

5-1-2017

Alcohol Related Rural Emergency Department Use: A Treatment Opportunity

Ezekiel Sanders

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Recommended Citation

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Alcohol Related Rural Emergency Department Use: A Treatment Opportunity

by

Ezekiel Sanders

Presented to the Faculty of the
Graduate School of Clinical Psychology

George Fox University

in partial fulfillment

of the requirements for the degree of

Doctor of Psychology

in Clinical Psychology

Newberg, Oregon

May 2017

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by

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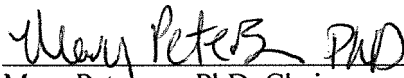
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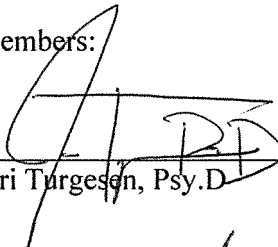
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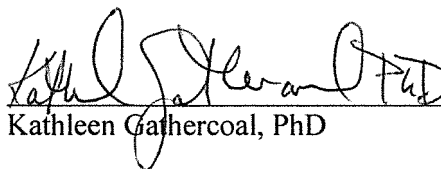
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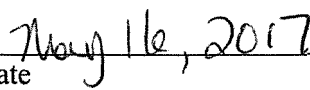
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Alcohol Related Rural Emergency Department Use: A Treatment Opportunity

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Abstract

The negative impact of alcohol on an individual's social, psychological, and physiological health is well known. Despite this knowledge, it remains a prevalent problem in our society. Residents of rural communities encounter a wide range of risk factors including poverty, unemployment, and limited access to healthcare. These factors can influence both the prevalence and treatment for alcohol use disorders. With limited access to medical resources, the Emergency Department (ED) can become the default provider for problems related to alcohol use. The reported prevalence of alcohol-related problems in the ED varies widely from an estimated 2% to 40% of all visits. Despite this, there is limited use of standardized population-health screeners, which highlights the need for an ED to determine the true prevalence of the problem before developing and implementing the continuum of care relative to substance use problems. The current study explored the prevalence of alcohol-related problems in a population of patients presenting to the ED of a rural general medical setting. It also explored variables differentiating a matched sample of patients presenting to the ED with and without identified

alcohol use problems. The current study analyzed an archival data set of individuals ($n = 5,450$) admitted to an ED in rural Yamhill County, Oregon (population 100,725) during the year of 2015. The results of this study suggest that there was a statistically significant difference between average age, time spent in the emergency department, gender, and method of arrival. There was also found to be a significantly lower amount of people diagnosed with an alcohol-related disorder in this particular rural emergency department setting compared to the national and regional average. Furthermore, despite no significant differences between groups in medical care utilization in 2015, there was a significant difference in utilization in 2016. With a proven need for alcohol interventions, the evident opportunity to reach and treat high-risk populations, and the empirically supported effectiveness of screening, brief interventions, and referrals to treatment suggest that rural emergency departments should take advantage of the unique opportunity to make a significant impact on a vulnerable and risky population.

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Chapter 1

Introduction

Alcohol Misuse

The negative impact of alcohol on an individual's social, psychological, and physiological health is well known, despite this knowledge it remains a prevalent problem in our society. In the United States 87.6% of Americans ages 18 and older reported that they have consumed alcohol at some point during their life, while 24.6% reported binge drinking (blood alcohol level above 0.08) within the last month (Substance Abuse and Mental Health Services Administration [SAMHSA], 2013). The deleterious impact of alcohol abuse is well documented, and approximately 88,000 people in the United States die each year from alcohol-related causes (Centers for Disease Control and Prevention [CDC], 2014a). On a larger scale, alcohol accounts for about 4% of all global mortalities, leaving alcohol misuse as one of the leading preventable causes of mortality (Rehm et al., 2009).

The financial and social impact of alcohol misuse extends far beyond the individual. In the United States in 2006, \$223.5 billion were spent on alcohol misuse with the primary cost being healthcare expenses, criminal justice expenses, losses in workplace productivity, and motor vehicle crash costs. It is also estimated that almost three fourths of that financial cost was directly related to binge drinking (CDC, 2014c). Alcohol has an indirect impact on youth as noted by a SMHSA (2012) study that reported over 10% of the children in the United States have a parent with alcohol-related problems. The physiological damage of alcohol to a developing fetus is well documented including low birth weight, premature delivery, miscarriage, fetal

alcohol spectrum disorders, and stillbirths (Committee on Substance Abuse, 2000; Kesmodel, Wisborg, Olsen, Henriksen, & Secher, 2002; Naimi, Lipscomb, Brewer, & Gilbert, 2003).

Additionally, alcohol misuse increases the likelihood of violence, suicide, homicide, intimate partner violence, and sexual assault (Burge & Schneider, 1999; CDC, 2014b). Finally, alcohol decreases productivity and increases unemployment, exacerbating its social impact (CDC, 2014b).

Beyond the social impact, alcohol misuse has negative physiological effects on the individual. Alcohol is associated with a number of diseases and health concerns including hypertension, strokes, digestive problems, heart disease, liver disease, gastrointestinal problems, neurological disorders, reproductive system disorders, and cancer (CDC, 2014b). In the United States in 2009, approximately one in every three liver transplants was directly associated to alcohol-related liver disease (Singal, Guturu, & Hmoud, 2012). Alcohol is also a risk factor for fatal or life-threatening injuries, including domestic violence, pedestrian injuries, falls, burns, drowning, and crashes (CDC, 2014b; Linakis, Chun, Mello, & Baird, 2009).

The negative impact of alcohol on mental health is well documented. Studies have shown that alcohol use negatively influences depression and anxiety (CDC, 2014b). Addiction and alcohol dependence are common results of alcohol misuse (CDC, 2014b). Also, the potential co-occurrence of substance abuse and mental health problems exacerbates symptoms of both disorders and further complicates treatment. Alcohol misuse can exacerbate neurological problems including dementia, memory loss and learning impairments (CDC, 2014b).

Treatment

Despite the severity of the problem, there are potentially effective treatments for alcohol misuse and dependence. Of the estimated 17 million adults who have an alcohol use disorder (Fuller & Hiller-Sturmhöfel, 1999; SAMHSA, 2013), over 700,000 people each day receive some type of treatment related to alcohol misuse. There are often two phases to treatment. The first phase is detoxification and the second involves helping the patient through rehabilitation, remission, and abstinence (Martin, 2008). If abstinence isn't the desired goal, treatment may involve harm reduction, which seeks to reduce the risks associated with alcohol misuse. Each phase of treatment can be administered in an inpatient, outpatient, or in-home setting.

Phase 1. Phase 1 is detoxification involving a planned withdrawal from the physiological effects of alcohol. Detoxification consists of an appropriate assessment of the patient's alcohol use, chronicity and dependence, the creation of a controlled environment, pharmacological intervention, and physiological assistance (Fisher & Roget, 2009). Despite psychological changes in patients, Phase 1 of treatment often specifically addresses alcohol dependence from a physiological perspective. Common symptoms during detoxification include increased heart rate, tremors, insomnia, nausea, headaches, vomiting, anxiety and restlessness (Wesson, 1995). Pharmacological interventions are often used to help the patient combat these physiological symptoms (Martin, 2008).

Phase 2. Historically, Phase 2 of treatment primarily consists of professional treatment and mutual aid (often led by peers in recovery) groups. Phase 2 can be done in either an outpatient or inpatient setting. Professional treatment often consists of more traditional psychotherapy from various evidence-based practices. Cognitive Behavioral Therapy,

Motivational Interviewing, and Behavioral Therapy are all commonly used practices for alcohol abuse treatments in Phase 2 (Martin, 2008).

Mutual-aid groups are a main type of treatment in Phase 2. There are a variety of different groups used to treat alcohol abuse. Some of the most common types include self-help groups, skills training groups, process groups, and psycho education groups (Martin, 2008). Each type of group uses different techniques to help the patient accomplish their goal. One of the most common organizations that holds mutual aid groups is known as Alcoholics Anonymous, which uses a core 12-step system to help facilitate and support abstinence (Sharma & Branscum, 2010). Mutual aid groups are often classified into two categories, open and closed, with open groups being available to the public and closed groups focused more on select patients.

Psychopharmacology is also commonly used to aid treatment for alcohol abuse. Medication can be used during all phases of treatment, but it is primarily used during detoxification to help manage withdrawal side effects. Commonly used medications include Diazepam, Chlordiazepoxide, Nalmefene, Naltrexone, Serotonergic Agents, Acamprostate, and Disulfiram (Garbutt, 2006).

Rural Communities

Despite proven treatments for alcohol abuse, it is still a very common problem, especially in rural areas. Residents of rural communities are a high-risk population with low protective factors, which makes them more susceptible to alcohol abuse. The significant barriers to treatment are described below. Suffice it to say that access to a medical support for detoxification is even less likely than Phase 2 treatment resources.

Some of these high-risk and low-protective factors include socio-economic disadvantages, vulnerability to health risks, geographic and social isolation, environmental adversity, vulnerable community infrastructure, educational disadvantages, and less access to social and healthcare resources (Fraser et al., 2005; Kelly et al, 2011; Rost, Forney, Fischer, & Smith, 2002; Smith, Humphreys, & Wilson, 2008).

Poverty is pervasive in rural communities. Studies have shown that the probability of living in poverty in a non-metro area is 1.2 to 2.3 times higher compared to metro areas (Fisher, 2007; Weber, Jensen, Miller, Mosely, & Fisher, 2005). Rural social contexts, including power and motivation of local government, distribution of poverty, community capacity, and social norms, make it harder for residents in non-metro areas to succeed economically (Blank, 2005; Rupasingha & Goetz, 2003; Weber et al., 2005). On average, the annual per capita income in rural areas is \$7,417 lower than in urban areas (Dáil, 2015). There are also fewer jobs in rural communities and the jobs often depend on seasonal agriculture (International Labour Conference 97th Session, 2008). Studies have shown that rural job markets are often concentrated with minimum wage employment, providing minimal opportunity for advancement (Fisher, 2007; McKernan, Lerman, Pindus, & Valente, 2001). There are also job limitations from a community standpoint: fewer options for childcare, less training programs, and limited public transportation to get to work (Colker & Dewees 2000; Fletcher, Flora, Gaddis, Winter, & Litt, 2002). One study showed 42% of jobs in non-metro areas are low-skilled occupations compared to the nation as a whole at 35%, suggesting lower amounts of lucrative occupations (Gibbs, Kusmin, & Cromartie, 2004). People who live in rural America rely more heavily on the federal food stamp program to meet their food requirements, according to The Carsey Institute at the University of New

Hampshire (2005). The institute's analysis found that while only 22% of Americans lived in rural areas in 2001, a full 31% of the nation's food stamp beneficiaries lived there.

Another risk factor is a lack of educational opportunities and resources in rural communities. Children and adolescents in rural areas are less likely to have access to career counseling and programs to aid in college preparation, and they often experience a more narrowed educational school curriculum (Graham, 2009; Griffin, Hutchins, & Meece, 2011; Lapan, Tucker, Kim, & Koscuilek, 2003; Provasnik et al., 2007). Research suggests that rural families lack in educated parents, educational expectations, and academic preparation, which are all factors that influence enrollment, persistence, and completion of college (Adelman, 2006; Adelman, Daniel, Berkovits, & Owings, 2003; Attewell, Heil, & Reisel, 2011; Bozick, 2007; Goldrick-Rab, Carter, & Wagner, 2006). As further evidence of limited educational resources, rural youth have lower college completion rates compared to their counterparts in metro areas. (Provansik et al., 2007)

There are also significant health disparities in rural communities (Authoritative Information and Statistics [AIHW], 2006; AIHW, 2008; Weich, & Araya, 2004). Not only are there high rates of drug and alcohol abuse, there is less access to healthy food options, as well as higher rates of obesity and chronic illness (United States Department of Health and Human Services, 2013). Furthermore, the amount of DUI arrests is greater in non-urban counties. One particular study found that 40% of 12th graders in rural communities reported using alcohol while driving compared to 25% of their urban counterparts. Additionally, rural 8th graders are twice as likely to smoke cigarettes (26.1% versus 12.7% in large metro areas) compared to their urban counterparts (Palmer Lutheran Health Center, 2013).

Mental health is an additional concern in rural communities. There is evidence to suggest that there are higher rates of mental health comorbidity (Hunter, Hunter, & Kessler, 2014) and depression in rural areas (Probst et al., 2005). Suicide rates are also disproportionately higher as adults with depression in rural areas tend to make more suicide attempts compared to their urban counterparts (Rost, Owen, Smith & Smith, 1998). One specific study found that between the years of 1996 and 2010, per 100,000 people, 19.93 males and 10.31 females in rural communities committed suicide compared to 4.40 males and 2.39 females in non-rural areas (Fontanella et al., 2015). A study done by Rost, Kirchner, Fortney, and Booth (2000) found that when comparing the differences between urban and rural at-risk drinkers the rural population had a significantly higher rate of emergency department visits for substance abuse and mental health related concerns.

Rural residents also often have limited access to healthcare. Not only are specialized services and programs limited, but also there are fewer healthcare providers to provide routine or preventative care. Only about 10% of physicians practice in rural America, despite the fact that nearly one-fourth of the population lives in these areas (Dáil, 2015). Rural communities also have higher rates of uninsured residents, which minimizes patients' health care opportunities. Rural residents are less likely to have employer-provided healthcare coverage or prescription drug coverage. In addition, the rural poor are less likely to be covered by Medicaid benefits than their urban counterparts (Newkirk & Damico, 2014). There are also more barriers for those who are uninsured due to fewer low-cost or charity healthcare opportunities (Newkirk & Damico, 2014). There are fewer specialists (mental health) and care opportunities, which often leads to a higher volume of emergency department patients being treated for a wider variety of concerns

(Linakis et al., 2009). As a result, rural emergency departments are often the source of care for uninsured patients with a wide variety of concerns due to limited access to healthcare (Linakis, et al., 2009).

Emergency Departments

Emergency departments (ED) often become the primary source of care for the underprivileged and mentally ill (Dhossche & Ghani, 1998). About 1 in 17 Americans with a diagnosable mental disorder are categorized as having a serious and persistent mental illness (SPMI). When someone with an SPMI experiences an increase in symptoms, they may become a risk to self or others and may require inpatient psychiatric hospitalization (National Institute of Mental Health [NIMH], 2013). The ED in a general medical center is often the path to such hospitalization. As a result, many of these individuals come voluntarily or are transported to the local ED by family or law enforcement (Niska, Bhuiya, & Xu, 2010). The number of patients with mental health-related concerns in the ED has been increasing (Chakravarthy et al., 2013). Mood disorders, anxiety, and substance abuse account for 68% of the mental health concerns presented in the ED (Chakravarthy et al., 2013).

This increased number of patients creates difficulties within the medical system and may affect access for patients with other emergent medical needs (Salinsky & Loftis, 2007). Individuals who come in for mental health reasons tend to stay in the ED for substantially longer periods of times than those with an acute injury or illness. One study not only found that people who came in with mental health related concerns stayed 43% longer than those with other concerns, but it also found that the length of stay increased 17% between the years of 2002 and 2008 (Chakravarthy et al., 2013). In addition, many patients with mental health problems have

higher rates of ED recidivism than other patients. Bobo et al. (2004) found that the number of repeat patients were a disproportionately high amount of the medical inpatient bed stays. Specific psychosocial stressors described above which are often associated with rural communities can increase the probability of admission to the ED (Doerfler, Moran, & Hannigan, 2010). The lack of resources leads to high recidivism, which in turn becomes a financial burden for the individual and the medical center. Creswell (2013) found that patients with a mental health or substance use disorder diagnosis were projected to cost approximately \$38.5 billion in 2013. In 2007, Yang & Lester found that each person who attempts suicide and is taken to the ED for treatment and assessment can cost anywhere from \$13,500 to \$68,000.

It is not uncommon for patients with acute and chronic alcohol problems to visit the emergency department with a wide range of symptoms and co-occurring disorders. It is estimated that approximately 110 million ED visits each year in the United States are associated with alcohol misuse (D'Onofrio & Degutis, 2004), and there is clear evidence that this number is increasing (Chakravarthy et al., 2013). The number of people seen in the ED for alcohol misuse is well above the number of people seen for alcohol problems in adult primary healthcare centers and general hospitals (Calle, Damen, De Paepe, Monsieurs, & Buylaert, 2006; Martinez, Nieto, & Espi Forcen, 2012). Interestingly, however, it was found that patients are 1.5 to 3 times more likely to report heavy drinking in an emergency department setting than in a primary care clinic setting (Cherpitel, 1999).

One reason the emergency department has such a high rate of alcohol-related cases is that alcohol has a disinhibiting effect on one's behavior, which is associated with extreme action and impulsivity (Lyvers, 2000). This causes an increase in risky behavior and increases the

likelihood that someone witnessing the behavior will bring the person to the ED (Martin, 2008). Alcohol use disorder, alcohol dependence, and acute alcohol use are all known risk factors for suicide (Bagge et al., 2013). In addition, alcohol is known to increase impulsivity and aggression, which are also associated with suicide (Bhattacharjee et al., 2012). High rates of blood alcohol levels have been found in 33%-59% of individuals who have committed suicide and in 46%-77% of those who have attempted suicide (Hufford, 2001). Additionally, intoxicated people have been known to attempt suicide in a more lethal manner (Sher, 2006). People with alcohol dependence are 60-120 times more likely to commit suicide compared to a non-psychiatrically ill population (Sher, 2006). Despite the great need, the connection between the Emergency Department and the addiction services has been a difficult one (Martin, 2008).

Addressing alcohol abuse in the Emergency Department can be a challenging and frustrating task. The main continuum of intervention responses, which is only occurring in limited ED's includes the following: identification/assessment, brief interventions, and a referral to specialized treatment. The specific response is often dependent on the severity of the alcohol use and the available resources.

Brief screenings and psychological assessments are typically used to identify the problematic use of alcohol. Some commonly used screeners include the Screening, Brief Intervention, and Referral to Treatment (SBIRT), the Alcohol Use Disorders Identification Test (AUDIT) and the Drug Abuse Screening Test (DAST); both are designed to identify individuals who are at risk of alcohol and drug problems. More specifically, the screeners tend to look at quantity and frequency of use, self-regulation, impairment in functioning, and psychosocial implication of use. Not only does identification allow for the medical teams to further intervene,

but identification can also be an intervention in itself (Burge & Schneider, 1999; Richmond, Heather, Wodak, Kehoe, & Webster, 1995). Evidence suggests a 40% reduction in alcohol use following a medical provider's advice to reduce drinking among nondependent problem drinkers (Fleming, Barry, Manwell, Johnson, & London, 1997).

Another way of addressing alcohol abuse in the emergency department is through brief interventions. Brief interventions have been proven to be effective in decreasing alcohol consumption and the overall number of individuals consuming alcohol at a risky level (Álvarez-Bueno, Rodríguez-Martín, García-Ortiz, Gómez-Marcos, & Martínez-Vizcaíno, 2015; Richmond et al., 1995; WHO Brief Intervention Study Group, 1996). Brief interventions typically consist of a process using the following four steps: raising the subject, providing feedback, enhancing motivation, and negotiating a plan. Brief interventions typically last anywhere from 5 to 15 minutes and often have components of Motivational Interviewing. Brief interventions do not need to be administered by an addiction specialist to be proven effective (American Public Health and Education Development Center, 2008). As little as two hours of training can be sufficient to make a difference (D'Onofrio & Degutis, 2004).

The third way of addressing alcohol abuse in the emergency department is by referrals to treatment. A referral to treatment can be seen as a three-step process: assessment, eliciting preferences and limitations (goals, cost, time, privacy, support), and offering evidence-based treatments. When providing referrals, a shared decision-making process between providers and patients has been identified as a key aspect to patient follow-through (Bradley & Kivlahan, 2014). When referring a patient for treatment, it is important to assess for the appropriate and most effective level of care for the patient. Treatment referrals are usually categorized into four

increasing levels of care: outpatient treatment, intensive outpatient treatment, residential or inpatient treatment, and intensive medically managed inpatient treatment. Overall, Estee, Wichizer, He, Shah, and Mancuso (2010) found that when ED's in Washington state implemented the Screening, Brief Intervention, and Referral to Treatment (SBIRT) there was an estimated Medicaid reduction cost of \$366 per patient per month in addition to a reduction in inpatient hospitalization utilization.

The assessment, intervention and referral process can easily get overlooked in a chaotic emergency department, particularly when the alcohol use is not the primary presenting concern. Mcknight-Eily et al. (2014) report that only 16% of all adults in the United States and only 25% of binge drinkers discuss alcohol use within a medical setting including the ED. It was also found that physicians did not detect moderate to severe alcohol use disorders in 68%-98% of adults. According to the National Center on Addiction and Substance Abuse (2000), some of the perceived barriers to addressing alcohol use are time constraints, fear of questioning a patient's integrity, belief that patients may lie, fear of angering or frightening patients, uncertainty about treatment, provider discomfort, fear of losing patients, and the belief that insurance does not reimburse. Despite many of these common misconceptions, when patients were asked, "If my doctor asked me how much I drink, I would give an honest answer," 92% of them agreed or strongly agreed that they would. When they were asked, "If my drinking is affecting my health, my doctor should advise me to cut down on alcohol," 96% agreed or strongly agreed that they should (Miller, Thomas, & Mallin, 2006).

While problematic alcohol use can be identified and referrals can be given, the treatment follow-through is often entirely left up to the patient, and due to the nature of addictive behavior,

referral follow-through can be very difficult. When you also incorporate an additional co-occurring mental disorder, it can be assumed that the likelihood of follow-through on the referred treatment continues to diminish.

In summary, it is clearly evident that alcohol use is problematic and a common concern within an emergency department setting. The complexity of factors suggests a need to understand the salient variables of patient demographics and prevalence before developing processes to increase screening and referral to intervention. As such, the current study explored the demographic differences between patients with and without alcohol-related concerns presenting in a rural ED, particularly age, gender, method of arrival, length of stay, and financial cost to the system.

This information will help to inform the potential development of clinical pathways that will be able to target those patients most likely to benefit from assessment, intervention or referral for services, which may reduce recidivism as patients receive appropriate treatment outside of the emergency department. The ultimate goal of this research is to gain further insight into how to better treat and care for patients with problematic alcohol use within a rural emergency department.

Chapter 2

Methods

Participants

The current study analyzed an archival data set of patients admitted to the Emergency Department (ED) of a regional medical center in Yamhill County, Oregon (population 100,725) during the year of 2015. The initial data set included 12,402 patients, however only patients who were over 18 and enrolled in Medicaid or Medicare health plans or were uninsured were included in this research. The inclusion criterion was based on the ability to retrieve medical claims data for patients insured through the county health plan. The final data set included 5,450 patients, 2,061 of them were identified as males (38%) and 3,388 as females (62%). The mean age of the participants was 41 years of age ($SD = 22.78$).

Instruments

Demographic data included the following information: age, gender, method of arrival, date, time, primary and secondary diagnosis, length of stay, and type of insurance. Clinical data were collected through a chart review including the results of any routine medical procedures (e.g., orders for lab work), attending provider's initial history and physical assessment, and discharge note. The study also utilized county resources (Business Intelligence Specialist from the Yamhill Community Care Organization) in order to acquire the claims data of selected individuals. This research was approved through the Institutional Review Board of George Fox University.

Procedure

The archival data was generated from a secure database on a desktop computer within the medical center. Patient information was de-identified, then encrypted and loaded on a flash drive for analyses. The data were separated into two groups, patients who had and patients who had not received a diagnosis associated with alcohol misuse. Once the two groups were established we used the STATA and SPSS statistical programs to analyze the differences between the two categorical groups using 2-sample independent t-tests as well as multiple Pearson Chi-Square Tests. Additional analyses were completed to assess: (a) whether individuals who tested positive for a blood alcohol level (BAL) over the legal limit (.08) received an alcohol-related diagnosis and (b) the differences in utilization of medical care (as measured by annual medical claims data) between patients with an alcohol-related diagnosis compared to those without. In an effort to reduce the variance, we extracted a matched sample based on gender and age from each of the groups. Once the matched sample was determined, we reviewed all lab results and coded the BALs for each group. We then analyzed whether all patients (regardless of group assignment) who had a BAL over the legal limit received an alcohol-related diagnosis (including a rule out). A final level of analysis explored the differences in medical claims data between the two groups (those presenting with an alcohol-related problem vs. those who did not). The Business Intelligence Specialist employed by the insurance provider for the included population completed this final comparison.

Analysis

This study sought to answer the following questions: (a) what are the differences in demographic, clinical processes and utilization of medical services (as measured by claims data)

between patients who had an alcohol-related diagnosis as compared to those who did not? (b) are alcohol-related diagnoses being under-recognized within rural emergency departments? The initial question sought to increase our understanding of the variables (including demographic, clinical care and medical utilization) differentiating patients who present with alcohol-related problems vs. those who don't with an ultimate goal of improving assessment and referral to treatment. The second is to explore the prevalence of identified alcohol-related problems in the general medical center located in a rural area with national norms, and to determine the potential occurrence of "false negatives" or patients whose BAL was above the legal limit but did not receive an alcohol related diagnosis. The increased understanding may benefit both the ED and the patient by helping to facilitate appropriate identification, referrals, and intervention. The nominal variables in this project are alcohol missus or non-alcohol misuse.

Chapter 3

Results

A 2-sample, independent sample t-test with equal variances was conducted to compare the demographic data between the two groups including age and gender. There was no statistically significant difference in mean age between patients who were diagnosed with an alcohol-related disorder ($M = 48.81$, $SD = 13.84$) compared to those patients who did not receive an alcohol-related diagnosis ($M = 51.35$, $SD = 21.76$); $t(5447) = 1.34$, $p = .17$.

Yet, when a Pearson Chi-Square test assessed differences between groups when the data were divided into ten-year increments (all cell frequencies were greater than five for all Chi Square analyses) there was a statistically significant association between the age ranges of patients who were diagnosed with an alcohol disorder and those who did not receive an alcohol diagnosis, $\chi^2(5) = 70.59$, $p < .001$. Table 1 shows the frequency of each group.

Table 1

Age Ranges and Alcohol Diagnosis Chi-Square Testing

Age range	Alcohol	Non-alcohol
20-29	9	1,030
30-39	33	1,008
40-49	25	663
50-59	40	659
60-69	20	615
>70	7	1,341

Note: Numeric values are frequency counts for each combination of variables.

A Pearson chi-square test for association was conducted between the genders of patients who were diagnosed with an alcohol disorder and those who did not receive an alcohol diagnosis. There was a statistically significant association between genders of patients who were diagnosed with an alcohol disorder and those who did not receive an alcohol diagnosis, $\chi^2(1) = 40.57, p < .001$. Table 2 shows the frequency of each group.

Table 2

Gender and Alcohol Diagnosis Chi-Square Testing

Gender	Alcohol	Non-alcohol
Male	86	1,975
Female	48	3,340

Note: Numeric values are frequency counts for each combination of variables.

Following the analysis of demographic data, we compared group differences in two clinical process variables: mean time spent in the ED and method of transportation to care. The analysis found a statistically significant difference in mean time spent in the emergency department between patients who were diagnosed with an alcohol disorder ($M = 208.53, SD = 165.45$) compared to those patients who did not receive an alcohol diagnosis ($M = 142.1, SD = 174.6$); $t(5447) = -4.35, p < .001$.

A second Pearson chi-square test assessed differences in method of transport to clinical care (police, ambulance, other) to the emergency department for patients who were diagnosed with an alcohol disorder and those who did not receive an alcohol diagnosis. There was a statistically significant difference between the method of arrival of patients who were diagnosed

with an alcohol disorder and those who did not receive an alcohol diagnosis, $\chi^2(2) = 155.5, p < .001$. Table 3 shows the frequency of each group.

Table 3

Methods of Arrival and Alcohol Diagnosis Chi-Square Testing

	Alcohol	Non-alcohol
Ambulance	39	875
Police	5	2
Other	90	4,439

Note: Numeric values are frequency counts for each combination of variables.

In exploring the prevalence of patients with an alcohol related diagnosis presenting to the ED we took the total number of individuals with an alcohol related diagnosis ($n = 134$) and divided it by the total sample size ($n = 5450$). It was determined that 2.46% of patients meeting the inclusion criteria received an alcohol related diagnosis (see Table 4).

Table 4

Percent of Alcohol Related Diagnosis

Year	Total	ETOH	Non-ETOH	Percent
2015	5,450	134	5,316	2.46%

Note: Numeric values are frequency counts for each combination of variables.

A 2-sample independent t-test with equal variances was conducted to compare the difference in utilization of medical care (as measured by medical claims data) between patients diagnosed with an alcohol-related disorder versus those who did not, for the complete calendar years of 2015, 2016, and a combined difference over those two years. There was no statistically

significant difference in medical care utilization between patients who were diagnosed with an alcohol disorder ($M = 21,123.12$, $SD = 23,090.77$) compared to those patients who did not receive an alcohol diagnosis ($M = 18,314.43$, $SD = 26,789.29$); $t(100) = -0.54$, $p = .58$) for the full calendar year of 2015. The effect size for this analysis ($d = .11$) as indexed by Cohen's Coefficient d was found to have a small effect.

In 2016, there was also no statistically significant difference in medical care utilization between patients who were diagnosed with an alcohol-related disorder ($M = 14,189.89$, $SD = 24,361.31$) compared to those patients who did not receive an alcohol diagnosis ($M = 8515.519$, $SD = 14137.1$); $t(87) = -1.38$, $p = .16$. The effect size for the 2016 analysis ($d = .28$) as indexed by Cohen's Coefficient d was found to have a small effect.

When data were combined for 2015 and 2016, we found no statistically significant difference in medical care utilization between patients who were diagnosed with an alcohol-related disorder ($M = 36,554.24$, $SD = 42956.34$) compared to those patients who were not ($M = 25,657.92$, $SD = 32146.37$); $t(86) = -1.36$, $p = .17$. The effect size for the 2015 and 2016 analysis ($d = .29$) as indexed by Cohen's Coefficient d was found to have a small effect.

Due to large standard deviations and significant outliers we also compared the difference after removing any counts out side of two standard deviations from the mean. For 2015 with the outliers removed we did not find a statistically significant difference in medical care utilization between patients who were diagnosed with an alcohol disorder ($M = 11,731$, $SD = 9,142$) compared to those patients who did not receive an alcohol diagnosis ($M = 10,697$, $SD = 11,163$); $t(80) = -.47$, $p = .63$. The effect size for this analysis ($d = .10$) as indexed by Cohen's Coefficient d was found to have a small effect.

However, when outliers were removed from the 2016 data, we found a statistically significant difference in medical care utilization between patients who were diagnosed with an alcohol disorder ($M = 7,854$, $SD = 11,608$) compared to those patients who did not receive an alcohol diagnosis ($M = 3,877$, $SD = 4,729$); $t(78) = -2.1$, $p = .06$. The effect size for this analysis ($d = .45$) as indexed by Cohen's Coefficient d was found to have a medium effect.

Table 5

Differences in Medical Care Utilization 2016 Outliers Removed*

Group	Total	Mean	Std. Error	Std. Dev.	Skew	Kurtosis	t	df	Effect Size	Sig. (2-tailed)
Non-ETOH	46	3,877	697	4,729	1.78	2.35	-2.10	78	-.21	.03
ETOH	34	7,854	1,990	11,608	1.48	1.86				

Note: Numeric values are frequency counts for each combination of variables.

- Differences in medical care utilization were assessed through medical claims data.

Our last analysis combined data (with outliers removed) for 2015 and 2016 and found no statistically significant difference in medical care utilization between patients who were diagnosed with an alcohol disorder ($M = 9,792$, $SD = 10,552$) compared to those patients who did not receive an alcohol diagnosis ($M = 7,591$, $SD = 9,434$); $t(167) = -1.4$, $p = .15$. The effect size for this analysis ($d = .22$) as indexed by Cohen's Coefficient d was found to have a small effect.

Chapter 4

Discussion

Summary

The current study examined the differences between patients who were diagnosed with an alcohol-related disorder in the emergency department (ED) compared to those who were not. The purpose of the study was to better understand the characteristics, variables, and unique dynamics associated with alcohol-related problems within the ED, with the ultimate goal of gaining further insight into how to best treat this population. The results of this study found a statistically significant difference between average age, time spent in the emergency department, gender, and method of arrival. Compared to the national and regional average, the reported prevalence of patients presenting with alcohol-related problems in this ED was much lower than expected. Despite no significant differences between groups in medical care utilization in 2015 there was a significant difference in utilization (as measured by medical claims) in 2016.

Aligns with Current Literature

The results of the current study supported existing literature in finding consistent characteristics and variables associated to individuals with alcohol-related emergency department (ED) visits. There is a vast amount of literature supporting that males are significantly more likely to visit the emergency departments for alcohol-related concerns than are females. According to Substance Abuse and Mental Health Services Administration (2016) National Estimates of Drug-related Emergency Department Visits from 2009 to 2011, male alcohol-related visits were estimated at 1,278,441 compared to females at 790,924. According to

the National Institute on Alcohol Abuse and Alcoholism (2013), 5.67% of all male visits to the ED each year were alcohol-related in 2010 compared to 1.97% of all female visits

Our findings associated to age are also consistent with previous literature. Verelst, Moonen, Desruelles, and Gillet (2012) found that 48.3% of alcohol-related visits were from individuals who fell in the age range of 41 to 60 years old. There is also evidence to suggest that not only do individuals in the 45-64 age range with an alcohol-related visit have a higher overall total cost, but they also have a higher cost per visit (National Institute on Alcohol Abuse and Alcoholism, 2013).

This study found that individuals with alcohol-related ED visits spend a longer amount of total time in the ED per visit. This is consistent with the literature that suggests that similar to patients with mental health concerns, individuals with alcohol-related visits spend more time in the ED than the typical ED patient (Chakravarthy et al., 2013; Verelst et al., 2012). This finding highlights the potential benefit of explicitly addressing alcohol misuse in the emergency departments. Not only could brief assessment and referral to treatment improve patient outcome, it may also alleviate system stress inherent in caring for patients with alcohol-related problems and re-allocate resources to other acute medical care.

The results regarding group differences in medical utilization were unexpectedly variable. The 2016 data showing higher use of medical care by patients with alcohol-related problems are consistent with previous literature. Butler et al. (2016) explained that individuals with alcohol-related ED visits spend more time in the ED and have more co-occurring disorders, resulting in a higher cost. A study done by Maryland Department of Health and Mental Hygiene (2015) found that from 2012 to 2014, Medicaid was the highest expected payer for alcohol-

related visits compared to Medicare, Commercial, and Self-Pay/No Charge. This suggests that starting to address alcohol use in the emergency department can not only help financially support the emergency department and the hospital system in which is housed, but also support the overall cost of these patients to counties and tax payers. A potential explanation for the unexpected similarity in medical care utilization is discussed in the implications section, which highlights the need for routine assessment of alcohol-related problems.

While the above findings are congruent with the past literature, the literature is either based on urban or both urban and rural populations. This research expands the literature by focusing specifically on a rural population. As a result, the congruence with current literature also suggests that some of the previously identified characteristics and variables associated with individuals presenting with alcohol-related problems in the ED are generalizable to rural-specific populations.

Deviates from Current Literature

The most unexpected result of the current study was the very low prevalence data showing that only 2.5% of the participant pool (patients uninsured or insured through the Medicaid and/or Medicare health plans) presenting to the ED were identified as having alcohol-related problems. While there appears to be some variation in the literature associated to prevalence, 2.5% is still much lower than the majority of the findings. With evidence to suggest that patients on Medicaid are more likely than other payers to visit the emergency department for alcohol misuse, this study average would be expected to be at the higher end of the percentage (Maryland Department of Health and Mental Hygiene, 2015). One particular study looked at alcohol-related ED visits from 1992 through 2000. The study suggests that almost 8% of all ED

visits for individuals at least 15 years of age are directly related or attributed to alcohol (McDonald, Wang, & Camargo, 2004). National Institute on Alcohol Abuse and Alcoholism (2013) found that in 2010, 3.6% of ED visits had an alcohol-related diagnosis. The Institute of Alcohol Studies (2015) found that alcohol-related incidents accounted for 25% the emergency departments' caseload. The Institute of Alcohol Studies (2015) suggested that the level of variance within the literature ranges from 2% to 40%. One explanation for the large variability may be attributable to the method of analysis. Research that looks specifically at prevalence of alcohol-related diagnosis compared to alternative measures of analysis, such a secondary screening or surveys, is much lower. One possible conclusion could be that not all individuals who come in with an alcohol-related concern are being diagnosed because it is a secondary chronic condition, when the medical focus is primarily on acute concerns. This conclusion suggests the need for further awareness, screening and attention to alcohol-related concerns.

Implications

The implications of this study, particularly the surprising finding of the low prevalence rate, highlight the need for further screening, brief interventions and referrals to treatment within the emergency department, particularly in rural settings. Previous literature suggests that at least 25% of the patient population within the emergency department report engaging in hazardous or harmful drinking. ED patients reported heavy drinking and experiencing adverse consequences of drinking and alcohol dependence 1.5 to 3 times more often than primary care patients (Harvard, Shakeshaft, & Sanson-Fisher, 2008). Additionally, the current study further indicates the financial burden individuals with alcohol-related ED visits can be on the system, providing further evidence for the need to provide differential assessment and treatment.

With a proven need for alcohol interventions, the evident opportunity to reach and treat high-risk populations, and the empirically-supported effectiveness of screening, brief interventions, and referrals to treatment suggests that emergency department should take advantage of the unique opportunity make a significant impact on a vulnerable and risky population of alcohol abusers (Babor et al., 2007; Bien, Miller, & Tonigan, 1993; Kahan, Wilson, & Becker, 1995; Wilk, Jensen, & Havighurst, 1993). There is clear evidence that screening, brief interventions and referrals are feasible and effective in the emergency department (Gentilello, Donovan, Dunn, & Rivara, 1999; Vaca, Winn, Anderson, Kim, & Arcila, 2011). The results of this study suggest that taking advantage of this opportunity will not only benefit the population served, but will also benefit the system as a whole by providing financially, reducing employee fatigue, and allowing physicians to spend more time with patients presenting with acute concerns.

With this wealth of literature, it leaves the following questions: why are proven tools not being utilized in the emergency department, and why do alcohol concerns appear to be under diagnosed and under recognized within the emergency department? A survey of ED directors by Cunningham et al. (2010) found that only 9% indicated their EDs were providing brief alcohol interventions by trained professionals. It was also found that only 12% patients who were exhibiting some related alcohol misuse and had an injury within their EDs were provided any type of brief intervention for the alcohol misuse by a trained professional. It was also determined that only 15% of the ED directors reported having any intervention policies or formal screening within their EDs. Despite this minimal level of investment, 65% reported that they supported and recognized the importance of screening in the ED. Furthermore, 70% felt the same way about

brief alcohol-related interventions among injured ED patients. With the significant difference between the percent of individuals diagnosed with an alcohol-related diagnosis in this particular rural ED and the national and regional average, the results of the current study suggest it may be associated to the lack of identification and importance placed on the perceived chronic condition in an acute care facility. Similarly, the low identification rate may explain the lack of robust findings related to medical care utilization. It appears that while time and finances are barriers, implementing ED-SBRT has been feasible and effective in various EDs throughout the country (Crawford et al., 2004; D'Onofrio & Degutis, 2004). As a result, I suggest that the primary barriers to using/incorporating/etc. the screener are awareness and attitudes that would require a cultural shift from clinicians, researchers, and policymakers.

Limitations

Several limitations to this study exist. While there is a large overall sample size, the number of individuals who were diagnosed with an alcohol use disorder is relatively low. There were also multiple alcohol misuse disorders, which could show some variance within themselves. Furthermore, in order to access the county claims data, individuals with private insurance were excluded from the study. With a small sample size the results associated to the financial differences between groups limited the significance due to various individual cost and significant outliers impacting the mean. Additionally, this data was only collected at one hospital and did not account for system differences.

Future Research

While the research around alcohol-related concerns within the ED is continuing to move forward, I feel that there is still a paucity of literature regarding the introduction of screening,

brief interventions, and referrals to treatment with individuals suffering from various substance use disorders. Drug use is a significant concern in rural populations and with minimal treatment options, the ED can be an effective place to help intervene. I also believe that further research around explicit barriers to EDs not introducing screening, brief interventions, and referrals to treatment could be extremely useful in further implementing such treatments. As previously explained, ED directors acknowledging a significant need for such treatment and such minimal implementation research to explore this disconnect could be very insightful.

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Appendix A

Curriculum Vitae

Ezekiel Neville Sanders

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Education

Doctor of Psychology Candidate (2013-Present)

Emphasis-Health Psychology

- George Fox University Newberg, OR
- Graduate Department of Clinical Psychology: APA accredited

Master of Arts, Clinical Psychology (2015)

- George Fox University Newberg, OR
- Graduate Department of Clinical Psychology: APA accredited

Bachelor of Science (Psychology) (2013)

- Oregon State University Corvallis, OR

Supervised Clinical Experience

University of Texas Health San Antonio

Department of Psychiatry, Behavioral Medicine Track

APA Accredited Pre Doctoral Clinical Health Psychology Internship in an Academic Medical Setting.

Department of Psychiatry, Transitional Care Clinic (2018-Present)

- **Behavioral Health Consultant**
 - Six-month rotation working as part of a multidisciplinary treatment team providing brief psychotherapy to patients transitioning from medical and psychiatric inpatient hospitalization to long term care.
 - Provided individual psychotherapy with an integrative theoretical model, with emphases in: brief solution-focused therapy, motivational interviewing, cognitive behavioral therapy, mindfulness, and acceptance and commitment therapy.
 - Group intakes and access triage for patients initially starting services

- Manualized cognitive processing therapy under the supervision of Katherine Dondanville PhD., which included weekly CPT specific supervision.
- Led Group Psychotherapy: Weekly DBT Skills Training and Mindfulness Groups.
- Formal crisis response planning
- Curbside consultation with psychiatrist
- Interdisciplinary treatment team meetings (case manager, social work, psychiatrist, psychologist, family therapist)
- Telehealth psychotherapy
- Program development: involved in getting the transitional care clinic dialectical behavioral therapy and cognitive processing therapy programs developed, advertised, and organized
- ❖ Supervisor: David Roberts, PhD

Department of Family and Community Medicine

(2017-2018)

• Behavioral Health Consultant

- Six-month rotation as an active member of a multidisciplinary primary care treatment team providing population-based clinical health care
- Behavioral health initial and follow up consultation in PCBH model of care
 - Brief CBT, CBT-I, Problem Solving Treatment for Primary Care (PST-PC), Focused Acceptance and Commitment Therapy (FACT), Condition Specific Behavioral Medicine Consults (Obesity, Chronic Pain, Insomnia, Hypertension, Sexual Dysfunction, Asthma, DM, etc) Behavioral Treatment, Motivational Interviewing, Dialectical Behavioral Therapy Skills Training (DBT), Communication Training, Smoking Cessation, Parent Management Training, Brief Cognitive Screeners.
- Brief consults “meet and greets” and same day visits “warm hand offs”
- Telephone consultation
- Conjoint consultation with medical residents
- Collaboration with case managers
- PCP consultation “curb side consults”
- Conjoint home visits with family medicine residents
- Oriented towards population health & preventative medicine
- Participate in Bexar County Translational Advisory Board meetings.
- Participated in family medicine resident didactics, grand rounds, case conferences, and journal clubs.
- ❖ Supervisor: Stacy Ogbeide, PsyD

• Behavioral Health Chronic Pain Management

- One half-day a week provided individual and co-consult with family medicine residents directed towards treating patients with chronic pain.
- Participated in and observed pre-surgical psychological evaluations for spinal cord stimulators
- Trained family medicine residents in behavioral techniques to manage Chronic Pain.
- Provide initial chronic pain evaluations
- Conduct chronic pain follow up visits

❖ Supervisor: Stacy Ogbeide PsyD & Donald McGeary PhD, ABPP

- **Bariatric & Weight Management**

- Two half days a week provided behavioral health consultation for the Mindful Choices Weight Management Clinic. The clinic consisted of a comprehensive approach to weight management including two physicians board certified in weight management, Behavioral Health Consultant, Registered Dietitian, and a Physical Activity Specialist (kinesiologist).
- Provided pre-surgical Bariatric Psychological Evaluations for UT Health San Antonio Center for Bariatric and Metabolic Surgery
- Co-Led a pre and post bariatric support group structured off of the VA's MOVE.
- Observed live bariatric surgeries.
- ❖ Supervisor: Stacy Ogbeide PsyD & Donald McGeary PhD, ABPP

Department of Psychiatry's Advance Care Clinic

(2017-Present)

- **Psychology Intern**

- One day per week provided 50 minute, yearlong psychotherapy to patients suffering from chronic mental and medical health conditions (Early Onset Dementia, Chronic Pain, Bipolar I Disorder, Conversion Disorder, ADHD, Depression, Anxiety, and Adjustment Disorders).
- Worked with patients from a CBT, MI, & ACT theoretical orientation.
- ❖ Supervisor: Dave Roberts, PhD

Pre Internship Practicum Experience

Oregon Health & Science University

(2016-2017)

Family Medicine at Richmond

Federally Qualified Health Center: provide Behavioral Health services to primarily underserved populations.

- **Behavioral Health Consultant**

- Worked within a multidisciplinary primary care team including medical doctors, psychiatrists, family nurse practitioners, physician assistants, family medicine residents and interns, psychiatric mental health nurse practitioners, registered nurses, resources specialists, community outreach specialists, social workers, medical assistants, team coordinators, medical students, and a eligibility specialist.
- Provided behavioral health treatment from a brief and long term model
- Consulted with patients and providers
- Warm hand offs: immediate behavioral health assessments and interventions.
- Group therapy: co-led Mindfulness and Stress Management Groups
- Conducted Psychodiagnostic, Gender Reassignment Evaluation and Neuropsychological assessment as well as assessment interpretation consults
- Provided community referrals and social services to patients and families
- ❖ Supervisor: Joan Fleishman, PsyD

The United States Department of Veteran Affairs (2015-2016)
The Portland VA Health Care System

Provided a wide variety of therapeutic services to Veterans in 6 different clinics within five, four-month rotations.

- **Primary Care Mental Health Integration Rotation**
 - Worked within a multidisciplinary primary care team
 - Provided evidence-based behavioral health services and patient screening
 - Interdisciplinary communication regarding patient care
 - Provided treatment from a brief short term model
 - Co-led a smoking cessation group.
 - ❖ Supervisors: Mike Lee, PsyD, and Elizabeth Sadock, PhD

- **Palliative Care/Chronic Pain Rotation**
 - Palliative Care*
 - Worked in a multidisciplinary team to holistically treat individuals suffering from terminal chronic illnesses
 - Individual Palliative Care consults with a medical inpatient population
 - Brief mental health interventions
 - Family collaborations
 - Aided in discharge plans
 - Conducted Dignity Therapy
 - Provided mental health and cognitive screening
 - Acceptance and Commitment Therapy (ACT), Cognitive Behavioral Therapy (CBT), and Mindfulness based interventions.
 - ❖ Supervisors: Elizabeth Goy, PhD and Andrea Diulio, PhD
 - Chronic pain*
 - Conducted chronic pain consults in the North West Pain Clinic
 - Co-consultation with a medical provider
 - Worked within a multidisciplinary team to create treatment plans and recommendations for individuals suffering from chronic pain.
 - Provided individual therapy within a 50min, 8 session model with a treatment focus on pain management.
 - ❖ Supervisors: Kenneth Sewell, PhD and Andrea Diulio, PhD

- **Health Psychology Rotation**
 - Provided co-located Health Psychology services to patients referred from multiple medical services in the VA hospital.
 - Individual Psychotherapy with individuals suffering from a wide variety of health concerns.
 - Psychodiagnostic assessments (PAI, MOCA, RBANS, BDI-II, BAI, AUDIT, PCL-5, TOMM, PHQ-9)
 - ❖ Supervisors: Bret Fuller, PhD and Stephen Boyd, PhD

- **Post Traumatic Stress Disorder Clinical Team Rotation (PCT)**
 - Provided Individual PTSD symptom management

- Trained and engaged in Clinician-Administered PTSD Scale for DSM-5 (CAPS-5)
 - Co-led Seeking Safety (dual diagnosis) therapy group.
 - Brief Trainings in Cognitive processing therapy
 - ❖ Supervisors: Amy Wagner, PhD and Joshua Clark, PhD
- **Outpatient Mental Health Rotation**
 - Provided individual outpatient psychotherapy in a 50 min, 8-session model.
 - Co-facilitated a PTSD process group.
 - Completed Intake Psychological Assessments
 - Member of a multidisciplinary team including licensed clinical social worker, Clinical psychologist, Psychiatrist, Vocational rehab, Substance abuse Treatment Program (SATP), Suicide Prevention team member, a nurse practitioner, and a member from Footsteps to Recovery.
 - Participated in triage and psychological assessments for the Substance Abuse Treatment Program (SATP)
 - ❖ Supervisors: Gina Ortola, PhD and Dr. Belle Zacarri, PhD

Behavioral Health Crisis Consultation Team

(2015-2017)

Working within a multidisciplinary team providing Crisis Consultation, assessment, and intervention for the Emergency Department at Providence Newberg Medical Center and Willamette Valley Medical Center in Yamhill County.

- **Behavioral Health Consultant, QMHP**
 - Completed hospital risk-assessments for harm to self, others, and inability to care for oneself.
 - Consulted with physicians and other staff, provided recommendations regarding patient risk and discharge plan, documented evaluations in electronic medical records, and coordinated resources with county mental health employees.
 - Case management experience: Arranging hospitalizations, contacting respite care facilities, collaborating with Yamhill County Mental Health agencies, contact and coordinating with drug and alcohol detoxification facilities.
 - ❖ Supervisors: Mary Peterson, Ph.D., William Buhrow, PsyD., and Joel Gregor PsyD.

Pacific University Student Counseling Center

(2014-2015)

Student Counseling Center provides a range of services focused on the mental health and well-being of Pacific students.

- **Practicum student**
 - Provided individual mental health treatment to college students.
 - Provided emergency consultation and crisis management for students with immediate needs.
 - Worked within a college system developing the skills to collaborate and utilize system resources to most effectively treat students.
 - ❖ Supervisors: Robin Keillor, Ph.D., and Monica Froman-Reid, PhD

Supplemental Practicum Experience

Samaritan Health Neuropsychology Services (2016)

Administered neuropsychology batteries to Oregon State University Athletes.

- **Practicum student**
 - Test administered: Word reading and Math composite subtest from the Wide Range Achievement Test fourth edition (WRAT4), Test of Memory Malingering (TOMM), Hopkins Verbal Learning Test-Revised (HVRT-R), Brief Visuospatial Memory Test-Revised (BVRT-R), PSU Symbol Cancellation Task, Delis-Kaplan Executive Function System (D-KEFS) Trail making subtest, FAS verbal Fluency, Stroop Color And Word Test, Adult Version, Symbol Digit Modalities Test, Ruff 2 & 7 Selective Attention Test
 - ❖ Supervisor: Robert Fallows, PsyD

George Fox Behavioral Health Clinic (2016)

Administer various assessments with a community mental health setting

- **Practicum student**
 - Tests administered: Wechsler Adult Intelligence Scale – Fourth Edition (WAIS – IV), Woodcock Johnson, Tests of Achievement – Fourth Edition (WJ-IV), Personality Assessment Inventory (PAI), Connors Continuous Performance Test, 3rd Edition (CPT 3), Wechsler Memory Scale-Fourth Edition-Designs I and II, Delis-Kaplan Executive Function System (D-KEFS), Trail Making, Color-Word Interference, California Verbal Learning Test-Second Edition (CVLT)
 - ❖ Supervisor: Joel Gregor, PsyD

Pre Practicum Experience

Providence Newberg Medical Group, Depression Management (2013)

Co-led weekly psychoeducational and symptom management support group with patients at Providence Medical Hospital for depression management. Worked with adults and geriatric patients who struggled to manage overall health and daily functioning.

- **Group Facilitator**
 - Facilitated a support group that encompassed bio/psycho/social aspects of depression and functioning
 - Program interpretation and psychoeducation
 - ❖ Supervisor: Carlos Taloyo, PhD

George Fox University (2013-2014)

Provided outpatient services to college students including clinical interview, diagnosis, and individual psychotherapy. Typical presenting problems consist of adjustment disorder, relationship and identity distress.

- **Pre Practicum Therapist**
 - Focuses on a person-centered approach
 - Experience with individual psychotherapy
 - Videotape review

❖ Supervisor: Carlos Taloyo, PhD

Trillium Family Services, Children's Farm Home (2012-2013)

The Children's Farm Home is an inpatient residential treatment facility for children and adolescents. Worked approximately 30 hours per week.

- **Child and Adolescent Treatment Specialist**
 - Adopted individualized behavior therapy on a per-patient basis.
 - Lead Dialectical Behavioral Therapy (DBT) groups weekly, focusing mostly on emotional regulation, cognitive restructuring, and skill building.
 - Facilitated Psycho-education groups for kids with a variety of mental disorders
 - Gained experience with clinical supervision and monitoring of patient progress
 - Formal training and experience with Collaborative Problem Solving, Dialectical Behavior Therapy, Cognitive Behavior Therapy, Sanctuary Model, and Crisis Intervention

Research Experience

Research Vertical Team Member (2014-Present)

George Fox University

- Meet bi-monthly to evaluate progress, methodology, research design, research projects and presentations.
- Team chair is Mary Peterson, PhD, ABPP

Dissertation

Sanders, E (2017) Alcohol Related Rural Emergency Department Use: A Treatment Opportunity

Professional Presentations

Ogbeide, S., Winkler, P., **Sanders, E.** (2018, February) *Teaching Brief Motivational Interviewing Skills with a Focus on Interprofessional Education in an Academic Health Center*. Scholarly Topic Roundtable Discussion will be presented at the Society of Teachers of Family Medicine Conference on Medical Student Education (Austin, TX).

Speck, C., **Sanders, E.**, Peterson, M. (2016) *Change in Relationship Dynamics after Bariatric Surgery: A Qualitative Analysis*. Poster presentation at the annual convention of the American Psychological Association, Denver, Colorado. Division 22 Rehabilitation Psychology.

Barr, B., **Sanders, E.**, & Engle, N. (2015). *Impact of a Cognitive Behavioral Pain Management Group on Depression, Anxiety, Pain Severity, and Opioid Use in an Inpatient Population*. Poster presentation at the annual convention of the American Psychological Association, Toronto, Ontario. Division 49 The Society of Group Psychology and Group Psychotherapy.

Davis, S., **Sanders, E.**, & Reed, G. (2015) *Assessing the Stability of Kelso's Choice impact on self-Efficacy Development Over Time*. Poster presentation at the annual convention of the Oregon Psychological Association.

Wynsma, E., **Sanders, E.**, Davis, S., Elizabeth, G., & Peterson, M, (2016) *The Correlations Between Resiliency and Supportive Spirituality In Bolivian Street Adolescents*. Poster presentation at the annual convention of the American Psychological Association, Denver, Colorado. Division 36 Psychology of Religion and Spirituality.

Wynsma, E., **Sanders, E.**, Davis, S., Elizabeth, G., & Peterson, M, (2016) *The Correlation Between Resiliency and locus of control in Bolivian Street Adolescents*. Poster presentation at the annual convention of the American Psychological Association, Denver, Colorado. Division 56 Trauma Psychology.

Supervision Experience

Supervised Supervision

Department Of Psychiatry

University of Texas Health San Antonio

- Provided weekly supervision to student in the Texas A&M San Antonio Master of Arts Degree in Counseling & Guidance
- Weekly supervision of clinical work within a family medicine clinic.
- Adherence to the Developmental Model of clinical supervision
- ❖ Supervisor: David Roberts, PhD.

Department of Family and Community Medicine

University of Texas Health San Antonio

- Provided weekly supervision to two clinical counseling psychology doctoral students (4th year & 3rd year student) from Our Lady of The Lake University.
- Weekly supervision of clinical work within a family medicine clinic.
- Supervised from both a traditional and preceptor model
- Adherence to the Developmental Model of PCBH supervision
- ❖ Supervisor: Stacy Ogbeide, Psy.D.

Clinical Psychology Oversight

George Fox University

- Provided clinical oversight of second year PsyD students.
- Aided in the development of their clinical and assessment skills, and professional development.
- Collaborated in development of theoretical orientation and personal style of therapy.
- Provided formative and summative feedback on clinical and professional skills in formal and informal evaluations.
- Taught clinical skills in a small group format.
- ❖ Supervisor: Brooke Kuhnhausen, PhD

Clinical Foundations Teaching Assistant

George Fox University

- Evaluated therapy training videos and session charting
- Guided individual and group developmental process and feedback
- Individual supervision of first year students pseudo-psychotherapy as part of clinical training
- **Supervisor:** Glenna Andrews, PhD, MSCP

Teaching/Training Experience

Psychotherapy Lab Co-Leader

University of Texas Health San Antonio

- Presented and led teaching in various forms of psychotherapy including Motivational Interviewing, Cognitive Behavioral Therapy, and Acceptance and Commitment Therapy to psychiatry residents, psychiatry faculty, marriage and family therapy students, and counseling students.

Primary Care Behavioral Health Workshop

University of Texas Health San Antonio

- One-day workshop to students and faculty in the University of Texas San Antonio Masters in Clinical Mental Health Counseling Program who are completing their internship in Integrated Primary Care Behavioral Health.

Family Medicine Residency Training

University of Texas Health San Antonio

- Participated in the training of family medicine residents through direct observation, co-consults, group discussions and literature reviews during their Behavioral Medicine Rotation.

South Texas Regional Family Medicine Grand Rounds

Department of Family and Community Medicine

University of Texas Health San Antonio

- Presented *Primary Care: A Solution to the Growing Suicide Epidemic* on the importance of managing suicidal thoughts and behaviors in primary care and practical ways for the PCP's to do so.

Nuts & Bolts of Motivational Interviewing for the Interprofessional Team

University of Texas Health San Antonio

- Two separate full day workshops on the basics of Motivational Interviewing to Medical, Dental, Nutrition, and Nursing Students at UTHSCSA.

Medical Student Training

University of Texas Health San Antonio

- Training of 3rd and 4th year medical students through review of clinical cases, literature review, and direct observation.

Medical Student Oversight

Oregon Health & Science University

- Provided clinical training and oversight to OHSU medical students surrounding behavioral health within Family Medicine
- Training through direct observation of my clinical work and warm hand offs
- ❖ Supervisor: Joan B. Fleishman, PsyD.

Clinical Foundations Teaching Assistant

George Fox University

- Provided guest lectures, demonstrated role-plays, and gave students feedback on training exercises and course work.

Clinical Team Forum Presenter

George Fox University

- Presented on Suicide Risk Assessments and Theories

Behavioral Health Crisis Consultation Team Forum Presenter

George Fox University

- Presented on appropriate discharge plans and referral resources from the Emergency Department.

Professional Involvement

Primary Care Behavioral Health Special Interest Group Student Representative: Collaborative Family Healthcare Association

- Student representative of a SIG focused on growing interest and enthusiasm, provide learning experiences, and promote actionable dissemination activities among CFHA members regarding PCBH Service Model delivery.

Student Volunteer: Collaborative Family Healthcare Association Conference

- Volunteered at 2017 conference with registration and presentation support.

Planning Committee: Collaborative Family Healthcare Association

- Member of the 2017 social networking planning committee

Student Chair of the Clinical Health Psychology Student Interest Group

George Fox University

- Leader of the Health Psychology Network, which meets on a regular basis to discuss relevant research, training opportunities, and best health psychology practices

Admission Committee Member

George Fox University

- Participated in the admission of new students by assisting in application review and assessment, helped host prospective students, participated in student panels and interview day activities.

Peer Mentor*George Fox University*

- Mentored a first year graduate student in transitioning to graduate school by providing personal and professional mentorship.

Professional Affiliations

American Psychological Association (2017)*Graduate Student Affiliate***Division 38 Association for Health Psychology (2017)***Graduate Student Affiliate***Collaborative Family Healthcare Association (2017)***Graduate Student Affiliate***Association For Psychologists in Academic Health Center (2017)***Graduate Student Affiliate***Society of Teachers of Family Medicine (2017)***Graduate Student Affiliate***Association For Contextual Behavioral Science (2017)***Graduate Student Affiliate***Selected Extended/Continuing Education**

Health Psychology

Primary Care Behavioral Health (2013)

- *Brian Sandoval, Psy.D., Juliette Cutts, Psy.D.*

What's Smoking Got to Do with It? (2015)

Improving the Health of Priority Populations by Treating Tobacco Use

- *Westley Clark, MD, JD, MPH, CAS, FASAM, Lula Beatty, PhD*

Screening, Brief Intervention, Referral to Treatment (SBIRT) In Medical Settings (2015)

- *Jim Winkle, MHP*

Work Force Development For Integrated Behavioral Healthcare (2015)

- *Mary Peterson, PhD., Joel Gregor, PsyD., Jeri Turgesen, PsyD., Kristin Garcia, Psy.D*

Brief Intervention Skills For Primary Care Providers and Behavioral Health Consultants Working in the PCBH Model (2015)

- *Patricia Robinson, PhD.*

Integrating Your Practice: Key Building Blocks (2015)

- *Parinda Khatri, PhD.*

Integrating Comprehensive Pain Management into Primary Care (2015)

- *Scott Safford, PhD., Kim Swanson, PhD.*

Peer-to-Peer Support For Managing Physical and Emotional Well-Being Among Patients (2015)

- *Kerri Sparling*

Creating a Welcoming and Safe Environment For LGBT People and Families (2015)

- *Nathan Levitt, RN*

Understanding the Health Needs of LGBT People: An Introduction (2015)

- *Jason Schneider, MD., Gal Mayer, MD.*

Military

Evidenced Based Treatment for PTSD in Veteran Populations: Clinical and integrative Perspectives (2014)

- *David Beil-Adaskin, Psy.D*

Caring for Military Family: What We All Should know About Military Culture and the Stress of Deployment (2014)

- *David S. Riggs, PhD*

U.S Department of veterans Affairs National Center for PTSD: PTSD 101 Series; (2015)

- PTSD Overview
 - *Jessica Hamblen, PhD*
- Assessment of Posttraumatic Stress Disorder
 - *Brian P. Marx, PhD*
- Functional Impairment and PTSD
 - *Brian P. Marx, PhD*
- PTSD and Chronic Pain
 - *Carri-Ann Gibson, MD, DAAPM*

Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) (2015)

- *Brian P. Marx, PHD*

Other

DSM-V, Essential Changes in Form and Function (2014)

- *Jeri Turgesen, Psy.D, Mary Peterson, Psy.D*

Face Time in an Age Of Technological Attachment (2014)

- *Doreen Dodgen-Magee, Psy.D.*

References

Stacy Ogbeide, PsyD, MS

Behavioral Health Consultant and Assistant Professor
Department of Family And Community Medicine and
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