Advances in technology have intersected with the health care sector to produce innovative practice and delivery venues known under the umbrella term of telehealth, which is “the use of electronic information and telecommunications technologies to support and promote long distance clinical health care, patient and professional health-related education, public health, and health administration” (Health Resources and Services Administration, n.d., para. 3). Telerehabilitation, a rapidly growing branch of telehealth, “is the application of telecommunication and information technologies for the delivery of rehabilitation services” (American Occupational Therapy Association [AOTA], 2013, p. S69).

In telehealth, various types of services can be delivered and typically include client evaluation, treatment intervention and monitoring, consultation, education, and training (Russell, 2009). Synchronous videoconferencing is a common form of service delivery and can be provided using a variety of forms of technology (e.g., voice over the Internet protocol, or VoIP; mobile videoconferencing; consumer HDTV videoconferencing; plain old telephone service, or POTS; and telehealth network with commercial videoconferencing system; Cason, 2011). Other modes of delivery include text-based (e.g., e-mail, cell phone text messaging), audio-based (e.g., teleconferencing), virtual reality (e.g., video games), Web-based (e.g., real-time chat rooms), and wireless (e.g., personal digital assistants, or PDAs) technologies (Pramuka & van Roosmalen, 2009).

Occupational therapy practitioners are among the rehabilitation health care providers who may use telehealth technologies for service delivery. Potential uses include consultation, client evaluation, client monitoring, supervision, and intervention (AOTA, 2013). Reports in the literature describe interventions such as wheeled mobility and seating assessments (Schein, Schmeler, Holm, Saptono, & Brienza, 2010); poststroke arm rehabilitation delivered over the Internet (Hermann et
al., 2010); evaluation of rural clients (Dreyer, Dreyer, Shaw, & Wittman, 2001); and polytrauma rehabilitation (Bendixen et al., 2008).

AOTA (2013) has examined current issues important to telehealth practice in its *Telehealth* position paper. Some practice and ethical considerations outlined in this document include informed consent/consent to treat, privacy/confidentiality, effectiveness of this service delivery model, competency, compliance with licensure laws and regulations, and ensuring compliance with current standards of practice.

**General Considerations for Occupational Therapy Practice**

To practice ethically, occupational therapists and occupational therapy assistants must consider the unique features of service delivery using telecommunication methods. These issues can relate to the client or client extenders receiving services or to the technology used to provide services. A major advantage of telehealth is that it can provide access to services for those clients who live in rural areas and who have difficulty traveling. Without the use of telehealth delivery methods, some may not receive services at all.

**Client Comfort and Competence**

Several issues could arise because the site of service is physically distant from the client (AOTA, 2013), and extenders (e.g., family members, support staff) may need to be present during the session. Presence of a third party may affect client comfort or be problematic due to privacy and confidentiality issues, especially if the same third party would not necessarily be present during in-person treatment sessions. For example, an occupational therapist may need to discuss issues of bathing or toileting during a videoconference, possibly creating a sense of discomfort or feelings of intrusiveness for the client.

In addition, clients or extenders must be comfortable with and competent in using the technology (Torsney, 2003). For clients, technology competence often can be problematic due to sequela of the condition for which they require rehabilitation services. Sensory loss due to normal aging (e.g., diminished hearing and vision) or cognitive, motor, language, or vocal impairments can impede clients’ ability to operate the technology or benefit from services delivered from a distance (Brennan et al., 2010).

**Provider Competence**
Occupational therapy practitioners must be competent in the use of the technology to ensure effective service delivery, and the equipment or technology must be of sufficient quality and in dependable working order. Lapses in sound or picture transmission can impede the therapeutic encounter (Denton, 2003; Grosch, Gottlieb, & Cullum, 2011). To avoid disruption of services, facilities and private practitioners should have a sound plan of action in the event of equipment malfunction (Denton, 2003).

**Ethical Considerations for Occupational Therapy Practice**

Occupational therapists and occupational therapy assistants who provide services via telehealth technology face unique ethical considerations. The Occupational Therapy Code of Ethics (2015) (referred to as the “Code”; AOTA, 2015), in conjunction with other AOTA official documents, offers guidance for these considerations. Specific issues that may arise relate to attaining consent to treat, protecting clients’ privacy and confidentiality, and adhering to professional standards to ensure the highest level of quality care or best alternative when delivering services using a telehealth model.

**Consent to Treat**

As guided by Principle 3 (Autonomy) and Principle 4 (Justice) of the Code, occupational therapy practitioners must fully disclose information about the specific occupational therapy services (e.g., benefits, risks, potential outcomes, providers of services, reasonable alternatives; AOTA, 2015) and about the implications of the use of technology during intervention. Clients should be informed of the risks and benefits, their rights (including the right to refuse treatment) and responsibilities, and organizational policies for the retention and storage of audio and video recordings and electronic medical records (Grosch et al., 2011).

Some risks related to providing services via telecommunication include the potential for loss of client privacy or confidentiality, lack of knowledge and skills of the care recipient or extender when needed for equipment use, the possibility for equipment malfunction, high costs, potential for client feelings of less-personalized care, or modifications to assessment administration and scoring procedures (Bauer, 2001; Grosch et al., 2011; van Wynsberghe & Gastmans, 2009). Practitioners should consider all these risks as well as benefits when determining whether to provide occupation therapy services via telehealth technology.
Practitioners should document the consent-to-treat process and content, and some professions recommend that clients sign a consent-to-treat document (Hyler & Gangure, 2004). Initially and throughout the duration of intervention, clients should be given opportunities to ask questions to ensure ongoing affirmative consent. Finally, in accordance with Principle 3E, practitioners must respect clients’ right to refuse service provision using telecommunication methods.

**Privacy and Confidentiality**

As stipulated in Principle 3H of the Code, occupational therapy practitioners must “maintain the confidentiality of all verbal, written, electronic, augmentative, and non-verbal communications, in compliance with applicable laws, including all aspects of privacy laws and exceptions thereto” (AOTA, 2015, p. 4). Providers should ensure that clear policies related to service provision; documentation; and transmission, retention, and storage of audio, video, and electronic recordings and records are in place and are in accordance with Health Insurance Portability and Accountability Act of 1996 (HIPAA; P.L. 104–191) privacy rule to protect the privacy and confidentiality of clients’ protected health information. Strategies include ensuring that equipment and connections are secure (Hyler & Gangure, 2004) and taking steps to make certain unauthorized third parties do not accidentally enter the room during a videoconferencing session (Grosch et al., 2011). Practitioners should inform clients of the possibility of third-party presence (e.g., technology assistant) and obtain client permission for the same (Grosch et al., 2011).

Clients have the right to know that, despite efforts to protect their privacy and confidentiality, breaches may occur. In these instances, practitioners should understand and adhere to appropriate procedures addressing the compromise of the client’s privacy and confidentiality of protected health information (AOTA, 2013). To maximize privacy and confidentiality, organizations and practitioners should use authentication or encryption technology (Brennan et al., 2010). Authentication technology ensures that people accessing the technology are whom they claim to be, and encryption ensures that no one can copy information transported via the Internet (Chadwick et al., 2000).

**Quality Care and Adherence to Standards**

Occupational therapy practitioners delivering services using a telehealth model must consider the impact of the technology on the services delivered to ensure they provide the best care possible and adhere to all professional and legal standards. Determination for appropriateness of occupational
therapy intervention using telehealth technology should be made on a case-by-case basis according to sound clinical reasoning and should be consistent with published professional standards (Brennan et al., 2010). That is, a decision to implement telehealth service delivery should be client-centered and based on advocating for recipients to attain needed services (Principle 4B of the Code) rather than on factors related to convenience or administrative directives.

In addition, when using telehealth, practitioners must be aware of the potential impact of technology on the communication process (e.g., distorted or delayed audio or video transmission) and take steps to facilitate meaningful communication and comprehension (Principle 3J) and promote open and collaborative dialogue (Principles 3D and 3J; AOTA, 2015). Finally, practitioners should be knowledgeable as to how technology could affect the reliability of assessments when performing client evaluations using telehealth delivery methods. Consistent with Principle 1C, practitioners should remain abreast of the current evidence related to conducting evaluations using telehealth technology (AOTA, 2013).

Telehealth delivery opens the door to the provision of service with clients from a variety of diverse backgrounds. According to Principle 4D, occupational therapy personnel shall “advocate for changes to systems and policies that are discriminatory or unfairly limit or prevent access to occupational therapy services.” (AOTA, 2015, p. 5). Practitioners should recognize and consider issues related to their own cultural competence, especially if language and ethnicity issues could affect the delivery or effectiveness of services (AOTA, 2015).

Practitioners also must meet their ethical responsibilities to “maintain awareness of current laws and AOTA policies and official documents that apply to the profession of occupational therapy” as stipulated in Principle 4 (Justice) (AOTA, 2015, p. 5). Principle 5E states that therapists should “hold the appropriate national, state, or other requisite credentials for the occupational therapy services they provide in academic, research, physical, or virtual work settings” (AOTA, 2015, p. 5). As mentioned previously, practitioners must be aware of state licensure laws (of each state where involved parties reside) and of each state’s regulations related to telehealth practice. At this time, a practitioner who delivers occupational therapy services via telehealth technology to a client who lives in a different state from the one in which the practitioner is licensed must adhere to the licensure regulations of his or her home state as well as the state where the client receives services, including possibly obtaining additional licensure in the state where the client resides (AOTA, 2013).
Knowledge of and adherence to billing and reimbursement regulations are also important considerations when providing occupational therapy services via telehealth technology (AOTA, 2013). As of the writing of this paper, Medicare does not provide reimbursement for occupational therapy services provided using telehealth technology, and Medicaid reimbursement practices vary on a state-by-state basis (AOTA, 2013). Private insurance, school systems, state early intervention systems, workers’ compensation programs, and other payers may have rules that guide or restrict interventions provided using a telehealth service delivery model. Principles 4 (Justice) and 5 (Veracity) of the Code direct practitioners to collect fees legally (Principle 4M) and ensure that documentation for reimbursement meets laws, guidelines, and regulations (Principle 5C). Thus, practitioners should be transparent in describing services delivered via technology when documenting telehealth encounters and ensure that the documentation meets professional (or practice) standards.

As stated in the Code, occupational therapists and occupational therapy assistants are obligated to provide services within their level of competence and scope of practice (Principle 1E) and to take responsibility for maintaining high standards and continuing competence in practice (Principle 1G). Principle 1F specifically refers to situations in which “generally recognized standards do not exist in emerging technology” and directs therapists to take steps to ensure their own competence and weigh benefits of service provision with the potential for client harm (AOTA, 2015, p. 3).

Practitioners providing services via telehealth technology must develop and maintain competency in several areas. Beyond competency in administering typical occupational therapy assessments and interventions, practitioners must be knowledgeable about the implications of providing these services using technology as opposed to in person, as modifications in materials, techniques, or instructions may be required (Brennan et al., 2010). Similarly, they must keep informed of and apply current evidence (Principle 1C) related to telehealth service delivery into their practice (AOTA, 2015). Practitioners also must gain and maintain competency in the use of all relevant technology to provide safe and effective services (Brennan et al., 2010).

**Case Scenarios**

**Case 1. Client With Cerebral Palsy**

Carrie is an occupational therapist who is licensed in West Virginia and Ohio and employed by a children’s hospital in Ohio; she specializes in adapted seating and positioning systems for
individuals with cerebral palsy (CP). Carrie is considered an expert in this area and has earned a reputation for providing high-quality services by designing innovative seating systems for children with multiple and complex impairments.

Carrie recently gave a presentation at AOTA’s Annual Conference & Expo about her experiences in providing consultation to clients using real-time videoconferencing. Because she is naturally drawn to and adept with technology, Carrie is excited to expand her telehealth practice.

Sam, an occupational therapist who practices in rural West Virginia, attended Carrie’s presentation. After the presentation, Sam approached Carrie and asked her to serve as a consultant with one of his clients, Becky, a 13-year-old girl with CP. Becky has multiple impairments, and a recent growth spurt has rendered her seating system obsolete. Sam tried everything he could think of but was unable to develop an effective seating system for Becky.

Carrie agreed to consult with Becky using a HIPAA-compliant, real-time videoconferencing Internet program, as she was licensed to practice occupational therapy in both Ohio and West Virginia.

Sam explained to Becky and her mother how the teleconferencing session with Carrie would work. He told them that during the session Carrie would ask Sam and Becky questions and instruct Sam to do specific physical assessments so that Carrie can determine the best seating options for Becky. Becky and her mom enthusiastically agreed to participate because, traveling to Ohio would have been very difficult and costly for them, and they were anxious for a seating system that would improve Becky’s ease of functioning.

The session proceeded as planned. However, after her standard, initial questions were answered, Carrie felt that she still didn’t have a good “feel” for what Becky needed. Carrie wanted more information about Becky’s pelvic mobility, and if the session were in person, Carrie would be able to use light touch to maneuver Becky’s pelvis to attain this information. Carrie asked Sam to pull down Becky’s pants and lift her shirt so that she could better observe Becky’s mobility. Upon hearing this, Becky started to cry, so Sam decided to end the session (C. Morress, personal communication, January 23, 2012).

In this scenario, a well-intentioned situation turned out poorly. Becky was in need of specialized occupational therapy services that were geographically inaccessible to her. In arranging for Becky to receive services via live videoconferencing, Sam was meeting his ethical
responsibility to advocate for Becky to receive these services in the only available way according to Principle 4B (Justice) of the Code (AOTA, 2015). After being fully informed about procedures, Becky and her mother readily consented to the videoconferencing session, in accordance with Principle 3C (Autonomy), as this potentially resolved two issues for them (i.e., they did not have to travel for services, and Becky could receive the treatment she needed).

However, when Becky heard that Sam would need to pull down her pants and lift her shirt, she became upset by the thought of having her body parts exposed via video communication. By ending the session at this point, Sam avoided exploiting Becky physically or emotionally and was thus in adherence with Principle 2I (Nonmaleficence).

Carrie and Sam might have avoided the problem all together. According to Principle 3B (Autonomy) of the Code (AOTA, 2015), they should have more fully informed Becky about what to expect during and about potential risk of her removal of clothing and being touched by Sam.

**Case 2. Supervision**

Abby is a certified and licensed occupational therapy assistant who has 10 years of experience working at a Brookhaven, a rural skilled nursing facility (SNF). Her supervisor is Scott, a licensed and registered occupational therapist who works at 2 SNFs about 60 miles from Brookhaven.

To meet professional and state supervisory standards and regulations, Scott travels to Brookhaven every other week to spend the day with Abby. During these meetings, Scott typically discusses client initial evaluations, intervention plans, and outcome measures with Abby. He also cosigns her documentation and provides instruction in new treatment techniques as needed or cotreats with Abby when necessary. In between visits, Abby and Scott communicate as needed via telephone conversation or electronic mail.

While their supervisory routine is effective and meets state licensure requirements for occupational therapy assistant supervision, Scott is concerned about the amount of time supervision is detracting from his availability for other responsibilities, including his own client caseload. To address this issue, Scott applies his technology knowledge and skills to establish a routine of weekly videoconferencing sessions with Abby using technology that comply with HIPAA standards. He also checks with the state licensure board to ensure that regulations permit tele-supervision, and he reviews Medicare, Medicaid, and other payer requirements for supervision to be sure he is following them.
While Scott still travels to Brookhaven twice per month, using videoconferencing technology decreases the amount of time he spends there. Abby also appreciates having weekly face-to-face time with him, as it enables more regular and effective discussions about client needs. Furthermore, Scott and Abby plan to expand their use of video teleconferencing to include his observation of Abby treating clients, Scott’s provision of instruction as Abby implements treatments in real-time, and Abby’s participation in staff continuing education activities conducted at Scott’s worksites (e.g., journal club, case discussions).

Both models of Scott and Abby’s supervisory process were appropriate and effective. In ensuring that both met state licensure regulations, they have complied with the Code (AOTA, 2015). Specifically, Principle 5H directs that occupational therapists provide appropriate supervision “in accordance with AOTA official documents and relevant laws, regulations, policies, procedures, standards, and guidelines” (AOTA, 2015, p. 5). Furthermore, these processes met standards and guidelines delineated in the Guidelines for Supervision, Roles, and Responsibilities During the Delivery of Occupational Therapy Services (AOTA, 2014) in that the frequency, methods, and content were appropriate to ensure safe and effective delivery of services and also supported Abby’s current and advancing competency.

Using videoconferencing to supplement in-person, telephone, and e-mail supervisory communication does offer advantages to Scott, Abby, and the clients they serve. Using videoconferencing technology to meet some supervisory responsibilities via real-time interactions could be a more efficient and effective process for Scott. It could free up time to enable him to better meet other responsibilities and provide opportunities to observe Abby providing interventions or instruct her in providing new or complex interventions in real time. Similarly, Abby could benefit from the provision of real-time and face-to-face instruction as well as the opportunity to participate in continuing education opportunities otherwise not available to her. Ultimately, their clients will benefit by adding videoconferencing to their repertoire of supervisory methods.

At the same time, Scott and Abby must ensure they conduct their videoconferencing sessions in accordance with legal and ethical standards. As mentioned previously, they must make sure they are knowledgeable about and competent in using the technology. They should attain fully informed written consent from clients before including them in a videoconference and implement strategies to protect clients’ privacy and confidentiality by using secure connections and minimizing
opportunities for others to overhear their conversations. Scott and Abby also are responsible for ensuring that providing supervision using videoconferencing is appropriate to situations for which it is used, is the best way to meet their needs, and is not used as a convenient replacement for situations that call for an in-person meeting.

**Conclusion**

Occupational therapists and occupational therapy assistants are using technological advances to provide interventions and services to people who may not otherwise have access to them in innovative ways. Although the benefits and advantages of using telehealth are important, therapists should be aware of ethical considerations that accompany the use of emerging technology in practice. Practitioners should fully disclose to clients (and ensure that they comprehend) the risks, benefits, and nature of service delivery using technology. In addition, the client, his or her family, or service extenders may need to develop knowledge and skills in operating technology. The technology used must be of sufficient quality to provide dependable services and include protective measures to meet HIPAA privacy standards.

Practitioners using telehealth must be cognizant of and practice according to ethical standards outlined in the *Occupational Therapy Code of Ethics* (AOTA, 2015). In addition to attaining consent to treat and to treat in this manner, practitioners may need to take extra measures to protect clients’ privacy and confidentiality. Practitioners also should take several measures to ensure they provide optimal interventions. Such measures relate to the responsibility to ensure competency in delivery of services and adherence to local, state, and federal standards and regulations. Practitioners must understand how to operate the technology and how the use of technology can affect the communication, intervention, and assessment processes and to make adjustments as needed.

Practitioners also must exercise clinical judgment and reasoning when deciding whether providing services via telehealth technology is an appropriate option. When using distance technology to provide services to a client in another state, practitioners should be aware of the potential to treat clients from unfamiliar diverse backgrounds and how this could affect the interventions. Comparable to traditional service provision, practitioners should provide interventions that are based on current, best evidence.
Because telehealth as a mode of service delivery is nontraditional and evolving, practitioners must be knowledgeable about how local, state, and national standards and regulations affect their practice. Federal reimbursement regulations (e.g., Medicare) and policy (e.g., HIPAA privacy standards) and state reimbursement regulations (e.g., Medicaid regulations) and policy (e.g., practice licensure) can influence service delivery.

In addition, practicing according to standards and guidelines published in several AOTA official documents can promote the safe and effective delivery of occupational therapy services via telehealth technology. By adhering to the highest level of ethical standards, occupational therapists and occupational therapy assistants can join other health care providers in using technological advances to better serve their clients.

References


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It has been revised to reflect updated AOTA Official Documents and websites, AOTA style, and additional resources.

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