Consulting psychologists have recognized the importance of providing comprehensive consultation and clinical services for consumers with special needs. Often because of distance and access to consultation services, remote and underserved populations may not have the necessary access to consultant specialists in psychology and other disciplines. Such services are now available through an innovative model of telehealth. Telehealth technology and services have gained the attention of scientists, clinicians, consultants, and health educators in a variety of settings. Examined are consultation case scenarios using telehealth qualitative observations of consultants who have used telehealth and liability issues consultants may face using this technology. A model release of liability is provided for consulting psychologists who may consider its use in their consultation practice. Case examples using telehealth applications are discussed, as are special applications for health care delivery to undeserved rural populations using telehealth technology.

Keywords: telehealth, liability, consulting, algorithm

Telehealth is “the use of telecommunications and information technology to provide access to health assessment, diagnosis, intervention, consultation, supervision, education and information across distance” (Nickelson, 1998). Several studies using telehealth technology provide case study reports of clinical applications. Such reports are appropriate given how recently the technologies involved have been developed and implemented. Case reports describe use of telehealth for conducting interviews in community mental health clinics (Hogue, 2003; Miller, Veltkamp, Kraus, Lane & Heister, 2003); multiple-session evaluations for a range of disorders (Ghosh, McLaren & Watson, 1997; Berek & Canna, 1994); multiple session psychotherapy including cognitive–behavioral treatment of a child with a disruptive behavior problem; use of telehealth in supervision, (Wood, Miller & Hargrove, 2005); clinical supervision for allied health professions (Miller, Burton, Sprang & Adams, 2003); psychiatric consultations using videophones (Miller, Veltkamp, Kraus, Lane & Heister, 1999); and a session for children with special needs in rural Kentucky (Miller & Miller, 1999). Such reports as these provide early evidence of a spectrum of potential applications for telehealth consultation. There have been a number of services involving consulting psychologists offered in public service settings. These services have provided a wide range of services, including general adult and child consultations and treatment of incarcerated inmates. Finally, review articles of active telehealth programs have been published (Bashshur & Armstrong, 1996).

Thomas W. Miller, PhD, ABPP, is a professor in the Department of Psychiatry, College of Medicine, University of Kentucky in Lexington, Kentucky.

The author wishes to acknowledge the assistance of Tag Heister, MLS, Deborah Kessler, MLS, Deborah Burton, PhD Candidate, Jennifer Trzaski, Kaysie Campbell, Michelle Chicoski, Brenda Frommer, Richard Clayton, PhD, Thomas Holcomb, EdD, PC. Amy Farmer, Rob Sprang, MBA, Jennifer Gourley, Miranda Rogers, Lon Hays, MD, and Otto Kaak, MD, for their contributions to the completion of this article. Funding from the Center for Prevention Research and National Institute on Drug Abuse contract #05312 supported in part the completion of this article and publication.

Correspondence concerning this article should be addressed to Thomas W. Miller, PhD, ABPP, Department of Psychiatry, College of Medicine, University of Kentucky, 3470 Blazer Parkway, Lexington, Kentucky 40509-1810. E-mail: tom.miller@uconn.edu
Consumers and practitioners in rural settings have traditionally contracted independently for specialized consultant services. Some of the paradigmatic changes that are being experienced in both urban and rural settings include administrative applications, consultation models, information systems, and evidence-based decision-making in consultations. Summarized in Table 1 are some of the emerging trends in each of these categories. Most notable among these changes are the multiple uses of telehealth in consultation services for psychologically related services.

**Consultation Case Scenarios in Telehealth**

**Case #1**

A Veterans Administration psychologist was referred a patient who had been reported for incidences of child sexual abuse by the State Department of Children and Families. Because of the complexity of problems and the lack of any staff specialized in working with perpetrators in this rural area, the use of an innovative telecommunications approach was implemented to provide multidisciplinary consultation to the VA hospital and staff psychologist. On-site team members included a child clinical psychologist, an advanced practice nurse, a clinical social worker, and a psychiatrist. The team communicated with a consulting psychologist, a specialist in treating perpetrators of child sexual abuse by video link to a university-based Department of Psychiatry through an inexpensive and cost-effective model of telehealth. Through the use of an 8x8 telemetric link, the provision of needed interdisciplinary clinical consultation and service was provided to this remote site in a cost-effective and timely manner. The telehealth services ranged by the State Department of Children and Families. Because of the complexity of problems and the lack of any staff specialized in working with perpetrators in this rural area, the use of an innovative telecommunications approach was implemented to provide multidisciplinary consultation to the VA hospital and staff psychologist. On-site team members included a child clinical psychologist, an advanced practice nurse, a clinical social worker, and a psychiatrist. The team communicated with a consulting psychologist, a specialist in treating perpetrators of child sexual abuse by video link to a university-based Department of Psychiatry through an inexpensive and cost-effective model of telehealth. Through the use of an 8x8 telemetric link, the provision of needed interdisciplinary clinical consultation and service was provided to this remote site in a cost-effective and timely manner. The telehealth services ranged

<table>
<thead>
<tr>
<th>Patterns</th>
<th>Past trends</th>
<th>Contemporary trends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative applications</td>
<td>Referral from medical centers, independent practices, and independent provider services through consultant contracting.</td>
<td>Consultants establish networks and alliances; psychologists contracting through integrated delivery system of service providers by telehealth models and technology.</td>
</tr>
<tr>
<td>Consultation models</td>
<td>Provider-focused, psychologists are individual providers/specialists. They provide services on an independent basis without integrating multidisciplinary input.</td>
<td>Client-focused, consumer-focused clinical models, psychologists, and team of providers and specialists provide service systems integrating treatment planning, implementation and evaluation.</td>
</tr>
<tr>
<td>Information systems</td>
<td>Paper, fax, and clinical records, provider developed record systems, local accessibility record.</td>
<td>Interactive television consultation, electronic health records, on-line support systems, E-mail, electronic files, and information exchange for comprehensive and integrated clinical care.</td>
</tr>
<tr>
<td>Evidence-based decision making in consultation</td>
<td>Few incentives for prevention-based initiatives or for health promotion and prevention in programs in health, nutrition, exercise, addictive disorders. Interactive Video emotional and behavior telehealth models in disorders, attention deficit, intervention services to hyperactivity disorders and community centers.</td>
<td>Prevention-oriented healthy lifestyles/wellness and healthcare promotion, clients receive accurate information through telehealth, screening based on evidence-based decision-making.</td>
</tr>
</tbody>
</table>
from continuing education on perpetrator
treatment, consultation about each of the
referred perpetrators to a clinical diagnostic
evaluation, a multidisciplinary team treat-
ment plan, and subsequent implementation
of the treatment plan involving weekly tele-
health supervision for treatment staff at the
remote VA site, family relations and sub-
sequent contact and follow-up involving
the ongoing communication and monitor-
ing of the home and family situation.

**Case #2**

A state hospital-based psychologist was
referred an inpatient case involving a court-
ordered evaluation for a cult member and
criminal activity. In the course of the
emerging presence of this cult, the super-
intendent of the school system in which the
cult activity was occurring recognized the
need for professional assistance in manag-
ing the situation and sought clinical consul-
tation services. The case involved several
high school teenagers described as mem-
bers of a “vampire cult.” They were
charged with first-degree murder in the
bludgeoning deaths of the parents of a cult
member. Through telehealth technology,
clinical specialists in the treatment of cults,
the sociology of cults, and multidisci-
plinary telehealth held a series of consulta-
tions to the hospital and school system.
Telehealth consultations provided the
school personnel in this rural community
with the education expertise and assistance
necessary to manage and provide an under-
standing as to how school personnel should
consider dealing in with cult members in
the school system.

Many of the necessary consultations were
accomplished by using portable video tele-
phone equipment that utilized long distance
telephone lines. The set-top videophone is
designed for clinical use. This set-top videophone integrates a digital video cam-
era, a high-performance modem, and a
powerful video processing system using a
portable video communications processor.

**Case #3**

A psychologist in an outpatient commu-
nity mental health center and clinic in a
rural Midwestern setting was presented
with a clinical case of a differential diag-
nosis and treatment planning involving a
12-year-old child with Attention Deficit
Hyperactivity Disorder (ADHD). A multi-
disciplinary clinical consultation using tele-
health technology was conducted. Particip-
ating professionals were a clinical psychi-
atrist, special educator, speech language
pathologist, and school psychologist. The
multidisciplinary consultation using tele-
health technology was accomplished by
using the set-top videophone. This consul-
tation provided interaction opportunities
among school personnel, medical and
health-related professionals that assisted
in the differential diagnosis and treatment
planning for the psychologist in the rural
outpatient clinic setting. A model algo-
rithm practice guideline is offered in Fig-
ure 1. This summarizes the steps a con-
sultant should consider in the delivery of
consultation services.

**Qualitative Observations With
Telehealth Technology**

Current technology used in providing
telehealth clinical services involves the
Polycom system. This is an improvement in
technology over the earlier systems, both of
which transmit through normal phone lines.
The limitations of the earlier system are
such that the video image is married by
frequent disruption whenever any move-
ment occurs in the camera. This makes it
such that as long as the person is sitting
completely still, their image is relatively
intact, but as soon as they move, or make
any facial gestures, the image becomes a
blur. The Polycom system is an improve-
ment in that it compresses much more in-
formation in a shorter amount of time, thus
allowing for a much greater resolution in
video quality. This allows for every movement of the face and body to be seen.

Much of the diagnostic qualities of a clinical evaluation involves observing behavior. Any system must allow one to observe not only gross motor behaviors, but also subtle nonverbal communication that one normally uses in facial expression and body language. It is the information that we receive from this nonverbal body language that comprises an important element in a clinical evaluation. As technology improves to increase the visual resolution through telephone lines with improved information compression software and hardware, the technical limitations of telehealth will be virtually eliminated. There is still the limitation of not being physically present with the client, and this perhaps will never be bridged by telehealth technology. This was not always a hindrance to the eval-

Figure 1. Model algorithm for use of telehealth.
vation. It was mainly noticeable at times when poignant subjects were broached and the consultants’ ability to confer empathy through body language was limited.

One interesting phenomenon that occurs with telehealth equipment is that there usually is approximately a 1 to 2 second delay in the video and audio information. This creates an interesting situation, such that if someone pauses while answering a question and then when another question or comment is made, if that person also starts to talk at that the same time, there will actually be a break in the audio information as your information confronts the audio information coming from the other site. This information coming in from the other site will often interrupt what the other person had just started to say, and therefore both parties will pause in a somewhat embarrassed moment waiting to see who really wants to talk first. Over time, this has led some consultants using telehealth technology to allow for much longer pauses after a person finishes a statement to see if they are going to continue with their conversation, or whether they are ready for another question or comment from the clinician.

Style and pattern of conversation becomes another qualitative issue. Two groups of communicators along these lines are realized. The first population tends to go from sentence to sentence rather rapidly, therefore making it somewhat easier for the clinician to know when they have stopped. There is a second group of people who seem to pause 2 seconds between major statements or major subjects naturally. It is this 2 second pause that is the most difficult to judge, because the interviewer is left with the immediate decision of whether they are ready for the interviewer to ask another question. Another interesting consequence of the audio format of telehealth exchanges is that it can sometimes be difficult to hear the parents over a very boisterous child or in couples therapy when one person speaks over another. Since the information is only conferred by a single microphone, which gathers sound from the whole room, the competition involved can be quite difficult to clarify.

In a normal evaluation setting, often the consultant will have the client sitting close to them and the child playing off in the distance, so that although they may be loud, it is easier to pay attention to what the parent is saying. In my own telehealth practice, after approximately 30–45 minutes, it may be necessary to take their child out of the room while finishing the session with the parent. At the same time, this system allows for excellent diagnostic information, since when the child is loud, the mother also is having trouble hearing what the consultant is saying, and what they choose to do with this situation can be quite diagnostically helpful.

Finally, consultants who work with children have a natural playfulness they employ with children. There are some intriguing aspects to the telehealth. One of these is the zoom function of the camera, which can easily be found on most remote controls for the camera which the clinician can then change, impacting facial expression on the face on the camera screen.

With children, this has the tendency to see how they can focus and how they interact with people. They often will be most intrigued and ask for repetitions of a phenomenon. Growling and keeping an angry face permits the clinician to zoom in on the face and increase the loudness of my growl watching how children then want me to repeat this, as well as watching how they regulate the emotion of fear has been quite diagnostic. Some children will cower and cling to their parent, yet at the same time knowing that it is pretend, ask for more, enjoying the excitement of the scary situation. Other children will respond aggressively taking on their own monster roar and even sometimes swinging at the screen or hitting the microphone in retaliation.

Some consultants use the telehealth equipment to show close-ups of various
stimuli or thematic apperception cards. This is used early on in the interview, usually to develop some rapport with the patient since often they start the session in a very restricted affect, being either overwhelmed by the technology or scared about the fact that they are in some hospital and know that they are going to be evaluated for their behavior. Showing these cards over the telehealth network places the card in full large view of the child, and often they will be fascinated by the cards and provide clinical relevant responses helpful in diagnosis.

Reflections on the Utility of Telehealth Technology

The telehealth applications have been specifically directed at consultations that are requested by clinicians working in a rural community. Some of the clients seen are at least 2 to 5 hours away from the nearest specialist. They are referred usually by family practitioners. The great utility of telehealth then occurs in the fact that these people are receiving consultation that is usually not available to them and therefore allows their clients to have a full evaluation and consultation with a consulting psychologist who has the specific expertise that is beneficial to the rural client and practitioner.

Noticeable in some clients are some amount of apprehension at first in using the telehealth equipment. In rural settings, there are some families that may not even have a telephone or a TV in their household, although this is a small minority. Taking these families and placing them in front of telehealth technologies from the latest part of the 20th century can be quite overwhelming. Often clinicians notice that the children warm up rather quickly, whereas the mother or father tend to hesitate in answering and will often ask a question several times if they are being heard. Uniformly, at the end of an hour of a telehealth session, the parents will express great gratitude, usually along the lines that this was the first time that they have actually understood, or someone explained what their child’s diagnosis was, or that they were relieved to find out that there were actually medications or counseling services that would help their child improve.

Another aspect of serving as a consultant to clinicians in a rural community is that the clinician tends to restrict the clinical note to only the essential information required. Given that these clinicians probably have to see 50–60 patients in a day, a lengthy four-page note would be useless for them, and they would probably gravitate only to the plan. Notes are kept to less than one page, and use a bulleted presentation with specific behaviors emphasized, the diagnosis, and a very simple concise plan. The feedback received from clinicians that have ordered the consults is that they are greatly appreciative of the telehealth option, especially given the isolation and large responsibility they often undertake in being the only provider in these communities.

Liability in Telehealth

A critical factor involves liability for telehealth clinical services. Telehealth liability for consultation services involves two potential types of telehealth liability that consultants must recognize and address. These include liability for negligence or abandonment. Consultants may run the risk of liability for negligence whenever they provide telehealth services. Consultants must address the following areas and realize that proof must exist before one is liable. To prove liability for negligence, consumers must show that the consultant owes the consumer a duty of reasonable care. Has reasonable care been provided? Consultants breached their duty of reasonable care to patients when the consultant failed to do something or provide some service that they should have provided and did not in fact provide in the course of using telehealth medicine. Agencies can breach their duty to patients in either of the following
I, ______________________ of ______________________, acknowledge herein that I am a patient receiving health care services through ______________________ and I have been provided the use of a Telehealth Videophone for use.

I understand that the Telehealth Videophone is a secure connection between this site and the clinic, and that through the videophone, ______________________ will provide me assistance and support for the proper administration of prescribed medication. I understand the risks involved in taking prescribed medication and I understand I am solely responsible for compliance with the correct dosage and proper administration of prescribed medication. I understand that ______________________ cannot be held liable for services provided by means of videophone and are not responsible for compliance with the correct dosage or proper administration of any prescribed medication.

To the extent permitted by law, I hereby release the ______________________ and their representatives from any liability arising out of my participation in this Telehealth Videophone project, including any loss, damage or injuries that result from use of the Telehealth Videophone, my negligence or the negligence of others, participating in this project.

It is my express intent that this release and hold harmless agreement shall bind the members of my family and spouse, if I am alive and my estate, family, heirs, administrators, personal representatives or assigns, if I am deceased and shall be deemed as a “Release, Waiver, Discharge and Covenant” not to sue the above-named ______________________. I further agree to save and hold harmless, indemnify and defend the ______________________ from any claim by my family, or me arising out of my participation in the project referenced herein.

Figure 2. Release of liability model.
I further state that I am at least eighteen (18) years of age and fully competent to sign this release and that I execute this release for full, adequate, and complete consideration, fully intending to be bound by the same.

The foregoing is submitted in consideration of the ______________________________
________________________ allowing my participation in this project. I execute this document with full knowledge of the contents and consequences stated in this release and further agree that this release shall be construed in accordance with the laws of the State of ______________________________.

If any term of this release shall be held illegal, unenforceable, or in conflict with any law governing this release, the validity of the remaining portions shall not be affected thereby.

PARTICIPANT:

(Signature)  (Signature)

(Name)  (Name)

(Date)  (Date)

Figure 2 (continued)

understand how to operate the equipment used in providing telehealth services. It is essential that successful training in the use of the equipment to the consultant and consumer is assured.

Risk management strategies should educate consultants and consumers about telehealth equipment. Who will provide training, what mechanisms are used to evaluate the effectiveness of training, and how to document deficits in knowledge following completion of initial training.

Another concern with respect to liability involves liability for abandonment. Abandonment may occur when the consultant would unilaterally terminate the relationship with a client or the relationship was terminated without reasonable notice, and termination occurred when further attention was needed. Consultants using telehealth technology continuously monitor the clients’ ability to participate in telehealth activities and confirm their understanding of their responsibilities in the use of telehealth equipment. A model disclaimer is offered in Figure 2.

In summary, a consulting psychologist using telehealth in the course of their practice, should employ a practice guideline for its use, effectively assess risk management, understand liability in the use of telehealth and consider a disclaimer. These are critical steps that must be addressed in each consultation. There remain several concerns about the use of telehealth technology in the delivery of direct patient care services and in consultation services. What remains clear is that the value of utilizing telehealth...
technology where services to patients requires specialized services not available in such underserved, rural, or distant sites, this medium of care provides access for patients and clients. There are persistent questions, which continue to emerge and serve as a sounding board for consulting psychologists who are using telehealth in their practice. This is a period of opportunities to consider different levels and models of consultation services through the use of such telehealth technology. The current models provide systems based on improved knowledge and technology which will ultimately provide an improved quality of life to many underserved consumers.

References


