

# Provision of Mental Health Care Services to Deaf Individuals Using Telehealth

Jaime A. B. Wilson

Independent Private Practice, Tacoma, Washington

Sven Schild

Independent Private Practice, San Diego, California

The deaf population has traditionally been marginalized and underserved when it comes to mental health services. The inequity is partly due to a general lack of knowledge about hearing loss and a shortage of linguistically and culturally qualified clinicians in most parts of the United States. Providing access to qualified clinicians via video conferencing technology has been proposed as a possible solution to the inequity problem. This article describes the unique characteristics of the deaf community, explores the benefits and challenges in using telehealth with the deaf population, and discusses current research in this area. The main goal of this article is to educate mental health professionals, stakeholders, and administrators regarding an underutilized videophone infrastructure that exists for the deaf population. The authors also emphasize the need for further research to better understand and service the unique mental health needs of deaf individuals.

*Keywords:* deaf, equal access, mental health, technology, telehealth

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The deaf and hard of hearing population—a group of more than 37 million people in the United States (Schoenborn & Heyman, 2008)—faces significant obstacles in obtaining mental health care services (Barnett et al., 2011; Flynn, 2011; Pollard, 1996; see also Meador & Zazove, 2005). Three decades ago, in 1983, Vernon estimated that only 2% of deaf people who needed mental health care actually received services, a reality still faced by many deaf people today (Basil, 2000; Gournaris, Hamerdinger, & Williams, 2013; Pollard, 1999). Inaccessibility to mental health care is attributable to several factors, the largest of which is due to the limited number of culturally and linguistically competent providers available to work with this unique population (Drainoni et al., 2006).

Clinical competence for working with the deaf and hard of hearing population includes not only a strong foundation in mental

health issues and sign language proficiency, but also an understanding of the biological, developmental, educational, vocational, legal, social, and cultural aspects of deafness (Glickman, 2003). Such clinical competence usually includes specific training in working with both lower case “d” deaf and capital “D” Deaf individuals. As defined in the *American Heritage Dictionary* (2000), lower case “d” deaf refers to those individuals who have some form of hearing loss, while capital “D” Deaf refers to those who identify with Deaf culture.

The use of telehealth technology has been hailed as a possible means of alleviating the barriers to mental health care access faced by Deaf individuals (Wilson & Wells, 2009). For the purposes of the current article, *telehealth* is defined as the use of live video conferencing technology to support mental health care at a distance. The article will begin with an overview of background characteristics of the Deaf population. Next, the specific features that appear to make telehealth a good fit for Deaf individuals will be explored. Last, prior research applications of telehealth with Deaf individuals and the obstacles to full implementation will be discussed.

## Overview of Background Characteristics of the Deaf Population

Over the last 30 years, great strides have been made regarding the civil rights of the Deaf community. For example, since the 1988 “Deaf President Now” (Christiansen & Barnartt, 2003) revolutionary protest (also known as “The Week the World Heard Gallaudet” [Gannon, 1989]), the Deaf population has come to be more accepted by mainstream society as a minority population with its own cultural traditions and values (Kensicki, 2001). However, complete equality has yet to occur as Deaf individuals frequently continue to be denied equal access to community re-

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JAIME A. B. WILSON received his PhD in clinical psychology from Brigham Young University and completed a pre-doctoral internship at the University of Miami School of Medicine. He also completed a post-doctoral fellowship residency at Madigan Army Medical Center in Tacoma, Washington. He is a licensed psychologist at Wilson Clinical Services, PLLC., which provides an array of psychological health care services to deaf, hard of hearing, and deaf-blind individuals across the State of Washington.

SVEN SCHILD received his PhD in clinical psychology from The California School of Professional Psychology at Alliant International University. He is a California- and Hawaii-licensed clinical psychologist whose private practice is based in San Diego, California. He has published articles and continues to conduct research in the areas of trauma and dissociation, with a special interest in individuals who are deaf and hard of hearing.

CORRESPONDENCE CONCERNING THIS ARTICLE should be addressed to Jaime A. B. Wilson, 949 Market Street, Suite 488, Tacoma, WA 98402. E-mail: [Wilson.Clinical@gmail.com](mailto:Wilson.Clinical@gmail.com)

sources, such as mental health treatment. Some people fail to acknowledge the group as a bona fide minority population, leading to the consideration of the group as an “invisible minority” (Hunt, 2010). As a case in point, several entities, on the Federal and local levels, tend to recognize only ethnic populations as minorities (Lane, 2005; see also U.S. Department of Health and Human Services, 2013).

Part of what may be hindering the Deaf population’s status as an accepted true minority through the eyes of mainstream society can be understood through Wixstrom’s *Two Views of Deafness* (Wixstrom, 1988), which is often referenced in academic circles as an educational tool for those seeking to understand Deaf culture (Berke, 2009). This publication posits a dichotomous model, termed the *pathological/medical model* and the *cultural/identity model*. With regard to people of various race and ethnic backgrounds, such as within the United States—an English-speaking majority country—the Deaf population can be considered similar to the hearing population in its diversity. Yet the unique linguistic and cultural factors inherent within the Deaf population add to its heterogeneous makeup, even within the United States.

### **The Pathological/Medical Model of Deafness**

The most commonly known view is the pathological/medical model, which regards deafness as a disability to be fixed or eliminated. Hearing loss is considered to be a defect, handicap, or abnormality, with the focus being squarely on the sensory deprivation of being unable to hear (Gregory & Hartley, 1991). This view of deafness incidentally fosters a stigma of embarrassment and shamefulness. It can lead to a society that denies, downplays, or hides hearing loss. As a case in point, many ads in major newspapers and magazines from hearing aid companies showcase their “tiny and barely visible” in-the-ear hearing aid instruments (e.g., “Esteem”; “iMini”; “SoundLens”).

Well-meaning hearing providers who may not be informed regarding best practices for individuals with hearing loss tend to emphasize the use of oral methods of communication to help the deaf person be “less disabled” and to fit in with mainstream society. These professionals may center their efforts on helping deaf individuals to overcome their handicap and to live in the hearing world (Christiansen, 1991). The pathological/medical model neither accepts nor supports a cultural view of deafness.

### **The Cultural/Identity Model of Deafness**

As an antithesis of the pathological/medical model, the cultural/identity model embraces hearing loss as a part of one’s personal identity. Deafness is viewed as a difference. Hearing loss is simply a characteristic that distinguishes deaf persons from hearing persons. Deaf people are recognized as a sociolinguistic and cultural minority. All communication modalities are encouraged, including speech. Signing and other visual methods are encouraged due to the ease of accessibility such communication provides for Deaf persons. American Sign Language (ASL), a visually based language that is linguistically distinct from English, is the most commonly used language among Deaf people in the United States and Canada.

Instead of hiding one’s hearing loss, the emphasis is placed on equal access through the means of light signal alerts, closed

captioning, ASL interpreters, and video conferencing technology. Research with or decisions affecting the Deaf population tend to focus on incorporating feedback from Deaf individuals themselves, so as to appropriately foster an environment of rights and privileges that hearing individuals enjoy. Respect, value, and support for the language and culture of Deaf individuals characterize the cultural/identity model.

Largely due to the conflicting viewpoints of the pathological/medical model and cultural/identity model, Deaf individuals are a language disparate group. For example, as a primary means of communication, some educators may teach deaf individuals using ASL, others may use oral English, and still others may use cued speech or Signing Exact English (SEE). The lack of a widely known standard for dealing with hearing loss can create uncertainty in new parents regarding how to best educate or raise a deaf child. From the standpoint of the deaf community, it is an irony that parents may be discouraged from using sign language with their deaf infants, whereas parents with hearing children are encouraged to expose them to sign language from an early age (Padden & Humphries, 2005).

Some Deaf individuals also have minimal or no language skills. This lack of language is often a secondary consequence of language deprivation because of late or inadequate exposure to an accessible language. Moreover, though not as common, language difficulties (i.e., language dysfluency) may manifest as a result of brain injury or mental illness (Glickman, 2007). In fact, it has been noted in the literature that Deaf individuals who are poor language users are often overrepresented in mental health service and correctional settings (Glickman & Pollard, 2013). The multiple etiologies of language difficulties only add to the complexities of conducting mental status exams and/or psychological evaluations with this population. For the unassuming clinician, the language issues may be misconstrued as psychotic symptoms or neurological impairment.

Although much of the current article discusses the segment of the Deaf population who identify with the cultural/identity model and are ASL users, many of the issues raised can also apply to the general deaf population. It has been estimated that in the United States, there are about 1 million Deaf people over 5 years of age who fit the cultural/identity model of deafness (Michell, 2006). This estimate does not include the large number of hard of hearing or late-deafened individuals who eventually learn ASL and adopt at least some portion of the cultural/identity model.

### **Telehealth and the Goodness-of-Fit With the Deaf Population**

The very nature of ASL as a visual communication medium makes the use of telehealth technology especially relevant and a good fit for Deaf individuals (Afrin & Critchfield, 1997). In fact, many of the concerns voiced in previous studies regarding the use of video conferencing technologies with the general (hearing) population may be of less concern with the Deaf population. The concerns voiced for the general nonsigning population focus on the inability to see the hands, verbal and nonverbal cues, and discomfort with the technology (Himle et al., 2006; Taylor, 2011). Many of these concerns would not apply for the signing Deaf population. For example, signed communication naturally requires that the hands and other nonverbal cues be read for comprehension to

occur. Moreover, Wilson and Wells (2009) found that even if minor disruptions in the video quality occur, ASL is capable of overcoming the glitches in its conversational flow.

Frequent exposure to video conference technology has been shown to result in higher confidence and comfort levels with the equipment for both the Deaf and hearing populations (Allen, Sargeant, Mann, Fleming, & Premi, 2005; Taylor, 2011). Within the Deaf community, the video conferencing technology is commonly referred to as a videophone (VP; see Figure S1 in the online supplemental materials).

Because VPs have been a common and integral part of the U.S. Deaf community for over 10 years now, deaf individuals generally feel more comfortable with the technology and its use than do their hearing counterparts (Stahl, 2010). Confidence in the use of VPs among members of the Deaf community likely arises from the fact that the technology is a communication necessity, similar to the telephone for hearing individuals. A Deaf individual may call an ASL interpreter using the VP's integrated video relay services (VRS). An ASL interpreter (or relay operator) will appear on the Deaf individual's screen and assist in facilitating communication between the Deaf and hearing person.

Another completely different service from VRS that can be used with VP technology is video remote interpreting (VRI) services. VRI services allow for an ASL interpreter to be provided in areas where in-person accommodations may not be available. Some health care settings have used VRI with variable success (e.g., Johnson, 2010).

The mainstream population may not be aware of the fact that qualified Deaf individuals in the United States are eligible to receive free, specially dedicated VP equipment. To qualify for free VP equipment, a Deaf individual needs only to have access to a high-speed Internet connection and a video monitor (Brådvik & Berglund, 2000). The percentage of Deaf individuals who have dedicated VP equipment in the U.S. are estimated to be somewhere between 40% and 70% (personal communication, January 29, 2013).

The widespread provision of VP products to Deaf individuals in the United States is partly supported by the Federal Communications Commission (FCC). The FCC is an independent agency of the U.S. Government and is mandated through the Americans with Disabilities Act (ADA) of 1990 to provide equal access to telecommunications services that are provided to nondisabled individuals (National Association for the Deaf, 2013). VRS services have helped the FCC to at least partially fulfill the ADA mandate.

Since 2002, the FCC has provided financial reimbursement to VRS providers at a rate-per-minute fee standard that has fluctuated over the years and is currently being revised. The rate-per-minute reimbursement has provided a financial incentive for VRS companies to manufacture and provide free VP products to qualified Deaf individuals. Funding from the FCC presently relies on its Interstate Telecommunications Relay Services Fund—which recovers monies through state taxes, either through rate adjustments or surcharges on local telephone bills—to provide financial reimbursement to VRS providers (FCC, 2003).

In the United States, many VRS companies provide free dedicated VP equipment. A sampling of available VRS companies includes Sorenson Communications ([www.Sorenson.com](http://www.Sorenson.com)), Purple ([www.purple.us](http://www.purple.us)), and Z-VRS ([www.zvrs.com](http://www.zvrs.com)). Qualified Deaf individuals who live in the United States can also apply for

VRS-sponsored VP app products to be downloaded onto their desktop, tablet, or smart phone.

At least three differences distinguish dedicated VRS-sponsored VP equipment from video conferencing software programs available to the general public (e.g., Skype; FaceTime). One difference is that the VP equipment transmits clearer, faster, and smoother picture quality (Cromartie, 2012). This is due to the U.S. VRS manufacturer's focus on creating VP technology that emphasizes bandwidth on high picture quality—as opposed to high audio quality—to accommodate the visual needs of ASL users. Most of the VP equipment has also been known to have good low-light image quality along with capabilities for high-definition picture transmission (Williams & Vogler, 2011).

A second difference is that security is enhanced for the VP equipment, especially the “on-the-shelf” variety (Strauss, Williams, & Harkins, 2009). On-the-shelf VP equipment is defined as a physical VP unit installed on a monitor. Such VP equipment makes it especially difficult for would-be hackers to penetrate a session, thus alleviating possible HIPAA concerns.

A third difference between dedicated VRS-sponsored VP equipment and other common video conferencing software programs is the fact that the equipment is created with the needs of Deaf users in mind. For example, most VPs have strong external light flashers to alert the Deaf individual to an incoming call. On-the-shelf VP equipment also has additional ports that allow connections to other visual alert systems that, in turn, can be connected to surrounding lights within a home or workspace. For those Deaf individuals who have low vision or color blindness, there are options to change the colors on the navigation menu interface of the VP.

The quality of dedicated VRS-sponsored VP products is highly regulated by the FCC (Field & Jette, 2007) and must meet strict standards (Federal Communications Commission, 2013). Should technical issues arise at any time, each U.S. VRS company boasts a staff of professional installers, as well as a technical support team who can communicate in direct ASL to assist Deaf consumers.

## Mental Health Care and the Deaf Population

According to Warner (1987), mental health care was the most requested but least available service for Deaf individuals. Basil (2000) also indicated that Deaf patients have been identified as the most underserved of any disability group. Because of the shortage of culturally and linguistically competent clinicians who can provide care to Deaf individuals, mental health care remains largely inaccessible to this population (Kvam, Loeb, & Tambs, 2007; Munro-Ludders, Simpatico, & Zvetina, 2004; Steinberg, Sullivan, & Loew, 1998).

A U.S. Federal Court has ruled in the past that provision of mental health care through a hearing provider using an ASL interpreter is not considered to be equal access (Leigh, Corbett, Gutman, & Morere, 1996; Raifman & Vernon, 1996). Under ADA Title II and Section 504, a federally funded program must provide disabled persons equal access to all services that are provided to nondisabled recipients (1990). The court concluded that the language barrier caused by the differences between ASL and English, and the problems caused by introducing an interpreter into the therapeutic process suggest that Deaf patients are not getting equal access to mental health services.

According to another court ruling, the provision of a culturally and linguistically competent provider is not required in other health care settings—such as when somatic symptoms are examined by a primary care provider (PCP; *People of the State of New York v. The Mid-Hudson Medical Group*, 1995). Although the court rejected the use of written back-and-forth communication between a PCP and patient, it allowed the PCP to be “the ultimate arbiter of what auxiliary aid or services he or she will provide” (Schwartz, 1995, p. 6).

The above Federal Court rulings appear to imply that at least in mental health settings, communication is a key factor in gaining full access to treatment. Somatic and mental health treatment needs require approaches and accommodations that are different from each other when interventions are provided to Deaf individuals.

The ethical mandate to provide competent mental health services to Deaf individuals only serves to emphasize the need for creative solutions. Using the existing VP infrastructure that exists in the Deaf population as a telehealth medium is one solution. It is imperative, however, that such technical mediums be subjected to empirical examination to ensure their effectiveness in providing care to a Deaf individual.

If a deaf, Deaf, or hard-of-hearing individual presents to a provider who does not possess linguistic or cultural competencies, an appropriate step would be to refer the individual to a specially trained clinician (American Psychological Association [APA], 2010; National Association of the Deaf Position Statements on Mental Health Services, 2013). Resources for specially trained providers in the United States can be found at state community centers for the deaf (which can usually be found online), statewide social service agencies (e.g., vocational rehabilitation), and sometimes insurance companies. Other resources include Gallaudet University’s directory of deaf-friendly mental health service providers (<http://research.gallaudet.edu/resources/mhd/>) and the directory found on [www.DeafMD.org](http://www.DeafMD.org).

### Prior Research Applications of Telehealth With Deaf Individuals

Several articles have been published within the last 15 years regarding the use of telehealth with Deaf individuals. The majority of these articles have mainly provided anecdotal descriptions of a given program’s implementation of the telehealth technology. One of the earliest published articles was written by Afrin and Critchfield (1997). In this article, the authors described the use of the telehealth system in South Carolina. After setting up the technology, the providers reported that the Deaf patient could be seen with more frequency and in longer sessions. Approximate savings on travel were estimated at \$28,000 in the first 2 years (p. 901). Moreover, all users of the technology appeared to be satisfied with the system.

A recent search of the literature found only two articles that empirically examined the effectiveness of telehealth with Deaf individuals. The first article is a study conducted by Gournaris and Leigh (2004), which examined communication dialogue variables using telehealth compared with a face-to-face condition. Deaf individuals described map directions in ASL to participants through face-to-face and high-quality analog video to compare dialogue interaction. Both conditions were found to have nearly identical map task deviations, suggesting that instructions were

understood and appropriately followed in both conditions. The results of the study offer support for the use of ASL through a telehealth medium.

The second study, conducted by Wilson and Wells (2009), compared the effectiveness of telehealth to an “attention placebo” control condition. Deaf participants within the telehealth condition were asked to view a psychoeducational lecture on depression. The lecture was presented by a mental health professional using an ASL interpreter. In the attention placebo condition, the same psychoeducational materials were administered in print format. A pretest and posttest were administered to all participants. Both conditions were found to exhibit significant pretest to posttest score gains. For the telehealth group, high satisfaction, reduced travel costs, and significant time-savings were also statistically evidenced. Annual mean cost savings were estimated at over \$1,800, with mean time-savings estimated at 55 hours (p. 394).

### Obstacles to the Adoption of Telehealth

One of the biggest obstacles to the acceptance of telehealth by policymakers and others may well be an unfamiliarity concerning the unique characteristics, circumstances, and culture of the Deaf (Glickman & Gulati, 2003). Further complicating matters is the issue of financial compensation for various mental health services. For example, many health insurance companies do not provide remuneration for telehealth services. These decisions to not compensate for telehealth-provided mental health care services likely do not consider the unique qualifications that the deaf population meets when using this technology medium. Decisions appear to be made in light of the technology’s limitations when applied within the mainstream (hearing) population, ignoring the relevance of its application to the deaf population.

Another obstacle to the use of telehealth relates to the issue of licensure boundary limitations (Cwiek, Rafiq, Qamar, Tobey, & Merrell, 2007). The licensure boundary issue has spurred the United States’s Association of State and Provincial Psychology Boards, the APA, and the American Psychological Association Insurance Trust to collaborate in developing guidelines for the practice of telehealth (APA, 2013). These guidelines encourage psychologists to be familiar and comply with all relevant laws and regulations when providing telehealth services to patients across jurisdictional or international borders. Because many jurisdictions have yet to develop laws and regulations regarding telehealth use, the guidelines suggest the development of a “telepsychology” credential that would be required by licensure boards for inter-jurisdictional practice. The APA Practice Directorate’s Office of Legal & Regulatory Affairs has also composed a document outlining existing regulations or provisions in telehealth’s use for each of the 50 States in the U.S. (APA, 2013).

The problem of mental health emergencies with a telehealth patient is another issue that has yet to be adequately resolved (Perle, Langsam, & Nierenberg, 2011). The *Guidelines for the Practice of Telepsychology*, which was adopted by the APA in October 2013, offer some direction—“Psychologists make a reasonable effort to identify and learn how to access emergency resources in the patient’s local area, including emergency response contacts” (p. 9). This issue points to the importance of ensuring that the patient’s contact information, which should include a home address and personal VP numbers, is at the ready for quick

reporting should an emergency arise. Most VRS providers maintain a set of relay operators who readily handle 911 calls on a 24–7 basis (Gupta, Dantu, Schulzrinne, Goulart, & Magnussen, 2010).

The benefits of telehealth in providing mental health care to a significantly underserved Deaf population appear to outweigh the potential limitations in using the technology. It has been stated previously that if creative means are not undertaken to provide access to care to the “epitome of the underrepresented” (Vernon, 2006, p. 820), Deaf individuals will likely remain a critically underserved population. The various obstacles to mental health care access that the Deaf population has historically faced—and presently faces—decree that change must take place.

Prior trends suggest, however, that increased acceptance of telehealth by stakeholders is unlikely to arise because of the needs of Deaf individuals. Change is more likely to come due to the legislative actions of providers advocating for the use of telehealth in the general (hearing) population. This is probably related, in part, to the low incidence impact of the Deaf population and its concomitant lack of political clout.

On the upside, for the general practitioner, the widespread availability of social media apps and accessibility of video conferencing technology are likely to speed up the acceptance of telehealth (Sharp, Kobak, & Osman, 2011). As regular video conferencing technology continually improves, simultaneously high picture and audio quality will likely become the norm. Naysayers criticizing the 2D nature of video transmissions may be quieted with the advent of 3D technology (Stranieri, Collmann, & Borda, 2012). The coming decade is likely to be one of significant change in the way mental health care is delivered (Doarn, 2012).

It is interesting to consider whether the needed stamp of approval by policymakers and administrators for the use of telehealth with Deaf individuals should be delayed by a decision that is most likely to be made for the general population. Such a question begs possible ethical connotations. The fact that many Deaf individuals already have the required high quality technology infrastructure needed to allow access to care cannot be overlooked. The sooner change is implemented, the better the access will be for Deaf individuals in need of services.

### Researching Telehealth With the Deaf: Obstacles and Future Directions

Past and present researchers in the Deaf mental health field have called for the implementation of telehealth to assist in alleviating the problem of inadequate access to care (Alverson et al., 2008; Hughes, Hudgins, & MacDougall, 2004; Pollard, 1999). As recent as 2012, the development, exploration and examination of the effectiveness of telehealth and other web-based applications for use with Deaf individuals were named top research priorities in the field of Deaf mental health care (National Association of State Mental Health Program Directors, 2012). As previously mentioned, to date, there have only been two empirically controlled studies on the use of telehealth with Deaf individuals. Clearly, further controlled studies are needed to demonstrate its effectiveness and efficiency. Especially for mental health purposes, studies that compare the effectiveness of treatment provided to Deaf patients through telehealth versus in-person conditions are needed.

Despite the need for further research to substantiate the use of telehealth with the Deaf population, lack of enthusiasm to broach

the subject may prevent such research from taking place. One possible reason for the research apathy may relate to the idea that no other viable alternative exist for connecting to a sign-fluent mental health provider. Moreover, the limited number of sign-fluent and culturally competent clinicians available has led to the vast majority of otherwise aptly qualified researchers to pursue service-oriented careers (Glickman & Pollard, 2013). Social connections created through the VP medium—not unlike face-to-face interactions among hearing individuals—may further reduce the motivation to subject telehealth to empirical examination.

Whether or not needed research is forthcoming, several challenges constitute logical limitations of the utility of telehealth. For example, clinical assessments may always be more challenging to conduct remotely because the clinician’s ability to evaluate a patient is visually limited to the on-screen information. Completing psychological testing or psychiatric screens remotely may also be difficult given that current measures are not normed for this type of administration and frequently require patients to manipulate certain test items. In addition, managing high needs patients (e.g., patients who are highly impulsive, suicidal, or manipulative) or patients with complex symptom presentations (e.g., highly dissociative or traumatized), may be more challenging when the clinician is not physically present. The clinician may be limited with regard to the interventions that he or she can provide remotely (Rummell & Joyce, 2010). Using telehealth compared to regular treatment, some controlled studies have also noted a negative effect on the therapeutic alliance, despite equal treatment outcomes (e.g., Frueh et al., 2007; Morgan, Patrick, & Magaletta, 2008), which may make it harder to work with Deaf people who are already distrusting or who have difficulty connecting with others.

Although telehealth may not be applicable or useful for all Deaf patients, it nonetheless provides a possible solution to the current shortage of access to mental health care for the Deaf community. Table 1 provides a brief overview of some of the benefits and challenges related to a Deaf patient’s care in the context of telehealth. We hope that the cited examples (both positive and negative) may be used as areas for future research.

### Conclusion

The Deaf population’s lack of access to mental health care can be considered to be of an epic proportion (“Information Gaps,” 2006). The already well-established VP infrastructure that exists among the Deaf population, as well as the natural dependence on the VP for telecommunications, suggests that the use of such technology for professional services would likely not come across as foreign to a Deaf individual as it might for a hearing person.

Most technological advances require time before they are adapted into the accepted arsenal of professional practice. Only recently, for instance, have medical records begun making the transition into electronic formats and cloud storage; more and more insurance companies are requiring claims to be submitted electronically; and secure email communication connections are being used to exchange confidential patient information and documentation between relevant parties (Singh, Naik, Rao, & Petersen, 2008).

Time will tell whether there will be some resolution to the seemingly perpetual barriers to mental health care that Deaf individuals have faced. It is exciting to envision a day when policy-

Table 1  
*Benefits and Challenges to Using Telehealth With Deaf Individuals*

Benefits and challenges
<p>Benefits</p> <ul style="list-style-type: none"> <li>• Provides easier access to the limited culturally and linguistically competent clinicians available to treat the mental health needs of Deaf individuals</li> <li>• Technology and VRS are commonly used and easily accessible to the Deaf</li> <li>• VP technology is regulated by the U.S. Federal Communication Commission</li> <li>• Dedicated VP technology designed specifically for the Deaf has special features such as good low-light image quality, light flasher alerts, and high-definition capabilities</li> <li>• ASL as a visual communication medium appears to be especially amenable to the VP</li> <li>• Significant travel time and costs savings to both the clinician and patient</li> <li>• VP more available and widespread through the advent of various technologies</li> </ul> <p>Challenges</p> <ul style="list-style-type: none"> <li>• Technology does not solve the larger problems in the Deaf community regarding the general lack of qualified sign-fluent mental health professionals</li> <li>• Clinical assessments may be more difficult to conduct since some of the visual information and body language is restricted</li> <li>• Harder to intervene in emergency situations</li> <li>• Not useful for high needs patients or those with more complex symptom presentations</li> <li>• Certain types of therapies may be difficult to provide remotely (e.g., group and couples therapy, EMDR, role play)</li> <li>• May only be suitable for Deaf individuals with good language and tech-savvy skills</li> <li>• Possibly not suitable to the elderly or those with additional physical disabilities</li> <li>• Unresolved legal (e.g., interstate licensure issues), reimbursement, and ethical scenarios</li> </ul>

Note. VRS = video relay services, VP = videophone, ASL = American Sign Language, EMDR = eye movement desensitization and reprocessing.

makers, administrators, and stakeholders of various agencies might see eye-to-eye with Deaf individuals, which would pave the way to the long-awaited equal accessibility to needed mental health care. That day cannot come soon enough.

## References

- Afrin, J. N., & Critchfield, A. B. (1997). *Low-cost telepsychiatry for the deaf in South Carolina*. Paper presented at the Proceedings of the AMIA Annual Fall Symposium.
- Allen, M., Sargeant, J., Mann, K., Fleming, M., & Premi, J. (2005). Videoconferencing for practice-based small-group continuing medical education: Feasibility, acceptability, effectiveness, and cost. *Journal of Continuing Education in the Health Professions*, 23, 38–47. doi: 10.1002/chp.1340230107
- Alverson, D. C., Holtz, B., D'Iorio, J., DeVany, M., Simmons, S., & Poropatich, R. K. (2008). One size doesn't fit all: Bringing telehealth services to special populations. *Telemedicine and e-Health*, 14, 957–963.
- American Psychological Association. (2013). *American Psychological Association guidelines for the practice of telepsychology*. Retrieved from <http://www.apapracticecentral.org/ce/guidelines/telepsychology-guidelines.pdf>
- American Psychological Association. (2010). *Ethical principles of psychologists and code of conduct*. Retrieved from <http://www.apa.org/ethics/code/index.aspx>
- American Psychological Association, Practice, Legal & Regulatory Affairs. (2013). *Telepsychological 50-state review*. Retrieved from <http://www.apapracticecentral.org/advocacy/state/telehealth-slides.pdf>
- Barnett, S., Klein, J. D., Pollard, R. Q., Samar, V., Schlehofer, D., Starr, M., . . . Pearson, T. A. (2011). Community participatory research with deaf sign language users to identify health inequities. *American Journal of Public Health*, 101, 2235–2238. doi:10.2105/AJPH.2011.300247
- Basil, R. N. (2000). Providing mental health services to the deaf community. In L. Vandecreek & T. L. Jackson (Eds.), *Innovation in clinical practice: A source book* (vol. 18, pp. 369–381). Sarasota, FL: Professional Resource Press/Professional Resource Exchange.
- Berke, J. (2009). *Pathological point of view on deafness versus cultural point of view on deafness: What is the difference?* Retrieved from <http://deafness.about.com/od/deafculture/a/pathcultural.htm>
- Brådvik, L., & Berglund, M. (2000). Treatment and suicide in severe depression: A case-control study of antidepressant therapy at last contact before suicide. *The Journal of ECT*, 16(4), 399–408. doi:10.1097/00124509-200012000-00010
- Christiansen, J. B. (1991). Sociological implications of hearing loss. *Annals of the New York Academy of Sciences*, 630, 230–235.
- Christiansen, J. B., & Barnartt, S. N. (2003). *Deaf president now! The 1988 revolution at Gallaudet University*. Washington, DC: Gallaudet University Press.
- Cromartie, J. (2012). *Evaluating communication technologies for the deaf and hard of hearing*. Worcester, MA: Worcester Polytechnic Institute.
- Cwiek, M. A., Rafiq, A., Qamar, A., Tobey, C., & Merrell, R. C. (2007). Telemedicine licensure in the United States: The need for a cooperative regional approach. *Telemedicine and e-Health*, 13, 141–147.
- Doarn, C. R. (2012). The middle of nowhere! *World Medical & Health Policy*, 2, 137–142.
- Drainoni, M. L., Lee-Hood, E., Tobias, C., Bachman, S. S., Andrew, J., & Maisels, L. (2006). Cross-disability experiences of barriers to health-care access consumer perspectives. *Journal of Disability Policy Studies*, 17, 101–115. doi:10.1177/10442073060170020101
- Federal Communications Commission. (2003). *FCC Encyclopedia*. Retrieved from <http://www.fcc.gov/encyclopedia/telecommunications-relay-services-trs>
- Federal Communications Commission. (2013). *What you need to know about TRS*. Retrieved from <http://transition.fcc.gov/cgb/dro/trs.html>
- Flynn, H. (2011). IAPT for Deaf people. *Healthcare Counselling & Psychotherapy Journal*, 11(2), 10–11.
- Frueh, B. C., Monnier, J., Grubaugh, A. L., Elhai, J. D., Yim, E., & Knapp, R. (2007). Therapist adherence and competence with manualized cognitive-behavioral therapy for PTSD delivered via videoconferencing technology. *Behavior Modification*, 31, 856–866. doi:10.1177/0145445507302125
- Gannon, J. R. (1989). *The week the world heard Gallaudet*. Washington, DC: Gallaudet University Press.
- Glickman, N. S. (2003). Culturally affirmative mental health treatment for deaf people: What it looks like and why it is essential. In N. S. Glickman & S. Gulati (Eds.), *Mental health care of deaf people* (pp. 1–32). Mahwah, NJ: Erlbaum.

- Glickman, N. (2007). Do you hear voices? Problems in assessment of mental status in deaf persons with severe language deprivation. *Journal of Deaf Studies and Deaf Education, 12*, 127–147. doi:10.1093/deaf/enm001
- Glickman, N., & Gulati, S. (2003). *Mental health care of deaf people: A culturally affirmative approach*. Mahwah, NJ: Erlbaum.
- Glickman, N., & Pollard, R. Q. (2013). Deaf mental health research: Where we've been and where we hope to go. In N. Glickman (Ed.), *Deaf mental health care* (pp. 358–383). New York, NY: Taylor and Francis Group.
- Gournaris, M. J., & Leigh, I. (2004). Comparison of face-to-face and video-mediated communication with deaf individuals: Implications for telepsychotherapy. *Journal of Professionals Networking for Excellence in Service Delivery with Individuals who are Deaf and Hard of Hearing, 37*, 20–41.
- Gournaris, M. J., Hamerdinger, S., & Williams, R. C. (2013). Creating a culturally affirmative continuum of mental health services: The experiences of three states. In N. Glickman (Ed.), *Deaf mental health care* (pp. 138–180). New York, NY: Taylor and Francis Group.
- Gregory, S., & Hartley, G. (Eds.) (1991). *Constructing deafness*. London, UK: Pinter Publishers.
- Gupta, N. K., Dantu, R., Schulzrinne, H., Goulart, A., & Magnussen, W. (2010). Next generation 9-1-1: Architecture and challenges in realizing an IP-multimedia-based emergency service. *Journal of Homeland Security and Emergency Management, 7*. doi:10.2202/1547-7355.1657
- Himle, J. A., Fischer, D. J., Muroff, J. R., Van Etten, M. L., Lokers, L. M., Abelson, J. L., & Hanna, G. L. (2006). Videoconferencing-based cognitive-behavioral therapy for obsessive-compulsive disorder. *Behaviour Research and Therapy, 44*, 1821–1829. doi:10.1016/j.brat.2005.12.010
- Hughes, G., Hudgins, B., & MacDougall, J. (2004). *Using telehealth technology to improve the delivery of health services to people who are deaf*. In Conference Proceedings: Annual International Conference of the TEEE Engineering in Medicine and Biology Society, 4, pp. 3084–3087.
- Hunt, G. (2010). Trapped in the shadows: The working Lives of Invisible Minorities. In N. Pupo, D. Glenday, A. Duffy (Eds.), *The Shifting Landscape of Work*, 101–118. Toronto, CA: Nelson Education Ltd.
- Johnson, K. (2010). An inductive analysis of interpreter mediated communication events between patients who are d/deaf and psychiatrists who are hearing. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 70*, 4757.
- Kensicki, L. (2001). Deaf President Now! Positive Media Framing of a Social Movement within a Hegemonic Political Environment. *Journal Of Communication Inquiry, 25*(2), 147–166. doi:10.1177/0196859901025002005
- Kvam, M. H., Loeb, M., & Tambs, K. (2007). Mental health in deaf adults: Symptoms of anxiety and depression among hearing and deaf individuals. *Journal of Deaf Studies and Deaf Education, 12*, 1–7. doi:10.1093/deaf/enl015
- Lane, H. (2005). Ethnicity, ethics, and the deaf-world. *Journal of Deaf Studies and Deaf Education, 10*, 291–310. doi:10.1093/deaf/eni030
- Leigh, I. W., Corbett, C. A., Gutman, V., & Morere, D. A. (1996). Providing psychological services to deaf individuals: A response to new perceptions of diversity. *Professional Psychology: Research and Practice, 27*, 364. doi:10.1037/0735-7028.27.4.364
- Meador, H. E., & Zazove, P. (2005). Health care interactions with deaf culture. *The Journal of the American Board of Family Practice, 18*, 218–222. doi:10.3122/jabfm.18.3.218
- Michell, R. E. (2006). How many deaf people are there in the United States? Estimates from the survey of income and program participation. *Journal of Deafness and Deaf Education, 11*, 112–119. doi:10.1093/deaf/enj004
- Morgan, R. D., Patrick, A. R., & Magaletta, P. R. (2008). Does the use of telemental health alter the treatment experience? Inmates' perceptions of telemental health versus face-to-face treatment modalities. *Journal of Consulting Clinical Psychology, 76*, 158–162. doi:10.1037/0022-006X.76.1.158
- Munro-Ludders, B., Simpatico, T., & Zvetina, D. (2004). Making public mental-health services accessible to deaf consumers: Illinois Deaf Services 2000. *American Annals of the Deaf, 148*, 396–403. doi:10.1353/aad.2004.0008
- National Association for the Deaf. (2013). Relay services. Retrieved from <http://www.nad.org/issues/telephone-and-relay-services/relay-services>
- National Association of State Mental Health Program Directors. (2012). *Final List of 34 Research Priorities*. Proceedings of the NASMHPD Deaf Mental Health Research Priority Consensus-Planning Conference, Washington, DC.
- National Association of the Deaf Position Statements on Mental Health Services. (2013). *Mental health services*. Retrieved from <http://nad.org/issues/health-care/mental-health-services>
- Padden, C., & Humphries, T. (2005). *Inside deaf culture*. Cambridge, MA: Harvard University Press.
- People of the State of New York v. The Mid-Hudson Medical Group, No. Consent Judgement 94 Civ 4688 (HB) (U.S. District Court, Southern District of New York 1995).
- Perle, J. G., Langsam, L. C., & Nierenberg, B. (2011). Controversy clarified: An updated review of clinical psychology and tele-health. *Clinical Psychology Review, 31*, 1247–1258. doi:10.1016/j.cpr.2011.08.003
- Pollard, R. Q. (1996). Professional psychology and deaf people: The emergence of a discipline. *American Psychologist, 51*, 389–396. doi:10.1037/0003-066X.51.4.389
- Pollard, R. Q. (1999). *Psychological services to deaf individuals via teleconferencing*. Rochester, NY: University of Rochester Medical Center.
- Raifman, L. J., & Vernon, M. C. (1996). Important implications for psychologists of the Americans with Disabilities Act: Case in point, the patient who is deaf. *Professional Psychology: Research and Practice, 27*, 372. doi:10.1037/0735-7028.27.4.372
- Rummell, C. M., & Joyce, N. R. (2010). "So wat do u want 2 wrk on 2day?": Ethical implications of online counseling. *Ethics & Behavior, 20*, 482–496. doi:10.1080/10508422.2010.521450
- Schoenborn, C. A., & Heyman, K. (2008). *Health disparities among adults with hearing loss: United States, 2000–2006*. Atlanta, GA: Centers for Disease Control, National Center for Health Statistics.
- Schwartz, M. A. (1995). Good news on the doctor-interpreter-patient front. *Silent News, 27*, 6.
- Sharp, I. R., Kobak, K. A., & Osman, D. A. (2011). The use of videoconferencing with patients with psychosis: A review of the literature. *Annals of General Psychiatry, 10*, 14. doi:10.1186/1744-859X-10-14
- Singh, H., Naik, A. D., Rao, R., & Petersen, L. A. (2008). Reducing diagnostic errors through effective communication: Harnessing the power of information technology. *Journal of General Internal Medicine, 23*, 489–494. doi:10.1007/s11606-007-0393-z
- Stahl, N. Z. (2010). Sorenson's Pleasanton Interpreting Center helps break down communications barriers for the deaf and hard-of-hearing. *Hacienda Network, 18*. [http://www.hacienda.org/ho/nw1004\\_Sorenson.html](http://www.hacienda.org/ho/nw1004_Sorenson.html)
- Steinberg, A. G., Sullivan, V. J., & Loew, R. C. (1998). Cultural and linguistic barriers to mental health service access: The deaf consumer's perspective. *American Journal of Psychiatry, 155*, 982–984.
- Stranieri, A., Collmann, R., & Borda, A. (2012). *High definition 3D telemedicine: The next frontier?*
- Strauss, K. P. (2007). Access to Telecommunications Technology by Americans with Disabilities: Key Laws and Policies. In M. J. Field & A. M. Jette (Eds.), *The future of disability in America*, Washington (DC): National Academies Press.
- Strauss, K. P., Williams, N., & Harkins, J. (2009). *Videophone telecommunication accessibility in Federal Government: Technology and policy*

- analysis*. Washington, DC: RERC on Telecommunications Access, Gallaudet University and Trace Center.
- Taylor, T. (2011). Video conferencing vs talking face-to-face: Is video suitable for supportive dialogue? *International Journal of Therapy and Rehabilitation, 18*, 392–403
- The American Heritage Dictionary of the English Language (4th ed.). (2000). Boston, MA: Houghton Mifflin Company.
- U.S. Department of Health and Human Services, Health Resources and Services Administration. (2013). *Shortage designation: Health professional shortage areas & medically underserved areas/populations*. Retrieved from <http://bhpr.hrsa.gov/shortage/>
- Vernon, M. (1983). Deafness and mental health: Emerging responses. In E. Peterson (Ed.), *Mental health and deafness: Emerging responses* (pp. 1–15). Silver Springs, MD: American Deafness and Rehabilitation Association.
- Vernon, M. C. (2006). The APA and deafness. *American Psychologist, 61*(8), 618–619. doi:10.1037/0003-066X.61.8.618
- Warner, H. C. (1987). Community service centers for deaf people: Where are we now? *American Annals of the Deaf, 132*, 237–238. doi:10.1353/aad.2012.0796
- Williams, N., & Vogler, C. (2011). *Interoperability across videophones, VRS, and off-the-shelf equipment*. Paper presented at the TDI 19th Biennial International Conference Austin, TX.
- Wilson, J. A., & Wells, M. G. (2009). Telehealth and the deaf: A comparison study. *Journal of Deaf Studies and Deaf Education, 14*, 386–402. doi:10.1093/deaf/enp008
- Wixstrom, C. (1988). Two views of deafness. *The Deaf American, 38*, 3–10.

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