

Home-Based Telemental Healthcare Safety Planning: What You Need to Know

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Abstract

Telemental health (TMH) care provided directly to the home is an emerging area of care delivery. TMH care involves awareness of safety issues and adequate safety planning, although detailed practical recommendations for home-based TMH safety planning are absent in the literature. With this article we aim to increase awareness of safety issues associated with home-based synchronous TMH treatment and to discuss recommendations for consistent safety planning that can inform the development of standard operating procedures, emergency protocols, and overall good TMH practice. Specific areas discussed include consideration of state and local requirements, appropriateness of TMH care, technology and infrastructure, and emergency management and monitoring procedures. The topic of safety, as it relates to TMH policy, as well as the need for additional TMH research are also discussed.

Key words: home-based, telehealth, safety, telemental health

Introduction

Telemental health (TMH) care provided directly to the home is an emerging area of care delivery. Awareness of the potential safety issues involved, as well as considerations for consistent and effective safety planning, is critical. In their review and evaluation of the safety of TMH care delivered to clinically unsupervised settings, Luxton et al.¹ defined "safety" as "the reduction and prevention of adverse reactions or events that might be experienced by patients who partake in care services. This definition extends to the protection of care providers and collateral persons (e.g., family members and treatment staff) during the course of care." Luxton et al.¹ defined "safety plans" as "predetermined procedures for reducing risk, preventing adverse reactions, and for responding to adverse events when they occur. These include appropriate screening processes for risk (e.g., suicidality), monitoring of patients during the course of treatment, and the establishment of safety protocols to ensure that the best methods for resolving adverse events are fol-

lowed when they do occur." Safety plans can be included as part of standard operating procedures (SOPs) or used as specific protocols for handling emergency issues during the delivery of clinical TMH services.²

To date, there are only a few published guidelines and studies reported in the literature that discuss telehealth safety planning¹⁻⁵ and even fewer that are specific to home-based TMH care.^{1,3} The American Telemedicine Association (ATA) Practice Guidelines for Videoconferencing-Based Telemental Health,² in particular, provide general guidance on telehealth psychiatric emergencies that was adapted from guidelines previously published by Shore et al.⁵ Although there are people in the telehealth field who are working to provide data and recommendations regarding the safety of TMH, specific practical recommendations for safety planning for home-based TMH are currently scant in the literature. Given this critical gap, our goal with this article is to focus on specific safety considerations associated with synchronous (two-way) home-based TMH and to provide recommendations for consistent TMH safety planning. We acknowledge that much of the information we present here applies to other clinically unsupervised settings (e.g., community centers); however, we focus on home-based TMH given the emergence of home-based TMH care. We summarize our recommendations in *Table 1* and provide detailed discussion in the following sections. We hope that this article, although unlikely to be exhaustive given the space of one manuscript, will help to inform the development of SOPs, emergency protocols, and overall good TMH practice.

Legal and Policy Guidelines Considerations

Familiarity with federal, state, and other local laws and regulations is a prerequisite to the development of home-based TMH safety plans. One of the primary advantages of TMH, and telemedicine in general, is that care delivery is not limited by geographic boundaries. Because care may potentially transverse state lines, the legal requirements for interstate care delivery must be considered. It should be noted that most laws and regulations define the site of care delivery where the patient is located as the "originating site." It is necessary for TMH clinicians to be familiar with the individual state requirements of the originating site. Some states have specific *telemedicine* laws, and these laws vary from state to state in what type and under what circumstances care can be provided across state lines. Laws also vary according to the type of license one holds (i.e. medical, psychology, etc.). For example, California, Kentucky, and Vermont are the only three states that have licensure guidelines for psychologists who wish to practice TMH.⁶

Familiarity with civil commitment requirements as well as with duty to warn/protect (both statutory and case law requirements) is

Table 1. Considerations for Home-Based Telehealthcare Safety Planning

SAFETY PLANNING STEPS	SPECIFIC CONSIDERATIONS
Preliminary steps	
Review state laws, regulations, and institutional-level guidance	• Licensure requirements
	• Civil commitment and duty to warn/protect
	• Institutional rules (VA, DoD, hospital, etc.)
Determine appropriateness of home-based telemental care	• Appropriateness of particular treatment
	• Safety concerns
	• Privacy concerns
Determine adequacy of infrastructure and technology	• Adequacy of bandwidth
	• Environmental (i.e., lighting, sound proofing, etc.)
	• Adequacy of equipment (i.e., quality of computer, cameras, microphones, etc.)
	• Backup contact plans (e.g., telephone)
	• Tech support procedures
	• Equipment/network problem procedures
Emergency management planning	
Site assessments and procedures	• Obtain patient address and local 911/EMS
	• Provider contact information
	• Obtain alternate patient contact phone numbers
	• Identify local collaborators if appropriate and consider their safety
Plan and discuss roles and responsibilities	• Discuss safety issues/expectations with patient
	• Discuss technical troubleshooting (provide guide, checklist, etc.) with patient
Monitor risk during and after treatment	• Monitor symptom levels
	• Monitor self-harm ideation
	• Monitor expressed intent to harm other(s)
	• Monitor changes in setting/patient situation
	• Plan referral procedures/care continuity
DoD, Department of Defense; EMS, emergency medical services; VA, Department of Veterans Affairs.	

also important for TMH safety planning. The criteria and procedures for involuntary hospitalization as well as requirements for duty to warn/protect vary by state.^{2,7} Moreover, some states do not have statutes or guidelines for exercising duty to protect, and among the states that do have statutes, there is considerable variability in language and expectations for clinicians.⁸⁻¹⁰ Clinicians who are considering home-based TMH should be aware of civil commitment and duty to warn/protect requirements in their jurisdiction as well as that of the patient. TMH clinicians should also be aware of applicable institutional-level guidance and SOPs that may address these issues. Moreover, we recommend that TMH clinicians become familiar with the guidelines and ethics codes of their respective professional organizations.

Appropriateness of Home-Based TMH

It is important to note that TMH is not a type of therapy, but rather a mechanism to deliver mental health services by clinicians who are sufficiently trained in the types of services (e.g., interventions, diagnostic interviews, family counseling) that they are delivering.⁴ It is nonetheless critical for TMH clinicians to assess whether treatment delivered via TMH to the home is appropriate for any given patient. This should begin by determining whether the patient is comfortable with the home as a healthcare delivery location. We recommend that clinicians assess patient perceptions of the appropriateness and safety of home-based TMH care by discussing the topic with them prior to initiating TMH care and to reassess this during the course of treatment. It is also important for clinicians to consider their own expectations and comfort level with home-based TMH care,¹¹ including their own confidence in established safety plans. Ultimately, the appropriateness of TMH care should be based on the needs of the patient as well as the comfort level of the clinician.

Some patients with a history of adverse reactions to treatment, such as severe panic attacks, may not be appropriate candidates for home-based TMH if potential reactions cannot be addressed by onsite treatment staff. Thus, careful review of patient history, with the aforementioned in mind, is recommended. In some cases, home-based TMH may be safer than in-person treatments. For instance, a patient with a history of violence toward treatment providers may be better suited for in-home treatments because the potential for physical harm to onsite treatment staff is eliminated. It is also possible that home-based TMH may become contraindicated during the course of treatment because of worsening of clinical symptoms or threats of self-harm or harm to others. It is therefore necessary to evaluate and assess whether a TMH treatment is appropriate via prescreening procedures (such as suicide risk assessment) and to also have a plan to monitor symptoms during the course of treatment.¹ The inclusion of screening measures or questions during each treatment session may be beneficial.

It is also important for the clinician to evaluate whether technology limitations might influence the capability to observe nonverbal behavior during the delivery of care. The observation of nonverbal behaviors, such as gestures, posture, and facial expressions, is

important for clinicians to note during psychological assessment and treatment because nonverbal behaviors can provide valuable clinical information that is not expressed by words alone.¹² Although there are data that suggest that patients are satisfied with the level of presence (awareness of and sense of connection to another through nonverbal cues) they experience during TMH sessions,^{13,14} in some cases, webcam video may not be optimal because of screen size or connection speed and therefore not appropriate for assessment of nonverbal information.

Access to firearms is another potential safety issue when delivering home-based TMH. The ATA Practice Guidelines for Videoconferencing-Based Telemental Health² provide specific guidance that describes firearm ownership for telehealth delivered to rural populations. In brief, the guidelines state that clinicians shall discuss firearm ownership, safety, and the culture of firearms in rural areas. The guidelines also specify that clinicians shall be prepared to negotiate firearm disposition with patients and consider involvement of family members when appropriate. We recommend discussion of firearm access, regardless of setting, when safety is a concern. Furthermore, the use of trigger safety lock devices may provide an additional level of safety precaution by restricting immediate access to firearms. The Department of Veterans Affairs currently provides trigger locks to patients and family members for this purpose. A discussion about the use of trigger locks and provision of them prior to initiating TMH treatment is an additional safety management tool for clinicians to consider.

Technology and Infrastructure Considerations

Safety planning should include assessment of potential technology and infrastructure issues prior to initiating the delivery of care. Technology issues include the adequacy of bandwidth (the rate of data transfer) for synchronous communication as well as the adequacy and reliability of telehealth equipment (computers, monitors, video cameras, audio equipment, etc.). The most significant issue germane to patient safety is loss of connection due to inadequate transmission bandwidth or other equipment failure during a clinical crisis situation. Other equipment limitations such as insufficient camera resolution or environmental problems (adequacy of room lighting and microphone placement) can also present a safety issue if audio/visual detail is impaired. Unlike with fixed TMH video-teleconferencing equipment in traditional clinical settings, home-based TMH has the potential disadvantage of relying on the network limitations of the patient's location as well as the patient's equipment (personal computer, camera, etc.). It is therefore important to be familiar with the basic minimal technical requirements necessary for conducting home-based TMH. Furthermore, it is important for clinicians to discuss what the technical requirements are with the patient prior to initiating treatment and to also consider the level of technology experience of the patient.

It is also important to have a backup plan if the video connection is lost. Alternate contact methods, such as by telephone, are necessary to maintain a connection between the patient and originating site and to contact technical support. Landline telephones are preferred as

they are generally more reliable, although cell phones can also serve as effective backups. Some other important steps when developing safety plans include the identification of information technology technical support to assist with technical troubleshooting and the creation of troubleshooting guides and checklists that can be used by both the clinician and the patient. TMH clinicians should also have sufficient training regarding the technology so that they can conduct basic troubleshooting. Furthermore, a plan to test the technology prior to the first clinical encounter with a patient is recommended, and, in some cases, a home visit by support personnel to set up and test the equipment may be necessary.

Emergency Management Planning

SITE ASSESSMENTS AND PROCEDURES PLANNING

It is important for clinicians to collect information regarding the physical location of the patient (i.e., home address) in case emergency services become necessary during the course of treatment. Verification of patient location and contact information at the beginning of every TMH encounter is also recommended because patients may have relocated their camera to an unfamiliar setting or be in a completely different locality, especially if they are using a laptop or mobile device. Verification of patient location is not only important for planning for the dispatch of emergency services but also for clinician awareness of state licensure requirements. Additionally, clinicians should obtain the direct phone number for emergency services for the location of patients³ and test the nonemergency number for that area in order to verify that the emergency number is correct. Clinicians should also consider obtaining information regarding medical and psychiatric services that are nearby the patient in order to make appropriate referrals and/or to contact the patient's medical provider during a crisis situation.³ The collection of alternate contact information for patients before the initial session is also important³ in case the primary mode of communication fails because of technological issues or as the result of a patient losing, damaging, or not responding to contact attempts on the primary contact device.

USE OF LOCAL COLLABORATORS

The identification and use of a local collaborator^{2,5} such as a family member or close friend of the patient are important considerations for home-based TMH safety planning. There are several benefits of involving a local collaborator. Local collaborators can assist clinicians by providing information about the patient's history, by monitoring mood and behavior, and by assisting with treatment planning and coordination.¹⁵ Local collaborators can also provide TMH clinicians with an additional mechanism for contacting patients if a connection becomes lost, provide onsite technical assistance, and when appropriate, provide support to the patient during emergency situations. Furthermore, local collaborators can assist with coordination with local 911 services, which may provide more efficient responses from emergency responders than if the TMH clinician is calling from outside of the county or state.

TMH clinicians should also consider the risks of involving local collaborators in emergency situations. In particular, the safety of local collaborators must be carefully considered when managing crisis situations. In some scenarios, it may be best to rely on local 911 responders if there is a safety risk to local collaborators. Also, the ATA Practice Guidelines for Videoconferencing-Based Telemental Health² specifically state that clinicians should also be cognizant of the potential deleterious effect of disclosures made during emergency management on patient confidentiality and relationships, especially in small communities. The ATA guidelines further state that clinicians should be sensitive to potential family tensions in small communities when family members may become involved.

It is important for clinicians to discuss safety planning with patients before initiating home-based clinical interactions. These issues should be addressed during the informed consent process with the patient. The discussion of applicable confidentiality, data security (encryption/HIPAA requirements), privacy, and safety procedures as they pertain to the home-based treatment is recommended. The roles and responsibilities of local collaborators must be clearly defined, and discussion of emergency procedures with appropriate family members or other identified local collaborators is advised.⁵

MONITORING RISK DURING AND AFTER TREATMENT

We recommend that a plan be established for continuous monitoring of the patient and environment during the course of TMH care delivery. Monitoring should include assessment of clinical symptoms as well as risk for self-harm or harm to others during every session. Inclusion of standardized screening measures during every session can help to identify worsening symptoms as well as current suicidal thinking.¹⁶ It is also important to monitor changes in the treatment setting/patient environment or situation. A treatment session checklist can include collection of whether or not another person is at home with the patient and whether the patient feels that their environment is safe and private.

The extant literature on emergency management in TMH focuses primarily on suicide and suicidal ideation.^{3,5,6} Successful management of a suicidal patient during home-based TMH was recently reported by Gros et al.³ These researchers presented the case of a 43-year-old male veteran enrolled in a research trial evaluating home-based TMH treatment for posttraumatic stress disorder. During week 6 of the Prolonged Exposure protocol, the patient endorsed serious suicidal ideation and reported to the TMH clinician that he could not guarantee his own safety. Fortunately, this patient was willing to maintain a connection with the clinician while the situation was resolved. Central to the resolution of this crisis was the clinician's knowledge of contact information for local police and hospital emergency facilities.³ Gros et al.³ also highlighted the importance of having a second clinician or care provider available to help with care coordination in the event of clinical crises. In this case, the second clinician coordinated with the emergency dispatcher while the primary therapist remained in contact with the patient and his family. It is also important that safety considerations extend to

post-TMH treatment. We recommend that clinicians be familiar with local community services to make appropriate referrals and to have a continuity-of-care plan in place.

Discussion and Conclusions

With this article we have outlined recommendations for the safe delivery of home-based TMH care. These recommendations can be used to develop SOPs that also consider adjustments based on site-specific safety requirements. SOPs can ensure consistent implementation of TMH program functions and responsibilities including patient safety assurance guidelines and procedures and have been shown to positively influence the safety of mental healthcare delivery.^{1,3}

Policies that define where and how TMH care can be delivered are necessary to maximize the full potential of TMH capabilities. The provision of TMH services requires access to both the appropriate technologies (i.e., those approved based on minimum specifications and data security requirements) and an approved originating site. Some current institutional policies prohibit the delivery of TMH care to a clinically unsupervised originating site such as a patient's home. Therefore, even if an individual has access to capable technologies, home-based TMH may not be a viable option due to policy restrictions. Policy limitations may, in part, be based on perceptions that home-based TMH is somehow inherently less safe than conventional in-person care. Acceptance among individual clinicians may also be influenced by their perceptions of the safety of TMH, which may inadvertently decrease rather than increase accessibility options for patients who may best benefit from TMH care. A recent survey study by Simms et al.¹¹ indicated that clinicians' perceptions regarding the adequacy of TMH for patients are influenced by mental and physical health status, experience with technology, age, and level of trust of patients. Moreover, concerns regarding the need for support structures in place at a client's location were potential barriers to the use of TMH. Therefore, the telehealth field must focus on developing and implementing specific safety procedures for home-based TMH services and disseminating data regarding TMH safety.

The review by Luxton et al.¹ of safety data provided initial evidence that TMH services delivered to clinically unsupervised settings can be safely managed. More research is needed, however, to directly influence policy and perceptions regarding the safety of home-based TMH. Areas of focus might include evaluation of potential differences in safety based on the type of telehealth technology used. Most important is that research and case study results must be published in peer-reviewed journals to inform and build upon lessons learned. Randomized controlled trials that involve home-based TMH have the most power to strengthen the perception of the safety of home-based TMH. One current study by the U.S. Department of Defense's National Center for Telehealth and Technology is evaluating the safety, feasibility, and efficacy of home-based TMH for service members and veterans. Although this is just one study, it is an important step in the process to expand conceptualizations of not only where telehealthcare can be delivered, but how innovative solutions can enhance access to care.

We expect home-based TMH options to become more available and demanded by patients in the years to come. Advancements in technology, lowered cost, and the continued shift towards patient-centric healthcare delivery will increase accessibility options for home-based TMH. Home-based TMH is a viable solution to provide improved access to quality mental healthcare for those unable or unwilling to seek traditional care because of mobility, geography, or concerns about stigma. The consideration and application of the safety recommendations outlined in this article in research and clinical practice should help inform TMH policies that can ultimately increase access to quality and cost-effective mental healthcare.

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