Telepsychiatry: Overcoming barriers to implementation

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Providing treatment via videoconferencing can improve access to care

Although many states have substantial health services in urban areas, these services—particularly mental health care—are relatively scarce in rural areas.[1] Telepsychiatry, in which clinicians provide mental health care from a distance in real time by using interactive, 2-way, audio-video communication (videoconferencing), could mitigate workforce shortages that affect remote and underserved areas.[2] Psychiatry is one of the biggest users of telemedicine, which refers to any combination of communication technology and medicine.[3-5] This article discusses telepsychiatry's effectiveness in providing psychiatric diagnosis and treatment, and the clinical implications of this technology, including improving access, cost, and quality of mental health services.

Outcomes comparable to face-to-face care

Telepsychiatry is used primarily in rural areas or correctional institutions or with underserved populations such as veterans with posttraumatic stress disorder or children. Although the literature generally is weak, there has been more research on psychiatry than other medical specialties because psychiatric clinicians rely on mental status examinations and verbal communications, not physical exams. Telepsychiatry can be considered a part of an evolving "connected health" system that offers many benefits to patients and clinicians (see the *Table* at CurrentPsychiatry. com).

Previously, we have reviewed evidence on the use and effectiveness of telepsychiatry in providing mental health care for children,[6] adolescents,[6] and adults.[2] The literature includes

The technology behind telepsychiatry

Although telemedicine has embraced many communication technologies, live, interactive, 2-way, audio-video communication—called videoconferencing—is broadly synonymous with telemedicine and, more specifically, telepsychiatry.

Telepsychiatry primarily uses interactive audiovisual conferencing systems over high-bandwidth networks. The central component of interactive telepsychiatry is the codec (coder/decoder), which provides compression, decompression, and synchronization of audio and video signals; both patients and clinicians need a codec. A codec can be a separate device, but personal computer-based codecs are being used more frequently. A typical setup also includes a video camera, microphone, speakers or headset, and 1 or 2 display monitors at both the clinician's and patient's end of the system. Often, separate displays or a picture-in-picture display are used to see both outgoing and incoming video. Another consideration is pan-zoom-tilt control of video cameras. This allows clinicians to remotely control his or her view of the patient's site or control the view being transmitted to the patient.

Historically, interactive telepsychiatry applications have used point-to-point network connections, usually as full or fractional T-1 or integrated services digital network circuits. However, the rapid diffusion of internet and ethernet networks has led to the development of videoconferencing systems that can work over internet protocol (IP) networks. If using an IP network, ensure security by using encrypted codecs or by setting up a virtual private network and/or a virtual local area network (LAN). The principal advantage of IP networks is that by implementing proper security solutions, they can be shared by several applications—eg, internet, e-mail, LAN, etc. This means that the telecommunications network costs can be shared or considered a sunk cost (ie, not an additional cost of the telepsychiatry application).

studies of feasibility,[7] acceptance and satisfaction,[8] and cost.[9,10] Although limited, comparison of telepsychiatry with similar face-to-face interventions continues.[11,12] Researchers have examined telepsychiatry in several patient populations for assessment and treatment goals. In virtually all cases, telepsychiatric assessments and/or interventions have been comparable with face-to-face assessments and/or interventions. Although the research methodology used in some studies has been weak, there is no evidence that therapeutic alliance,[13,14] therapist fidelity,[15] patient satisfaction, or outcomes with telepsychiatry are inferior to those seen in comparable face-to-face treatment.

Barriers to implementation

Although telepsychiatry offers tremendous promise, implementation has not been widespread or easy. Potential barriers to implementation, such as cost and resistance to change, are associated with acceptance of new technology or practice in health care. In addition, there are several legal, regulatory, and technical barriers.

**Institutional barriers.** Physicians and other providers may not have access to timely, evidence-based information and may face challenges, such as time constraints, access to technical support, and complexity of large health care institutions, when integrating this information into clinical practice.[16] Two studies[17] found that after controlling for other barriers—eg, reimbursement and regulatory issues—providers are the most significant initial gatekeepers that affect telemedicine use. When designing a telemedicine system, project managers should prioritize providers' needs, such as ease of use and incentives.[18]

Reimbursement. Medicare started reimbursing providers for telemedicine in 1999, and some limitations in the payment scheme have been addressed.[19,20] Approximately one-half of state Medicaid programs and many third-party payers reimburse for telehealth services, with similar limitations in Medicare.[20] A "fee-for-service" approach reimburses the consulting psychiatrist or mental health professional for his or her time. Telepsychiatry reimbursement typically is provided for a diagnostic interview, pharmacologic management, and individual psychotherapy provided by psychiatrists and clinical psychologists. Differences among payers

Clinical Point

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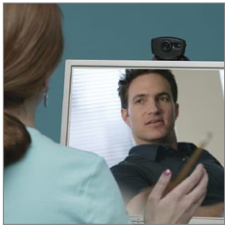
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and supporting documents are available on the American Psychiatric Association's Telepsychiatry Internet Resources site (see *Related Resources*).

States do not cover services provided by other mental health providers, except for Utah's coverage for social workers. The American Psychiatric Association has 2 suggestions regarding this issue[3]:

• reimbursement for telepsychiatry services should follow customary charges for delivering the appropriate current procedural terminology code(s)

• a structure for reimbursement of collateral charges, such as technician and line time, should be identified.

Impact on practice. Changing workplace behaviors requires restructuring daily workflow and routine procedures to make it easy for clinicians to provide telepsychiatric care. For successful implementation, clinicians and patients must regard telepsychiatry as a treatment approach that will enhance success, access, and quality of care. As with patient behaviors,[21] to change practice behaviors, the intention to change must be combined with the necessary skill, and environmental constraints that prevent new behaviors must be absent or removed. In general, telepsychiatry is accepted. In our experience, usually a reluctant clinician, not the patient or his or her family, hampers acceptance of telepsychiatry.

Licensure. A physician conducting a telemedicine session with a patient in another state must be licensed in both his or her state and the patient's state. Nurses and other allied health professionals have similar state licensing constraints. Sanders[22] suggests 3 potential solutions:

• establishing a national licensing system

• assigning the responsibility of care to the referring physician, with the consulting physician's opinion serving as "recommendation only"

• determining that the patient is being "electronically transmitted" to the consultant's state.

Patient privacy and security. Privacy considerations unique to telepsychiatry

include the potential for nonclinical technical or administrative personnel to view telepsychiatry sessions.[23] Increased videoconferencing over public networks also creates the potential for unauthorized access to protected health information. Technological solutions such as encryption and virtual private networks should be implemented (*Box, page 29*). Once these technological solutions are in place, providers need to be trained in proper data storage and retrieval and medicolegal and ethical issues related to maintaining patient privacy.

Infrastructure. Costs associated with infrastructure development and maintenance of telepsychiatry typically are not reimbursable. Individual contracts, managed care, third-party payers (in a few states), or, in limited situations, Medicaid and Medicare may reimburse these costs. A structure for reimbursing collateral charges, such as technician and line time, needs to be developed.

The U.S. Federal Communications Commission's (FCC) Universal Service Fund (USF) subsidies can reduce the cost of telepsychiatry network connections. The FCC implemented the USF to bring high bandwidth telecommunications to rural schools, libraries, and health care providers. Funding for the USF is generated from fees paid by telecommunications providers. However, the USF subsidies are not being widely used for several reasons, including a cumbersome application process, limitations on eligible facilities and locations, and questions regarding costs to the health care provider.[19]

Individual states also have developed funding streams to support telemedicine. The Centers for Medicare and Medicaid Services will pay a facility site fee to the host site (where the patient is located), but only if the site is in a rural area. Providers can charge patients a fee to support telepsychiatry infrastructure and maintenance, but typically this arrangement is not affordable and is not standard practice.

The future

Telepsychiatry's ability to improve access to mental health care to underserved

populations is becoming more evident. Technology is adequate for most uses and is constantly advancing. Numerous applications already have been defined, and more are ripe for exploration. Barriers to implementation are primarily of the human variety and will require a combination of consumer, provider, and governmental advocacy to overcome.

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Related Resources

- American Telemedicine Association. www.americantelemed.org.
- International Society for Telemedicine & eHealth. www.isfteh.org.
- American Psychiatric Association. Telepsychiatry internet resources. www.psychiatry.org/practice/professional-interests/underserved-communities/telepsychiatry-internet-resources.
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Disclosure

The authors report no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

Clinical Point

The costs of telepsychiatry infrastructure typically are not reimbursable

Bottom Line

Telepsychiatry is a viable, reasonable option for providing psychiatric care to underserved patients or those who lack access to services. Evidence suggests telepsychiatry assessment and treatment is comparable with face-to-face care. Barriers such as cost and clinician resistance need to be overcome to increase telepsychiatry use.

Table

Benefits of telepsychiatry as part of a 'connected health' system

Available to everyone
Health care is provided at the point of convenience
Patients are informed and empowered
Facilitates patient compliance, continuing education, ease of access into the health care system, and healthy behaviors
Clinical data are integrated with longitudinal electronic health records
Data are available to patients via his or her personal electronic medical record and authorized clinical providers
Data and transactions are secure to greatest practical extent
Other telehealth applications with demonstrated efficacy—eg, telephone, internet, e-mail, and text messaging interventions—can be used as well