

Using Videoconferencing to Provide Psychological Services to a Rural Clinic:

A Unique Town and Gown Partnership

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An estimated 20% (55 million people) of the total United States population live in rural areas and are faced with the barriers of low accessibility, availability, and acceptability of mental health services (Health Resources and Services Administration, 2005). These barriers include a shortage of capable health providers and access and availability to treatment. Mental health services in rural areas usually lack coordination and consistency, and access and availability to mental health services is hindered by high rates of poverty, transportation, low health insurance, and poor health. An estimated one-third of rural counties in the United States lack any health professionals equipped to address mental health issues, with a much larger ratio of rural counties lacking any kind of specialty mental health services (Gamm, Stone, & Pittman, 2003).

Texas has one of the largest rural-residing populations in the United States. It also has the highest proportion of counties designated as mental health provider shortage areas in the United States (Trust for America's Health, 2013). As in other states, mental health services in Texas largely remain concentrated in more populous areas where need and resources are also concentrated. Without aggressive training, preparation and the implementation of innovative service provision strategies, rural Texas will only experience further declines in the number of mental health providers available to provide services to those tens of thousands of rural citizens in need of care (The Hogg Foundation for Mental Health, 2007). Despite the concerted efforts by groups such as the Lone Star Psychology Residency Consortium, it is unlikely that these complex issues will be fully resolved by increasing the number of available mental health service providers. Without significant changes in national and state health policies and innovative reimbursement mechanisms, new providers will, like their colleagues, continue to concentrate in urban areas where they can be assured of a client base or join an ongoing practice and enjoy the amenities of contemporary

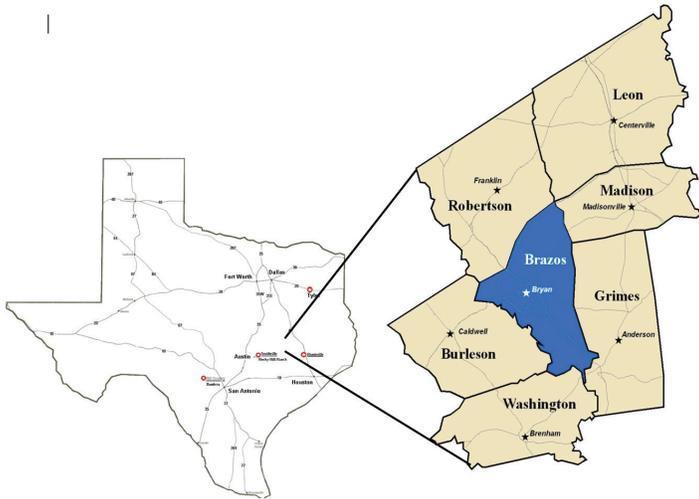
urban life available to most professionals. However, solutions to address mental health disparities in rural areas may be addressed, in part, in the strategic application of new service delivery strategies with new communication technologies.

In this paper we present an innovative and unique "town-and-gown" partnership between the Center for Community Health Development and the APA-accredited Counseling Psychology doctoral program at Texas A&M University with community leaders in Leon County that provides a logical, cost-effective, empirically supported, and potentially sustainable option for providing mental health services to Leon County residents who otherwise have limited options for services. It also provides valuable training and research opportunities for Counseling Psychology doctoral students. The development of the partnership and initial evidence for its effectiveness are discussed in this paper.

Mental Health Disparities in the Brazos Valley

Five of the seven counties in the Brazos Valley — a region located in south-central Texas, approximately 90 miles northwest of Houston — have been designated as Mental Health Provider Shortage Areas (Health Resources and Services Administration, 2013; see Figure 1). Like their counterparts in other rural regions of Texas, residents of the Brazos Valley face health disparities resulting from geographic isolation, limited availability of services, lack of transportation, poor socioeconomic status, low educational achievement, lack of insurance, and a host of other contributing factors. To identify and understand the health disparities, and to find avenues by which community resources could be developed and coordinated to address these disparities, the Center for Community Health Development (CCHD; <http://www.cchd.us/>) at the Texas A&M University Health Sciences Center conducted a series of meetings with community leaders,

Figure 1
Counties in the Brazos Valley



health care representatives, and concerned non-profit and advocacy groups. These stakeholders established the Brazos Valley Health Partnership in 2002 to collaboratively address health disparities in the region, and to explore and evaluate opportunities to build capacity to provide sustainable services. The CCHD also conducted a series of comprehensive health surveys of the Brazos Valley to inform policies and planning.

Leaders in Leon County were particularly active in this process. Leon County is a rural county in east Texas, covering 1,072 square miles, and is home to an estimated 16,344 residents. Centerville, the county seat, is almost equidistant from Houston and Dallas, and had a population of 977 at the 2010 census. The majority of the population resides in unincorporated areas. Positioned on the farthest edge of the Brazos Valley service region, the population in Leon County is dispersed throughout the county. Most area health care systems do not preserve an office or staff in the county. Leon County residents who want any type of health services typically travel at least an hour's drive in one direction.

To address these needs, the Leon County Health Commission established the Leon Health Resource Center, a facility located centrally in Centerville to house a full-time community health clinic and provide space for other service providers to see local clients without incurring additional overhead. The county contributes the cost of utilities and an office manager to coordinate operations. The county also developed a free, volunteer-based transportation system for residents to get to health-related services.

We know from the extant literature that the prevalence of behavioral disorders and mental health problems are at least as high in rural areas as in metropolitan areas, but mental health issues in rural communities are exacerbated by the lack of mental health services and highly-trained

mental health service providers. The 2006 Brazos Valley Health Status Assessment Report conducted by the CCHD identified health disparities for rural residents and access to mental health services as two of the top five priority areas for health planning and development in the region. Similarly, the 2010 survey revealed the following:

- Throughout the region 18.1% reported being diagnosed with depression, and 15.8% reported being diagnosed with anxiety.
- 41.7% reported at least one poor mental health day in the past month; 19.9% reported more than five poor mental health days.
- One in four (25.6%) who needed mental health services did not receive them—41.7% in the counties other than Brazos County (where the population is much higher due to the presence of Texas A&M).
- Of those needing drug and alcohol abuse services, 51.9% did not receive those services.

The 2010 survey included a brief, criterion-referenced measure of depression, the Patient Health Questionnaire – 9 (Kroenke, Spitzer, & Williams, 2001). In a recent analysis of these data (from a total N = 3,965 respondents), 5.3% had minor depressive symptoms and 5.7% likely met criteria for a major depressive episode. The combined rate of “probable depression” is higher than the rates reported in other studies using similar measures with rural samples. Additionally, we found that women had the highest rates of depression, generally. Among the ethnic groups African-American respondents had the highest rates of depression (Brossart, Wendel, Cook, Castillo, Elliott, & Burdine, 2013). African-American women had the highest rates of depression among all respondents. These findings suggest that women and African Americans in this underserved and predominately rural area may face unique issues that compromise their emotional well-being and contribute to the development of depressive symptoms.

After considering the results of the 2006 health survey, the Leon County Health Resource Commission (LHRC) began meeting with local health care providers, the local United Way, various Texas A&M University faculty, and with the local health division of the state of mental health and mental retardation authority to recruit mental health service providers. The CCHD and LRCH identified a potential resource in the accredited doctoral program in Counseling Psychology at Texas A&M University. The program's department operates a non-profit psychological services and training clinic—the Counseling and Assessment Clinic (CAC)—in a Federally Qualified Health Center (FQHC) in Bryan, Texas (about 70 miles from Leon County). Students in the Counseling Psychology doctoral program provide counseling and assessment services in the clinic under the supervision of program faculty, and they accrue practicum hours that count toward their degree and internship requirements.

Subsequently, the LHRC decided the CAC would be a logical, cost-effective, and potentially sustainable option for providing mental health services to residents in this rural community. To increase accessibility and availability to rural residents, the Commission then decided to establish a high-speed, T1 connection between the CAC and the rural health resource center in Leon County. Videoconferencing technology can effectively extend psychological services to rural areas, decrease travel burden, and keep individuals physically near their support systems in their home communities. With technical assistance from the CCHD, the Leon County Health Resource Commission secured a Rural Health Network Development grant from the Health and Resources Service Administration (HRSA).

The grant provided assistantships (for counseling psychology students), equipment, and initial infrastructure necessary for providing counseling services via videoconferencing capabilities to clients at the health resource center in compliance with the Health Insurance Portability and Accountability Act. Designated rooms at the CAC and at the Leon County Health Resource Center were equipped with a 42-inch, high-definition widescreen television and a standard PolyCom teleconferencing unit, including a high-definition camera and microphone. The equipment provides real-time audio and video communication on a high-speed and secure T1 Internet connection that permits “real time” therapeutic interaction between counselor and client. The internet connection is encrypted to comply with HIPPA regulations. The interaction between counseling and client is depicted in Figure 2.

The Clinical Protocol

Services from the CAC site to Leon County began in May 2009. A clinical protocol was established to parallel standard practice at the CAC “walk in” clinic. Clients at the Centerville clinic are self-referred, or referred by a local agency (e.g., the state Mental Health Mental Retardation authority), by one of the area health care providers, or by any of the non-profit or other community organizations (e.g., from a school, church). The Service Coordinator at the Leon County Health Resource Center (LHRC) gathers client information, briefly describes the process to the client, and lets the client know a counselor will speak with them soon. The Service Coordinator next contacts the “telehealth” counselor at the CAC to let them know a new client is on the waitlist. Once the basic information is given to the counselor, they then assign the client based on a counselor’s current client load as well as specific client needs. Currently, we have 7-10 counselors at various stages of their doctoral training.

We are fortunate to have bilingual students in the program so we are able to provide services in Spanish. It is vital to offer bilingual services in order to accommodate the ever-expanding Hispanic population in Texas.

The only requirement is that the client shows an interest in counseling services. This is usually the first question the counselor asks the client when contact is first made. Given that therapy requires sufficient amount of time, commitment, and emotional work, it is imperative the clients be invested and willing to participate. As in other clinics, clients who are not motivated but who may be otherwise required to seek counseling are among those who terminate prematurely.

The initial intake takes roughly two hours in order to give the counselor and client sufficient time to fill out paperwork, review limits of confidentiality, develop rapport, and gather initial client history.

The Initial Session

On the day before the intake, a reminder call is usually given to the client to verify that they are still available at the scheduled day and time. The client is asked to arrive 30 minutes early to their intake appointment in order to complete consent forms, a personal history intake form, and the Patient Health Questionnaire (PHQ) to screen for mental health disorders such as depression, anxiety, substance and eating disorders. Once these are completed, the Service Coordinator at the LHRC faxes the forms to the psychology trainee, who reviews the paper work for completeness and to identify specific questions to ask during the interview. The client is then brought to the counseling room (Figure 2). Following introductions the psychology trainee explains the initial session will look different than future therapy sessions in that a significant amount of time will be spent explaining procedures, gathering client history, and little time will be devoted to processing.

The first item discussed with the client is the Telehealth Client Information pamphlet, that further explains confidentiality, the basic foundations of therapy and clinic procedures, information regarding emergency

Figure 2
Counseling via Videoconferencing



procedures, and how clinic information will be used for archival research. It also provides the trainee's supervisor's information. The consent form that was completed before the session is reviewed again to reiterate the limits of confidentiality and to discuss any questions the client might have. Once the client has asked all their questions, a form entitled, "Notice of Policies and Practices to Protect the Privacy of Your Health Information" is provided and explained, in which clients learn how their information is treated according to HIPPA regulations. The client may request a copy to take home.

The counselor then conducts a structured therapeutic interview and administers a brief measure of mental status and a measure of current well being and functioning. Initially, a version of the SF-12 (an omnibus quality of life instrument; Ware, Kosinski, Turner-Bowker, & Gandek, 2002) was used for this purpose but we now use another measure developed for psychotherapy outcome research (the Clinical Outcomes in Routine Evaluation- Outcome Measure; CORE, 1998). The counselor attends to the client's primary reason for seeking mental health services, family dynamics and relationship, spiritual or religious practices, history of abuse, and previous or current suicidal ideation. In addition, the counselor may ask any relevant follow up questions about the client's answers on any of the measures.

Once the client and counselor feel that sufficient information has been gathered, the counselor schedules their next session and explains that the upcoming, and all future appointments, will be 50 minutes long, once a week, and will be more collaborative and less directive in nature.

Following the intake, the counselor writes their assessment of the content of the session, results from the assessment, therapeutic impressions, and a corresponding treatment plan. The Telehealth CAC staff utilizes Titanium Schedule, a HIPPA-compliant electronic records program specifically designed for university counseling centers to facilitate scheduling, storing of progress notes and assessment reports. The notes are then forwarded to the counselor's supervisor to be approved. A member of the Counseling Psychology faculty provides weekly supervision for each counselor.

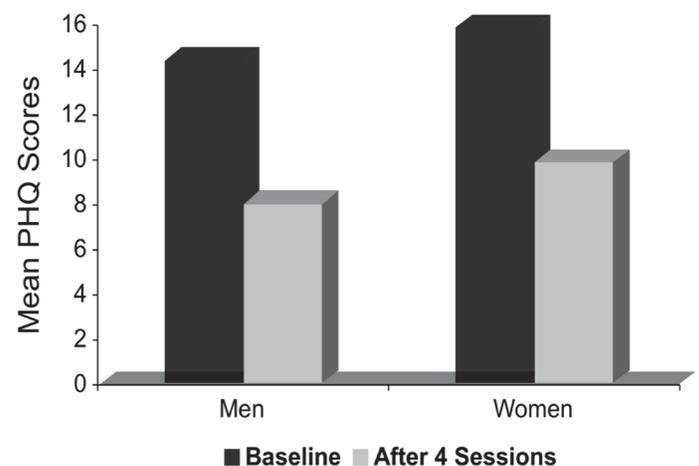
Clients are scheduled for weekly 50-minute sessions to discuss treatment planning and intervention strategies, which vary depending on the presenting problem of the client. Subsequent sessions follow the initial treatment plan, but routine follow-up assessments are scheduled for all clients. Presently, the PHQ and the CORE short form are administered after every four sessions to monitor progress and therapeutic outcomes. The counselor and client review these results and the information is recorded for formal evaluation of clinic effectiveness.

Evidence of Effectiveness

The Telehealth CAC (TCAC) has provided counseling to 81 women and 27 men since the program began in March 2009. Clients range in age from 9 years old to 73 with a mean age of 40.5 (SD = 14.1). Most identify as Caucasian. Major Depressive Disorder has been the most frequent single diagnosis (n = 59), followed by Panic Disorder (19), Post-traumatic Stress Disorder (18), and General Anxiety Disorder (11). Clients are seen an average of 11 sessions. The majority of clients are low-income, poor or indigent.

We have conducted two studies of clinical effectiveness. These are understandably difficult studies to conduct: Like any other community mental health setting (and unlike "laboratory" settings that often characterize academic research) clients cancel sessions, come late to sessions, terminate prematurely, and measures are not always completed as directed. Our research methods try to capitalize on the real-world data that our conditions permit. Preliminary data from the first 68 clients were encouraging. We found clinically significant improvements among clients after four sessions (McCord, Elliott, Wendel, Brossart, Cano, et al., 2011). As displayed in Figure 3, PHQ depression scores decreased significantly for men and women by an average of 5.88 points. Similarly, clients who completed the SF-12 measure reported important gains in their overall well being, as indicated by the Mental Health scale score and the Mental Health Composite score (see Figure 4).

Figure 3
Decreases in Client Depression after Four Sessions of Therapy via Videoconferencing to the Centerville Clinic

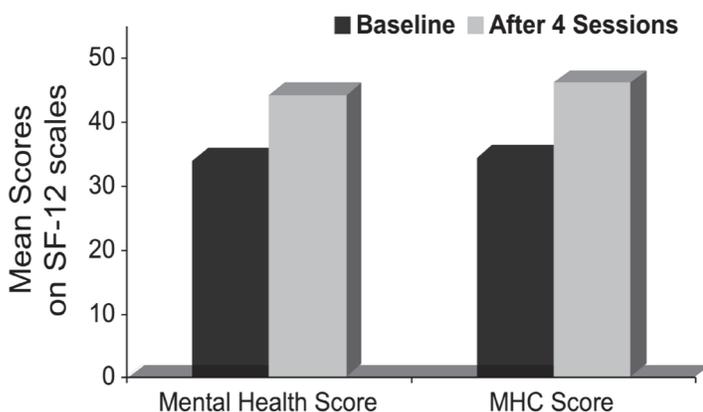


Note: From data reported in McCord et al., 2011.

A second study, now under editorial review compared group (nomothetic) and single-case (idiographic) analytic methods to analyze changes (Gonzales, Brossart, & Salerno, 2013). Of the 41 clients (34 women, 7 men) 83% met the criteria for Major Depressive Disorder and 75% of patients had two or more co-occurring disorders.

Significant decreases on the PHQ depression scale are again seen among clients after four sessions. More than half of the clients (69%) evaluated after the fourth session demonstrated *reliable* improvements and another 23% were classified as *recovered*. Single-case analyses of seven clients (with varying diagnoses) indicated that five showed *reliable* change and three others experienced clinically significant decreases in depression. Improvements in their well-being (assessed by the SF-12 mental health scale) and personal adjustment (assessed by the CORE) were similar to the therapeutic gains reported the McCord et al. (2011) study. We routinely provide updates about our activity to the Leon County Health Resource Commission. To obtain community feedback we conducted a survey of referral sources, agencies and organizations in the county and found that 84% of the respondents were aware of our service. Only one reported they *never* referred a client to Telehealth and 25% reported they *always* referred LHRC clients to the TCAC (McCord, et al., 2011). Half of those who had referred to the TCAC were *satisfied or very satisfied* with the service, and one agency expressed dissatisfaction. Half of the respondents were *very confident/confident* that the services were , and only two sources stated *not confident/a little confident*.

Figure 4
Increases on Client Mental Health and Mental Health Composite Scores after Four Sessions of Therapy via Videoconferencing



Note: From data reported in McCord et al., 2011.

However, respondents were unaware that the TCAC staff offered other services, such as couples therapy and psychological assessments, suggesting that we can work to increase the awareness of the full range of services offered through the TCAC. Additionally, 81% of referral sources responding indicated that the TCAC *probably or definitely* increased access to psychological services, and all respondents indicated some level of agreement that services were more accessible to residents.

Training Benefits

Over this time period, the TCAC funded four different doctoral students with graduate assistantships to serve as half-time counselors (20 hours per week) and three others were supported for 10 hours per week. Ten other students worked with clients as part of their required practicum training. The practicum hours from the TCAC helps students prepare a competitive application to internship sites. It also gives them valuable experience in contemporary, long-distance technologies in providing psychological services that few other programs in the country can provide.

The TCAC also provides unique opportunities for our students to conduct outcome research and to present and publish their work. All of the studies to date have featured advanced students as lead and contributing authors. In particular, students are learning alternative methods to analyzing outcomes and obtaining evidence of effectiveness that may be more generalizable to real-life settings than the typical randomized clinical trial design. As the database for the clinic grows, we expect students to utilize more complex, contextual modeling procedures – that can accommodate missing data – to analyze therapeutic changes and outcomes over a longer time frame than previously reported.

Implications and Future Directions

Our ongoing research supports our unique “town and gown” partnership with community stakeholders, university resources, and a regional FQHC. This partnership resulted from improvements in the capacity of the community to collaborate, share information, seek assistance from external sources, and reach consensus on strategic solutions. In this process, the community maintains a sense of ownership and administration over the service. Supervising faculty members and doctoral students, for example, often attend community events to promote the TCAC and provide reports about the service to commission meetings. This kind of long-term investment and ownership is necessary to ensure adequate utilization of services, maintain a positive presence in the community, and define the ongoing commitments for local stakeholders – all of which are crucial for sustainability.

This project illustrates how community stakeholders can recognize and capitalize on the expertise of their partners – in the present case, the Counseling Psychology program, the CAC, and the CCHD – as important to their success in bringing an innovative solution for access to mental health services for their community. The mutual collaboration also exemplifies the potential doctoral programs may have in partnering with FQHCs and interdisciplinary endeavors in the community to enrich training while addressing disparities. The partnership provides the county with access to resources and expertise that they did not previously possess to build their capacity to address health issues in the community. In many ways, these activities typify the hallmarks of community psychology with the

emphasis on building community capacity and maintaining mutually-beneficial collaborations.

Sustainability of the service remains a primary concern. To a great extent the TCAC differs from typical grant-funded projects because the HRSA funds were provided to create capacity to initiate and provide services. The project also differs from other initiatives from health care agencies because community stakeholders were involved from the beginning, and they were instrumental in identifying solutions. This kind of community engagement is often time-consuming, and it requires interdisciplinary collaboration to successfully cultivate a long-term investment and “buy in” from local stakeholders. Community engagement is essential for adequate utilization of services, for cultivating a positive presence in the community, and in securing ongoing commitments for local stakeholders – all of which are crucial for sustainability.

The TCAC has benefitted from the positive “press” Leon County officials have shared with their colleagues in surrounding counties. The CCHD recently assisted leaders in adjacent Madison County in obtaining an award from HRSA to support TCAC services in Madisonville. We will initiate services at a resource center in Madisonville later this spring. With generous support from the School of Rural Public Health at the TAMU Health Science Center we have relocated to new office space where we can utilize the high-speed TAMU T1 lines and pursue new lines of support that enable services to sites in Washington, Burleson and Grimes counties.

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