N (%)	$\chi^2$
I delayed/avoided talking about mental health with a professional in the past year.				29.828***
Yes	424 (11.2)	479 (15.6)	903 (13.2)	
No	3378 (88.8)	2585 (84.4)	5963 (86.8)	

Table 5  
*Help-Seeking Behavior Logistic Regression Analysis*

<b>Covariates</b>	<b>Help-Seeking</b>
Rural/Urban	OR: 1.224 95% CI: 1.045-1.435 Sig: .012*
Age	OR:.960 95% CI: .956-.965 Sig: .000**
Gender	OR: .649 95% CI: .540-.780 Sig: .000**
Some College	OR: 1.106 95% CI: .892-1.370 Sig: .359
Bachelor's Degree and Above	OR: 1.217 95% CI: .962-1.540 Sig: .102
Income	OR: 1.119 95% CI: 1.089-1.151 Sig: .000**

\*\* Significant at .01, \* Significant at .05

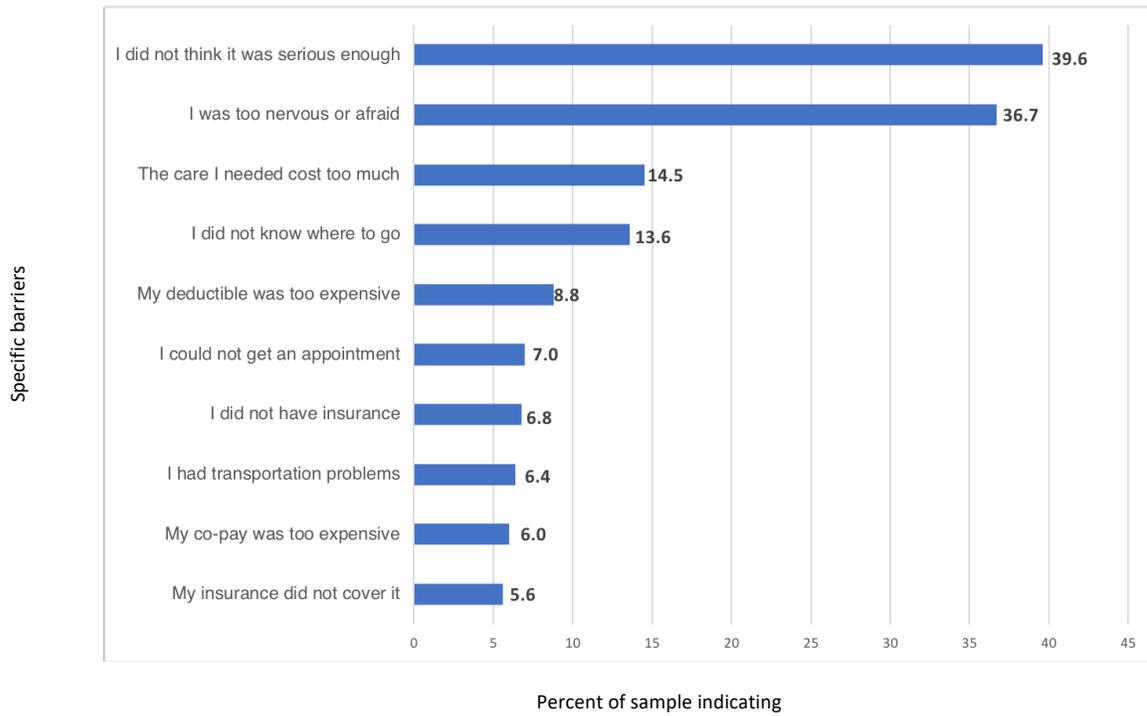
Table 6  
*Specific Barriers Logistic Regression Analyses*

Covariates	Specific Barriers		
	Too nervous or afraid	Didn't think it was serious enough	Didn't know where to go
Rural/Urban	OR: .688 95% CI: .520-.911 Sig: .009**	OR: .712 95% CI: .572-.886 Sig: .002**	OR: .583 95% CI: .412-.826 Sig: .002**
Age	OR: 1.052 95% CI: 1.043-1.061 Sig: .000**	OR: 1.024 95% CI: 1.017-1.030 Sig: .000**	OR: 1.036 95% CI: 1.025-1.046 Sig: .000**
Gender	OR: 1.102 95% CI: .807-1.506 Sig: .540	OR: 1.525 95% CI: 1.181-1.968 Sig: .001**	OR: 1.410 95% CI: .946-2.102 Sig: .092
Some College	OR: .918 95% CI: .638-1.322 Sig: .646	OR: .934 95% CI: .697-1.252 Sig: .649	OR: .809 95% CI: .503-1.299 Sig: .379
Bachelor's Degree and Above	OR: 1.221 95% CI: .804-1.856 Sig: .349	OR: .897 95% CI: .650-1.238 Sig: .509	OR: .632 95% CI: .380-1.050 Sig: .077
Income	OR: .888 95% CI: .846-.932 Sig: .000**	OR: .934 95% CI: .9-.970 Sig: .000**	OR: .857 95% CI: .807-.910 Sig: .000**

\*\* Significant at .01, \*Significant at .05

Table 7  
*Demographic Information for Rural Physician Study Participants*

<b>ID Number</b>	<b>RUCA Code</b>	<b>Years in Practice</b>	<b>Gender</b>	<b>Current Location/Specialty</b>
1	4	21	Female	ER
2	10.3	37	Male	Family Practice
3	10.3	48	Male	ER
4	7	17	Male	Family Practice
5	10.3	7	Female	Family Practice
6	10.3	1.5	Female	Family Practice
7	10	3	Male	Family Practice
8	4.1	26	Male	ER
9	4	32	Female	Family Practice
10	4	20	Female	ER
11	4.1	5	Female	Family Practice
12	7.2	26	Male	Family Practice
13	10.3	20	Female	Family Practice



*Figure 1: Specific barriers indicated for delayed/forgone help-seeking by full sample.*

## Appendix A

### **RUCA Code Dichotomous Variable Breakdown**

#### **Urban**

1.0, 1.1, 2.0, 2.1, 3.0, 4.1, 5.1, 7.1, 8.1, and 10.1

#### **Rural**

4.0, 5.0, 6.0, 7.0, 7.2, 8.0, 8.2, 9.0, 10.0, 10.2, and 10.3

Appendix B

**Original Questions from the Bridge to Health Survey Used in Study 1**

2. Have you ever been told by a physician, nurse or health professional that you have or had any of the following health conditions?  
(Please check Yes or No for each.)

- q. Depression
- r. Anxiety or panic attacks
- s. Other mental health problems

8. During the past 12 months, was there a time when you wanted to talk with or seek help from a health professional about mental health problems such as stress, depression, excess worrying, troubling thoughts, or emotional problems, but did not go or delayed talking with someone?

Yes  
No (IF NO, GO TO QUESTION 10)

9. Why did you not get or delay getting the mental health care you thought you needed?  
(Please check all that apply.)

- a) The care I needed cost too much
- b) My co-pay was too expensive
- c) My deductible was too expensive
- d) My insurance did not cover it
- e) I did not have insurance
- f) I was too nervous or afraid
- g) I could not get an appointment
- h) I did not think it was serious enough
- i) I had transportation problems
- j) I did not know where to go
- k) Other reason:

55. Are you:

- Male
- Female
- Other/transgender

56. In what year were you born?

58. What is the highest level of education you have completed? (Please check only ONE answer.)

- a) 8th grade or less
- b) Some high school
- c) High school graduate or GED
- d) Some college/vocational/technical/trade school
- e) Graduate of a vocational/technical/trade school
- f) Associate's degree (2-year degree)
- g) Bachelor's degree (4-year degree)
- h) Post graduate or professional degree

68. What was your household's total income from all earners and all sources in 2014?

- a) \$23,000 or less
- b) \$23,001 - \$31,500
- c) \$31,501 - \$39,500
- d) \$39,501 - \$48,000
- e) \$48,001 - \$56,000
- f) \$56,001 - \$64,000
- g) \$64,001 - \$72,000
- h) \$72,001 - \$80,000
- i) \$80,001 - \$100,000
- j) More than \$100,000

(Kjos, Kinney, Finch, & Peterson, 2015)

## Appendix C

### Final Interview Schedule

**Grand Tour Question:** What are your experiences and observations of barriers to mental health care amongst patients and their families in your practice?

#### Demographic Questions:

- What is the name of the town/community in which you practice?
- What is the zip code in which you practice?
- How many years have you been in practice?
- How many years have you been in practice at your current location?
- How would you describe the demographics of the population you serve? (In terms of age, race, ethnicity, socio-economic status, education status, gender, etc.)

#### Semi-Structured Interview Questions:

- How did you choose to practice in a rural community?
- Would you consider there to be a distinct rural culture in the community you practice in? If so, how would you describe it?
- What, if any, mental health concerns do your patients face?
- What kind of mental health care do your patients have access to?
  - What kind of mental health referral sources do you have access to?
- What, if anything, prevents patients from accessing mental health care?
  - What, if any, role does mental health stigma play in the community in which you practice/within families in your practice/at the individual patient level?
- What impact, if any, do you have on your patients' perceptions of mental health stigma?
- What role do you see families of patients with mental health concerns playing in their treatment?
- What language do you notice patients and their families using when referring to mental health conditions and treatment?
- What ideas do you have for increasing access to mental health care in rural communities?
- Is there anything else that I did not ask that you would like to talk about?

## **Proposed Interview Protocol**

*(Originally proposed interview questions that were revised after receiving input from the committee during the proposal meeting, and revised once again after completing a practice interview with a volunteer rural physician who was not in the dataset.)*

**Grand Tour Question:** What are your experiences and observations of barriers to mental health care amongst patients and their families in your practice?

### **Demographic Questions:**

- What is the name of the town/community in which you practice?
- What is the zip code in which you practice?
- How many years have you been in practice?
- How many years have you been in practice at your current location?
- How would you describe the demographics of the population you serve? (In terms of age, race, ethnicity, socio-economic status, education status, gender, etc.)

### **Semi-Structured Interview Questions:**

- How did you choose to practice in a rural community?
- Would you consider there to be a distinct rural culture in the community you practice in? If so, how would you describe it?
- What, if any, mental health concerns do your patients face?
- What kind of mental health care do your patients have access to?
- What kind of mental health referral sources do you have access to?
- What, if anything, prevents patients from accessing mental health care?
- According to a recent analysis of mental health care barriers in your county, \_\_\_\_\_, was the most prevalent reason respondents did not seek mental health care. Does that match your experiences with patients?
- What, if any, role does mental health stigma play in the community in which you practice/within families in your practice/at the individual patient level?
- What impact, if any, do you have on your patients' perceptions of mental health stigma?
- What role do you see families of patients with mental health concerns playing in their treatment?
- What language do you notice patients and their families using when referring to mental health conditions and treatment?
- What ideas do you have for increasing access to mental health care in rural communities?
- What ideas do you have for decreasing barriers to mental health care in rural communities?
- Is there anything else that I did not ask that you would like to talk about?

## Appendix D

### **Recruitment Phone Call Talking Points**

- Recruiting for a study on experiences with mental health care in rural areas.
- Interviewing family practice physicians about their ideas on the state of rural mental health care and patients' experiences dealing with mental health concerns.
- We would like to schedule a 30-minute interview that can be conducted via phone or video conferencing.
- If you are open to being interviewed, Emily Jensen, a doctoral student in our department, will follow up with you. Can we have your phone number and email?

## UNIVERSITY OF MINNESOTA

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*Twin Cities Campus*

*College of Education and Human Development  
Family Social Science*

*290 McNeal Hall  
1985 Buford Avenue  
Saint Paul, MN 55108  
Main office: 612-625-1900*

### **Consent Form**

#### *Rural Family Physicians and Mental Health Services*

You are invited to participate in a research project that is being conducted by Emily Jordan Jensen, MA, LAMFT, a doctoral candidate at the University of Minnesota (UMN). She is being advised by Tai Mendenhall, Ph.D., LMFT, an associate professor in the Department of Family Social Science at the UMN. The purpose of this project is to gain knowledge regarding family physicians' perspectives and experiences surrounding the accessibility, availability, and acceptability of mental health services in rural areas.

We ask that you read this form and ask any questions you may have before agreeing to participate in the study.

#### **Procedures:**

If you agree to be in this study, you will be asked to participate in a 30-45 minute interview. Questions will be asked regarding your experiences practicing in a rural community and your ideas about mental health care in rural contexts.

#### **Risks and Benefits of Participating in the Study:**

Participating in this interview may elicit the disclosure or discussion of information and/or topics that are personally difficult or sensitive for you. Further, while it is our hope that participating in this interview will be generative of new knowledge and understanding, we cannot guarantee that you will directly benefit from being involved with any part of this study.

#### **Confidentiality:**

To ensure that we keep your study materials private and confidential, we will use a coded identification system in which you are assigned a unique identification number. Interview recordings and notes will be kept in a secure location away from all other people except for myself, my doctoral advisor, and an undergraduate research assistant. No identifying information (e.g., your name) will be placed on any study materials. I may quote what you say in writing up or presenting this research, but will never use your name and or other data that facilitate others' personal recognition of you.

There is a possibility that your answers may provide information that would require us to break confidentiality. Under Minnesota law, researchers cannot keep confidential

information about incidents of abuse or neglect of a child, including physical, sexual, or emotional abuse or neglect. We would also be required to inform legal authorities if you report that you are in imminent danger of trying to hurt yourself or others.

**Voluntary Nature of the Study:**

You are free to decline participation in the study, in part or whole. If you begin participating, you are free to not answer any particular question(s) and/or discontinue participation altogether. Your decision, if you do so, to decline or discontinue taking part in the study will not result in any negative consequence(s) from the researchers or the University of Minnesota.

**Contacts and Questions:**

As outlined above, the researchers conducting this study are: Emily Jordan Jensen (principal investigator) and her advisor, Tai Mendenhall. You may ask any questions you have now. If you have questions later, you are encouraged to contact them at:

Emily Jordan Jensen, MA, LAMFT  
University of Minnesota  
Department of Family Social Science  
290 McNeal Hall; 1985 Buford Ave.  
St. Paul, MN 55108  
Cell: 715-896-4598  
jorda675@umn.edu

Tai J. Mendenhall, Ph.D., LMFT  
University of Minnesota  
Department of Family Social Science  
290 McNeal Hall; 1985 Buford Ave.  
Saint Paul, MN 55108  
Office: 612-624-3138  
mend0009@umn.edu

If you have any questions or concerns regarding this study and would like to talk to someone other than the interviewer, you may contact the Research Subjects' Advocate line at the University of Minnesota. The phone number there is 612-624-1650, and the address is D528 Mayo, University of Minnesota, 420 Delaware St. SE, Minneapolis 55455.

*You will be given a copy of this information to keep for your records.*

**Statement of Consent:**

I have read the above information. I have asked questions and have received answers. I give my permission to participate in the study.

\_\_\_\_\_  
Participant Name (Printed)

Emily J. Jensen  
Researcher Name (Printed)

\_\_\_\_\_  
Participant Signature and Date

Emily J. Jensen 10/1/2018  
Researcher Signature and Date

## Appendix F

### Dissertation Log

**3/21/2018:** *Met with and hired Kate Futoransky* as undergraduate research assistant to help with dissertation research.

**4/16/2018:** *Dissertation Proposal sent to committee for review.*

**4/30/2018:** *Dissertation Proposal Meeting.* Full committee was present for this one-hour meeting. The proposal was accepted with some revisions and recommendations.

**5/2/2019:** *Proposal amendments emailed to committee.* My adviser, Tai Mendenhall, took notes from my proposal meeting. We then met to discuss the notes and revisions discussed at the meeting and compiled a list to be sent out via Google documents for final approval by the committee. Sarah Beehler responded with an added note about asking physicians to discuss the differences between individual and family mental health care.

**5/15/2018:** *Meeting with Tim Piehler.* Tai Mendenhall was also present for this meeting. We discussed feedback from my dissertation proposal meeting and talked about how to move forward with the quantitative analytic plan. Due to lack of counties in the dataset, and lack of data about county-level resources, Hierarchical Linear Modeling may not be the best fit for analysis. Discussed the possibility of conducting logistic regressions for comparing rural and urban groups in the dataset.

**5/16/2018:** *Meeting with Eileen Fischer* coordinated through Sarah Beehler. Eileen was a visiting scholar to the University of Minnesota-Duluth and I was able to meet digitally with her during her visit. We discussed the challenge of measuring attitudinal variables related to rural research. Dr. Fischer introduced me to the idea of “Place Identity” as a measurable construct that would be more accurate in predicting behaviors than would be location alone.

**5/23/2018:** IRB Determination Forms for both studies submitted. Assigned numbers: STUDY00003619 and STUDY00003620

**5/25/2018:** Correspondence from University of MN IRB received determining that both studies were deemed “Not Human Research.”

**6/7/2018:** *Contacted Minnesota Academy of Family Physicians (MAFP)* to inquire about recruiting for the study.

**6/22/2018:** *Heard back from MAFP* that we could not recruit through their organization. After much back-and-forth, it was determined that because our PI is not a member of the organization, we cannot have access to the members. This is disappointing as in previous phone conversations I learned that there are members of MAFP who specifically indicate

they are interested in mental health research. They would have likely made great participants. Discussed this information with Tai and have decided to move forward with public listings for recruitment.

**6/26/2018:** *Meeting with Cathy Schulz.* Cathy helped me figure out SPSS code to use for truncating 9-digit zip codes available in the dataset into 5-digit codes that could then be converted into RUCA codes. After our meeting, Cathy also helped me figure out how to recode the zip codes into RUCA codes in SPSS via email correspondence.

**7/11/2018:** *Phone call with Gary Hart, Ph.D, creator of RUCA Codes.* Dr. Hart spoke with me about the process for creating RUCA codes and shared context for their origin and function. Discussed the analysis I am working on and he shared insights about how to divide the codes for dichotomous and group analysis.

**7/18/2018:** *Meeting with Tim Piehler:* Met with Dr. Piehler to discuss interpretation of initial Chi-square findings, and to discuss how to do the logistic regression analyses.

**7/19/2018:** *Kate Futoransky completed DHS-based contact sheet.* Kate, my undergraduate research assistant compiled the Minnesota DHS listings of all of the family practice physicians in the zip code areas we will be recruiting from.

**8/8/2018:** *First consultation meeting with Kyle Nickodem from Research Methods Consultation Center.* Kyle helped me with interpreting my chi-square results. Discussed implications for findings and how to present/communicate them to a wider audience.

**8/17/2018:** *Dr. Kirby Clark responds with feedback on list of DHS contacts.* He identified eight physicians who were either affiliated with the RPAP program, or were people he just recognized. These eight will serve as the first round of contacts for recruitment.

**8/25/2018:** *Rural Mental Health Conference, New Orleans, LA.* Traveled to New Orleans to present preliminary results from the study in a paper presentation talk. Received helpful feedback on interpretation for apparent differences between rural and urban groups in the Chi-square analyses.

**9/12/2018:** *Phone call with Ann Kinney, researcher at MN Dept. of Human Services.* Sarah Beehler connected me with Ann, who was a researcher involved with the creation of the Bridge to Health Survey. We discussed the rationale behind the weighting of the dataset. Ann was very concerned that I was doing zip code-level analysis and was not sure how that would work with the county-level weighting, but she was very adamant that weighting be used.

**9/13/2018:** *Phone call with Sarah Beehler debriefing call with Ann Kinney.* Discussed the phone call with Ann and expressed concern about zip code-level analysis vs. county-level. Decided to look into it more and get more information/opinions.

**9/15/2018:** *Round one recruitment contacts sent to Tai.*  
Creating call script, enlisting Tai to help

**9/27/2018:** *Practice interview with Kirk Lane, MD, a family physician from Black River Falls, WI (the rural community I grew up in). Dr. Lane provided great feedback about the language of my questions and was very affirming about the interview. It took approximately 30 minutes, which is also encouraging. He had some excellent insights, and it is a bit of a shame his responses cannot be counted in the actual data of this analysis.*

**9/30/2018:** *Wave two of recruitment contacts sent to Tai.*

**10/2/2018:** *Interview one completed*

**10/10/2018:** *Meeting with Tim Piehler. Tai Mendenhall was also present for this meeting. We discussed the analytic plan for conducting logistic regressions and Tim helped me with understanding how to conduct the analysis in SPSS.*

**10/17/2018:** *Guest lectured in FSoS 2015 Research Methods about sampling and recruitment strategies in both dissertation studies. Also shared analytic plan and emerging findings.*

**10/17/2018:** *Interview two completed*

**10/17/2018:** *Interview three completed*

**10/24/2018:** *Interview four completed*

**11/2/2018:** *Interview five completed*

**11/10/2018:** *Round three of recruitment contacts sent to Tai.*

**11/14/2018:** *Traveled to Faribault, MN for an RPAP site visit with Dr. Kirby Clark. Met a medical student completing her rounds at a rural hospital as part of the RPAP program. Dr. Clark observed her with a patient and offered feedback. She took us on a tour of the hospital, and we got to meet with the onsite social worker who talked to us about mental health integration and care in the hospital and in the community.*

**11/18/2018:** *Interview six completed*

**12/11/2018:** *Fourth wave of recruitment contacts sent to Tai.*

**12/12/2018:** *Interview seven completed*

**12/17/2018:** *Interview eight completed*

**1/18/2019:** *Interview nine completed*

**1/21/2019:** *Interview 10 completed*

**2/13/2019:** *Meeting with Kyle Nickodem from RMCC.* Discussed weighting data and the process for completing the logistic regression.

**2/21/2019:** *Interview 11 completed*

**2/27/2019:** *First coding reconciliation with adviser and fellow-coder.* Reviewed coding from Interview 7. No major deviations, but good discussion about the potential themes and Tai definitely has a different lens than I do.

**2/28/2019:** *Guest lectured in FSoS 2015 Research Methods.* Discussed sampling and recruitment strategies in addition to analysis strategies and measures in the two dissertation studies.

**3/6/2019:** *Coding reconciliation meeting with adviser and fellow-coder.* Discussed coding for Interview 8. Also had a broader discussion about the unique findings in this one as it represents a tourist community.

**3/7/2019:** *Contacted committee members to set date for oral defense.* Aiming for May 7, 2019.

**3/12/2019:** *Meeting with Kyle Nickodem from RMCC.* Discussed the dummy-coding strategies for the covariates I am going to use for the logistic regression.

**3/12/2019:** *Weekly meeting with adviser.* Discussed plan for dissertation writing.

**3/13/2019:** *Oral exam scheduled for May 7 from 2:00 PM to 4:00 PM.* After hearing back from each member of the committee, the date and time for the exam are set.

**3/14/2019:** *Interview 12 completed*

**3/15/2019:** *Interview 13 completed*

**3/27/2019:** *Meeting with Kyle Nickodem from RMCC.* Worked on interpreting logistic regression outputs.

**3/27/2019:** *Coding reconciliation with Tai Mendenhall and Kate Futoransky.* Focused primarily on list of emerging themes, categories and subcategories. Honed and revised list based on their feedback.

**3/27/2019:** *Contacted participants for member checking process.* After refining the list of themes, categories, and subcategories, I contacted each of the 13 participants individually via email offering them the opportunity to review the initial results and give their feedback. I gave them a deadline of April 5 to respond.

**4/2/2019:** *Coding reconciliation with Tai Mendenhall and Kate Futoransky.* Focused on coding from Interview 2.

**4/10/2019:** *Meeting with Tim Piehler.* Met with Tim to ask questions about presenting findings in quantitative research writing. Talked about tables, missing data analysis, and the need to run the correlation matrix for the logistic regression covariates.

**4/15/2019:** *Full draft of dissertation due to committee* to allow two week's time to review before our ready-to-defend meeting and three week's time before the actual defense.

(Additional meetings and steps in the research process will occur while the committee is reviewing the draft in preparation for the final oral defense)

## Appendix G

### **Themes, Categories, Subcategories**

#### **Seven Overarching Themes:**

- 1) Family Physicians are Intentional in their Choices to Practice in Rural Communities
- 2) Rural Culture is Unique, and Presents Challenges and Opportunities for Mental Health
- 3) A Range of Mental Health Concerns Persist for Rural Communities
- 4) Existing Mental Health Services are Often Insufficient or Disconnected from Healthcare
- 5) Several Persisting Barriers Prevent Patients from Accessing Existing Mental Health Care
- 6) Family Physicians Have Unique Roles in Rural Practice
- 7) Rural Family Physicians Have Unique Ideas for Increasing Access to Mental Health Care

#### **Detailed Themes, Categories, and Subcategories**

Themes (appear numbered) Categories (appear bold-faced) Sub-categories (appear bulleted under categories)

#### **Demographics**

- Mostly white
  - Some areas Scandinavian influence
  - Iron range, more Italian and Easter European influence
- Some Native American populations
  - Range in proportion depending on proximity to reservations
- Aging population
  - Many people retire in rural vacation communities. Skews age and socioeconomic trends.

- Lower than average SES
  - Vacation communities an exception- yet greater discrepancy between rich and poor there
- Physicians serve a much broader geographic area than just their community

## **1) Family Physicians are Intentional in their Choices to Practice in Rural**

### **Communities**

- Intentional choice
- Personal
  - Grew up rural
  - Always knew wanted to live in a small town
  - Natural beauty of rural areas
  - Outdoor activities associated with rural areas
  - Spouse wanted to
- Professional
  - Loan repayment programs
  - Wanted family medicine to be able to do a little bit of everything. Like practicing as generalist
  - Family practice well suited to rural practice

## **2) Rural Culture is Unique, and Presents Challenges and Opportunities for**

### **Mental Health**

- Industry shapes culture
  - Tourism
  - Mining
  - Paper mills
  - Logging
  - Farming
- Presence of Reservations
- Everyone is related
  - Physicians often treat families
- Tight-knit community
  - Centrality of community events
  - Stay local
  - Support local business
  - Even if people leave, they have a way of coming back
- Remoteness Shapes Culture

### 3) A Range of Mental Health Concerns Persist for Rural Communities

- **Mental health symptoms**
- Anxiety and Depression
  - Post-partum depression
- Some psychosis
- Substance abuse
  - Opioid Crisis
- Suicidality
  - Suicide Tourism
- **Causes for mental health symptoms:**
  - Joblessness/Poor economies
  - Poverty
  - Family stress
    - Family instability
    - Single-parent families
  - Isolation
    - Move to rural area to “escape” problems, end up on the outside of the community
  - Aging
    - Dementia
    - Depression associated with aging
  - Social media (with younger generation especially)
  - Historic trauma/oppression

### 4) Existing Mental Health Services are Often Insufficient or Disconnected from

#### Healthcare

- **Mental health resources that do exist in communities:**
- Medication management
- Emergency room
  - Some have crisis management teams
- Some community services
  - Churches
  - Schools
  - Private organizations/clinics
- Telehealth services
  - Used for other medical specialties
  - Used for mental health emergency triage
- Overall lack of preventative care
- Lack of consistency with providers
  - Loss of preexisting resources
    - Used to have psychiatrist

- Used to have mental health clinic
    - Used to have nurse practitioner
  - High turnover
  - Funding runs out
- Separation between healthcare and private mental health in the community
  - Lack of communication/collaboration
    - Lack of consistency
    - Lack of awareness for what private resources are available

#### **Lack of resources for emergency mental health situations**

- Not enough beds for in-patient treatment
  - Patients end up waiting/taking up space in ER
  - Patients often end up having to travel hundreds of miles
  - Attending treatment far away from community means often a gap with reintegration services
- Need better training/services/resources for emergency assessment and triage
- Lack of in-patient care for children especially

### **5) Several Persisting Barriers Prevent Patients from Accessing Existing Mental**

#### **Health Care**

- Lack of availability of providers
  - More about quality of care than quantity. Hard to access skilled professionals
  - Wait times to see existing providers very long
  - Lack of providers who see children/adolescents
- Patients may not trust providers
  - Political differences
  - May know them personally
- Distance to services
  - Lack of transportation
- Patients do not have time
  - Cannot afford to take time off of work
- Patients' symptoms make it hard to follow-through with appointments
- Lack of consistency with providers
  - Loss of preexisting resources
    - Used to have psychiatrist
    - Used to have mental health clinic
    - Used to have nurse practitioner
  - High turnover
  - Funding runs out
- Tribalism-fear of the city/outside
- **Though mental health stigma still exists, it seems to be decreasing**

- Has decreased over time
  - Media has helped normalize
  - Commercials for medications
- Lack of anonymity in rural communities
- Fear of talking about problems with a professional
- Different barriers for different age groups
  - More stigma for older generations
  - Same stigma for older generations
- **Language for mental health symptoms**
- Clinical/diagnostic
  - Patients have Googled before coming in
  - Younger generation more apt to use clinical language
  - More than there was in the past
- More obscured
  - Patients describe physical symptoms/somatizations
  - Physician has to decode and decipher what is being shared/what presents in the room

## 6) Family Physicians Have Unique Roles in Rural Practice

- **Role of physician in mental health care**
- Assessment/Triage
- Providing therapy
- De-stigmatizing mental health services
- Treating families- unique role
- Medication management
  - Primary reason why patients report mental health symptoms to physicians
- **Family Involvement in Treatment**
- Positive
  - Wife reports for husband
  - Adult children encourage aging parents
  - Children always come in with parents
- Negative
  - Substance abuse, enabling relationships
  - “Crab-potting” (term used to describe family members keeping each other down)
- Lack of family involvement
  - Burned bridges
  - Police or other professionals bring them in
  - Family support has decreased as family instability has increased
- **Uncertainty around psych med prescribing**
- Lack of agreement with other professionals
  - Observations of over-prescribing/mis-prescribing

- Lack of familiarity with off-label prescriptions

## 7) Rural Family Physicians Have Unique Ideas for Increasing Access to Mental

### Health Care

- **Ideas for improving access- things we are already doing:**
- Consultations with psychiatrists for family physicians
  - Monthly meetings
  - As-needed phone consults
- Tactful ways of calling patients back for mental health appointments (to conceal identity)
- Experiences with telehealth
  - Not as successful with elders
  - Telehealth for crisis management
  - Telehealth within the clinic, connecting to counselors
  - Telehealth for child psych
  - Currently using it for other health specialties
- **Ideas for improving access- things we should try**
- Better compensation for mental health professionals
- Consider RPAP-style training program for mental health professionals (rural rotations)
- Expanding telehealth
- Working on prevention through schools/school-based interventions
- Better physician training for mental health
  - Better physician training for child and elder mental health
- Programs to increase transportation availability
- Community education
- Increase collaboration with existing community mental health services
- Increase number of med prescribers (train more nurses and PAs)
- Increase culturally appropriate treatment