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Telemental Health Services as a Targeted Intervention for Individuals who are Deaf and Hard of Hearing

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Introduction

According to the World Health Organization (WHO; 2011), the number one cause of disability worldwide is hearing loss. WHO reports that approximately 124.2 million individuals are Deaf or hard of hearing, affecting low- to middle-income families disproportionately. Following close behind are mental health disorders. The third-most prevalent cause of disability is depression (98.7 million individuals), followed by alcohol dependence and problem use at number seven (40.5 million). Other causes include bipolar disorder (22.2 million), panic disorder (13.8 million), and drug dependence and problem use (11.8 million).

According to the U.S. Census Bureau (2014), approximately 6.2% of the population reported having a hearing difficulty. Using this estimate, approximately 19,500,000 U.S. citizens have some degree of hearing loss (Census Bureau, 2014; National Institute for Communication Disorders, 2015). Though census data does not include sign language as an alternative language at home, estimates of sign language users vary widely, from 100,000 to 500,000 in the United States to 15,000,000 worldwide (Census Bureau, 2014; Mitchell, Young, Bachleda, & Karchmer, 2006; Schein & Delk; 1974).

Certain individuals in society may be at higher risk of experiencing mental health problems. Individuals, such as those who are poor, unhealthy, neglected, maltreated, older, members of minority groups, disabled, and/or marginalized, such as gay, lesbian, bisexual, and transgendered individuals, may be vulnerable to mental health problems (WHO, 2013). Environmental conditions may also affect the degree to which one experiences mental health issues. Living in rural areas or areas with high unemployment, high crime, lack of services, lack of accessible services, inadequate nutrition, high conflict, and natural disasters can compound the situation and make healing difficult.

The intersection of being Deaf or hard of hearing and having a mental health disorder creates an additional dimension for consideration. Like those with chronic mental illness, individuals who are Deaf or hard of hearing often face medical and treatment disparities (Behl & Kahn, 2015; Blaiser, Behl, Callow-Heusser, & White, 2013; Wilson & Schild, 2014), and require specialty care from providers who are culturally and linguistically competent and have the necessary training and credentials.

Specialty or targeted interventions can help reduce the treatment disparities in order to meet the needs of Deaf and hard of hearing individuals. This paper proposes the use of telemental health (TMH) services, or services provided via videoconferencing technology, as a targeted intervention that may provide treatment to Deaf and hard of hearing individuals who have mental health problems. The literature review addresses several crucial areas when considering service provision to Deaf and hard of hearing individuals, including a working definition of TMH, clinical efficacy, challenges and advantages, and considerations for establishing a TMH service based on a pilot program in Maryland.

Telemental Health Services

TMH services are sometimes called telemedicine, telehealth, telepsychiatry, telepsychology, telebehavioral health, and telepractice. The National Center for Telehealth and Technology (2011) describes TMH services as a subset of telehealth in that it utilizes video or

telephone technology to provide mental health services at a distance. TMH services are often provided in a synchronous fashion, meaning that the video interaction between provider and client is a live, and interactive two-way communication. In this paper, TMH services are defined as the use of video technology to provide real-time face-to-face mental health services. For Deaf and hard of hearing individuals, TMH services should be provided by a clinician who is fluent in American Sign Language and knowledgeable about Deaf culture¹.

Psychiatrists have used TMH services with military personnel in the U.S. Dept. of Veteran Affairs since the 1950s (Chan, Torous, Hinton, & Yellowlees, 2014; Santa Ana, Stallings, Rounsaville, & Martin, 2013; Shore, 2013). The use of these services then expanded outside its original military application into clinical use with the general population, especially with individuals living in rural areas (Behl & Kahn, 2015; Chan, Torous, Hinton, & Yellowlees, 2014; Johnson, 2014; Mohr, 2009; Sequist, 2011; Shore, 2013). Psychiatry and psychotherapy offered through videoconferencing allow clinicians to provide services to individuals who may ordinarily have limited access, such as those living in rural areas, underserved populations, and individuals with low incomes.

Often financial limitations and health insurances prevent individuals from seeking and receiving treatment (Sequist, 2011). Disparities in referrals to specialty services and lack of available specialists also make it difficult to find and receive help (Behl & Kahn, 2015; Blaiser, Behl, Callow-Heusser, & White, 2013; Mohr, 2009; Santa Ana, Stallings, Rounsaville, & Martino, 2013; Sequist, 2011). Additional social barriers, such as stigmas, negative attitudes, transportation costs, and time constraints may also deter individuals from seeking treatment (Mohr, 2009; Pruitt, Luxton, & Shore, 2014). These deterrents can affect potential clients because they may be reluctant to initiate contact for services, follow-up for services, and remain in treatment.

In addition, Deaf and hard of hearing individuals have an additional need for providers who are able to communicate in American Sign Language (ASL) and understand the nuances of Deaf culture. Mental health services designed for Deaf and hard of hearing people are scarce (Behl & Kahn, 2015; Blaiser, Behl, Callow-Heusser, & White, 2013; Cabral, Muhr, & Savageau, 2013; Wilson & Schild, 2014). Because signing mental health providers are often difficult to find, clients and their providers may have significant communication barriers. To complicate matters further, competent interpreters are also scarce; some Deaf and hard of hearing individuals, especially if they have chronic mental illness, may have poor understanding of written medical information, medications, side effects, dosages, symptoms, and diagnoses (Cabral, Muhr, & Savageau, 2013; Wilson & Schild, 2014). Competent interpreters are specially trained and hold appropriate certifications, but many interpreters do not hold certifications and may not be qualified for mental health settings. Such barriers are significant because 80% to 90% of Deaf and hard of hearing individuals with chronic mental illness do not gain access to mental health services (Cabral, Muhr, & Savageau, 2013).

¹ Deaf culture, indicated by the capitalized “D,” refers to a group of Deaf and hard of hearing individuals who identify as being members of the culture, which implies use of American Sign Language, adherence to the norms and mores of the culture, and participation in the community’s cultural organizations and events.

Even if a competent interpreter is present, there may be difficulty with translating mental health assessment instruments and symptom presentation (Cabral, Muhr, & Savageau, 2013). Communication difficulties can lead to a clinician's poor assessment, inaccurate diagnosis, and subsequent ineffective treatment planning. Deaf people may be concerned with confidentiality because of the small, tight-knit characteristics of the Deaf community (Blaiser, Behl, Callow-Heusser, & White, 2013; Cabral, Muhr, & Savageau, 2013). They may even perceive that Deaf and hard of hearing clinicians as having less knowledge and skills than their hearing counterparts because of internalized stigmatization (Cabral, Muhr, & Savageau, 2013; Gertz, 2001). They may distrust non-signing, hearing providers because of previous experiences of stigmatization, discrimination, and oppression.

TMH services may be a viable targeted intervention for Deaf and hard of hearing individuals. Because the technology can connect clients with an appropriate clinician who can sign and is knowledgeable about Deaf culture, TMH may reduce disparities in treatment and improve mental health outcomes for this population. By offering TMH services, support can be provided directly to Deaf and hard of hearing clients, potentially increasing the comfort in addressing concerns and establish a deeper level of trust and engagement (Cabral, Muhr, & Savageau, 2013). Connecting Deaf and hard of hearing individuals with culturally competent clinicians can increase consumer knowledge of mental health issues, increase understanding of clinical symptoms, and improve access to services that are specifically targeted for their unique needs (Cohn & Cason, 2012; Wilson & Schild, 2014).

Clinical Efficacy of TMH Services

Many research studies document the clinical effectiveness of TMH services on mental health outcomes when compared to face-to-face traditional psychotherapy (Blaiser, Behl, Callow-Heusser, & White, 2013; Chan, Torous, Hinton, & Yellowlees, 2014; Choi, Marti, Bruce, Hegel, Wilson, & Kunik, 2014; Crowe, Jani, Jani, Jani, & Jani, 2016; Gibson, Pennington, Stenhoff, & Hopper, 2010; Hailey, Roine, & Ohinmaa, 2008; Mohr, 2009; O'Reilly, Bishop, Maddox, Hutchinson, Fisman, & Takhar, 2005; Pruitt, Luxton, & Shore, 2014; Richards & Vigano, 2013; Montero-Marin, Carrasco, Roca, Serrano-Blanco et al., 2013; Sorocco, Bratkovich, Wingo, Qureshi, & Mason, 2013). Some studies find a high reliability in conducting structured clinical interviews using TMH (Gibson, Pennington, Stenhoff, & Hopper, 2010; Shore, 2013). Researchers report that most psychiatric treatments, even for clients with symptoms of psychosis, can be delivered via videoconferencing (Choi et al., 2014; Montero-Marin et al., 2013; Pruitt, Luxton, & Shore, 2014; Santa Ana, Stallings, Rounsaville, & Martino, 2013; Shore, 2012). TMH studies document effectiveness in working with clients who have depression, panic disorder, phobias, smoking, dementia or cognitive limitations, obsessive-compulsive disorder, schizophrenia, bipolar disorder, alcohol and substance abuse, eating disorders, suicide prevention, and post-traumatic stress disorder (Choi et al., 2014; Crowe, Jani, Jani, Jani, & Jani, 2016; Montero-Marin et al., 2013; Pruitt, Luxton, & Shore, 2014; Santa Ana, Stallings, Rounsaville, & Martino, 2013; Shore, 2013).

Research on TMH services with Deaf and hard of hearing people shows that Deaf consumers report a high satisfaction rate for services (Blaiser, Behl, Callow-Heusser, & White; 2013; Cabral, Muhr, & Savageau, 2013; Crowe, Jani, Jani, Jani, & Jani, 2016; Gournaris, 2004; Wilson & Schild, 2014). Clients also report decreased travel costs and increased time savings. In a study by Crowe and colleagues (2016), clients receiving telemental health services reported a

significant decrease in psychiatric symptoms and an increase in coping skills. Several studies report the effectiveness of TMH services compared to face-to-face services (Behl & Kahn, 2015; Crowe, Jani, Jani, Jani, & Jani, 2016; Gournaris, 2004; Stredler-Brown, 2012; Wilson & Schild, 2014). In a study of 422 Deaf and hard of hearing individuals about their perceptions of TMH services, several variables predicted whether one would use the service, including knowing someone who used the services, having had previous experience with psychotherapy, experiencing barriers in receiving services, and whether the service was provided by someone fluent in ASL (Crowe, 2016). The majority of respondents also reported that TMH services could be beneficial to Deaf and hard of hearing individuals. Given the advantages and efficacy of TMH services with larger populations and with smaller studies of Deaf and hard of hearing individuals, TMH may be a viable intervention targeted at Deaf and hard of hearing consumers.

Challenges of TMH

Studies indicate that some clinicians using TMH have concerns about providing services (Johnson, 2014; Pruitt, Luxton, & Shore, 2014; Shore, 2013). Some clinicians report a lack of control during the session. For example, if a client leaves the room or becomes upset and turns off the technology, the clinician may be unable to interact with the client immediately. Another example is if a client is intoxicated during a session, but the clinician is unable to smell alcohol to verify this. There can also be a loss of visual context clues that may be seen during a face-to-face session (Richards & Vigano, 2013), so clinicians will need to manage mental health emergencies from a distance (Wilson & Schild, 2014). In addition, certain types of therapy modalities, such as group therapy, family, and couples therapy, may be more difficult to provide via TMH (Wilson & Schild, 2014).

Because TMH services are provided within a two-dimensional space, providers should develop additional skills in order to create a supportive presence (Johnson, 2014). Clinicians may need to increase energy levels and expressiveness to project over video technology, which can help the overcome feelings of distance and remoteness that can occur without direct face-to-face contact. TMH clinicians must be able to engage the client in ways that communicate warmth, engagement, support, and nonjudgment across a video screen (Reynolds, Stiles, Bailer, & Hughes, 2013; Richards & Vogano, 2013). In addition, disruptions in the video stream or problems with technology require that clinicians have back-up plans in place to ensure client safety.

Issues of licensure, credentialing, and malpractice are important factors that TMH practitioners should consider (Cohn & Cason, 2012; Johnson, 2014; Wilson & Schild, 2014). Typically, practitioners must hold a license where the client resides, which may not be the same state as the clinician (Behl, Houston, & Stredler-Brown, 2012; Cohn & Cason, 2012; Johnson, 2014; Krupinski & Bernard, 2014). Some states require that a mental health staff member be physically present with the client when providing services, and some states may require specific, written consent from the client before delivering TMH services (Johnson, 2014). Some states require face-to-face visits as part of TMH services. In addition, third-party payers, such as private health insurance companies, Medicare, and Medical Assistance, may have requirements for TMH services; many insurance providers do not compensate for TMH services (Cohn & Cason, 2012).

Before providing services, practitioners must address issues of confidentiality and HIPAA compliance (Choi et al., 2014; Johnson, 2014; Montero-Marin et al., 2013). A wide variety of technology is offered, but knowing which ones are HIPAA compliant can be difficult to ascertain (Chan, Torous, Hinton, & Yellowlees, 2014; Clough & Casey, 2015; Mohr, 2009). Many video technologies, such as Skype, are not encrypted for security and should not be used for TMH services. Yet, technology changes rapidly. Providers must continually expand their knowledge of emerging technologies.

Providers of TMH services must have a degree of technological proficiency (Johnson, 2014; Pruitt, Luxton, & Shore, 2014). Often this means that additional staff are required to set up the technology, ensure that the technology is encrypted and is HIPAA compliant, coordinate the different components of service provision, and provide technical support and additional equipment, such as surge protectors to decrease the likelihood of equipment needing to be reset (Sorocco, Bratkovich, Wingo, Qureshi, & Mason, 2013). Clinicians must have access to the equipment needed to conduct the session. Sometimes the systems are very expensive and require fast internet connections (Behl & Kahn, 2015; Behl, Houston, Stredler-Brown, 2012; Stredler-Brown, 2012). Other software programs and mobile applications can offer affordable, secure, mobile, and consumer-friendly services.

Advantages of TMH

Despite the challenges of providing TMH services, this type of treatment is still a viable targeted intervention for mental health treatment of Deaf and hard of hearing individuals. The literature contains many studies that point to the advantages of TMH services. It can help to reduce disparities in healthcare, increase accessibility to mental health services, increase the range of services provided, and increase the availability and frequency of support (Gibson, Pennington, Stenhoff, & Hopper, 2010; Pruitt, Luxton, & Shore, 2014; Sequist, 2011; Shore, 2013; Sorocco, Bratkovich, Wingo, Qureshi, & Mason, 2013). TMH services can be provided in a wide range of settings, across different ethnic groups, to many ages, and across a host of different psychiatric treatments (Behl & Kahn, 2015; Choi et al., 2014; Montero-Marin et al., 2013; Pruitt, Luxton, & Shore, 2014; Santa Ana, Stallings, Rounsaville, & Martino, 2013). Its versatility and flexibility make TMH a viable targeted intervention for Deaf and hard of hearing individuals.

TMH services are also cost-saving in that it can reduce the cost and amount of travel, increase care coordination, and enable early intervention, reducing overall treatment costs (Blaiser, Behl, Callow-Heusser, & White, 2013; Chan, Torous, Hinton, Yellowlees, 2014; Gibson, Pennington, Stenhoff, & Hopper, 2010; Mohr, 2009; Pruitt, Luxton, & Shore, 2014; Reynolds, Stiles, Bailer, & Hughes, 2013; Sorocco, Bratkovich, Wingo, Qureshi, & Mason, 2013). TMH services can help clients access treatment from specialists who may not be located in their immediate area (Hailey, Roine, & Ohinmaa, 2008; Johnson, 2014). The cost-saving outcomes may be helpful for those who have low incomes. In addition, multiple brief sessions, 15-30 minutes, may be more appropriate and feasible than one one-hour session (Pruitt, Luxton, & Shore, 2014).

For special populations, such as those who are incarcerated or in nursing homes, TMH services can be a practical option (Hailey, Roine, & Ohinmaa, 2008; Johnson, 2014). Deaf and hard of hearing individuals can have direct access to a signing therapist. Furthermore,

individuals with anxiety disorders or paranoia or similar challenges may prefer to have TMH services rather than face-to-face contact (Clough & Casey, 2015). TMH services can also help prevent inpatient psychiatric re-hospitalization, decrease the number of days in the hospital, increase treatment satisfaction and compliance, increase medication compliance, and increase therapy attendance (Pruitt, Luxton, & Shore, 2014).

TMH services overall may be an ideal fit for Deaf and hard of hearing people. The visual nature of the technology is familiar to most Deaf and hard of hearing people (Wilson & Schild, 2014). Sign language and nonverbal cues are a natural part of communication, which lends itself well to this particular modality. Videoconferencing is a common experience for many Deaf and hard of hearing people who utilize video relay services, video remote interpreting, and point-to-point calls through videophones that are widely available to them often at no charge.

Videophone equipment generally transmits images clearer, faster, and smoother than many other types of technology (Stredler-Brown, 2012; Wilson & Schild, 2014). Because the videophone was designed with visual communications in mind, the manufacturer places importance on bandwidth for high picture quality rather than audio quality. The videophone has enhanced security because it is a separate physical unit installed on a monitor, making it difficult for privacy violations (Stredler-Brown, 2012; Wilson & Schild, 2014).

Considerations for Establishing a TMH Program

Establishing a TMH program requires piecing together multiple components in a way that works for the agency providing the service, the clinician, and the client. Gournaris (2009) provides guidelines for establishing a telemental health program for Deaf and hard of hearing individuals with detailed recommendations for informed consent and emergency procedures. Based on firsthand experience with a pilot TMH project for Deaf and hard of hearing consumers with mental illness in a rural area of Maryland, and available literature, below are some recommendations.

- **Licensure:** Many states require clinicians to be licensed in the state where the client resides. This issue should be addressed prior to the program establishment. Clinicians planning to provide TMH services to individuals who live in different states or jurisdictions should contact local licensing boards to determine requirements before providing services.
- **Malpractice Insurance:** Clinicians should check that malpractice insurance carriers cover TMH services.
- **State Regulations:** States often have regulations about providing TMH services. Some states only allow psychiatrists to provide treatment through videoconferencing, while some require staff attendants with the client when receiving TMH services. Some states require a face-to-face component for TMH services, some allow agencies to request variances from the regulations for special populations (e.g., Maryland Medical Assistance granted one agency a variance to provide TMH services at a specific site). Clinicians should familiarize themselves with state regulations before providing TMH services.
- **Community Outreach and Engagement:** Prior to establishing TMH services, a coordinator or practitioner should engage community stakeholders, including Deaf and hard of hearing individuals and local service providers such as mental health clinics and hospitals. Often if community members support the idea of TMH services, they can help

connect providers with potential consumers. Similarly, preparation for work with Deaf and hard of hearing people may be necessary with clinics that provide mental health services to hearing consumers.

- **Third-party Payers:** Some third-party payers do not cover psychotherapy through TMH. Some allow TMH services, but require billing under specific billing codes. Clinicians should verify in advance whether the service is covered and which billing codes should be used.
- **TMH Setting:** When conducting TMH sessions, clinicians should give attention to important details, such as room configuration, lighting, positioning of the TMH equipment, background, clothing, and visual distractions. Ensure that there is minimal visual noise, adequate lighting, and maximal visual clarity in the room.
- **Informed Consent:** Clinicians should design a written consent form explaining TMH treatment. Written protocols and procedures, including an emergency protocol, should be developed and discussed with clients during the initial session. This will most likely involve collaboration with a local agency near the client. Consumers should know which agencies may be involved and what steps will be taken in emergency situations.
- **TMH Orientation:** Practitioners should provide a TMH orientation to obtain informed consent, discuss procedures and emergency protocols, and train clients on equipment use. If sessions are provided via an agency, agency staff may need an orientation as well.
- **TMH Equipment:** Clinicians should become familiar with the teleconferencing equipment and its capabilities. They should learn about the strengths and limits of each equipment type available to them. Experiment with video displays, video lag, eye contact, picture-in-picture display, and other components prior to beginning a session. For example, some systems allow clients and clinicians to view each other and educational material simultaneously during a session.
- **Technology Support:** Clinicians should obtain an IT support contract with a provider who will offer continual and frequent assistance. This support may be crucial in cases of emergency when a client is in distress and/or when there is a disruption in transmission because of a technology glitch. Evaluate whether protective equipment, such as surge protectors, are needed to protect equipment from failure. Practitioners should ensure that there is adequate broadband width and speed to ensure connectivity for both the practitioner and the client.
- **Training:** All staff involved with TMH service provision, clinicians, and clients should receive specific training. Training components could include topics such as how to establish rapport, engagement, assessment, suicidal and homicidal ideation, emergencies, problem-solving, technical difficulties, service provision, and important issues of working with Deaf and hard of hearing clients who have mental illness.
- **Technology Security:** Clinicians should ensure that the technology platform chosen for TMH services also complies with federal and state regulations for patient privacy and security. Not all video technologies are encrypted and therefore, do not comply with HIPAA regulations.
- **Agency Collaboration:** Agency collaboration is a vital component of a TMH service. Clinicians and agency administrators should create a memorandum of understanding (MOU) prior to service provision that outlines the expectations of the agency the client attends to receive TMH services and the clinician/agency's responsibilities. Often the MOU also outlines emergency protocols as well as responsibilities for maintaining and

exchanging client records. The MOU may also stipulate the type and amount of malpractice insurance that should be carried by the agency and/or provider.

Establishing TMH services as a targeted intervention for Deaf and hard of hearing individuals requires significant planning, organization, and coordination. TMH services are an empirically-based effective practice with many groups, including Deaf and hard of hearing individuals (Crowe, 2015; Crowe, Jani, Jani, Jani, & Jani, 2015; Wilson & Schild, 2014). It increases accessibility, reduces cost, and closes some gaps in treatment disparities. Engagement and collaboration with the Deaf community and with local providers is an essential component to ensuring a TMH program success. As with any type of mental health service provision, practitioners must adhere to state and federal regulations. Because TMH for psychotherapy is an emerging practice, clinicians may face gaps in guidelines and knowledge about providing these services. Despite the barriers, the efforts of establishing TMH practices are worthwhile and an effective way to reach Deaf and hard of hearing people who require mental health services.

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