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ONLINE ROLE-PLAY SIMULATIONS WITH EMOTIONALLY RESPONSIVE AVATARS FOR THE EARLY DETECTION OF NATIVE YOUTH PSYCHOLOGICAL DISTRESS, INCLUDING DEPRESSION AND SUICIDAL IDEATION

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Abstract: Gatekeeper training is a widely used prevention method for training local community members to recognize the signs and symptoms of suicide and to support appropriate referrals for mental health. Training community "gatekeepers" is critical for increasing access to care for those youth who are in need, as youth often turn first to family and friends for help. This study examines the outcomes at pre-training, post-training, and 3-month follow-up for American Indian and Alaska Native (AI/AN) students, teachers, and faculty completing online role-play gatekeeper training simulations. The simulations use emotionally responsive avatars that have memory and personality, and respond like real students experiencing psychological distress in realistic situations. Data from 86 matched pairs showed significant increases in self-identified gatekeeper attitudes of preparedness, likelihood (behavioral intent) and self-efficacy to engage in helping behaviors (i.e., identifying those in psychological distress, talking to them, and supporting a referral for services) 3 months after training. This study provides promising evidence for use of online avatar-based training with AI/AN communities and has the potential to address many of the current challenges with gatekeeper training in Indian Country.

INTRODUCTION

Disparities in suicide rates for American Indian and Alaska Native (AI/AN) people have been reported for decades (Dizmang, Watson, May, & Bopp, 1974; Suicide Prevention Resource Center, 2013). While the U.S. Surgeon General's Report identifies a number of community risk

factors, including violence, poverty, and racism/discrimination linked to mental health problems (Satcher, 2001a, b), AI/AN scholars have identified historical traumas as a unique risk and contributing factor for mental health disparities, including suicide (Brave Heart 2003; Brave Heart & DeBruyn, 1998; Whitbeck, Adams, Hoyt, & Chen, 2004). Further, there are many co-occurring illnesses and conditions that show similar disparities for AI/AN people, including depression, substance abuse, post-traumatic stress disorder (PTSD), and anxiety disorders (Evans-Campbell, Lindhorst, Huang, & Walters, 2006; Freedenthal, Stiffman, & Rubin, 2004; Rutman, Park, Castor, Taualii, & Forquera, 2008; Saluja et al., 2004; Simoni, Sehgal, & Walters, 2004; Spear, Crèvecoeur, Rawson, & Clark, 2007; Urban Indian Health Institute [UIHI], 2009). The limited resources for prevention, treatment, and recovery related to behavioral health conditions in Indian Country further exacerbate the current disparities (U.S. Commission on Civil Rights, 2003). Regardless of the etiology and systemic challenges in preventing suicide in AI/AN communities, culturally appropriate, sustainable, and affordable interventions are critical for addressing the current disparity as the devastating impact of suicide reverberates within families, communities, and the greater society.

Suicide Rates and Prevalence in Indian Country

AI/AN people represent only 1.7% of the U.S. population (U.S. Census Bureau, 2010), but represent the highest rates of suicide among youth in the U.S. The Centers for Disease Control and Prevention (CDC) report the suicide rate for AI/AN youth ages 15-34 years as 2.5 times higher than the national average for that age group (31 per 100,000 as compared to 12.2 per 100,000, respectively), and suicide is the second leading cause of death for AI/AN youth and young adults (CDC, 2012a). For young men, these rates are even higher. The National Violent Death Reporting System of the CDC indicates that AI/AN young men ages 15-19 years have a death rate of 25 per 100,000. For young men ages 20-24 years of age, the suicide rate jumps to 46 deaths per 100,000 people (CDC, 2012b).

In urban communities, where 71% of the entire AI/AN population now lives (Urban Indian Health Institute, 2013), suicidal ideations and attempts are as concerning as in rural/reservation communities. In a review of data from Youth Risk Behavior Survey, 10.9% of AI/AN urban youth reported a suicide attempt requiring hospitalization within the last year (UIHI, 2009). This rate is four times greater than the national average. In a community-based

study with urban AI youth, almost one fifth (18.6%) reported that they had thought about ending their lives within the last month (Pettingell et al., 2008). Given the extreme disparities, it is critical to identify and address unique risk factors when implementing programs and interventions for suicide prevention.

Historical Trauma as a Unique Risk Factor

According to the Surgeon General's Mental Health Supplement, American Indian and Alaska Native people are more likely to be living in poverty than any other ethnic minority group in the U.S. The Surgeon General identifies that the history and experience of Native people; including discrimination, oppression, and land loss; has contributed to poor social determinants of health that lead to high need for mental health care, although the report would not admit cause (Satcher, 2001a, b). While the U.S. recognizes the relationship between mental health challenges and historical losses and oppression for AI/AN people, direct links have been conceptualized and studied only recently (Brave Heart & DeBruyn, 1998; Duran, Duran, & Brave Heart, 1998; Whitbeck, Adams, et al., 2004; Whitbeck, Chen, Hoyt, & Adams, 2004; Whitbeck, Walls, Johnson, Morrisseau, & McDougall, 2009). In a groundbreaking article, Brave Heart and DeBruyn (1998) examined the similarities between Jewish Holocaust survivors and the Indigenous experience in the U.S. This paper proposed that the "social ills" facing AI/AN people were the result of chronic trauma, loss, and grief across generations of families and coined the terms *historical trauma* and *historical unresolved grief*. These terms have been used to describe the oppressions, grief, and loss that have resulted in the historical trauma effects seen today (Brave Heart, 2003). Preliminary studies aimed at measuring historical trauma have found that these losses are a part of the ongoing experiences of AI/AN people, and have been linked to current behavioral health issues (Whitbeck, Chen, et al., 2004; Whitbeck et al., 2009; Wiechelt, Gryczynski, Johnson, & Caldwell, 2012). Recognizing historical trauma as a unique risk factor is imperative for supporting suicide prevention efforts in AI/AN communities.

Gatekeeper Training Models

To address suicide in Indian Country, many communities are implementing gatekeeper training, which teaches local community members and professionals to identify warning signs and symptoms of psychological distress, including anxiety, post-traumatic stress, depression, and

suicidal ideation, and to ensure that individuals with suicidal ideation are linked to services. There are very few published studies on the impact of gatekeeper training for AI/AN populations (Muehlenkamp, Marrone, Gray, & Brown, 2009) but there are international studies examining use with Indigenous populations (see Clifford, Doran, & Tsey, 2013 for review). Research shows that gatekeeper training is effective in increasing knowledge and self-efficacy in participants, but few studies have examined changes in gatekeeper behaviors (Aseltine & DeMartino, 2004; Cross, Matthieu, Lezine, & Knox, 2010; Issac et al., 2009; Kalafat & Gagliano, 1996; Mann et al., 2005; Wyman et al., 2008). There is some research on the relationship of skill sets learned during gatekeeper training and utilization of these skills in the future (Albright, 2013; Albright, Goldman, Shockley, McDevitt, & Akabas, 2011; Cross et al., 2011), and some research showing that gatekeeper training reduces self-disclosed suicide attempts and rates (Aseltine & DeMartino, 2004; Eggert, Thompson, Randell, & Pike, 2002; Knox, Litts, Talcott, Feig, & Caire, 2003).

Commonly used gatekeeper training programs not examined in this study include Applied Suicide Intervention Skills Training (Mencuccini, 2008); Safe Talk (Tanney, Ramsay, Lang, & Kinzel, 2006); Question, Persuade, Refer (QPR; Wyman et al., 2008); LifeLines (Aseltine et al., 2004); and Signs of Suicide (Kalafat & Gagliano, 1996). All of these training programs, with the exception of Safe Talk, are included in the Substance Abuse and Mental Health Services Administration's National Registry of Evidence-based Programs and Practices (NREPP), showing effectiveness with various populations.

The Kognito Gatekeeper Simulations (KGSs) presented in this paper (described in detail below) are, to the authors' knowledge, the only online role-play modality found in the literature that has been shown to bring about changes in gatekeeper behaviors. Kognito has three online role-play training simulations in the NREPP. The online virtual KGS for high school educators has been shown to increase gatekeeper skills, attitudes, and intent to help students, as evidenced by increases in user preparedness, likelihood, and self-efficacy to identify signs of student psychological distress and to engage at-risk students in a conversation. As a result of the training, participants self-reported significant increases in the number of students in psychological distress they identified, discussed concerns with, and referred to the counseling center (Albright, 2013). Lastly, after participating in the KGS for college students, learners reported being more likely to identify signs of psychological distress within themselves and to self-refer into mental health support services (Albright, Himmel, Goldman, & Shockley 2013).

Additional models for suicide prevention include skills building for at-risk youth and youth/community camps that focus on developing a strong sense of cultural identity and the healing from historical traumas. Two evidence-based practices (EBPs), which are practices whose efficacy has been determined by comparing outcomes to those of a control group that did not receive the training, have been developed specifically for AI/AN youth. The American Indian Life Skills curriculum (AILS; formerly the Zuni Life Skills Curriculum) is a 30-week school-based course focused on reducing suicide risk and improving protective factors among AI adolescents ages 14 to 19 years (LaFromboise & Howard-Pitney, 1995). Project Venture was developed specifically for the prevention of substance abuse in AI/AN youth, but also has been used to address suicide (American Indian/Alaska Native National Resource Center for Substance Abuse and Mental Health Services, 2007; Sanchez-Way & Johnson, 2000). Two similar programs are being utilized in Indian Country but do not yet have enough data to be considered EBPs: the Gathering of Native Americans (GONA) and Native HOPE.

Use of Role-plays to Change Gatekeeper Behaviors

Face-to-face role-plays, which involve constructing situations that attempt to mimic real-life circumstances authentically (Ladousse, 1987; Ments, 1983), have long been used in a wide variety of training and educational contexts. Training participants typically are expected to behave in role-plays as they would in real life. In certain training environments it may be permissible for trainees to explore different behaviors and outcomes, as in the KGSs used in this study. In some cases, all participants are trainees, while in other cases, trained professionals perform certain roles, which leads to a more standardized and reliably reproduced experience to bring about mastery and deliberate practice (McGaghie, Siddall, Mazmanian, & Myers, 2009).

Despite the overall benefits of face-to-face role-plays, situational factors can influence their effectiveness. Performing in front of peers, instructors, and other role players can increase the likelihood a trainee will feel embarrassment or social evaluative threat (i.e., fear of being evaluated in a social setting, Nestel & Tierney, 2007; Stevenson & Sander, 2002). Both negative emotions in general and social evaluative threat in particular are known to impede cognitive performance (Baumeister, Twenge, & Nuss, 2002; Bolte, Goschke, & Kuhl, 2003; Kuhlmann, Piel, & Wolf, 2005; Lupien et al., 1997; Payne et al., 2006; 2007; Smallwood, Fitzgerald, Miles, & Phillips, 2009). Additionally, the cost of face-to-face role-plays with professionals can be a drawback, because professional instructors must be expertly trained and calibrated, especially if

gatekeepers from all segments of the community and various professions are being trained. Such training may result in the quality and consistency of the role-play to be reduced, as it may not be realistic across all settings and contexts. Further concerns emerge when the role-play requires a perspective or behavior very different from that of the trainees (e.g., a trainer who does not understand AI/AN historical trauma), and/or playing this role may make the trainee feel self-conscious. For these and other reasons, online simulations (such as those used in this study) using virtual role-plays that are highly replicable (high fidelity) where the trainee is interacting with computer-driven avatars or virtual humans rather than another person, often are preferable. This delivery method has the added advantage of being able to reach large numbers of geographically dispersed individuals in a cost-effective manner.

The majority of gatekeeper training programs do not employ active learning strategies, such as role-plays, to aid skill development (Cross et al., 2011). Researchers have begun to explore the use of role-plays during gatekeeper training to allow people the opportunity to practice the new skills in a safe environment. Cross et al. (2011) found that the use of role-plays or behavioral rehearsal in gatekeeper training resulted in higher overall gatekeeper skills immediately post-training and at 3-month follow-up, compared with trainees who did not participate in a role-play. However, there was significant reduction in both groups' scores at 3-month follow-up. Rubak and colleagues (2005) argue that role-plays must be designed to be a potent stimulant to the imagination and created with real-world scenarios. In other words, the potential to learn is limited if the simulation's narrative is not established, maintained, and relatable. Without proper guidance and context, behavioral rehearsals among gatekeeper training participants may not be effective and the learning process may be limited, which, in turn, may make it less likely that the learner will return for further training. Use of qualified trainers, as was done in Cross's (2011) face-to-face role-play simulations, may counteract this limitation, but can be problematic to scale up and costly to implement. More recently, a meta-analysis (Shockley & Albright, 2014) examined the impact of five online virtual role-play gatekeeper training simulations completed by 8,700 participants that included college educators, students, and K-12 school personnel. The effect sizes provided evidence that game-based role-play gatekeeper training simulations using virtual humans have an impact on preparedness, likelihood, self-efficacy, and gatekeeper behaviors that is sustained over time.

Current Study

The a priori aim of the current study was to examine the usefulness of the KGSs with AI/AN users for increasing preparedness, likelihood and self-efficacy in identifying the signs and symptoms of suicide and increasing gatekeeper behaviors. The authors hypothesized that the KGSs can be a useful tool for supporting suicide prevention in AI/AN communities and may have the potential to overcome cultural and geographical challenges in traditional gatekeeper training models.

About the Kognito Gatekeeper Training Simulations

Each KGS used in this study was built around a series of mini-conversation games in which users interact with intelligent, fully animated, and emotionally responsive student avatars that are experiencing psychological distress, such as anxiety, PTSD, depression, and thoughts of suicide (the avatar development process is described in the Methods section). These virtual humans possess their own personality and memory and adapt their behaviors to the learners' conversation decisions throughout the role-play to provide the player with a highly realistic, yet risk-free, experience of interacting with virtual students in psychological distress (see Illustration 1). The virtual students are multiethnic, which is helpful in trainings that are being used with individuals from many different ethnic backgrounds. This is the first publication on the effectiveness of these multicultural simulations with an AI/AN sample.

The online KGSs in this study were first found to be an effective tool for helping family members take an active role in motivating veterans with post-deployment stress to seek help at the Veterans Administration (Albright et al., 2011).

To facilitate gatekeeper communication skills, learners engage in virtual role-plays using Motivational Interviewing (MI; Lane & Rollnick, 2007) skills. All KGSs in this study teach learners to employ a set of MI techniques originally designed by clinical psychologists for use in counseling sessions with problem drinkers (Miller, 1983). MI is a goal-oriented, client-centered counseling approach designed to actively engage clients in identifying their problems and to increase their intrinsic motivation to change their behavior (Miller & Rollnick, 2012). Numerous meta-analyses have demonstrated the efficacy of MI in a variety of clinical contexts, including motivating individuals in primary care settings to address weight loss, smoking cessation, adolescent substance abuse, and problem drinking (Armstrong, Mottershead, Ronksley, Sigal,

Campbell, & Hemmelgarn, 2011; Burke, Arkowitz, & Menchola, 2003; Heckman, Egleston, & Hofmann 2010; Jensen et al., 2011; Lai, Cahill, Qin, & Tang, 2010; Lundahl & Burke, 2009; Rubak, Sandbæk, Lauritzen, & Christensen, 2005; VanBuskirk & Wetherell, 2014; Vasilaki, Hosier, & Cox, 2006). The KGSs cover four core MI skills: asking open-ended questions, providing affirmation, reflective listening (listening closely and periodically confirming comprehension), and summarizing client self-assessments. These techniques have been associated with effective therapy and are thought to encourage strong rapport and support behavioral change (Miller & Rollnick, 2012).

The KGSs also have a virtual coach that provides ongoing positive feedback when the learner employs effective conversation strategies and corrective feedback in response to poor conversation choices, such as being judgmental or diagnosing a problem. The avatar's verbal and nonverbal responses provide the learner with immediate feedback. To complete the KGSs used in this study, the learner must be able to identify the signs of psychological distress and successfully engage the student avatar in a conversation that results in an effective referral to support services. In Illustration 1, users assume the role of Ms. Yazzie and learn to manage a challenging conversation with a student being bullied. Users interact with the virtual character by selecting (clicking on) conversation tactics they would use to manage the conversation. These tactics change continually based on prior selections; thus, each learner can have a very different experience within the conversation.
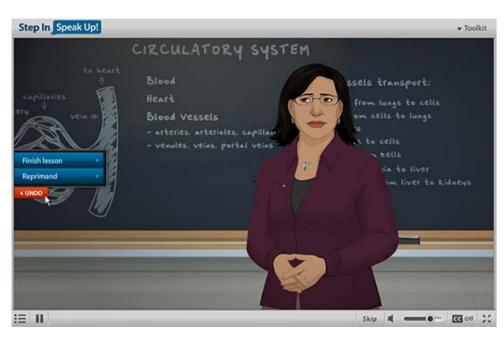
Illustration 1
Avatar of Ms. Yazzie

METHOD

From April 2011 to December 2013, outcome data were collected from 9,000 participants completing one of four KGSs: (1) university and college faculty, (2) college students, (3) high school educators, and (4) middle school educators.

More than 10% of participants ($n = 983$) self-identified as AI/AN by responding to demographic questions that included a list of races. Of the 983 AI/AN participants, 86 matched pairs were drawn from 19 middle and high schools and 42 colleges that were dispersed geographically across 19 states, in both rural and urban settings. Matched pairs describe all individuals who completed pre-training, post-training, and 3-month follow-up surveys, allowing researchers to track changes in their attitudes, experiences, and behaviors over time. The reduction of 983 AI/AN participants to 86 matched pairs does not differ from that of other racial groups, as we generally have a 10% response rate for participants who have completed assessments at all timepoints. In addition, the 86 AI/AN matched pairs' outcome measures assessed in the present study (described later) were consistent with the total matched pairs' outcome measures of all races combined. Of the 86 AI/AN matched pair participants, 46.5% also indicated another race.

The four KGSs enabled us to collect data from five different races across a wide spectrum of educational settings (middle school through college) for gatekeeper skills aimed at identifying and helping youth in psychological distress (See Table 1). All KGSs were developed with input from nationally recognized subject matter experts who were dispersed geographically throughout the country and had racial, ethnic, and cultural diversity training; most had worked with AI/AN groups but it is important to note that the modules are not specific to AI/AN cultures. Additionally, hundreds of end users, including school personnel and higher education faculty, staff, and students, participated in beta testing. This input was part of a comprehensive iterative process involving every aspect of simulation development, ranging from accuracy of content, engaging and realistic storylines, virtual character development, and avatar verbal and nonverbal responses, to interactive activities that augment learning. All of the KGSs are listed in Section III of the Suicide Prevention Resource Center/American Federation of Suicide Prevention (SPRC/AFSP) Best Practices Registry (http://www.sprc.org/bpr/section-i-evidence-based-programs). KGS for College Students and KGS for High School Educators also are listed in the Substance Abuse and Mental Health Services Administration's National Registry for Evidence-Based Programs and Practices (http://www.nrepp.samhsa.gov/SearchResultsNew.aspx?s=b&q=kognito). Demos can be viewed at www.kognito.com/demos.

Table 1
Number of Users by Race and Type of KGS Completed

Race/Ethnicity[a]	Faculty/Staff (*N* = 1505)	Students (*N* = 531)	High School Educators[b] (*N* = 775)	Middle School Educators (*N* = 484)
American Indian or Alaska Native	2.7%	3.6%	1.3%	3.3%
White/Caucasian	87.6%	81.4%	65.9%	88.4%
Black or African American	9.2%	12.4%	3.5%	9.9%
Asian	4.3%	11.5%	1.5%	1.7%
Native Hawaiian or other Pacific Islander	0.5%	1.0%	0.6%	0.6%
Hispanic	6.2%	1.7%	15.2%	22.7%

[a] Participants could choose more than one category. Hispanic is a separate item from race, as it is considered an ethnicity. [b] Some participants were not asked demographic questions

Participants were recruited mainly via e-mails sent by school administrators (principals, directors of counseling departments and student affairs), staff members at nonprofit organizations, and State Youth Suicide Prevention Coordinators. As part of the KGS adoption package, schools are provided a variety of media materials from the vendor, including flyers, sample e-mail language, and PowerPoints for face-to-face recruitment presentations, to augment outreach efforts.

We used Survey Monkey to collect pre-training, post-training, and 3-month follow-up data. All three surveys included the 11-item Gatekeeper Behavior Scale (GBS), a validated tool that predicts gatekeeper behaviors (Albright, Davidson, Goldman, Shockley, & Timmons-Mitchell, in press). Drawn from two major theories of motivation, the GBS is composed of three subscales that measure gatekeeper attitudes and beliefs by assessing: 1) how prepared participants are to engage in gatekeeper behaviors, including recognizing people in psychological distress or at risk of suicide, motivating them to seek help, and knowing appropriate mental health services to which to refer those in distress for help; 2) the likelihood or behavioral intent to engage in gatekeeper behaviors; and 3) how confident participants are in their ability to engage in gatekeeper behaviors (i.e., self-efficacy).

In the three surveys used in the college student KGS, including the GBS, items containing the word "student" were changed to "fellow student." The only other difference between the KGS surveys is that the college student version of the post-training survey two additional questions: "As a result of this course I may:" 1) be more likely to recognize the signs of psychological stress in myself, and 2) seek help from the counseling center myself when

feeling stressed. Responses were collected via a 4-point Likert scale ranging from 1 = *Strongly disagree* to 4 = *Strongly agree*. See Appendix 1 for GBS assessment items. The GBS was validated using confirmatory factor analysis and had internal reliabilities of .95, .85, and .94, respectively.

In addition to the GBS, post-survey questions also measured participants' reactions to the training program, including an overall rating (on a 4-point Likert scale ranging from 1 = *Poor* to 4 = *Excellent*) and whether they would recommend the program to others. They also were asked specific means efficacy questions (on a 5-point Likert scale ranging from 1 = *To a very great extent* to 5 = *Not at all to a very little extent*). Means efficacy is defined as an individual's belief in the utility of the tools available for performing a job, and has been correlated with changes in behavior (Eden, Ganzach, Flumin-Granat, & Zigman, 2010). The means efficacy questions used in this study included measures of the training's 1) usefulness; 2) construction; 3) ease of use; 4) likelihood of helping the learner with students (or fellow students) in psychological distress, 5) basis on scenarios that are relevant; and 6) likelihood of aiding the learner in getting timely help to their students (or fellow students).

The post-training survey also included demographic items. Lastly, to determine impact on gatekeeper behaviors, participants reported on the pre-training survey and the 3-month follow-up survey the number of students that they: 1) were concerned about due to psychological distress, 2) approached to talk to about their concern, and 3) referred to mental health services during the past two academic months.

RESULTS

AI/AN participants in the present study were from 19 geographically dispersed U.S. states, with Texas (31%) and California (29%) accounting for the highest percentages of participants. Of the participants who completed the KGS for educators (not the college student training), 23.9% reported that they had received prior gatekeeper training in suicide prevention, and 17.1% had received training to become a mental health practitioner. Demographic information is seen in Table 2.

Table 2
Demographic Information for Each KGS

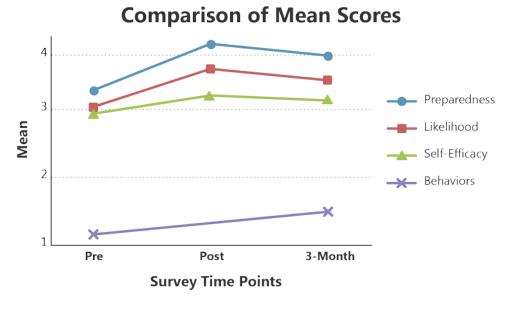|	Faculty/Staff (*N*=41)	Students (*N*=19)	High School Educators (*N*=10)	Middle School Educators (*N*=16)
<u>Gender</u>				
Male	21.9%	15.8%	40.0%	18.7%
Female	78.1%	84.2%	60.0%	81.3%
<u>Age</u> (in years)				
25 and younger	11.1%	89.5%	0.0%	6.2%
26-35	11.1%	0.0%	55.6%	12.5%
36-45	22.2%	10.5%	11.1%	43.8%
46-55	33.3%	0.0%	33.3%	18.7%
Older than 55	22.2%	0.0%	0.0%	18.8%
<u>Years of Working in Education or Student Rank</u>				
< 3	20.0%	37.0% Freshman	40.0%	12.5%
3-5	30.0%	10.5% Sophomore	20.0%	18.8%
6-10	20.0%	31.6% Junior	30.0%	31.2%
> 11	30.0%	15.8% Senior; 5.2% Graduate Student	10.0%	37.5%

In this study, all AI/AN participant data from the four KGSs were combined ($N = 86$) to provide enough power for a repeated-measures analysis of variance (ANOVA), which revealed that there was a significant increase in participants' preparedness to help students in psychological distress between pre-training, post-training, and 3-month follow-up scores, $F(1.87, 159.12) = 58.88$, $p < .015$ ($F_{crit} = 3.90$). Bonferroni's correction indicated that the post-training and 3-month follow-up scores were significantly higher than pre-training scores. Three-month follow-up scores were significantly lower than post-training scores, but were still significantly higher than pre-training scores, indicating some reduction in preparedness over time. See Table 3 and Figure 1 for comparisons of preparedness at each timepoint.

A second repeated-measures ANOVA showed that there was a significant increase in participants' likelihood to help students in psychological distress between pre-training, post-training, and 3-month follow-up scores, $F(1.89, 137.62) = 24.35$, $p < .05$ ($F_{crit} = 3.910$). Bonferroni's correction indicated that the post-training and 3-month follow-up scores remained significantly higher than pre-training scores. There was no significant decrease in 3-month follow-up scores when compared to post-training scores.

Table 3
Comparison of Gatekeeper Behavior Scale Measures Over Time

Measure	Pre-Training M (SD)	Post-Training M (SD)	3 Month Follow-up M (SD)	Effect Size n^2
Preparedness (n=86)	3.40 (.74)	4.17 (.63)	3.97 (.62)	.41
Likelihood (n=74)	3.08 (.71)	3.64 (.44)	3.49 (.55)	.25
Self-Efficacy (n=84)	2.92 (.58)	3.27 (.72)	3.17 (.49)	.10
Behaviors (n=74)	1.15 (1.74)	-	1.49 (2.16)	.06[a]

[a] effect size calculated using r^2

Figure 1
Comparison of Gatekeeper Behavior Scale Measures Over Time

A third repeated-measures ANOVA showed that there was a significant increase between pre-training, post-training, and 3-month follow-up scores of participants' self-efficacy to help students in psychological distress, $F(2,166) = 9.64$, $p < .05$ ($F_{crit} =. 3.05$). Bonferroni's correction indicated that the post-training and 3-month follow-up scores were significantly higher than pre-training scores. There were no differences between post-training and 3-month follow-up scores.

To summarize, the data show significant increases in all three gatekeeper variables of preparedness, likelihood, and self-efficacy from pre-training levels to 3-month follow-up. At 3-month follow-up, the variables of likelihood and self-efficacy remained significantly higher when compared to post-training scores, whereas preparedness significantly declined, but remained significantly higher when compared to pre-training scores.

We found a significant increase in the mean number of actual gatekeeper behaviors reported at 3-month follow-up ($M = 1.49$, $SD = 2.16$) compared with pre-training reports ($M = 1.15$, $SD = 1.74$) of the same behaviors, $t(73) = 2.03$, $p = .046$, two-tailed. Preparedness had a large effect of .41. Likelihood and self-efficacy had medium to large effects of .25 and .10, respectively. Behaviors had a small to medium effect of .06.

All measures of means efficacy were high for the following statements: the training was 1) a useful tool, 2) well constructed, 3) easy to use, 4) likely to help the learner with a student in psychological distress, 5) based on scenarios that are relevant, and 6) likely to aid the learner in getting timely help for the student (see Table 4 for results).

Table 4
Means Efficacy

Please indicate to what extent you think that the course is:	To a Very Great Extent	To a Great Extent	To Some Extent	To a Little Extent	Not at All/ To a Very Little Extent
A useful tool	29.8%	48.8%	20.2%	1.2%	0.0%
Well constructed	31.3%	59.0%	9.6%	0.0%	0.0%
Easy to Use	47.1%	43.5%	5.9%	2.4%	1.2%
Likely to help you with students in psychological distress	36.0%	46.7%	16.0%	1.3%	0.0%
Based on scenarios that are relevant to you and your students	38.5%	36.9%	20.0%	4.6%	0.0%
Aid you in getting timely help to your students	28.6%	41.7%	27.4%	2.4%	0.0%

Reaction data also were high, with 100% of participants rating their respective course good to excellent and 96.5% agreeing or strongly agreeing that all faculty, staff, administrators, educators, and students in their academic institution should take the course. Ninety-five percent would recommend the course to a colleague or fellow student.

Lastly, for those college/university students who completed the training, 75% agreed or strongly agreed with the statement "As a result of this course I may be more likely to recognize the signs of psychological stress in myself." Ninety percent either agreed or strongly agreed with the statement "As a result of the course I may seek help from the counseling center myself when feeling stressed."

DISCUSSION

Our findings support the use of KGSs with AI/AN participants, and highlight some important implications for the field of gatekeeper training. First, KGSs demonstrated usefulness for educating AI/AN participants who are not formally trained in mental health. Given the current disparities in suicide rates, these training simulations are important tools for preparing teachers and students to identify the signs and symptoms of suicide and make appropriate links to referrals.

Second, the study found benefits for those who had prior gatekeeper training, perhaps because the practice component includes MI skills training and virtual role-play conversations coupled with personalized feedback. These findings indicate that periodic training over time might be important to maintain a person's feelings of preparedness. In much the same way that individuals need to be refreshed on a timely basis to maintain Cardiopulmonary Resuscitation (CPR) skills, gatekeepers should refresh their skills to maintain preparedness. Fortunately, the KGSs are available online 24/7, which allows for easy access to refresh one's skills.

The study found that the course not only seems to increase participants' ability to help others at risk, but also may be useful in supporting at-risk participants in seeking care. Therefore, the KGSs may serve as both training for gatekeepers and support for personal help-seeking behavior for suicide prevention.

The KGSs offer a number of unique advantages. First, the program is sustainable once it has been developed. Given the high workforce turnover in many AI/AN communities, an online training simulation is amenable to address both training of new staff and periodic retraining to maintain and even increase the number of people with gatekeeper skills. While the training simulations have not yet been fully adapted for AI communities (beyond the development of the AI avatar teacher, Ms. Yazzie), such adaptation could be accomplished with the current technology, which could lead to customized mobile applications to address the specific needs of AI/AN communities.

Second, the online training simulations provide realistic role-plays to support MI skills building with continual feedback in a friendly, nonjudgmental environment. The avatar does not judge participants. Performance in the role-playing tasks remains confidential. These factors allow for skills building at one's own pace and without concern for making mistakes in a public forum; therefore, they may be particularly useful with AI/AN populations. Being the center of attention or receiving individual recognition is inconsistent with the collective worldview of many AI/AN people, and may interfere with learning for some (Pewewardy, 2002).

Third, the KGSs have high fidelity. Fidelity refers to the quality of delivery across all trainers so that there is a high standardization of the learning experience, including accurate knowledge dissemination, realistic and engaging role-plays, and appropriate feedback. As the data indicate, the fidelity of the KGSs is very highly standardized and the simulations can be replicated (due, in part, to the comprehensive and interactive development process involving subject matter experts and a variety of end users), whereas face-to-face training depends on the skill and experience of each individual trainer and her/his knowledge of the population being trained, which can compromise the learning experience.

Fourth, the training course can be tailored and adapted to meet the cultural and geographical needs of AI/AN communities. Once participants are trained as gatekeepers, they must know where to refer individuals about whom they are concerned. Without this knowledge, people are not likely to engage in gatekeeper behaviors. The KGSs address this concern by providing participants with local resources they can use to link those at risk to services. KGSs are available online and stream easily, so AI/AN learners who are geographically dispersed in rural communities can receive the training as long as they have Internet access. Finally, the simulations can be adapted to meet the unique cultural nuances of AI/AN communities regarding historical trauma and other culturally specific issues. For example, there is heterogeneity among tribes regarding cultural factors (e.g., belief about death), and the KGSs allow for cultural tailoring of content and messages (Novins, Beals, Roberts, & Manson, 1999).

Lastly, the authors propose that the KGSs could support increased access to and utilization of gatekeeper training across Indian County in a number of ways. Many AI/ANs fear or mistrust Western institutions, including health care systems, because of governmental policies that have created serious losses and disparities for tribal communities and because Western models of care that do not always fit the culture. This fear and mistrust can impact help-seeking behavior significantly (Goodkind et al., 2011; Guadagnolo, Cina, Koop, Brunette, & Petereit, 2011). The American Indian Service Utilization, Psychiatric Epidemiology, Risk, and Protective Factors Project, one of the largest psychiatric sample studies ever conducted with an AI/AN sample, highlighted help-seeking behavior of AI/AN people. The study found that fewer than half of AIs with depression, anxiety, or a substance use disorder actually sought out treatment from a mental health care professional in their lifetime (Beals et al., 2005). Studies also have found that AI/AN youth report stigma, embarrassment, or shame related to help seeking for suicidal ideation (Freedenthal & Stiffman, 2007). Many AI/AN people avoid mental health care

in smaller, remote communities due to concerns about confidentiality (De Coteau, Anderson, & Hope, 2006). Further, health services for AI/AN people are extremely underfunded (U.S. Commission on Civil Rights, 2003) and the Indian health system (Indian Health Services, tribally operated services, and urban Indian organizations) suffer greatly from workforce shortages in mental health and turnover of highly stressed staff members (Kim, 2000; Sebelius, 2011). These findings demonstrate the challenges for AI/AN people attempting to access care and the importance of interventions that are nonthreatening, private, and sustainable in the community. The KGSs may address many of these access and utilization challenges, but more research is needed to examine their efficiency and cost effectiveness for Indian health systems.

There also are disadvantages to this training model. One major disadvantage is the upfront cost required to develop these training simulations, for they require an extensive needs analysis, comprehensive instructional design planning, content and script production, narration by professional voice actors, ongoing feedback from subject matter experts and end users, and beta testing. From start to finish a 6-month effort from a team of professionals is required. However, once the simulations are developed, the training is sustainable, unlike face-to-face gatekeeper models. Another disadvantage is that, unlike face-to-face training, users are not afforded the advantages of interacting with a skilled live trainer. Culturally sensitive skilled trainers are ideal, but are not always practical. Lastly, even though this training has low bandwidth requirements, not all users may be able to access it due to lack of adequate Internet connectivity. However, the simulations are being migrated to mobile apps and DVDs, providing more access points.

Study Limitations

As in many field studies, it was difficult to recruit subjects for experimental and control groups through true random assignment. Thus, one limitation of the current study is that it utilized a quasi-experimental, within-group design that did not include a control group, and that examined changes within individuals over time as opposed to comparison with a control group. Additionally, to increase sample size, we combined data from AI/AN participants who completed one of four different training simulations. Although these training sessions exposed participants to the same learning models and gatekeeper skills, ideally the study would have had a sufficient sample size to evaluate the impact of each KGS individually.

Another limitation is that out of 983 participants who identified themselves as AI/AN, only 86 were matched pairs which is defined as those who completed the pre-survey, simulation, post-survey and 3-month follow-up survey. Even though these response rates are not different from other races, it may indicate that matched paired participants could be more motivated and disproportionately predisposed to assuming a "helper" role. This possible confound is present in most gatekeeper training research and is especially true for face-to-face programs, in which the learner must be at a physical location at a specific time/date. In addition, data collection occurred over a 2-1/2 year period, so we cannot rule out potential threats to internal validity that were outside the control of the study.

Finally, changes in actual gatekeeper referrals to mental health support services were self-reported due to a number of important concerns, primarily issues surrounding privacy of data. Additionally, gatekeeper behaviors were reported over two timepoints: the first covering the prior two academic months before completing the simulation and the second encompassing months two and three after completing the simulation. This represents a possible confound as the number of students that a participant had the opportunity to interact with was not controlled for. For example, a teacher may interact with more students across semesters, resulting in increased number of at risk youth identified and referred to care.

Future Research

While this study provides promising evidence for the use of virtual human or avatar technology to increase gatekeeper skills and behaviors for AI/AN people, more research is needed to determine the effectiveness of this training course. Future research will seek to increase the AI/AN sample size for each KGS, so the programs can be evaluated individually. Further, research is needed to examine the effectiveness of avatar training compared with face-to-face gatekeeper programs. Finally, it is important to note that the avatar program used in this study has not yet been fully adapted to AI/AN cultures. Given that the KGSs can be customized, it is possible to develop gatekeeper programs by working with tribal elders and cultural leaders to integrate the wisdom and experience of traditional healing, further addressing the stigma associated with seeking and receiving mental health treatment. Future research conducted in partnership with tribes and/or urban Indian health organizations could be beneficial for implementing the simulations and studying effectiveness with a closer cultural lens.

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Appendix 1
Gatekeeper Behavior Scale

Subscale	Item	Question	Scale
Preparedness		How would you rate your preparedness to:	
	1	Recognize when a student's behavior is a sign of psychological distress	
	2	Recognize when a student's physical appearance is a sign of psychological distress	1 - Very Low
	3	Discuss with a student your concern about the signs of psychological distress they are exhibiting	2 - Low 3 - Medium
	4	Motivate students exhibiting signs of psychological stress to seek help	4 - High 5 - Very High
	5	Recommend mental health support services (such as the counseling center) to a student exhibiting signs of psychological distress	
Likelihood	6	How likely are you to discuss your concerns with a student exhibiting signs of psychological distress?	1 - Very Unlikely
	7	How likely are you to recommend mental health/ support services (such as the counseling center) to a student exhibiting signs of psychological distress?	2 - Unlikely 3 - Likely 4 - Very Likely
Self-Efficacy		Please rate how much you agree/disagree with the following statements:	
	8	I feel confident in my ability to discuss my concern with a student exhibiting signs of psychological distress	1 - Strongly Disagree
	9	I feel confident in my ability to recommend mental health support services to a student exhibiting signs of psychological distress	2 - Disagree 3 - Agree 4 - Strongly Agree
	10	I feel confident that I know where to refer a student for mental health support	
	11	I feel confident in my ability to help a suicidal student seek help	

AT THE BEDSIDE: TRADITIONAL NAVAJO PRACTITIONERS IN A PATIENT-CENTERED HEALTH CARE MODEL

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Abstract: The growing national racial and ethnic diversity has created a greater need for health care delivery systems and health care providers to be more responsive to unique patient needs, that goes beyond meeting the immediate health problems to include attention to other critical component of patient care that take into account cultural competency such as health literacy, health beliefs and behaviors, cultural practices, etc.

INTRODUCTION

Patient-centered care is one of the critical benchmarks used in evaluating the quality of care provided by health care facilities. Quality measurements usually take into account various factors, such as the patient's cultural traditions, language, religion, values, and lifestyle. The promotion of patient-centered care has been motivated not only by the need to address the nation's health inequities, but also by the need to respond to the ever-growing racial and ethnic diversity of the nation's population.

As a part of the ongoing discussion about closing the health disparity gaps, key determinants of health, including sociocultural determinants, are stressed. Little, however, is known about how cultural considerations are embedded in these national efforts to address health disparities and improve patient-centered care.

This case study explores how one health care facility has developed a model that emphasizes the cultural aspects of its patient-centered care. This culturally oriented model has been implemented for Navajo patients served by the Chinle Comprehensive Healthcare Facility (CCHCF), a federal Indian Health Service (IHS) Unit located on the Navajo Reservation in northern Arizona (Hubbard, 2004). While this and other IHS health care facilities routinely have given attention to the cultural

aspects of their services, the Chinle model has expanded patient-centered care by adding a team of traditional Navajo (Diné) practitioners to work alongside physicians and other providers in the hospital, clinics, and other community public health programs.

The case study reported here was conducted in partnership with the hospital and the staff of the Office of Native Medicine (ONM). The study team was composed of the three practitioners, the associate hospital administrator, and an ONM board member, all from the Chinle facility, and the investigator and two research assistants from the University of Arizona. The central aim of the team was to explore how the traditional Navajo practitioners hired by the hospital provide patient care in the hospital and other clinical settings; how they interact with physicians and other service providers; and how their services are perceived by their colleagues, their co-workers, other Native practitioners, the hospital administration, and the community. In addition to a description of some day-to-day activities of the ONM practitioners, this report also discusses some unique challenges faced by these practitioners as they negotiate their role and their services within the complex world of health care regulations and policies.

It should be noted that this report is the first of a two-part series; the second, *A Collaborative Case Study: The Office of Native Medicine*, provides a detailed description of the study design and methods.

Background: Delivering Culturally Appropriate Health care

As the population of the U.S. grows more ethnically and racially diverse and as the number of health disparities continues to worsen, policymakers and major health agencies have initiated a number of programs to reduce some of these disparities. These federal and other governmental initiatives targeted cultural, linguistic, and other barriers to improving health. For example, most called for improving the cultural competence of the nation's health care workforce (Jayadevappa & Chhatre 2011; Saha, Mary, & Cooper, 2008; Silow-Carroll, Alteras, & Stepnick, 2006). Betancourt and colleagues (2002, p. V) defined cultural competence as "the ability of systems to provide care to patients with diverse values, beliefs and behaviors, including tailoring delivery to meet the patient's social, cultural, and linguistic needs."

Other key health agencies, such as the Institute of Medicine (IOM), also have recommended improving the quality of patient care by respecting and responding to an individual patient's preferences, needs, and values in clinical decisions (IOM, 2001). Saha and colleagues (2008) perceive cultural competence and patient-centered care as having different goals, but they suggest that patient-centered care can incorporate cultural competence, thereby improving health care equity and quality. Silow-Carroll et al. (2006) propose eight components in delivering patient-centered care: 1) a welcoming environment, 2) respect for patients' values and expressed needs, 3) patient

empowerment, 4) sociocultural competence, 5) coordination and integration of care, 6) comfort and support, 7) access and/or help with navigation skills, and 8) community outreach. Patient-centered care, therefore, requires attention to elements that impact health care decisions and outcomes, such as the patient's cultural traditions, religion, values, and lifestyle (Association for Healthcare Research and Quality, 2010; Hibbard, Peters, Dixon, & Tuster, 2007; IOM, 2001).

Current Health care Delivery on the Navajo Reservation

The role of the federal government in the delivery of health care services to AI/ANs is part of the federal-Indian trust relationship, historically rooted in various treaties the federal government signed in exchange for lands ceded by the tribes (Brophy & Aberle, 1966; Joe, 2003). The history of this nation's first prepaid health plan for tribes, however, has never resulted in consistent or adequate funding. Instead, funding always has been piecemeal and allocated at the discretion of Congress. Consequently, health care services for AI/ANs continue to be a patchwork of resources, some of which are funded only for a short term (U. S. Commission on Civil Rights, 2004).

Today, the IHS and a few private hospitals provide care on or near the Navajo Reservation (IHS, 2013). With provision made possible by federal support for tribal self-determination, a number of tribes, including the Navajo Nation, have assumed greater responsibility for health care delivery (Joe, 2003, 2008). For example, most community-based preventive health services are now provided by the Navajo Nation's Division of Health, while most medical care services continue to be provided by the IHS and/or by not-for-profit facilities that contract with the IHS and are managed by local tribal communities (Dixon & Roubideaux, 2001). The contracting arrangements are made possible under two legislative policies (and subsequent amendments), the 1975 Indian Education and Self-Determination Act (P.L. 93-638), and the 1976 Indian Health Care Improvement Act (P.L.94-437), which have had a significant impact in transferring some responsibility for health care and/ or educational programs from the federal government to tribes. For example, four health facilities formerly operated by IHS on the Navajo Reservation—two health centers and two hospitals—are now managed by local community organizations (Roanhorse, 2004, 2005). The ongoing operations of these tribal facilities, however, depend on funding from various sources, including the IHS. The sustainability of these efforts has recently been buttressed by the passage of the 2010 Patient Protection and Affordable Care Act (P.L. 111-148). The Navajo Area IHS also contracts with several nearby off-reservation non-federal health facilities for specialty care.

In spite of these gradual management changes, the IHS continues to operate 4 rural hospitals, 6 health centers, 15 health stations, and 22 dental clinics on the Navajo Reservation, which offer services to approximately 200,000 patients. The IHS health care delivery system on the Navajo Reservation includes approximately 333 physicians, 703 registered nurses, and 73 dentists (Hubbard, 2004).

The IHS and Culturally Sensitive Health Services

Gradually, the federal government has recognized the importance of cultural traditions and language barriers in delivering health care to American Indians and Alaska Natives (AI/ANs), most notably within recent years under the IHS. While federal efforts to address language barriers has a longer history (i.e., the use of interpreters), the IHS and other Western health care facilities serving AI/ANs did not always welcome or accommodate the services of traditional tribal practitioners. However, when the expanding mental health needs of the AI/AN patient population became more acute and could not be met with existing limited resources, the IHS began to utilize traditional Native practitioners as consultants in a number of its behavioral health treatment programs, especially those programs engaged in substance abuse treatment (Abbott, 1998; Nelson, McCoy, Setter, & Vanderwagen, 1992).

The more formal inclusion of traditional practitioners in the allopathic arena, however, did not occur until after 1994 when the then-director of the IHS, Michael H. Trujillo, an AI physician, issued an administrative initiative asking all regional IHS facilities to find ways to work more closely with local Native practitioners (Knoki-Wilson, 2008; Trujillo, 1994).

Establishing the ONM

The CCHCF established the ONM after a feasibility study recommended such a program, which also had the support of the hospital's Traditional Native Medicine Committee (Hsu & Corbin, 1998). The ONM was officially opened in 2000 with the hiring of the first traditional Navajo practitioner (Knoki-Wilson, 2008). Once the community learned about the new program, patient referrals increased rapidly, forcing the hospital to recruit two more practitioners. Within the hospital, the practitioners have their own office space; they utilize consultation rooms while working at the hospital's two off-site comprehensive community health centers.

Administratively, the ONM is located in the Public Health Division, an arrangement that gives the practitioners greater access to patients in the hospital as well as to the larger community. The ONM mission statement indicates that its major purpose is to promote and

empower the practitioners of Native medicine to provide health care to Navajo patients by complementing the services provided by physicians and other health care providers (Dennison, n.d.). In addition to the mission statement, the ONM also has the following objectives:

1) to ensure delivery of culturally appropriate care in partnership with allopathic medical providers;

2) to strengthen cultural sensitivity education of health care providers by providing educational programs about Native medicine, Navajo healing, culture, and language;

3) to provide outreach and education on various aspects of Navajo culture and health practices to local communities and/or organizations; and

4) to implement and maintain a program of excellence in Native medicine for the patient population served by the Chinle Service Unit (Dennison, n.d.).

To enhance ongoing coordination and oversight, the ONM has its own Advisory Committee consisting of allopathic providers, community leaders, and other local traditional practitioners. The committee meets quarterly to review program activities and to discuss new programs or requests.

WHY THE CASE STUDY APPROACH?

Because ONM was one of the first programs to employ and place a team of Native practitioners in a clinical setting, it was necessary to describe and analyze firsthand the interworking of the program and those involved. The method of study proposed was an exploratory, descriptive case study. The case study approach and methods of data collection are detailed in the second article in the series, later in this journal issue. This article provides in-depth findings about the practitioners and their work.

The case study approach allowed the team to examine and describe this complex and dynamic culturally oriented patient-centered care model within its own context (Baxter & Jack, 2008). In addition to firsthand observations, the methodology requires the collection and examination of data from multiple sources, including input and perspectives from the study team as well as the study participants (Hancock & Algozzine, 2006).

Appropriately, a case study approach explores "how" and "why" questions within a study environment where the investigator(s) cannot manipulate the behavior of the study participants (Yin, 1994). Moreover, Baxter and Jack (2008) define case study approach as a constructivist paradigm and state that "Constructivists claim that truth is relative and that it is dependent on one's perspective and recognizes the importance of the subjective human creation of meaning, but doesn't reject outright some notions of objectivity" (p. 545). The case study method therefore adds authenticity to what is learned by placing importance on the discourse of the participants, which in this study was expressed in both English and Navajo.

The data collection in this case study incorporated informal and structured interviews, focus groups, and review of documents and reports related to the program. The case study led to the production of a 35-minute video, *Two Ways of Healing*, that tells the story of the ONM and includes the perspectives of hospital staff, physicians, board members, and patients.

THE CHINLE COMMUNITY

The outer geographic boundary of the major Navajo Reservation extends into three adjoining Southwestern states: Arizona, New Mexico, and Utah. Internally, the Reservation is further subdivided into five regional geographic districts that include eight IHS service units. One of these eight IHS service units is Chinle (Hubbard, 2004).

The CCHCF is a 60-bed hospital and serves as the medical hub for 16 surrounding geopolitical areas referred to as chapters. The facility employs 978 people and serves a patient population of approximately 35,000. In addition to primary care, the hospital provides adult intensive care, general surgery, operative obstetrics, and 24-hour emergency services (Chinle Service Unit, 2013). Patients with serious injuries or other life-threatening conditions routinely are evacuated by air to larger non-IHS hospitals or to one of the two larger IHS hospitals in Gallup, NM, or in Phoenix, AZ (Knoki-Wilson, 2008).

According to the 2010 Chinle Census, the communities within the Chinle area reported 7,145 households with a population of 25,991. Approximately 93.3% of this population is Navajo. As is true for rest of the Navajo Reservation population, members of the community are predominantly young (36% of the population is under age 18), and the median age is 30.5 years. The median household income for this population in 2010 was $20,331, significantly lower than that reported for the rest of the Reservation. Fifty percent of the families reported income below the poverty line (Chinle, Arizona Population, 2013).

The present Chinle hospital, housing the ONM, was built in 1982, replacing an older, inadequate hospital. The patient population, however, has continued to increase; as a result, additions to the hospital are underway. The hospital is centrally located on the Navajo Reservation, near the point of entry to the popular Canyon de Chelly National Monument (Chinle Service Unit, 2013). Many in the population served by the hospital are strongly grounded in the Navajo culture; therefore, the facility has always given special attention to the culture in its service delivery, an approach fostered by its staff, many of whom are members of the tribe (Knoki-Wilson, personal communication, April 4, 2009).

Such attention to the Navajo culture by the facility included the construction of a hogan on the grounds of the hospital for local practitioners to use when conducting brief ceremonies for patients and their families. In additoin, one wing of the hospital has a circular healing room with the round interior shaped like the inside of a hogan. This room is utilized by ONM staff for patient consultation or for minor ceremonies when a patient is too ill to leave the hospital. The hospital grounds also have two sweat lodges, one for men and one for women (Dennison, 2009).

Another area where the hospital attends to cultural sensitivity is the maternity ward. Two birthing rooms are set up for women who want to deliver their babies in the traditional squatting position, facing east in conformity with tribal cultural practices, a position that symbolizes the dawn and the beginning of a new day or a new life. In these rooms, a traditional Navajo sash belt is anchored to the ceiling with an accompanying letter "E," indicating East. The sash belt symbolizes the rainbow, associated with the amniotic fluid that represents rain or water, a necessity for all living things (King, 2007).

TRADITIONAL NAVAJO HEALTH BELIEFS AND PRACTICES

Many researchers and observers of Navajo culture have written or documented various aspects of the tribe's healing ceremonies (Begay & Maryboy, 2000; Csordos, 1999; 2000; Gill, 1997; Kluckhohn & Leighton, 1974; Landy, 1974; Lewton & Bydone, 2000; Milne & Howard, 2000; Sandner, 1979; Spickard, 1991; Storck, Csordos, & Strauss, 2000; Waldram, 2000). Because extensive information is available, specific healing ceremonies will not be discussed in detail here. However, it is necessary to discuss some Navajo health beliefs that dictate the form and process of traditional healing, especially those that are helpful in explaining how traditional healing complements allopathic medicine.

Traditionally, the Navajo, or Diné, view spirituality as an integral part of being Navajo, not as a separate set of beliefs or rituals to be observed only during special occasions or in times of special need. Moreover, spirituality and traditional medicine are often viewed as one and the same. For example, an illness does not always need to have a physical cause but can be attributed to causes brought on by spiritual, mental, or cultural disharmony that might be linked to a number of cultural explanations (Roessel, 2002).

Regardless of the outward manifestation of a health problem, therefore, the cultural diagnosis may attribute the "unusual" aspects of the problem to such etiologies as excessive or inappropriate personal conduct; impropriety with other living things or other forces of nature; misuse of, or poorly performed, ceremonies; and/or contact with malevolent forces that might carry intentional harm in the form of spells. Sometimes, a culturally based illness may come in the form of retribution or

as the result of inadvertent contact with something disruptive (Wyman, 1983). Many Navajo also believe that words are powerful, and that spoken words or bad thoughts can bring on illness. Navajo emergence stories describe how thoughts and prayers by the holy people, or "diyin dine′é," brought the Diné world into existence (Griffin-Pierce, 2000, p. 129). Therefore, it is not unusual to link a health problem to the use of harmful words such as those expressed in a curse.

For traditional Navajo, these cultural beliefs promote personal and group health and also prescribe the proper conduct for one's relationship with all that is in the environment, including other humans, animals, and nature. In some cases, ceremonial interventions address deteriorating, frayed relationships and the disorders they cause (Roessel, 2002). In others, practitioners counter negative words with "good" words by accentuating the positive and empowering the patient by having him or her repeat the appropriate prayers (Willging, 2002; Witherspoon, 1977). Ultimately, the diagnostic process acknowledges the cultural etiologies that have allowed for ill health or misfortune to occur, and one or more courses of action will be recommended to address the problem.

The central aim of all Navajo healing ceremonies is, therefore, not to cure but rather to empower the patient so he/she can work towards restoring balance or harmony of mind, body, and spirit, which is essential because most illnesses are perceived as conditions in which these three elements are out of harmony (Adair & Deuschle, 1970). A cultural diagnosis helps the patient understand why an illness occurred or persists. From this perspective, it is readily understood that the allopathic provider treats the "illness," while the cultural intervention focuses on <u>why</u> an illness or health problem has occurred and how the patient can best help him- or herself to restore harmony (Dennison, 2009; Roessel, 2002). In the case of a spinal cord injury, for example, the aim of the traditional healing intervention is to help empower the patient so that the prescribed therapy or rehabilitation is perceived as positive and attainable. In every case, the goal of a healing ceremony is to evoke the assistance of spiritual helpers or deities to restore harmony (Kunitz, 1989). The ceremony is concluded with a specific set of chants, prayers, and other required steps to reaffirm harmony (Wyman, 1983).

Navajo diagnosticians use several means to establish culturally based causes of culturally based illnesses and, in some cases, to pinpoint possible causes of misfortune. Although there are others, the four most common diagnostic methods utilized today include hand trembling, star gazing, listening, and the use of crystals (Dadosky, 2008; Davies, 2001). In hand trembling, the diagnostician places him- or hefself in a trance to search for the cause of the ill health. While in the trance, he/she makes the diagnosis by tracing this information in the sand. Diagnosticians who use the star grazing method interpret the positions of the stars to determine the etiology of ill health, and "listeners" listen to the wind to help define the cause of an illness (Franciscans Fathers, 1910;

O'Bryan, 1956), while those who use crystals read the patterns in the crystal for diagnosis. The ONM practitioners are most likely to use crystal gazing, but the hospital does not require them to use a specific method.

Most Navajo healing ceremonies are seasonal, and these ceremonies always take place in a hogan (Griffin-Pierce, 2000). The preparations often are extensive and expensive, requiring family and kin to invest time and financial resources, including preparing needed supplies, obtaining food to feed the attendees, and sometimes building a temporary dwelling or shade house to serve as the kitchen. The patient's family is asked not only to contribute their labor, but also to donate food or assist the practitioners with some of the ceremonial preparation. The presence and support provided by the family and kin is considered an important part of healing. (Brown, 1992; Willging, 2002) It is not unusual, therefore, to hear on the local Navajo radio station a call to clan relatives to help assist with larger ceremonies.

FINDINGS: THE SERVICES PROVIDED BY THE ONM

The three practitioners in the ONM are employed by the CCHCF. While all are skilled diagnosticians, two specialize in a number of other traditional Navajo healing ceremonies. Their daily routine is a busy one. They indicated that over 50% of their patients are self-referrals, while others are referred by other health care providers. Some patients request services when the practitioners make grand rounds with the physicians (Chinle Service Unit, 2008). In addition to providing cultural diagnoses, the practitioners conduct abbreviated ceremonial interventions, mainly within the realm of protection or prevention. For example, patients facing a medical emergency who must be air evacuated to another hospital may request the services of a practitioner for a Protection Prayer not only to ease anxiety, but also to help focus on a positive treatment outcome.

Although the practitioners deem many of the services they provide to be minor, this designation does not imply "simple" or "easy." Although they are significant, they are called minor because they are brief interventions, rather than more complex or lengthy ceremonies. One practitioner distinguishes minor and major ceremonies with this example: "A protection prayer is a short intervention because it takes less resources and time, while a major ceremony can take one to nine days. In this respect, a diagnostic ceremony is considered a minor ceremony." In clinical settings, their work is limited to brief interventions, which one practitioner calls "first aid ceremonies."

When consulting with patients, the practitioners encourage them to accept medical diagnoses and follow recommended treatments in addition to the practitioners' cultural diagnoses and recommended cultural intervention(s). In explaining the need to pay attention to both the medical and cultural diagnoses, the practitioners remind patients that multiple etiologies and interventions

are found in many Navajo healing processes. Once the practitioner has made a cultural diagnosis and discussed it with the patient and family, the next step requires recommendations for the appropriate healing ceremony or series of ceremonies.

If requested by the patient, the practitioners will provide a list of other local practitioners who specialize in the specific ceremony needed. This list is developed by ONM in consultation with practitioners in the community who give their permission to be included; it is utilized by the hospital staff when ONM practitioners are not available.

As mentioned before, two of the ONM practitioners specialize in several traditional healing ceremonies, but they do not include these in their hospital services. Upon request, they will conduct the ceremony at the patient's home. To accommodate these off-duty arrangements, the practitioners work 4 days a week and utilize the 3-day weekends or take leave from work.

As part of their services, the practitioners frequently are called upon to help ensure patient or staff safety by conducting a spiritual cleansing of a room after a death. When there is a difficult birth, the mother also may ask one of the practitioners to offer an appropriate song or prayers to ensure safe delivery, or in some cases, to conduct a special ceremony to help unravel an umbilical cord. Some new mothers also ask practitioners for a special blessing to welcome the newborn. In other instances, patients or families may request a blessing, giving thanks when death has been averted or the patient has been discharged from the hospital.

The regular day-to-day services provided by the practitioners also include several hours of counseling patients or participating in various educational activities. During counseling sessions, practitioners give patients and families an overview of the ceremony recommended as well as a list of materials or items they will need to furnish.

Practitioners take turns participating in morning grand rounds with the physicians so that they can learn as much as they can about allopathic diagnoses and treatments in case patients have any questions about their care. Patients can request to see a practitioner at both grand rounds and at the Family Practice Registration Desk. Other patients are referred by physicians or other clinical staff. Following up on these referrals is part of the practitioners' daily activities. After seeing a patient, the practitioner enters his or her notes on the patient's chart, as well as a brief description of the actions taken on referral, which is routed back to the referral source. It should be noted that many of the hospital employees, both Native and non-Native, also utilize the services of the practitioners.

On most days, therefore, the practitioners are kept busy attending scheduled appointments with patients and their families, making home visits, conducting brief ceremonies, providing in-service training or community education, and participating in various hospital or community meetings, including monthly meetings of either the Diné Medicine Men Association or the *Diné*

Hatathile (Chanters) Association. The former has an all-inclusive membership of healers, and the latter usually includes only those practitioners specializing in the traditional Navajo healing ceremonies.

Because the practitioners are employees of the IHS, Navajo patients do not pay for ONM services. Although payment for service is not an issue, the practitioners have their share of "noncompliant" patients who return to request another diagnostic procedure even though they have not carried out the previous recommendations. Far more patients, however, are serious and do follow the recommended healing ceremonies.

The ONM staff lacks the financial resources to conduct systematic patient follow-ups, although all of the practitioners readily recall some of their cases anecdotally, especially when former patients come by to express their appreciation or speak about their health improvements.

FINDINGS: IN-SERVICE TRAINING PROVIDED BY ONM PRACTITIONERS

The other major activity of the ONM practitioners is cultural competence training (ONM, 2008a). The team conducts one or more formal in-service training sessions per month at the Chinle hospital for professional staff; these sessions also are open to other employees. Topics include Navajo Health Beliefs and Practices, the Navajo Wellness Model, Herbal Medications, the Protection Way and Protectors, Mental Illness, and Navajo Culture 101 (ONM, 2008b).

The in-service training sessions are popular, with average attendance ranging between 15 and 20. Typically, annual attendance averages 1200. In their written evaluation of these sessions, most attendees rate them as informative and useful in their work. The average evaluation score attendees is 3.61 on a scale of 0 (*not useful*) to 4 (*extremely useful*).

The cultural competence training also covers topics that are requested by staff, including Cultural Sensitivity, the Diné Perspective on Mental Illness, the Enemy Way Ceremony, Growth and Development, and the Diné Paradigm of Human Anatomy (ONM, 2008a). The practitioners also are invited by area schools, chapter officials, and other agencies to provide classes on these and other cultural topics at community meetings or special assemblies.

FINDINGS: COLLABORATIVE TRAINING BY ALLOPATHIC PROVIDERS AND PRACTITIONERS

The practitioners are natural educators, but also report that they are constantly learning new things as a part of their work in the hospital. In one 7-day workshop session, the practitioners and physicians co-taught a course to a group of traditional practitioners from the community about diabetes and some of its complications. The workshop, "Encouraging Healthy Lifestyles of Diabetic

Patients through Native Practitioners," was developed and taught jointly by physicians and the ONM practitioners to 15 practitioners. Type 2 diabetes mellitus is a prevalent health problem on the reservation, so this educational program was especially important. The educational goal, therefore, was to help the practitioners learn more about the treatment of diabetes, so that they can provide patients accurate information about the different allopathic treatments they have been prescribed. The practitioners provided not only the Navajo interpretation of the lessons, but also cultural explanations of the disease process, as well as the impact of diabetes on physical and psychosocial well-being (Chinle Service Unit, 2008).

The workshop attendees included herbalists, diagnosticians, chanters, and Native American Church practitioners. The ONM coordinator recalled that one workshop participant remarked that the training program helped her understand more about the complications associated with diabetes and why it is important for her to remind her patients to follow medical treatment plans. Another workshop participant told an ONM practitioner that the physiological consequences of diabetes were especially meaningful for him after a visit to one of the dialysis centers, where the workshop participants had a session on treating renal failure.

While these anecdotal assessments from attendees were deemed helpful by the ONM staff, the ONM director wished that workshops, especially their impact on the care provided by attendees, had a more formal evaluation. Staff and budget limitations, including lack of resources for professional development, prevent more extensive program evaluation. The three ONM practitioners noted that there were no continuing education programs or courses focused on Native medicine available to them. While they can learn a new specialty by taking on an apprenticeship with another practitioner, their workload at the hospital often does not allow enough free time to pursue this option. It is possible that, as more of the reservation hospitals establish their own ONM programs, the number of practitioners will not only increase, but the practitioners are likely to have planning meetings to organize their own continuing education programs. The desire to continue their training has undoubtedly been influenced by their own involvement in conducting training for hospital staff and other providers.

FINDINGS: SEEKING A COMFORTABLE NICHE IN AN ALLOPATHIC SETTING

Utilization of traditional practitioners in other Indian health care facilities has been increasing (Basset, Tsosie, & Nannauch, 2012; Buchwald, Beals, & Manson, 2000; Commins, 2008; Driscoll et al., 2011; Marbella, Harris, Diehr, & Ignance, 1998). However, the work of practitioners does not always fit comfortably with the everyday demands of an allopathic setting. Practitioners may view some requirements for documentation of health care delivery as daunting. For example,

some mentioned that the requisite paperwork and charting was something they did not expect. As do physicians, practitioners have to report services provided and enter information and referrals on charts for each patient encounter. In addition, they have to consult the physician's Patient Care Component Encounter (PCC) form to become familiar with the patient's health status. The PCC form summarizes pertinent information about the patient's chief complaint or purpose for the visit, treatment plan, medications, types of laboratory tests ordered, referrals initiated, and instructions offered.

While the PCC form works well for physicians and other providers, it is not necessarily designed for use by the practitioners. For example, the form's instruction space and section on prescribed medications do not make any references to herbal medications, nor does the section on routine medical procedures include a space for cultural diagnoses. The transition to electronic health records also has been challenging for the practitioners, as they had to learn to enter all their notes and referral information electronically.

Other challenges are more within the realm of moral or ethical dilemmas, especially cultural conflicts over advanced directives. One of the practitioners, for example, discussed the following case where a patient had signed an advanced directive and did not want other medical interventions:

> A 45-year patient on dialysis wanted to discontinue this procedure against the family's wishes. As the patient's health was failing, the family requested the help of ONM to conduct a minor ceremony, but because the patient had signed an advanced directive, the practitioners had to deny the request.

One practitioner said that cases like this are always difficult for practitioners because their traditional training tells them that they cannot deny a request for help, and that they also are responsible for helping patients maintain hope and an appreciation of life to the end, not to discourage them or hasten death. The language in the advanced directives (e.g., about preparing for death) is disturbing for practitioners because they do not want to give power to the words within the document, as well as for many patients, who do not want to have such a discussion, thinking that speaking of death has the power to bring about or speed up the undesired event.

While most physicians interact primarily with their patients, the Native practitioners tend to work with both patients and their family members, and they expect the family members to be informed and supportive in carrying out the prescribed treatments or other therapeutic interventions. In describing their approach to working with patients and their families, the practitioners explain that establishing clan relationship (*K'e*) with the patient comes first. For example, one practitioner commented that, upon meeting a patient for the first time, clan memberships are immediately exchanged so that kinship connections can be understood, establishing the proper etiquette in how the interaction is to proceed. One practitioner went on to elaborate that "as a practitioner, I might

learn that I am a clan uncle to this patient." Such an acknowledgement not only sets up rules of engagement, but also calls for mutual reciprocity in the relationship (Archie, 2007). This type of engagement also paves the way for mutual trust. The practitioner trusts the patient to be forthcoming, and the patient expects the practitioner to do all that he/she can to help.

While reciprocal kinship obligations are useful in patient-practitioner interaction, they can also challenge confidentiality. Therefore, the Native practitioners have extensive training on regulations governing patient confidentiality and why it is important in patient care.

It should be noted that similar kinship obligations are not expected in patients' interaction with a non-Navajo physician or with other health care providers, due in part to the structure of health care delivery. For example, most Navajo patients generally are not seen by the same physician each time they come to the health facility. Fortunately, the Chinle Service Unit fortunately does not experience staff turnover rates as high as those of other IHS facilities, but it still conducts ongoing recruitment of physicians to help sustain long-term provider-patient relationships.

The amount of time spent with patients is another interesting cultural issue. Initially, some medical staff complained that practitioners appeared to be spending more time with each patient and seeing fewer patients than the medical staff. Not all staff understood that a practitioner's interactions require more time with patients and their families. In addition to the diagnostic process, there is considerable discussion about what the cultural diagnosis means, what interventions are called for, and the specific requirements of the interventions or ceremonies These include when the treatment should be conducted (if the required ceremony is seasonal), who might be asked to do the intervention, how this practitioner or another specialist should be approached, and how the patient or family should prepare for the treatment, (e.g., what herbs have to be gathered and what baskets, deerskin, or other necessary items have to be obtained).

If patients have not participated in these ceremonial activities before, they may need more information, which the practitioner usually provides by recounting the relevant oral history. The time commitment in this type of diagnostic counseling is perhaps more in line with mental health treatment practices than medical care in a busy outpatient or hospital setting.

FINDINGS: OTHER CHALLENGES IN THE WORKPLACE

The practitioners, allopathic providers, and community members all agree that trying to fit the Navajo cultural model into the Western medical model is not easy because of the differences in understanding what these types of healing procedures mean, and the difficulty in fitting "cultural illness" and cultural interventions into the existing administrative forms and standards of medical treatment. In any clinical encounter, the physician's service is recorded or documented through a

set of codes, generally the International Classification of Diseases (ICD-10) codes, that reflect an array of health problems and typical medical services. However, the ICD-10 does not include, for example, a code for protection prayer or smudging.

The need to code patient service and diagnosis is a challenge because without such documentations, practitioners' services cannot be institutionalized, and the hospital cannot request reimbursement for these services. Payment requests for services provided have to contain required medical information that has been approved and accepted by credentialing agencies and health insurance companies. In a focus group discussion on this topic, one physician noted that spirituality is not part of the language used in the medical arena. He added that his medical training did not include a course on how to treat patients needing this kind of service, nor did he learn about assessments or a "laboratory test that indicated a patient was low on his Native medicine." Because spirituality is not part of the routine set of questions asked of patients by physicians, some providers are unsure when to refer patients to the ONM. Some say they do so "intuitively."

Both physicians and practitioners also are concerned about quantification of patients served by the ONM. One provider noted: "How do you quantify the healing of the spirit? How do you put this into a set of numbers? We providers [physicians] may see 40 patients a day, but we may have less impact on these patients than the one who was seen and helped by the practitioner."

When asked if patient health was ever compromised by conflicting advice or treatment offered by Native practitioners, the physicians answered "no"; one explained that this has not happened because the physicians and practitioners work together. He went on to say that some incidents have been reported elsewhere, usually in disconcerting situations where patients were advised by a community practitioner to stop taking medication recommended by a physician.

There also were situations in which physicians felt the presence of a practitioner could be critical to helping patients. For example, one physician recalled a case where a gravely ill patient was brought to the emergency room by his family at 2:00 a.m. Some family members were distraught because other members had advised against taking the patient to the hospital, predicting that hospitalization would only be fatal. There were no Native practitioners on call at that hour to help counsel or ease the concerns of the family, but, because the patient's condition was extremely serious, the physician was able to convince the family that the patient needed immediate help. The family consented but still voiced concerns about going against the wishes of some members. The physician noted that the patient did recover and thought the positive outcome helped relieve the family's guilt. Using this example, the physician commented that it would be helpful to have practitioners on call for emergency room services.

Community members overwhelmingly support the services provided by the ONM, and acknowledge that such services are necessary and important. One community member recalled how he and his family received help from a practitioner when a relative hospitalized in Phoenix could not regain consciousness. The practitioner conducted a ceremony at the family home and, at the end, informed the family that the patient would awaken shortly. "This did happen," explained the community member. "He awakened in two days." A health care provider who is Navajo commented that, in the business of healing, there are always unexplained miracles, and that she has witnessed a number of these "awesome" events when Native practitioners helped patients.

The comfort a practitioner brings to patients, especially those whose health beliefs and practices place emphasis on traditional healing, is viewed by the community as an important service. One community member who is also a practitioner recalled visiting her brother in the hospital on several occasions. She said he had lost his eyesight but knew her when she came to visit. During these visits, she would hold his hand and sing familiar chants, something that brought him contentment and peace in an unfamiliar environment. She and her brother also asked for frequent visits by the ONM practitioners to offer a prayer or encouragement. As a practitioner herself, she valued this support and remarked that she had been taught to ask other practitioners for this service.

CONCLUDING REMARKS

The contribution by the ONM practitioners in a clinical setting represents a significant effort to bring to fruition recommendations made since the mid-1900s for the incorporation of Native practitioners into the clinical and health care arena (Iverson & Roessel, 2002, p. 156), thus enhancing patient-centered care in a number of IHS facilities. Although the scope of services offered by the ONM practitioners is limited as a result of legal policies governing hospitals and the health care delivery system, the practitioners' services are welcomed by many Navajo patients, especially in identifying cultural explanations for health-related problems that are not visible in laboratory reports or present among physical or mental symptoms identified by medical providers. When these cultural explanations are addressed by practitioners, most patients say they feel empowered in facing their health crises and also find comfort and familial support when they are treated with familiar traditional ceremonies.

The operation of the ONM is not without its challenges. Foremost among them is developing a strategy that accommodates these culturally based interventions (or treatment models) into science-oriented medical models. Presently, there are no easy answers to this problem, but it is widely acknowledged that the services of the practitioners are valuable to a large segment of the patient population. How to sustain and maintain this type of service, however, is another challenge. Would

the medical field at large be willing to accept and incorporate these services, and would the insurance carriers be willing to accept and approve payment for these services? The need to institutionalize the cost of services provided by the practitioners at Chinle and other health facilities on the Navajo Reservation is being discussed with some of the insurance carriers. Tribal government employees do have an insurance carrier that provides partial reimbursement for services provided by Native practitioners, but only outside the hospital or clinical setting. One of the key goals in the ongoing discussions is to reach a consensus on a reimbursable set of codes.

The other challenges described by the practitioners are in the realm of patient care, such as moral or cultural conflicts (e.g., advanced directives). Should there be a Navajo version of an advanced directive? These issues are now being discussed among the practitioners and other health care providers.

It could be said that the establishment of the ONM, and the services it provides, have has raised the bar on regarding what is considered culturally appropriate care. Most recommendations call for involvement of traditional healers as consultants to help close the cultural gap in health care, but ONM practitioners actually are delivering care. They do this at their patient's bedside, on home visits, and during counseling sessions. They educate providers on relevant cultural issues, they talk about important health issues from a cultural perspective in the community, and they view their role and services as complementing the allopathic medical care provided to Navajo patients. In this context, the collaboration of Native practitioners with IHS allopathic providers in IHS facilities has resulted in an improved level of patient-centered care for AI/ANs.

Replication of the ONM model will not work in all health facilities serving tribal and urban communities. Each tribe has its own traditional healing system which prescribes who can conduct interventions or ceremonies and where they take place. A Sundance ceremony, for example, cannot be conducted in a hospital or on hospital grounds. Moreover, not every tribal member who seeks health care may want to use the services of a practitioner, or may not want to access such services in a clinical setting.

The health care needs of AI/AN populations everywhere, however, remain critical, making it necessary to provide culturally oriented patient-centered care, which may or may not include services like those provided by ONM. Where intercultural health care models can enhance health care, collaborative efforts should be made to make room for Indigenous tribal health resources.

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A COLLABORATIVE CASE STUDY: THE OFFICE OF NATIVE MEDICINE

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Abstract: National concerns about reducing the persistent health disparities found among varying racial and ethnic populations have led to initiatives to improve health care delivery systems. Many of these initiatives also promote the cultural competence of health care providers as a way to meet unique patient needs that go beyond immediate health problems, and to account for other critical components of patient care, such as health literacy, health beliefs and behaviors, and cultural practices. This case study describes a patient-centered care model developed by the Chinle Comprehensive Health Care Facility on the Navajo Reservation in Arizona, a model that has added a cadre of traditional tribal practitioners as part of its hospital and other clinical service resources.

Various national policy efforts are underway to decrease health disparities, efforts that are coupled with other movements that advocate for patient-centered care. The latter take into account determinants of health that contribute significantly to disparities, including culture and culturally appropriate care provision.

Although the Indian Health Service (IHS) has had the responsibility for providing health care to tribes since 1954, it has utilized only a few traditional tribal practitioners as consultants or staff in some behavioral health programs. Only recently have some IHS facilities started to include tribal practitioners in other health care delivery services, but these expansions have primarily been limited to community health programs (Roubideaux & Dixon, 2000).

One of the important outcomes from the Indian Self-Determination and Education Assistance Act (P.L. 93-638; 1975) has been the opportunity for tribes to contract with the IHS to take over management of their local health care programs. In doing so, several have integrated some of the services provided by their traditional healers or practitioners. In other instances, tribal leaders have negotiated with health insurance carriers to include coverage for certain services provided by their Indigenous practitioners. And while some attention has been paid to the promotion of culturally

appropriate health care in these programs, no systematic studies and/or evaluations have been done on the impact of the services on patient care (Dixon, 2006). While this case study is not evaluative in scope, it does describe and examine one such program, the Office of Native Medicine (ONM).

ONM was initiated on the Navajo Reservation by the IHS's Chinle Comprehensive Health Care Facility (CCHCF). One hospital administrator describes this initiative as the Chinle Service Unit's commitment to providing culturally appropriate patient-centered care (CCHCF, 2013).

The Collaborative Effort

Following an earlier partnership with Chinle hospital staff on a health promotion program, investigators from the University of Arizona approached the ONM staff about a collaborative venture to conduct a case study of the program. Initially, the ONM staff had requested an evaluative study, but, because only a limited description of the program was available, it was decided that a descriptive case study would be more appropriate. The ONM and University Staff developed a proposal, which the University staff then submitted to the National Institutes of Health's National Library of Medicine (NLM), an agency soliciting proposals for a planned exhibit on Native Peoples' Concepts of Health and Illness (NLM, 2012). The proposed study was reviewed and approved by the Institutional Review Boards of the University and the Navajo Nation.

The aim of the study was to explore the following research questions: 1) In what ways do the traditional Navajo practitioners assist allopathic providers with patient care in the hospital and its other clinical settings? 2) In what way do the traditional practitioners interact with physicians and other service providers in the workplace? and 3) How are the services of the traditional practitioners perceived by the physicians, other coworkers, patients, other Native practitioners, hospital administration, and the community? The study method called for the collection of data from multiple sources, including focus groups, formal and informal open-ended interviews, participant observations, filmed interviews, and extensive review of relevant reports and other archival documents related to the program. Study participants were to include former patients, ONM staff and board members, physicians, hospital administration representatives, and traditional practitioners.

Why the Case Study Approach?

In any research endeavor, the research question(s) to be explored routinely dictate the type of design necessary.

Each research strategy has its advantages and disadvantages. Yin (1984, p.1), for example, lists the following three criteria that come into play in selecting the most appropriate research design: 1) the type of research question, 2) the control an investigator has over actual behavioral

events, and 3) whether the focus on contemporary or historical phenomena. The ONM endeavor called for a comprehensive overview as well as examination of the services provided by the cadre of traditional practitioners in this new program. Because there had not been any formal examination or descriptions of how these services were being utilized or perceived, the logical choice was a case study. Gerring (2004, p.352) outlines the following seven characteristics that help determine when it is appropriate to use the case study method: 1) when inferences are descriptive rather than causal, 2) when propositional depth is more important than breadth and boundedness, 3) when internal case comparability is preferred over external case representativeness, 4) when insight into causal mechanisms is more important than insight into causal effects, 5) when causal proposition issues are more invariant than probabilistic, 6) when the strategy of research is exploratory, and 7) when useful variance is available for only a single unit or a small number of units. Case study design is flexible and permits investigation of a well-defined phenomenon holistically and within a real-life context, which can be documented factually with the use of multiple relevant data sources (Baxter & Jack, 2008). The approach is useful for in-depth exploration, although the boundaries between the phenomenon and the context may not always be clearly delineated (Crowe, et al., 2011; Feagin, Orum, & Sjoberg, 1991; Yin, 1984, 1993). The phenomenon under study, however, cannot be examined without its context. The case study approach frequently is utilized in studies investigating Indigenous traditional healing systems—for example, traditional Chinese medicine and India's Ayurveda medicine (Jafari, Abdooahi, & Saeidnia, 2014). Descriptive information gleaned from such case studies often is intended to help identify culturally acceptable ideas or methods that might be borrowed to help increase utilization of modern health care resources by members of a specific Indigenous population (Kaptchuk, 2000; Svoboda & Lade, 1995).

The limitations of case study design are also readily noted, because it deals with small sample sizes that are not amenable to producing reliability and/or generalization, and it has the potential to be biased. As an exploratory research tool, however, the case study approach is useful (Eisenhardt, 1989; Hamel, Defour, & Fortin, 1993; Mays & Pope, 2000; Stake, 1995). In this study, every effort was made to avoid the latter problem by including the voices of many participants in film and in print.

Against the backdrop of the national concern with health disparities, this case study was undertaken to present an in-depth description of a culturally based health resource in one Navajo community in Arizona, the ONM. In addition, this case study utilizes a naturalistic design, rather than an experimental design in which investigators generally control or manipulate the variables. The intent here was to provide an in-depth description of a unique patient-centered care model that emphasizes the importance of culture in the delivery of health care.

Utilization of Indigenous and Western health care resources

Today, many Indigenous communities worldwide continue to rely on health services provided by their traditional healers, sometimes in addition to services received from physicians or other health care providers. When both allopathic and Indigenous health resources are available, patients in need of care often match their perceived needs with one or both of these resources.

Where such systems coexist, they often remain parallel and complementary but not integrated. Torri & Hollenberg (2013) describe these various complementary systems as an *intercultural health approach,* where dual utilization positively contributes to patient care (Mignone, Bartlett, O'Neil, & Orchard, 2007). Mable and Marriott (2001), however, caution that, in order to positively meet the health care needs of their patients, the complementary systems need to be maintained by shared mutual respect as well as a common understanding that both resources do contribute to patient care.

The presence or extent to which Indigenous and Western health care systems coexist is largely dependent on the willingness of providers in the Western health care system to make room for Indigenous resources. Thus, most intercultural health care models are shaped by the degree of flexibility permitted by the local western health care resources and the context in which services are delivered. The context requires the involvement of relevant key entities—that is, the allopathic providers, the traditional practitioners, and the patient population.

In a comparative case study of several intercultural health programs in Latin America, Mignone and colleagues (2007) found three models of collaboration: 1) informal collaboration, where both types of service providers interact and periodically collaborate on patient care at the local community clinic; 2) a more formal model, where hospital or clinic staff schedule days or times when part-time Indigenous practitioners (i.e., herbalists, massage therapists, spiritual healers) can see patients in their clinics; and 3) a model with limited collaboration that permits certain certified or trained Indigenous providers, such as midwives, to have access to physicians and/or receive referrals from physicians (e.g., to assist women expected to have an uncomplicated pregnancy or delivery).

ONM at Chinle

The ONM case study reveals that, unlike the three Latin America models described above, the Chinle ONM model is leaning toward a more formalized, *intracultural* health care service model, where Indigenous practitioners are not only on the staff of the hospital but also collaborate with physicians daily in providing patient care in both the hospital and outpatient clinics. The roles of the practitioners are also more diverse (i.e., in addition to providing cultural diagnostic services, they also serve as consultants, educators, mentors, and counselors).

The establishment of this program in a federal health care system, however, probably would not have been possible without a formal directive from the director of the IHS. In 1994, such a directive was issued by the then-IHS director, Michael H. Trujillo, an American Indian physician. He instructed IHS health care facilities to develop and implement ways to work more closely with local Native practitioners (Trujillo, 1994).

Prior to this directive, the CCHCF staff had made some efforts to make its hospital and some services culturally sensitive. In planning the new the hospital, a special ceremonial room was included in one wing, where practitioners could consult with patients and their families. Two of delivery rooms also were set up to accommodate mothers who requested traditional Navajo birthing positions. Hospital volunteer staff also built a hogan on the grounds of the new hospital for use by practitioners when consulting with or assisting patients and their families.

Understandably, the hospital's ongoing effort to provide culturally sensitive health care services is also due to its location. Chinle is located in the center of the Navajo reservation, a place where natural geographic isolation has helped maintain a strong monolingual (Navajo) population, and where many residents continue to adhere strongly to the Navajo cultural heritage, including use of traditional healing resources. In addition, most of the personnel employed by the IHS are Navajo, many of whom advocate strongly for the provision of culturally appropriate health care services (Knoki-Wilson, 2008).

THE CASE STUDY

Data Sources

This collaborative case study sought to describe 1) the new model; 2) the day-to-day experiences of the traditional practitioners in their work alongside physicians and other providers in the hospital and clinics; and 3) how the services provided by the practitioners are perceived by physicians, other co-workers, patients, other traditional practitioners, and the community. Case study results are dependent on the collection and analysis of data from multiple relevant sources, all converging on the same findings (Yin, 1984, p.78). In this case study, the collection and use of data from multiple sources helped provide a greater range of relevant information about ONM's historical as well as its contemporary services and the perception of these services by co-workers and the community. All of these data sources, collectively, helped to create understanding about the culturally based patient-centered model, how the services provided by the practitioners contribute to patient care, and how their role in the larger health care delivery system is serving the Navajo communities.

The data collection methods included onsite observations, structured and informal open-ended interviews, focus groups participant observations, and reviews of archival documents containing relevant information on the services provided by ONM staff. These documents included the original feasibility study conducted by the CCHCF that led to the establishment of the ONM, ONM staff reports, the hospital's annual report on patient activity, curricula and attendance records from the practitioners' in-service training, and data on a special diabetes course conducted by the ONM and physicians for other traditional healers. Other relevant data included reports prepared by the hospital on its patient services, especially monthly activity reports submitted by ONM staff. The study team also filmed some of the interviews to be included in a 25-minute film, *Two Cultures of Healing* (Native American Research and Training Center 2010).

Language

From the outset, the research team anticipated that some data would need to be collected in the Navajo language. In preparation for this part of the data gathering, the team developed informal and formal interview guides so that questions could be understood in both languages. All interviews and focus groups (in both Navajo and English) were recorded digitally and transcribed. The Navajo data transcription was provided by a highly experienced local Navajo research assistant. The Navajo transcriptions were reviewed and analyzed by the principal investigator and another Navajo graduate research assistant at the University.

Participant Recruitment

In addition to consulting on the questions for the interview guides, the ONM practitioners also were instrumental in recommending possible participants for focus groups and filmed interviews. Those suggested included physicians, administrative staff, former patients, and other community-based Native practitioners. The community partners felt it was important to tap individuals who had been patients of the ONM, practitioners who had attended the program's in-service training, and family members of patients who had used the services of the ONM. Similarly, physicians or other health care providers who worked closely with the ONM were suggested as possible participants.

Focus Groups

Three focus groups were conducted with different groups of participants: 1) ONM practitioners, 2) hospital staff and providers, and 3) a community group. Examples of the open-ended questions that guided the ONM practitioner focus group included: "In what ways do you work with other health care providers in providing care to patients?" and "Tell me about the kinds of help sought most often from the Office of Native Medicine."

The hospital staff/provider focus group also explored a number of questions, including "Under what circumstances are patient most likely to request the services of the Office of Native Medicine?" and "Have there been any examples where allopathic treatments have been compromised or threatened by the use of Native medicine?"

Eight community members were invited to participate in the third focus group, all of whom were Navajo but came from different regions of the larger Chinle community. All were acquainted with the ONM and some indicated that they or a family member had used the services of the ONM. Among the questions discussed with this group were: "What are some ongoing barriers or challenges that face the Office of Native Medicine?" and "In what ways does the Office of Native Medicine help the communities in the Chinle area?"

Each ONM practitioner also was interviewed individually, and, where appropriate, portions of their interviews also were filmed. Questions asked in the open-ended interviews with ONM practitioners included, "In what ways do you work with other health care providers in providing care to patients?" Practitioners had an opportunity to review the transcripts of their interviews, allowing them to correct any misinformation. And, as is customary in ethical endeavors, each person filmed was given a draft of his or her semi-edited section of the film to review and approve.

The research team also conducted other semi-structured interviews with a number of hospital administrative staff, physicians, and patients. These interviews were recorded, transcribed, and, in some instances, captured on film. In all, the film features two physicians, two members of the hospital administration (the director of public health and the assistant to the CEO of the hospital), the ONM practitioners, and two other traditional practitioners from the community, one of whom recounts his own medical emergency. Not all clinical staff or physicians were interviewed, primarily because not all health care providers interacted with the ONM practitioners, especially surgeons, dentists, or other specialists who come on a periodic basis. In addition to the interviews, the film also shows some of the regular activities and services of the practitioners.

Analysis

Jorgensen (1989, p.107) notes that the process of analysis in qualitative research starts with disassembling the collected data elements or units that can be sorted and searched for factual information and categorized by types, classes, or sequences. The units are then reassembled to form meaningful datasets and documentation of study results.

Because the activities of the ONM practitioners ate the phenomenon under study and the research is bounded by this context, the case itself serves as its own unit of analysis (Miles & Huberman, 1994, p.25). Thus, the questions guiding this inquiry focused primarily on services provided by the ONM, and all of the data collected and analyzed had to be directly related to the ONM. Each data source became part of the formal database for producing the study findings; that is, they converged to present a holistic picture of the operation of the ONM.

The process of data reduction helps make the data more manageable and also helps identify key evidence needed to produce the case study findings. For example, one of the first steps in the analysis of the transcribed interviews and focus groups was to reduce the data from multiple pages to those sections or comments most relevant to the study. Guided by a priori sets of study questions, the research team then further analyzed the abridged dataset, sifting for themes, trends, and patterns that contained participants' opinions, firsthand experiences, comparison of services provided or received, etc. The culled thematic data then was converged with other ONM data to compose the case study findings. Some of key points made by study participants were also selected and included verbatim in the study results, while the film also captures some of these voices, which helps add creditability to participants' perspectives.

In addition to the evidence sifted from the interviews and focus group discussions, the university-based research team members verified the observational data by distributing a draft of the findings to the Chinle-based team members. Team members verified via phone that what was reported or interpreted was correct. Any errors or misunderstandings in the observations or descriptions were corrected in the final version.

FINDINGS

Because the accompanying article, *At the Bedside*, discusses the findings in more detail, this section will provide only a summary.

This descriptive case study indicates that the resources of the ONM are appreciated by patients, the community, hospital administration, Navajo employees, and many health care providers, especially those who work closely with the practitioners. The findings also indicate mutual respect

between the practitioners and physicians, especially those who work more closely together. The central patient care role for the practitioners is to provide cultural diagnostic services, as well as some of the minor ceremonies in the hospital or on its grounds. Their value, however, goes beyond these services. They provide patient education, in-service training for hospital staff, and patient consultation, and they also help facilitate training of other Native practitioners on such chronic diseases as type 2 diabetes, a major endemic health problem. They accompany the physicians on grand rounds so that they are able to complement allopathic treatments with their services. In other words, they perform many culturally based services that complement the medical treatments offered by physicians. Most participants in the community focus group indicated an appreciation for the added services and the convenience of having the ONM in the hospital and clinics. From the hospital administrative standpoint, the ONM has helped their efforts to provide culturally based patient-centered health care.

The Navajo patients who seek complementary health services are pragmatic; they know which physical health needs are best met by the physicians, and also when it is necessary to seek the services of the practitioners for cultural diagnostic services—or for referral to another practitioner who can help them with their spiritual and emotional health care needs.

Findings indicate that family involvement is central to patient care for practitioners. Families are welcomed to the counseling or diagnostic sessions to support patients and to help plan recommended ceremonial or cultural interventions. This approach also allows family members to help monitor treatment or intervention outcomes, and lends itself to community evaluation of the ONM program. Care or diagnostic services provided by the practitioners that are not helpful are quickly noted and discussed at community meetings or with hospital administration. Such situations were not found during this case study; rather, it was evident that the practitioners had gained the trust of the patients, the allopathic providers, and other hospital staff, as well as community leaders.

Providing culturally based health services at the bedside, however, is not without its challenges. The long-term sustainability of the program is one challenge, as there are no codes for services rendered by the practitioners under the existing ICD-10 (International classification of diseases). Most of the practitioners are well schooled in their practices, but various legal policies governing the hospital, as well as health care regulations, limit what they are able to do in the hospital setting. Finally, it is important to note that each tribal community has its own Indigenous healing resources and practices, many of which cannot be transported to the hospital setting. The ONM, however, demonstrates that some elements of the Navajo healing system can be delivered safely and appropriately in such a setting as part of patient-centered care.

Limitations

As with all research endeavors, the case study method has limitations. For example, as noted before, if not planned correctly a case study can produce biased findings, either by focusing on atypical individuals or relying on biased expectations (Jackson, 2009). Bias was avoided wherever possible in this undertaking, mainly by keeping the focus on learning about and understanding a single program, which was unique at the time because no comparable programs existed. It is possible that the selection of data sources and interview participants could be considered biased, but for the purpose of this case study, it was necessary to give priority to sources most knowledgeable about the program, and to obtain data from different perspectives (e.g., community, patient, providers).

Another shortcoming of the case study method is that the outcomes cannot be generalized due to the qualitative nature and small sample size. Again, because this was an exploratory, descriptive case study, generalization was not the intent, although every effort was made to be objective.

We attempted to avoid these pitfalls not only by making this case study collaborative and reporting on the program in its natural environment, but also by including a cross-section of participants who are knowledgeable and respected by their communities and peers. In addition, we made every effort to keep participants' voices in all of the data.

Dissemination

The project took longer than a year to complete. The case study and the accompanying film were begun in late 2007, and most work was completed in 2010. Delays were due to processing of the award and to extra time needed for film editing and waiting for feedback from key participants on the film and on drafts of the final report. When both of these deliverables were ready, each case study participant, the NLM, and two Institutional Review Boards received copies of both products. One of the conditions placed on approved research by the Navajo Institutional Review Board is to ask investigators to report the results of their study at one of its annual research conferences. The study team did deliver the results and showed the film at a conference.

Lessons Learned

In most tribal and other Indigenous communities, there is considerable resistance to granting researchers permission to study traditional healing ceremonies. This resistance is understandable, as some tribes have encountered unethical researchers whose publications or studies have exploited information considered confidential or sacred, or have contributed to negative stereotypes. As a

result of these experiences, most tribal communities now have established research protocols as well as a designated research committee charged with reviewing and approving research proposals that have the potential to benefit their communities.

Increasing numbers of funding agencies also now require investigators to include documentation of tribal support for their proposed studies. In addition, more community-based studies are being conducted under joint partnerships between the investigators and tribal entities, e.g., staff from the tribal epidemiology program. Such partnerships not only create research-related capacity-building opportunities for tribes, but also help foster cultural competency for academic researchers. The ONM case study benefited from such a partnership.

The case study provided an opportunity for the community partners to explore how the new ONM program was being delivered and how its services were perceived and utilized by the patient population. It also allowed an opportunity to learn how the services of the practitioners were perceived and utilized by physicians, other health care providers, and the hospital administration. The investigators benefitted from the partnership by having experienced and skilled partners who were not only familiar with the daily workings of the ONM, but also could provide input into the overall research agenda from the beginning through dissemination of the results. The researchers also were assured access to study participants that would not otherwise have been possible without time-consuming recruitment efforts. The data analysis also was enriched by the contributions of the community partners, especially those who had more expertise on culturally based healing practices. Their perceptions helped framed some of the key concepts that emerged from the narratives (e.g., ideas about the importance of kinship as mediator in provider/patient relationships, or the emphasis placed on family involvement in patient care).

This case study does not detail a particular diagnostic process offered by the practitioners, nor does it specify the healing ceremonies they have recommended; however, findings illustrate that the diagnostic component of the traditional Navajo healing system can be delivered within an allopathic setting and can enhance culturally oriented patient-centered care.

Finally, the completed ONM case study can also help pave the way for a more rigorous study that evaluates the impact of this program on patient care, retrospectively or prospectively.

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AMERICAN INDIAN VETERANS AND VA SERVICES IN THREE TRIBES

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Abstract: The purpose of this project was to describe experiences of reservation-based American Indian (AI) veterans with the Department of Veterans Affairs (VA), and to identify opportunities for improving care and services. Focus group discussions and individual interviews were conducted with AI veterans, family members, and community members in three diverse tribes. Results showed that many veterans in tribal communities experienced challenges receiving services and benefits from the VA, including lack of culturally competent care, transportation problems, and difficulties navigating the system. Family members, often main caregivers for AI veterans, lacked necessary resources, including sources for information, support services, and financial means to procure adequate care. A number of strengths also were identified, including local leadership and a strong community commitment to improve care for veterans.

American Indians and Alaska Natives (AI/ANs) enter into military service at higher rates than those of other racial and ethnic groups (Holiday, Bell, Klein, & Wells, 2006). They are also the least likely to access veterans' benefits compared to other race groups. Indeed, only 55% of enrolled AI veterans have been estimated to use Veterans Health Administration (VHA) services, the division of the Department of Veterans Affairs (VA) that delivers health care (Kramer, Wang, et al., 2009). Research to date suggests that the low levels of access are rooted in multiple causes, including use of Indian Health Service (IHS) instead of or in addition to VHA services; complex and often confusing systems of care spanning federal, state, county, and tribal jurisdictions; long distances; and cultural dissonance in care provision (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009; Shore, Kaufmann, et al., 2012; Westermeyer, Canive, Thuras, Chesness, & Thompson, 2002). AI/AN veterans are disproportionately rural, and are highly rural compared to other racial and ethnic groups (Kaufman et al., 2013), adding to transportation and health care costs. Additionally, cultural practices or traditions may shape health care decision making in unique ways (Noe, Kaufman, Kaufmann, Brooks, & Shore, 2014). The VA has made recent strides in outreach to this population, including telemental health outreach, Tribal Veterans Representative training, and the establishment

of the Office of Tribal Government Relations (Kaufmann, Richardson, Floyd, & Shore, 2014; Shore, Brooks, et al., 2012). Indeed, the renewal of the Memoranda of Understanding between the IHS and the VA in 2010 formalizes a commitment by both entities to strengthen partnerships and improve care for AI/AN veterans (IHS & Department of Veterans Affairs, 2010). However, effective coordination of federal entities will only occur if it can be integrated meaningfully into local context. To date, little is known about variations in those local experiences, or how those experiences have shaped current needs of AI veterans and their families in tribal communities. With a mandate to reach out to rural veterans and their families, the Office of Rural Health of the VHA supported this project, through an academic partnership, to assess the local context of veterans in rural communities. The goal of this project was to give a voice to those who are most affected by services and programs offered by the VA and to identify priority programmatic and service issues which may foster VA-tribal collaboration. We used focus groups and in-depth interviews with AI veterans, family members, and community members to describe experiences and perceptions of care in the VA and IHS. We then present local recommendations for changes or improvements that may facilitate VA-tribal partnerships to improve AI veteran health.

METHODS

We identified three culturally and geographically distinct tribal communities across the nation for participation in this project. Three tribes were chosen to exemplify different experiences of AI veterans living within them. Selection was based on region (one each from the Northern Plains [NP], Northwest [NW], and Oklahoma [OK] tribes), varied level of engagement with VA and IHS services (see Table 1), and contacts suggesting the community might be open to participating in the project. (Part of our agreement with tribal partners was to maintain community confidentiality. Thus, we do not use specific tribal names, but instead refer to general descriptors, such as regional affiliation).

Table 1
Schematic of Distribution of Service Structure for Participating Communities

	Mostly IHS only	Mostly VA only	Mix VA-IHS
Community 1	X		
Community 2		X	
Community 3			X

The project was conducted following basic tenets of community-based participatory research (CBPR; Israel et al., 2003; Wallerstein & Duran, 2006) and methodologies common to grounded theory (Martin & Turner, 1986). Through contacts, we identified local liaisons who worked closely with veterans in their respective communities. First, we asked these persons to confer with local

veterans about their interest in a veteran-specific needs assessment project using focus groups in their community. All liaisons initially contacted indicated that local veterans responded positively to the project idea. The liaisons, working closely with the project team, then assisted with logistics of the data collection, including reviewing discussion guidelines, coordinating tribal approval, recruiting, and securing an appropriate venue.

We asked veterans, family members of veterans, and community members who worked closely with veterans to participate in focus groups and individual discussions. To be eligible for the project, participants had to be age 18 years or older. Enrollment in the VA was not a condition for participation for veterans. Family members included those persons viewed as family culturally, regardless of legal standing. Community members were those involved in veteran life in some way, whether through employment or volunteer positions in tribal programs (e.g., health, housing, transportation) or in other local organizations (e.g., churches, radio stations, off-reservation philanthropic organizations). Recruitment strategies varied by community, but generally included some sort of public announcement (through local papers, fliers, or radio) and word of mouth. While initial interest in the project was high among veterans, enthusiasm to participate was tempered by a long history of mistrust of both the VA and research. We assured interested veterans of research confidentiality (e.g., names would be deleted from transcribed materials) and that no formal note of participation would be added to a VA file (if one existed), as is the case for clinic-based studies within the VA. We also informed them that we could not protect their privacy if those in the room disclosed to others what they stated during a focus group—an important qualifier in small, tight-knit communities. The project received Institutional Review Board approval from the VA and the University. We also obtained approval for the project from each of the three tribal communities.

The discussion guideline was developed in an iterative process. Initial drafts were developed with physical and mental health care providers who had expertise in AI veteran care. We then sent the draft to the community liaisons for review, with an invitation to share with and elicit comments from other appropriate persons in the community. Main themes included questions about veteran life; experiences with VHA care, IHS care, and coordination between them; barriers to care, including transportation, cultural competence, and accessing benefits; and facilitators of care, such as special programs or services, or outreach events or processes. Additional topics included role of family members, community services, and general veteran life and activities in the community. Finally, each discussion ended with questions about participants' recommendations and next steps to improve AI veteran health.

We conducted a series of three focus groups with AI veterans, family members of veterans, and community members, respectively. Focus groups provide a means for exploring beliefs, attitudes, and experiences conversationally. Participants can build on one another's comments to generate or

refine common themes. In addition, on the advice of the community liaisons, we offered individual interviews. They indicated that some veterans may not be able to cope with group settings, and, in general, participants of any type may prefer private conversations about sensitive topics. A team member experienced in qualitative methodology, including individual and group discussions in tribal settings, facilitated the focus groups and individual interviews. All participants were given the opportunity to read the consent form, and it also was described verbally to account for any individual challenges in reading or understanding. Safeguards for confidentiality were described, including a request for participants to keep confidential all discussion occurring in group settings. All but two conversations were audiotaped and then transcribed. The other two conversations, both individual interviews, were not audiotaped at the request of the participants. In these cases, extensive notes were taken and integrated into the transcription material. We also asked participants to complete an anonymous demographic background questionnaire; these data were aggregated to describe group characteristics. All participants provided informed consent and were offered $50 in compensation for their time.

Analytic Plan

All recordings were professionally transcribed. An integrative approach to classifying material was used, including both inductive and deductive development (Bradley, Curry, & Devers, 2007). Specifically, the lead facilitator identified the major and subordinate themes crossing communities, as well as community-specific themes. One other staff member reviewed the content independently to validate choice of themes and subthemes. A third staff member identified quotations that were most representative of the themes and subthemes. The lead facilitator then reviewed the quotations and categorization. Any inconsistencies in the process were resolved through discussion with project team members. All team members then reviewed the quotations again for representation of content and representation across participants and communities. Due to space limitations, we were not able to use all selected quotations in this article. However, we included as many direct quotations as possible, because the words of the participants provide the most authentic statement of their experiences. Because many veterans were concerned that speaking out about the VA might result in decreased benefits or services, we do not identify the quotations by community to protect confidentiality. We do identify method of interview (focus group [FG] or individual interview [I]), as well as type of participant (veteran [V], family member [F], or community member [C]).

We provided the opportunity for participants at all sites to review the final draft report and provide feedback on the content, including confidentiality, synthesis of material, identified themes, and recommendations, consistent with CBPR principles (Israel et al. 2003). The final draft report included masked identifiers, similar to those in this manuscript.

RESULTS

In total, we held seven focus groups and seven individual interviews across the three communities, for a total of 42 participants (see Table 2). One focus group was conducted with women veterans and one with sheltered homeless veterans, per request of the local liaisons. Participants were primarily Vietnam-era veterans, with most branches of the armed forces represented; most had graduated from high school, and the majority were male.

Table 2
Demographic Description of Participants

	Northern Plains		Northwest		Oklahoma	
	(*n* = 11)		(*n* = 18)		(*n* = 13)	
Average age (Years)	48.8		58.9		67.5	
	n	%	*n*	%	*n*	%
Number of males	7	64%	14	78%	9	69%
Race (multiple responses possible)						
American Indian/Alaska Native	11	100%	17	94%	11	85%
White/Caucasian	--	--	2	11%	2	15%
Native Hawaiian/Pacific Islander	--	--	1	6%	--	--
Hispanic/Latino	--	--	--	--	1	8%
Education						
Less than high school diploma	1	9%	3	17%	2	15%
12th w/GED or diploma	3	27%	3	17%	3	23%
Some college	3	27%	9	50%	6	46%
College +	4	36%	2	11%	2	15%
Missing	0	--	1	6%	0	--
Period of Service (multiple responses possible)						
No service	1	9%	3	17%	3	23%
Korean or earlier	--	--	2	11%	2	15%
Vietnam	5	45%	12	67%	5	38%
Post Vietnam through Gulf War	3	27%	1	6%	2	15%
Operation Enduring Freedom/ Operation Iraqi Freedom	1	9%	0	0%	0	0%
Branch (multiple responses possible)						
Air Force	1	9%	1	6%	--	--
Army	9	82%	7	39%	3	23%
Marine Corps	1	9%	3	17%	4	31%
National Guard	--	--	--	--	1	8%
Navy	--	--	1	6%	--	--
None	1	9%	3	17%	4	31%

Discussions provided many perspectives and insights into AI veteran community life. Below, we summarize common themes, including community life, VA experiences, family roles and experiences with AI veterans and their care, and housing. Finally, we asked participants to discuss their views of promising pathways to improve AI veteran health. Of note, the quotations draw from perceptions or experiences of AI veterans and those who care for them. Not all quotations describe benefits accurately, and individuals' eligibility for benefits likely varied greatly. The intent in reporting the results is to demonstrate local perceptions of benefit rights, responsibilities, and experiences rather than to determine an actual portfolio of benefits.

We also present short statements to provide context for the included quotations, which might otherwise appear confusing or disconnected. These statements are not intended to be interpreted as results, but to facilitate understanding of the quotations.

Tribal Communities and Veterans

Research on veteran health care often focuses on individual veterans or on a health care facility or service. However, community life for reservation-based AI Veterans is also an important influence on health. Most participants indicated widespread community respect for veterans. Indeed, veterans traditionally have held a revered place in AI communities. Many were quick to point out that, compared to veterans of other racial and ethnic groups, AI veterans consistently are honored publicly (Beals et al., 2002).

Well I think the Native Americans, they honor their veterans. I mean they're always recognized at different community gatherings and things like that. Dinners, suppers, powwows…So I think we're more fortunate than most people….They give you caps, blankets, sometimes different things. That has been my experience here, and most of the [region], I think that's the way it is.

-V (FG)

One veteran participant (I), when asked why veterans are so important to tribal communities, offered this quotation from Tatanka Iyotaka (Sitting Bull):

Warriors are not what you think of as warriors. The warrior is not someone who fights, because no one has the right to take another life. The warrior, for us, is one who sacrifices himself for the good of others. His task is to take care of the elderly, the defenseless, those who cannot provide for themselves, and above all, the children, the future of humanity.

She explained that veterans are held in such high regard because they align bravery with sacrifice for the survival of the community. The importance of veterans within tribes is a substantial strength to service provision. Indeed, it is this view of honoring and respect that drive many tribal programs to serve veterans—sometimes in partnership with the VA or the IHS, sometimes independently as a tribal response to that cultural priority.

VA Experiences

When conversation turned to the VA, many expressed frustration, distrust, and, at times, anger. Many veterans described a lack of information and assistance, dismissive personnel, and, at times, active obstruction on the part of the VA. These problems were reported to begin with the transition to civilian life. Many Vietnam-era veterans, for example, reported not receiving any information at all about benefits when they left the service.

> When you apply, when you're going in, you get all the combat stuff you need to go in combat. That is given to you. You're trained to do that, to get that. What do they do when we're getting out? Nothing. You have PTSD [post-traumatic stress disorder]. You have your people that are wounded. You have people that have all these issues. Why is it they cannot give you that package as you leave that says, "Here's a place to go, and this is how you receive it"? And why isn't that happening? See, that question, when I was getting out, I asked that question at that time, and nothing is happening.
>
> -V (FG)

Veterans from later periods of service also reported challenges in figuring out enrollment and benefits:

> And then it was about a year after I got back, I got a packet of information in the mail, they have case managers at the VA but the lady, she was deployed, and so they didn't have anybody to fill in her position. I had one appointment with her… so I never got [the information].
>
> –V (FG)

Underlying many of the stories of accessing benefits was a theme of prejudice, discrimination, and stereotypes.

> But because we're Native Americans, that image of us getting all this free government money is out there. It paints a picture…Maybe that's why it takes so long. "Oh, just put it over here, they'll be taken care of with Indian Health."
>
> -V (FG)

> Yeah. And we were informed at the last meeting we're better off not putting Native American on our claims. To get services faster.
>
> -V (FG)

For many, an unfortunate history of weak outreach and follow-through, insufficient cultural competence, and a general lack of resources contributed to many years of real or perceived VA neglect (Westermeyer et al., 2002). These feelings often were the first to be expressed, and often were expressed in strong terms. However, the experience was not universal. Many veterans and family members, particularly of one community in the sample, noted a VA system that worked well:

> I've been going to VA for a long time, and they always been nice, you know.
>
> -V (FG)

In that community, several factors may have been influential in supporting positive views: First, this community is not as geographically isolated as the others, making transportation to appropriate care possible. Second, this community has an advocate who works proactively on veterans' behalf to secure benefits. Third, the expectations differed. Veterans did not feel they missed out, necessarily, but simply did not need services for a long period of time.

Participants expressed varying opinions about the role of veterans in seeking VA services. Some held the view that veterans were expected to seek out those services.

> I understand, in a way, the VA that they cannot know when all these guys are coming in. I mean, they know by papers. They cannot go and chase them and say, hey, you know, how you doing or anything like that…It's like going to a doctor. Doctor is not going to go looking for you if you are sick… Same thing with the veterans.
>
> -F (FG)

For others, seeking help, even when those services had been earned, is counter to cultural values:

I am a firm believer that one should do all that they are capable of doing to help themselves before seeking help. It's this value instilled in me from grandparents and parents that hindered my application for VA benefits.

-V (FG)

Intertwined with beliefs about help seeking is the experience of the process. VA applications, appointments, and paperwork can be daunting.

When finally they get the courage to sign up, they are told they need more evidence, and these vets often don't have the skills to get that evidence.

-C (I)

One can get frustrated. Like which meetings are we supposed to go to or what meetings we're not supposed to go to? Which ones are you going to re-file if you don't do it within 30 days? And that gets a little confusing. Like, I'm kind of wondering if this was supposed to be one of the 30-day things or not now. I'm confused, you know, because that's what they've been telling me on the phone. If you don't make it within this 30-days, you're going to have to re-file. Re-file what, you know?

-V (FG)

The confusion is compounded by eligibility requirements for benefits across the VA and the IHS systems of care. Most IHS facilities are required to serve tribally enrolled AIs, and the VA is required to provide services to eligible veterans. However, scarce resources and misinformation often result in confusing care options, and eligibility often is freely interpreted by local facility representatives:

I'm an Indian so I came to the Indian hospital. And [the IHS] said no. Said I'm a veteran, I'm an Indian veteran. And I went to the veterans, and here they said "no" next. So I said how come I'm a veteran and I'm an Indian but I can't get into the [IHS] hospital and I can't get into [VA] hospital. Something's wrong here.

-V (I)

Across communities, the power of personal stories became clear in discussions. Veterans and those serving them often recounted the influence of others' experiences. Many began their own stories about not trying to obtain benefits based on others' experiences:

You know, I know a Native American veteran who got injured over there, and they just completely denied him… I mean when you're got this bureaucracy and they put those hurdles in front of you that are time consuming, I mean who would want to?

-V (FG)

Yep, we got a lot of veterans here. They were in Iraq and Afghanistan. They don't want nothing to do with the [VA] service because I think they hear us talking about it, how long it takes, and how frustrating it is to us.

-V (FG)

While hearing about others' experiences at times created barriers—when stories of delay and denial spread through the veteran community—stories also can facilitate outreach and enrollment. Many veterans commented that, as others in their communities had finally gotten benefits, sometimes after many years, they were considering applying.

Family and family services. Family support and relationships are critical to AI veterans' lives and their care. Often family members are the ones who help with—or sometimes hinder—appointments. Others in the family who have served are key to assisting more recent veteran family members with transition, including paperwork and benefits, but also by providing emotional support and help with the immense social, psychological, and financial changes associated with a transition back to civilian life. Family members also are the people who are most likely to feel the initial brunt of difficulties in transition or mental health problems of their veterans.

It's tough on family. How does the family deal with it? What do they do? They just become part of it. Then when things happen because we love somebody so much, we just learn to live with it...

-F (FG)

It gets scary, sometimes. He doesn't do it intentionally. It's stuff that he does when he's asleep. He hits, bites, kicks. Kicked a hole in our wall, thought he was in the war… But, I love him a lot and care and hope that he gets some kind of counseling and stuff because you want them to get better, so we can be better and not be scared.

-F (FG)

Most participants did not know of any programs for families, though a few had benefitted from such programs. All acknowledged that such services were vitally important to care for the veteran as a part of the whole family. In fact, many veteran participants were themselves children of veterans. One reflected on his perceptions of generational patterns of PTSD:

But what I learned from that was that the majority of my generation and my parents' generation all have PTSD because of the way they were raised, and those who were in the military, their military experience was, for the most part, was my father's generation was in World War II and the Korean War. And they never were treated. And as a result of that, it affected their ability to serve functionally in a family. And that, in turn, affected their children and their relationship with their wives, their spouses. And so there was a big—it created dysfunction all the way to my life.
But just for my own personal experience, we went through—my parents went through a process of cultural genocide where [government] tried to beat our culture out of us, and you had an education system where we experienced some of it ourselves but not so much as our parents, when they got penalized for speaking their language. They couldn't go to their spiritual ceremonies because they would be penalized. Whatever benefits they were receiving, they would be cut off.

-V (FG)

…It's like we have one foot in two worlds all the time. And people are constantly scared. If we do something we're going to lose this, or we have to sacrifice this, or we have to sacrifice a part of our life in order to move forward.

-V (FG)

Addressing trauma linking generations is key to successful service provision in AI communities. Trauma in these settings is not just about war experiences. It includes multiple traumas over a turbulent history, such as disease, genocide, forced relocation, broken treaties, and a systematic

deculturation through the education system (Dixon & Roubideaux, 2001; Evans-Campbell, 2008; Shelton, 2004). The result has been a traumatized people, with the added anguish of war for veterans and their families (Beals et al., 2002; Manson, Beals, Klein, & Croy, 2005).

Housing

The topic of housing arose in all communities. Certainly the topic was not a surprise in the homeless group. Still, others clearly struggled with obtaining this benefit they had earned. The comments reflect the ambiguity in jurisdiction: Is this the tribe's responsibility, through federal monies allocated to tribes to provide housing per treaty agreements? Or is it a VA benefit, earned through the course of military service? How can veterans overcome barriers to securing land through the tribe and loans through the VA?

> Another comment I want to make is why the VA wouldn't help me get a home when I got back. It's because I lived on the reservation. That's bull, because they told me if they bought me a home I'd have to move off the reservation and then they'd buy me a home, which isn't right, you know.
>
> -V (FG)

The veterans at the homeless shelter expressed similar sentiments.

> But we have a housing program here… Most of the veterans [in the shelter] are trying to get out [of the shelter] and get into the other houses. But they (the tribe) said they can't set aside any homes because there's too many people for homes, and they can't prioritize us (the veterans).
>
> -V (FG)

For many non-AI veterans, housing benefits and homelessness are often two separate issues. In many urban communities, for example, housing is available, but an individual's situation (unemployment, mental health, etc.) may result in homelessness. In contrast, housing simply is not available in these tribal areas even if a homeless AI veteran's economic or psychological situation may improve so that he or she can support responsibilities of accommodation.

Local Veteran Advocates

All three communities in this project were characterized by strong veteran leadership—sometimes an individual, and sometimes various individuals supported by veterans' committees or the tribe. Characteristic of advocates varied greatly, and were not easily defined by veteran status, gender, tribal membership, or age. Advocates' positions were sometimes supported by the VA, sometimes the tribe, and were sometimes voluntary. These advocates tended to have a sustained presence in the community, were deeply committed to the service of veterans, had developed skills in navigating the VA and IHS systems, and were persistent in facilitating VA enrollment or case review even of reluctant veterans. The differences these individuals have made to local veterans' lives cannot be underestimated.

> You know, I think the reason [advocate] is working so good is she has some compassion for the people, for the veterans. I think I never would have come back, in fact, to ask for upgrade if it wasn't for [advocate]. But she said, "I'm not going to let you go. You deserve it and you're going to get it. I'm going to help you get it." And I did.
>
> -V (FG)

When participants were asked what advice they would give to a recently returning veteran to the community, most responded that they would first send that person to the local liaison.

Local Views of Next Steps

We concluded the discussions with questions about recommendations that participants had for services to assist veterans. These questions prompted many creative and thoughtful ideas generated by participants' experiences with the VA—all of them relevant for future VA-Tribal partnerships. Several themes emerged across all three communities, including specific health services, local support services, and improvements in the VA process or coordination of care with the IHS. While some participants remained skeptical about improvements in VA services locally, others saw opportunities, including help with transition to civilian life and enrollment, expanding VA expertise in chronic pain services, incorporating spiritual components into care, supporting local advocates and veterans' family members, and increasing cultural competence. For the latter point, participants recommended that the VA also educate them about the VA culture and expectations. The ideas, summarized in Table 3, could be starting points for coordination and partnership with the VA. The VA already has started programs for some of these items (e.g., traditional healing services); because this area already has a foundation, it could be a basis for further collaboration.

**Table 3
Summary of Local Resources, Plans, and Suggested Next Steps**

Theme	Specific Recommendation	Quotation
Health Services		
	Home visitation programs	But, [IHS doesn't] understand combat vet mentality. What we did see was the rural program [of the VA] would go in-house, and I like that program for the vets, –if there's a relationship established with that provider. -C (I)
	Expanded chronic pain services	The VA is a good thing for the vets that have chronic pain issues because our IHS don't like to deal with the chronic pain issues... -V (FG)
	Spirituality	When a man is healed from the inside out, many of the outward manifestations stop or do not occur. The shortest and quickest healing for veterans will be found in the area of spirituality. -V (I)
Support Services		
	Local leadership	I've heard rumblings of a couple people that come back from Desert Storm or Iraq, they're isolated. They won't talk to anybody... Let them know there are people available like [local advocate] who's very assertive, very aggressive, and dependable. That's the type of person that we need here in this community. -V (FG)
	Family support services	I am going to start a PTSD support group... and see how that goes. Eventually, within that PTSD support group, we'll identify families that are in need. -C (I)
	Veterans community spaces	They could have this place for the Veterans, you know, just Veterans to come, to have like a library or so they could drink coffee, ...Because a lot of Veterans are uncomfortable being around other people, ...But if you're talking to Veterans, you can talk amongst yourself and laugh and talk and have a good time... -V (FG)
VA Process		
	Cultural sensitivity	It would be good if we could get somebody who would take the time to understand what our traditions mean to us. -F (FG)
	Personnel resources	Need an action plan that works—VA hires at the top and it looks good on paper, but not enough happening on the ground. -V (FG)
	Tribally based VA office	I believe my people here in [tribe] are more than capable of running their own VA Office on the reservation and would be more successful at it. -V (I)
	Listening skills	I think the big thing for transition for people getting out is just listening to them. It would be nice to have some kind of support group for them to just sit there and listen. -V (FG)
	Coordination with IHS	I don't know what it is, but I've heard about it... It's some kind of MOA or something between [IHS and VA]. They're supposed to work together. But I don't know – I've never seen that happen. -V (FG)
	Transition from discharge	I was so grateful to have my cousin and one of my best friends that got back before me... you get all the information before you get out of the service, and they tell you to enroll in the VA and about transition, but, I mean, it's so overwhelming you're just hit with all this information and it's hard to remember everything -V (FG)

DISCUSSION

The conversations of this project were emotionally charged—from anger to gratitude. Sharing experiences took tremendous strength and courage. The veterans themselves often were severely afflicted by PTSD. For them to come forth at all, much less in a group setting, was a highly courageous act. Moreover, these communities are small and group members knew one another. While this familiarity often turned into a strength as they drew support from other participants, no anonymity existed. Veterans risked making statements in front of others they knew—statements that could easily be taken outside of the room for others in the community to hear eventually. Finally, participation in these discussions was no guarantee of improved services, although some may have hoped for such an outcome. The following two quotations, both from the same group of participants, exemplify the tensions between these risks and benefits:

> It's been 40-some years [without receiving benefits], [for] some of them longer than that. Now, again, too, what's going to be the end result of this meeting? …See, that's the frustration…like I said, "Here's a hoop, you jump it, then we might give it to you."
>
>   -V (FG)

> I'm glad I came. I want these guys—I hope they get all their benefits and everything. I went through a lot of hard work to get mine, but I'm glad for them. Maybe my healing can start.
>
>   -V (FG)

While VA programs for AI veterans have been expanding in recent years, and veteran eligibility for benefits varies widely across veterans, the real or perceived lack of access to them continues for many. Feelings of frustration or anger shape present experiences in important ways. From outside perspectives, these discussions may easily be dismissed as negative or destructive. This would be a mistake. First, culturally, storytelling is critical. Stories retell events, display responses, and offer parables to guide future actions (Hodge, Pasqua, Marquez, & Geishirt-Cantrell, 2002). Second, the conversations about these experiences may be an important part of healing, as several veterans noted after the discussions—dismissing them precludes that possibility. Third, the discussions offer an implicit invitation for the listener to understand the community and those who live there. Stories of VA experiences—both good and bad—spread quickly. Those dedicated to serving veterans know that stories about veterans who were successful in obtaining benefits, or

receiving needed VA care, are powerful in encouraging others to seek services. In sum, as veterans themselves noted, listening to and affirming experiences will help build relationships necessary for effective service provision in these communities.

The three communities participating in this project were highly diverse in their culture, history, care experiences, and opportunities. Anger and frustration, for example, were not universal across or within communities, and, indeed, some participants' accounts of their experiences may be likened to local models of best practices. In spite of the diversity, several common themes emerged in all settings. First, local advocacy for veterans is paramount. Community advocates had achieved the trust of local veterans by demonstrating their ability to work within the system to obtain benefits that often seemed unattainable. Supporting this advocacy – including developing relationships with tribal leadership – and providing additional resources for "on-the-ground" work with AI veterans is key. Programs such as the Tribal Veteran Representative trainings, which build local leadership, are vitally important to maintain, enhance, and extend throughout AI communities (Kaufmann et al., 2014).

A second major theme was the role of families in veterans' well-being. Veterans often referenced lost or destroyed relationships, for which they held themselves responsible, and expressed regret and frustration for their inability to maintain important relationships. For family members, the focus was first on the veteran and their confusion about how to access a system to get needed help for him or her. Family members and veterans also talked about the apparent lack of emotion among veterans. The concern was not just about the lack of capacity, but the effect on others—the generational extension of trauma. Although the VA has begun to implement programs to support family members, focused efforts tailored to AI communities (e.g., addressing intergenerational trauma) likely could build on extant strong family and kinship ties.

Housing was a third common theme to all three communities. This topic came up unprompted in many discussions; in others, it was one of many topics presented in a list of issues affecting veteran life, and elicited animated discussion. Home loans and other assistance for housing are a part of the benefits earned through military service—one that AI veterans living in many tribal communities have difficulty accessing. In part, this difficulty is due to the lack of housing options in tribal reservation communities in general. Housing, a part of treaty rights for many communities, often precludes ownership. Transitional housing is not common, and many veterans do not have access to land on which to build new housing. While current VA programs to address housing in tribal communities, such as the Native American Direct Loan program, are intended to alleviate some housing problems, such programs often include substantial barriers. For example, an MOU between a tribe and the VA must be in place before any veteran in that community can apply for a loan.

A final theme across all communities was the hope and expressed need for an improved relationship with the VA, ideally coordinated with the IHS—a finding also reported by Kramer, Vivrette, et al. (2009). The relationship of veterans with the VA varied tremendously by community. However, all discussions illustrated a desire for improved relationships along several dimensions: (1) assistance with forms, appointments, and coordination of care; (2) continuity of VA services personnel, and (3) a bidirectional opportunity to learn about culture—VA understanding AI culture, but also veterans and their families wanting to understand VA "culture," including processes and expectations. For example, The VA has three main departments that provide programs, each with different responsibilities and eligibility criteria. Many veterans did not distinguish among them. While not necessarily surprising, because the VA is often perceived as one large entity, the lack of information about administration of services across the three departments may have contributed to confusion and frustration.

The findings of this project should be interpreted cautiously. Participants expressed concern about confidentiality, which may have hindered some discussion. We included only three communities in this project, and, within communities, just a small sample of eligible individuals participated. Although we chose communities carefully to demonstrate variation, and worked locally to recruit those with diverse experiences, the sample is not representative. For example, the mean age of participants in each tribe varied considerably. While no deliberate action caused the age difference, the conversations may have been shaped by issues that varied by age. Similarly, the veterans in this project primarily served during the Vietnam era, and so the views expressed may not be generalizable to those of other periods of service. Of particular note is the lack of participation by veterans of recent conflicts. Although some participants speculated that the lack of involvement may reflect a wish for distance from all things military immediately after discharge, or a generational gap by period of service, these veterans represent a growing proportion of all veterans, and their views and experiences will be especially important in future planning.

Even with these limitations, the discussions brought forth important insights into AI veteran life in tribal communities. The three communities included in this project reveal strong support and respect for veterans. This characteristic of tribal communities, extending far beyond these three, is a significant resource for any collaborative efforts serving the veteran population. Relationship building and advocacy were common themes throughout the discussions. A foundation of trust will provide immense opportunities for creative and innovative ideas for improved care for this important population.

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ESTABLISHING THE RELIABILITY AND VALIDITY OF THE SOURCES OF STRENGTH IN ONE AMERICAN INDIAN COMMUNITY

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Abstract: Strength-based approaches that explore resilience and health among Native communities are needed. This report highlights the results from a sources of strength inventory reported over a 2-year period by participants (N = 48) from a Montana tribe who attended cultural camps. The authors found the sources of strength scale to be a reliable and valid measure for the population (N = 11 items, α = .945). The community plans to use the results of this study to inform and promote strength-based measures grounded in the resilience of youth, families, and culture.

INTRODUCTION

American Indian (AI) communities possess many strengths, rich in cultural heritage, tradition, language, and kinship systems that serve as protective factors for youth and families (Allen, Mohatt, Fok, Henry, & Burkett, 2014; Zimmerman, Ramirez-Valles, Washienko, Walter, & Dyer, 1996). These strengths have led to many healthy generations; yet, measuring and reporting protective factors in AI communities often is overshadowed by prominent risk factors and enduring health disparities (Gone & Trimble, 2012). Major gaps in educational achievement, extreme economic disadvantage (Beckles & Truman, 2011), and ongoing traumas (Ehlers, Gizer, Gilder, & Yehuda, 2013) are well documented. These disparities, coupled with deficit-based prevention paradigms (Thomas, Quinn, Butler, Fryers, & Garza, 2011), pathologize Native communities and fail to illuminate strengths or promote solutions for addressing disparities.

Strength-based approaches that explore resilience and health among Native communities are needed. Conceptually and theoretically, these approaches make sense. Strength-based measures are an alternative to traditional deficit-based measures made up of intrusive questions on sensitive topics like suicide, substance abuse, and illegal behaviors (Gonzalez & Trickett, 2014), which may create distrust between researchers and communities; moreover, deficit-based data are often inaccurate (Allen et al., 2014) because individuals may feel the underlying approaches are not

culturally and contextually sensitive and may not respond truthfully (Green, McAllister, & Tarte, 2004). In contrast, universal protective factors, including self-efficacy, positive relationships with caring adults, internalization of social norms, cultural involvement, and availability of community resources (Alcántara & Gone, 2007), must be acknowledged by funding agencies, institutions, and policy makers as valid outcome measures of interest. In light of this need, many are calling for strength-based prevention program approaches and an end to pathologizing Native communities (Allen et al., 2006; Goodkind et al., 2010). This study answers this call by beginning to establish the reliability of a sources of strength inventory as an outcome measure that lays the foundation for future preventive interventions to build healthy Native youth, families, and communities.

Resilience

Resilience is a process. Most researchers agree that resilience involves overcoming risk factors, traumatic events, and other negative consequences (LaFromboise, Hoyt, Oliver, & Whitbeck, 2006). Resilience among Native youth is apparent in their ability to thrive despite a number of risk factors, including poverty, high-risk family environments, lack of employment opportunities, and discrimination (LaFromboise et al., 2006). Unfortunately, most research in Native communities focuses on risk factors—a one-sided approach that fails to acknowledge the many assets and resources within Native communities that contribute to resilience and overcoming risk (Fergus & Zimmerman, 2005).

Project Team

The project team consists of two officials from the tribe's community-based organization (CBO)—the chief professional officer and grant project director—as well as a data coordinator, multiple tribal program partners, several community volunteers, two cultural consultants, one educational consultant, and one evaluation scientist. The evaluation scientist is the first author and began working with the community in 2010 when the CBO's chief professional officer asked for assistance with evaluating programs. The educational consultant is the second author and an enrolled member of the tribe. He started working with the evaluation scientist in 2011.

METHOD

Respondents were 48 individuals who participated in a 3-day cultural camp which is led by a nonprofit organization affiliated with the tribe and is offered twice over a 2-year period. The cultural camp includes overnight tent camping, day hikes to a mountain that has both cultural and historical significance to the tribe, teachings about the history and traditions of the tribe, talking

circles, and various team-building activities. Respondents included 18 males (37.5%) and 27 females (56.3%); 3 camp participants (6.3%) did not complete the survey. Ages ranged from 8 to 40 years (*M* = 15.76, *SD* = 7.0). All participants identified as AI and the majority were enrolled members of the tribe. Respondents were recruited based on their involvement in the camp. Verbal consent/assent was documented, and youth under the age of 18 consented following tribal protocols, before the survey was administered. No compensation was offered.

Measures

The Sources of Strength (SOS) is an 11-item scale designed to measure strengths of survey respondents. Items were rated on a Likert scale anchored by 1 (*strongly disagree*) and 10 (*strongly agree*). Questions addressed social support (3 items), healthy involvement in activities (2 items), personal beliefs (2 items), access to physical and mental health services (2 items), and leadership qualities (2 items). Internal consistency for this study was α = .945; reports of internal consistency for previous studies were not available.

Procedure

The SOS was administered by two AI staff members trained by the evaluation scientist on survey administration and data collection, and was completed by participants using a paper and pen on the last day of the cultural camp. Each question was read aloud and staff members helped youth with lower literacy levels and others who needed questions clarified. Numerical responses varied by respondent and question; the minimum score was 43 and the maximum score was 110. The item means and standard deviations are reported in Table 1.

Table 1
SOS Scale Items - Means and Standard Deviations

Variables	*M*	*SD*	*Measures*
Q1: I feel my family cares about me, spends time with me, and is a strong support for me.	8.54	1.95	Social Support
Q2: I feel I have healthy friends/peer group that makes good decisions/stays out of trouble.	7.33	2.01	Social Support
Q3: I feel I have good caring relationships with adults who truly care about me.	8.13	2.10	Social Support
Q4: I feel I keep involved in healthy activities like sports, music, art, teams, organizations.	9.04	1.52	Healthy Involvement
Q5: I feel I am regularly involved in helping others, sharing generosity, and have leadership opportunities.	7.96	1.75	Healthy Involvement

Table 1, Continued
SOS Scale Items - Means and Standard Deviations

Variables	M	SD	Measures
Q6: I feel I have healthy beliefs and that I actively develop my faith, spirituality, or culture.	7.98	2.09	Personal Beliefs
Q7: I feel I have good access to a counselor, support group, or other mental health services.	7.40	2.20	Access to Services
Q8: I feel I have good access to a doctor, nurse, or other medical help if I was ill, injured, or needed medicine.	7.92	2.19	Access to Services
Q9: I participate in Leadership programs at my school.	7.25	2.90	Leadership
Q10: I am working on personal wellness and positive changes in my behavior.	7.75	2.46	Personal Beliefs
Q11: I take time to volunteer at school or in my community.	7.10	2.65	Leadership

RESULTS

Measures of strengths were evaluated for their psychometric properties and utility. As Long and Nelson (1999) report, instruments can be reliable, but not valid—particularly in Native communities, where the social and cultural context influences strength-based factors associated with positive mental and physical health outcomes (Jackson & Hodge, 2010). However, this scale was both reliable and valid. Cronbach's α for the scale was acceptable for all constructs measured ($N = 11$ items, $α = .945$). The correlation between items ranged from .42 to .87. The 11 items were linearly combined to measure cultural resilience and strength.

Scale items, item-total correlations, and α are described in Table 2.

Table 2
Reliability Analysis

Variable (N = 48) (α =.945)	Corrected Item-Total Correlation	α if Item Deleted
Q1: I feel my family cares about me, spends time with me, and is a strong support for me.	.733	.941
Q2: I feel I have healthy friends/peer group that makes good decisions/stays out of trouble.	.793	.939
Q3: I feel I have good caring relationships with adults who truly care about me.	.805	.939
Q4: I feel I keep involved in healthy activities like sports, music, art, teams, organizations.	.423	.951
Q5: I feel I am regularly involved in helping others, sharing generosity, and have leadership opportunities.	.809	.939
Q6: I feel I have healthy beliefs and that I actively develop my faith, spirituality, or culture.	.835	.937

Table 2, Continued
Reliability Analysis

Q7:	I feel I have good access to a counselor, support group, or other mental health services.	.776	.940
Q8:	I feel I have good access to a doctor, nurse, or other medical help if I was ill, injured, or needed medicine.	.738	.941
Q9:	I participate in Leadership programs at my school.	.875	.936
Q10:	I am working on personal wellness and positive changes in my behavior.	.845	.937
Q11:	I take time to volunteer at school or in my community.	.759	.941

Validity was assessed among variables by grouping items together that measured the same constructs. Social support included three questions to assess family support, peer support, and adult support (items 1-3). Healthy involvement included two questions to assess the level of involvement in healthy activities and positive helping qualities—generosity and leadership (items 4-5). Personal beliefs were assessed using two questions that asked about active development of faith, spirituality, and culture (items 6 and 10). Access to mental and physical health supports were assessed using two questions (items 7-8). Leadership was assessed by level of agreement regarding leadership at school and volunteerism (items 9 and 11). Table 3 shows the constructs of interest and reliability for each. All were within the acceptable range for a pilot test; however, to assess involvement ($\alpha =$ 0.544) reliably, an additional item may be necessary, or the language used may need to be revised. Possible changes include more specific language about healthy activities and opportunities available on the reservation such as powwows, dances, clubs, or community gatherings.

Table 3
SOS Scale Means, Standard Deviations, and Alpha Coefficients

Constructs	M	SD	α
Support (3 items)	24	5.29	0.846
Involvement (2 items)	17	2.71	0.544
Access to mental and physical supports	15.31	3.94	0.756
Leadership	15.73	4.28	0.862
Personal beliefs	14.35	5.24	0.876

An independent samples t-test was conducted to compare total SOS scores by year. There was a significant difference in the total SOS scores in 2013 ($M = 91.26$, $SD = 19.45$) and 2014 ($M = 80.14$ $SD = 17.98$); $t (44.5) = -2.05$, $p = .046$. These results suggest that participants from the 2013 cultural camp felt significantly higher levels of strength and support than participants from the

2014 cultural camp, which was somewhat surprising given the number of activities initiated in the community between 2013 and 2014 that promoted community connections, positive peer support groups, involvement, and increased awareness about mental and physical health services on the reservation. However, direct comparison between groups was not possible because cultural camps reached different participants each year. Notably, there were no differences between males and females, and total scores for the 11-item scale using Levene's (1960) test for equality of variances was not significant ($p < .05$).

DISCUSSION

In summary, the project team sought to capture sources of strength of participants who attended a 3-day cultural camp over a 2-year period. Participants reported high levels of support from family and other adults—a significant finding, because, within the resilience continuum, support is a universal protective factor among Native youth (Alcántara & Gone, 2007). Such prosocial relationships protect against negative outcomes such as suicide and substance abuse in Native youth (Pettingell et al., 2008). Resilience, too, helps reduce these negative outcomes (Fergus & Zimmerman, 2005), and the SOS may be a useful tool for Native communities that wish to build and analyze strength-based prevention measures aimed at promoting the resilience of Native youth and families. The SOS helped the project team identify and assess resilience factors in youth, and, when it was administered over a 2-year period (2013 and 2014 cultural camps), the team was able to combine data sets for more advanced statistical analyses and meaningful results—mainly, establishing the reliability and validity of the outcome measures.

Funding agencies, programs, and research initiatives must acknowledge this clear message from Native communities, tribal leaders, and authors (Alcántara & Gone, 2007; Allen et al., 2014): There is an immediate need to move toward strength-based prevention measures and approaches. The current prevailing deficit paradigm and resources are directed toward glaring disparities. This focus has led to failed prevention and intervention initiatives, and disparities among Native communities and communities of color continue widen (Thomas et al., 2011). This study underscores the need for new approaches that strengthen healthy communities while building leadership, social support, and capacity. It adds to the literature a clear picture of protective factors and measures that many Native communities possess, while providing recommendations for how public health programs, researchers, policy makers, and funding agencies can advocate for strength-based prevention programs and measures in the future.

Limitations

Limitations to this study include the single community focus, confounding variables and threats to internal validity, and small sample size. The SOS is a valid measure for this community, but may not be valid for other Native communities. For example, this study defined healthy involvement, support, access, leadership, and personal beliefs as strength-based measures. Other Native communities may include more culturally specific measures or use other definitions and examples. Internal validity of the measure may be questioned because of differences in SOS findings between 2013 and 2014 despite increases in community-based prevention activities. It is possible that confounding variables, such as the varying ages of the participants, contributed to the differences, and in the future a larger-scale study could examine community climate, assets, and significant events in a given year to determine if changes were related to these factors. The small sample threatens the reliability of this measure—as sample size increases, it is possible that reliability will decrease. Despite these limitations, the SOS remains an important tool for promoting strength-based measures.

In closing, culturally and contextually relevant scales are needed to assess the resilience and strengths of Native populations and their youth. The project team found the SOS to be a reliable and valid measure for the population in this study. The team, including the CBO, community volunteers, cultural leaders, and teachers, plans to use the results of this study to create prevention programs in the community that are grounded in the resilience of youth and Native families. The team also plans to use the pilot data from this study to tailor existing community programs and messaging aimed at promoting positive health outcomes for youth and families. Through this work, the community will be part of a changing prevention paradigm, grounded in culture and resilience for many healthy generations.

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