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Administrator's Guide for Implementing Technology-Based Behavioral Health

Introduction

This chapter targets behavioral health program administrators who wish to adopt or expand technology-assisted care (TAC) in their organizations, as well as clinical supervisors and behavioral health service providers who work in small practices and fulfill administrative roles. It covers programmatic, technological, budgeting, vendor selection, data management, privacy and confidentiality, and regulatory considerations likely to arise during adoption of technology-based interventions. As discussed in Part 1, with technology comes great potential to expand access to behavioral health services and to improve outcomes; however, TAC also creates new challenges for administrators.

TAC offers an array of opportunities in the prevention and treatment of mental and substance use disorders. It has the potential to reach historically underserved populations, improve overall quality of care, and enhance the efficiency and effectiveness of service delivery. Specifically, the use of technology has been demonstrated to improve access to services for diverse and potentially underserved groups, such as people who are geographically isolated (Finfgeld-Connett & Madsen, 2008; Griffiths & Christensen, 2007), women (Finfgeld-Connett & Madsen, 2008; Lieberman & Huang, 2008; Spek, Nyklicek, Cuijpers, & Pop, 2008), people who are Deaf and hard of hearing (Moore, Guthmann, Rogers, Fraker, & Embree, 2009), veterans (Barnwell, Juretic, Hoerster, Van de Plasch, & Felker, 2012; Godleski, Darkins, & Peters, 2012; Koch, 2012), substance use disorder treatment clients (King et al., 2009), older adults (Ramos-Ríos, Mateos, Lojo, Conn, & Patterson, 2012), and college students (Saitz et al., 2007). Telephone- and Web-based services have been shown to be particularly useful to people with demanding schedules (Mohr et al., 2010), and video conference-based services have achieved favorable outcomes in a variety of therapeutic formats with diverse populations (Backhaus et al., 2012).

Technology can also improve the quality and effectiveness of care. It provides an efficient means of intervening with individuals at early stages of risk for problems, such as with people who use alcohol but are not yet dependent (Postel, de Jong, & de Haan, 2005; Riper et al., 2008), and it presents new opportunities to manage care over time for people with chronic conditions (Drake & Bond, 2010; Wisdom, Ford, & McCarty, 2010). Although the cost-effectiveness of TAC has not been established (Tate, Finkelstein, Khavjou, & Gustafson, 2009), there is some evidence that Web-based therapy can be equally as effective as in-person care in building a strong therapeutic alliance (Abbott, Klein, & Ciechomski, 2008; Hanley & Reynolds, 2009), helping people change behaviors (Webb, Joseph, Yardley, & Michie, 2010), and reducing negative symptoms (Barak, Klein, & Proudfoot, 2009; Sloan, Gallagher, Feinstein, Lee, & Pruneau, 2011). The use of guided mutual help or social networking as an adjunct to professional services presents new avenues for recovery support with minimal clinical intervention (Farvolden, Cunningham, & Selby, 2009). In particular, Web-based and other computerized treatments for depression have demonstrated effectiveness, especially when coupled with support from a counselor (Andersson & Cuijpers, 2009). Thus, TAC can address some pressing needs in behavioral health organizations, including expansion of access to services and enhancement of the efficiency of care.

Potential Benefits of TAC

- Expand access to prevention and wellness information.
- Extend clinician availability.
- Reduce the burden on clients associated with repeating intake and assessment information.
- Increase the accuracy of reporting risky behaviors.
- Reach populations that have traditionally been difficult to engage.
- Present opportunities for remote registrations and preregistrations.
- Improve anonymity for clients in small communities.
- Increase access to specialists.
- Connect clients to others with similar problems.
- Tailor services to meet individual needs and preferences.
- Give clients flexibility in how and when to acquire new information or skills.
- Enhance consistency of service delivery.
- Improve frequency and timeliness of care.
- Focus clinicians' time on the clients most in need of intensive services.
- Improve interagency care coordination.
- Increase cost-effectiveness of services.
- Enhance access to clinical supervision.

TAC also presents new opportunities for clients to direct their own care. Technology can provide expanded accessibility for individuals who are isolated from services and support outside of scheduled sessions, offer new avenues for support, and provide opportunities for self-paced intervention. It allows for the provision of immediate feedback to clinicians, clients, and administrators on the outcomes of services at both individual and aggregate levels (Drake & Bond, 2010). Symptom monitoring systems that feed client data back to clinicians present options for tailoring services to be more responsive to the real-time challenges clients face. Web-based performance monitoring systems that provide immediate ratings of clients' perceptions of care are useful in more quickly addressing client concerns (Forman et al., 2007). Medication compliance technologies and remote client monitoring systems can improve medication compliance and allow remote monitoring of medication reactions (Center for Technology and Aging, 2010).

TAC can expand the tools available to coordinate services across providers and organizations. For example, using teleconferencing to coordinate services for an adolescent and his

or her family, who are involved across multiple systems spanning various geographic areas, can improve communication among providers, enabling them to present consistent expectations for the adolescent and family members. In addition to enhancing direct services, TAC offers new ways to train and supervise the behavioral health workforce (Hoge et al., 2007; Institute of Medicine, 2006). Innovations, such as self-paced cognitive–behavioral therapy training combined with Web conferencing and the use of digital recordings to perform clinical supervision, demonstrate the potential of Web-based training as a flexible and cost-effective approach in real-world settings (Byrne & Hartley, 2010; Weingardt, Cucciare, Bellotti, & Lai, 2009; Weingardt, Villafranca, & Levin, 2006). Telesupervision can be especially valuable in rural areas, enabling clinicians to access expertise that is not otherwise available in their local communities and improving access to supervision in crisis situations (Kanz, 2001; McAdams & Wyatt, 2010; Wood, Miller, & Hargrove, 2005).

As with any new opportunity, the adoption of new technology also presents administrative challenges. Despite the potential to improve access for some populations, TAC may involve greater risk for dropout than traditional in-person services (Andersson, Carlbring, & Grimlund, 2008; Farvolden et al., 2009), and disparities in access to technology resources may accentuate the gap in treatment access for people at lower income levels (King et al., 2009). The use of TAC in the behavioral health field introduces new challenges in traditional aspects of client–provider interaction, such as building a therapeutic alliance (Shore, Savin, Novins, & Manson, 2006). Furthermore, TAC creates unique ethical and legal concerns that you, as a behavioral health program administrator, will need to address (Mallen, Vogel, & Rochlen, 2005). These challenges range from responding to situations in which clients pose a danger to themselves or others to implementing systems that ensure the confidentiality and privacy of clinical information shared through emails or text messages (Mallen, Vogel, Rochlen, & Day, 2005).

Regulations and financing policies have been slow to keep pace with changing technology. This can create confusion and risk as you attempt to implement and finance TAC. Although federal agencies and professional licensing organizations have begun to address licensure portability and cross-jurisdictional certification, not all regulatory agencies or funders have addressed such issues as licensing standards dictating in-person contact, signatures of acknowledgment, and geographically bound service jurisdictions (McGinty, Saeed, Simmons, & Yildirim, 2006).

Examples of Comprehensive Web-Based Treatment Programs

Comprehensive Web-based programs, such as the following, offer online recovery services that incorporate screening and assessment, live group counseling and peer support groups, individual counseling and coaching, journaling, secure email, and chat rooms:

- **Anxiety Online** (https://www.anxietyonline.org.au/default.aspx) is a comprehensive Internet-based treatment clinic for people with anxiety disorders funded by the Australian Department of Health and Ageing. The site provides information, assessment, therapist-assisted treatment, and mutual-help programs.
- **Prochange.com** (http://www.prochange.com) is a set of online behavior change programs targeting a range of populations and problems, including stress, weight management, domestic violence, depression, smoking cessation, medication compliance, and teens in relationships. The programs are empirically based and use self-directed approaches as well as coaching.

TAC introduces new challenges and opportunities related to managing and supervising the behavioral health workforce. In addition to clinical and cultural competence, technological competence is becoming more important for clinical staff members (Midkiff & Wyatt, 2008). Technology also offers new avenues for supporting the workforce through Web-based or software-based training, decision support, and video conferencing (Institute of Medicine, 2006). The use of technology to deliver services in your organization requires that you have a working knowledge of the range of available technologies, including the strengths and weaknesses of each and the technological capacity each requires (e.g., bandwidth, special equipment, data storage). You must develop organizational expertise in risks related to privacy, confidentiality, and security and in the protections needed to minimize organizational liability and manage those risks.

Nonetheless, the challenges presented by TAC are no more daunting than those encountered when adopting other innovations. Many of the same tools and techniques that you may well routinely use to plan for and implement new service delivery approaches are suited to planning for and adopting technology-mediated service delivery. This chapter provides behavioral health program administrators, as well as clinical supervisors and providers in smaller agencies who may bear certain administrative responsibilities, with information they need to help thoughtfully navigate the risks and challenges associated with the use of technology to deliver behavioral health services.

Adoption and Sustainability Considerations

Technology is a means for delivering services rather than an end in itself. Therefore, clear goals for introducing technology-based interventions are essential. This section outlines a process for planning for and monitoring the success of TAC implementation; it addresses who should participate in TAC planning, strategies to consider when planning TAC for specific populations, and other considerations associated with the use of certain technologies. This section also discusses selection and training of staff members to incorporate TAC into their practice, as well as the provision of adequate supervision for TAC.

The process of considering and adopting technological innovations involves identifying the need or problem to be addressed, assembling a planning team, designing the service delivery process, selecting the technologies that best support service delivery, implementing and continuous monitoring, and maintaining process improvement. As with all new programs, thoughtful implementation that includes feedback from relevant stakeholders can help overcome implementation barriers and enhance the success of the project. A wide range of stakeholders—including administrators, supervisors, counselors, clients, and technology experts—should be involved in developing TAC processes. Behavioral health service providers who plan to incorporate TAC into their practice may not necessarily be technology experts, but they should have the ability to conceptualize how technology can be incorporated into service provision, and they need to be inquisitive about the use of technology to support care.

Strategic Goals

Strategic questions, such as the potential for specific technology-based approaches to promote partnerships with primary healthcare providers or other key community partners, will shape the direction of planning and elucidate a central role for administrators in establishing the overall goals for any given technology

intervention. The adoption of technology for staff supervision or training can assist your organization in reaching strategic goals related to staff recruitment or retention, and it can also help address process improvement challenges. Issues of positioning in the market, competitive advantage, improvements to customer service, and adding value for purchasers also drive the establishment of clear goals.

Planning Team

To foster successful planning, involve stakeholders with a range of skills and perspectives and focus on improvements in clinical care and business processes. Your planning team must make many decisions about the clinical goals of the TAC your agency provides; the content of TAC intervention that will be most responsive to the needs of the population your agency serves; the particular technologies that best complement TAC goals; and the technological, clinical, and administrative infrastructures required for implementation. Exhibit 2.1-1 outlines roles and responsibilities of various stakeholders in the technology adoption process.

Population-Specific Considerations

Most of the same considerations regarding cultural responsiveness and appropriateness that apply to in-person interventions also apply to technology-based interventions. In addition to the issues that you already typically consider, it is important to think about the suitability of various technological approaches to the strengths and needs of your intended service population. For example, you should avoid text-based approaches in situations where the target population has limited English proficiency or limited literacy skills, and you should establish clear protocols to assess literacy rather than relying on professionals to assess this skill without formal support. Interventions that include transmission of images may be sensitive for certain cultural and ethnic groups, and digital applications intended to serve older adults must have options for large text sizes and follow elder-friendly digital design principles. Certain groups, such as African Americans, Latinos, and young adults, are more likely than older Whites to use mobile devices as their primary source of Internet access, whereas people over the age of 65 and those with lower incomes are least likely to own a smartphone (Smith, 2010; Smith, Rainie, & Zickuhr, 2011).

Certain populations may significantly benefit from the use of technology to deliver services. For example, technology offers opportunities to improve treatment services for individuals who are hearing impaired by overcoming some challenges in communicating with hearing individuals, expanding the mechanisms for Deaf people to communicate with each other, and offering enhanced access to culturally specific treatment and support (Pollard, Dean, O'Hearn, & Haynes, 2009). It is also important to consider how much technical support your agency will need to implement a particular technological approach based on the problems and needs of the populations to be served. This will drive your decisions about which aspects of the intervention to automate and which aspects counselors should direct (Andersson, Carlbring, Berger, Almlöv, & Cuijpers, 2009). Thus, it is crucial to conduct a review of the strengths and needs of the population to be served and to include former and potential clients in the planning and implementation process. Doing so will help you match TAC to their needs and ensure greater usefulness to the group being served (Forducey, Glueckauf, Bergquist, Maheu, & Yutsis, 2012).

Factors Influencing Successful Adoption of New Practices

Implementing new practice patterns or technologies can be challenging for organizations.

Exhibit 2.1-1: Responsibilities of Stakeholders in the Technology Adoption Process

	Establish Goals and Team	Design or Refine Service Delivery	Select Technology and Field Test	Implement	Monitor
Administrators	• Define a strategic plan. • Identify opportunities and challenges. • Convene a team. • Assess risk and regulatory landscape. • Develop a business plan, including funding sources and budget. • Consider an evaluation component.	• Ensure availability of team and other design resources.	• Plan for funding and sustainability. • Identify performance monitoring and evaluation strategies.	• Ensure availability of needed resources.	• Review reports and monitor success of implementation and evaluation.
Clinicians and Supervisors		• Conduct workflow and workload analysis. • Communicate with clinical staff about needs and preferences.	• Field test the application. • Develop program materials and consent forms. • Develop supervision and training protocols. • Provide troubleshooting and support.	• Discuss implementation expectations with clinical staff. • Conduct supervision. • Provide troubleshooting and support. • Monitor fidelity to evidence-based practices.	• Monitor staff and client/ consumer feedback.
Technology Experts		• Expose clinical staff to new tools. • Present technology and delivery alternatives.	• Price out alternative approaches. • Coordinate evaluation of technology options. • Troubleshoot technology challenges during testing. • Analyze privacy and security features.	• Coordinate purchase and installation of hardware and software.	
Clients and Consumers		• Consult on client/ consumer needs and preferences.	• Test application. • Review consents and other program materials.	• Provide feedback on ease of use and effectiveness.	• Review ease of use and effectiveness.

However, research in the area of implementation offers some useful lessons. Individuals tend to adopt an innovation when they believe there is a need for the innovation, see the benefit in the new practice, and have the skills and confidence to implement the innovation (Meyer, Clarke, Troke, & Friedman, 2012). You can support clinicians by identifying how technology can be used to solve problems that are relevant to the key stakeholders. You should also consider providing training and support for, and involving clinicians in, service planning processes (Meyer et al., 2012). When adopting new technologies, the level of support from top management and the degree of assistance and support available to service providers are critical. (Jeyaraj, Rottman, & Lacity, 2006; Meyer et al., 2012). For example, ensuring ease of access to the equipment, having adequate support for operating the technology, and providing sufficient time for clinicians to learn the technology can promote the successful adoption of new practices. Clinicians and supervisors on the planning team must think carefully about how the introduction of TAC will change the flow of work for staff members (McGinty et al., 2006); they must also consider how to ensure that efficiencies are gained, or at least maintained, as the agency introduces TAC to the workflow. Successful implementation requires a well-developed business plan and identification of challenges before creating a mechanism to measure success (Meyer et al., 2012).

The Network for the Improvement of Addiction Treatment (NIATx, 2013), a division of the University of Wisconsin's Center for Health Enhancement Systems Studies, developed an effective process improvement system. NIATx identifies five principles for effective implementation of change:

- Focus on an important problem to be solved by implementing the change.
- Identify a change leader.
- Look to other organizations for ideas.
- Pilot the change on a small scale and make adaptations prior to large-scale implementation.
- Understand and involve clients in the change process.

Implementing a Therapeutic Workplace

A Web-delivered, employment-based intervention for people who inject drugs called the Therapeutic Workplace has reliably produced marked reductions in drug use and underscores the potential of long-term behavioral workplace interventions to be as therapeutic as long-term therapeutic agents in the treatment of substance dependence. The intervention computerizes a contingency reinforcement program that requires medication compliance for the client to be allowed to attend work and can also increase or decrease payment for the work, depending on abstinence as determined by urinalysis.

Source: Holtyn et al., 2014.

The Substance Abuse and Mental Health Services Administration's (SAMHSA's) Strengthening Treatment Access and Retention State Initiative (STAR-SI) supported NIATx and others (Molfenter, Boyle, Holloway, & Zwick, 2015) in conducting case studies of the use of telemedicine in addiction treatment. In each case study, treatment providers identified factors impeding or facilitating the sustainability and use of TAC, which they were most interested in conducting via videoconferencing and mobile devices. Impediments included costs, lack of reimbursement, unease with technology, lack of models to follow, and concerns about confidentiality. Facilitating factors included local success stories about TAC, champions of TAC, and a strong need to increase access and improve services. One notable STAR-SI effort is the Recoveration program (https://www.recoveration.org), which provides

information, support, and distance counseling to consumers (Molfenter et al., 2015).

Staff Recruitment and Training

Counselors who have strong in-person counseling skills will not necessarily be skilled in delivering TAC. Therefore, assessing the technological competence of the workforce and helping staff members develop a sense of self-efficacy with the technology will help increase the success of technology adoption (Andre, Ringdal, Loge, Rannestad, & Kaasa, 2008; Wisdom et al., 2010). As with any new practice, clinicians need to establish competence and develop self-efficacy with the intervention prior to engaging in service delivery (Andre et al., 2008; Maheu & Gordon, 2000; Midkiff & Wyatt, 2008).

To build competence and confidence, behavioral health service providers must have the opportunity to practice integrating services and technology prior to their first client interactions (Abbott et al., 2008; Wood et al., 2005). This might include hands-on practice with the technology before using it with a client, as well as supervised interactions with clients using the technology prior to independent activity. Providers must be comfortable enough with the technology to be able to answer clients' questions, talk about potential privacy and security risks, and troubleshoot technological problems with clients (Ragusea & VandeCreek, 2003). An alternative approach is to use technology that has built-in support and can assist with training clients.

Building competence in staff members should be an ongoing activity. The skills of clinicians and other staff members involved with the technology should be reassessed regularly, and you should have plans in place to institute additional training and support to help staff members who may struggle with the technology or experience new concerns as their competence with the technology advances. Professional associations, such as the American Psychological Association, have begun to develop specific guidelines for the ongoing evaluation of providers' skills and their effectiveness. Exhibit 2.1-2 outlines some of the technological competencies required to implement TAC in behavioral health services.

Clinical Supervision of Technology-Based Care

The challenges that emerge in the recruitment and training of clinical supervisors to oversee the delivery of TAC are similar to those that arise in preparing clinicians to deliver traditional care (Mallen, Vogel, & Rochlen, 2005). Supervisors need to have advanced knowledge of the technology, experience in delivering TAC, well-developed strategies for building relationships using technology, an understanding of the common ethical concerns related to its use, and experience in identifying and averting crises among clients participating in TAC. Additional competencies are required when clinical supervisors use technology to deliver supervision and when they supervise clinicians who are conducting TAC.

Technology-Mediated Supervision

The use of technology increases the flexibility and accessibility of supervision and presents new avenues for clinicians in remote areas to seek support and expert advice (Abbass et al., 2011; Barnett, 2011; Byrne & Hartley, 2010; Kanz, 2001; Murphy & Mitchell, 1998; Wood et al., 2005). Additionally, using technology to deliver supervision can reduce the stress associated with travel and provide an opportunity for people working in similar specialties to share expertise despite distance (Marrow, Hollyoake, Hamer, & Kenrick, 2002). A variety of tools can be used to deliver supervision, including telephone conferencing, Web cams to record clinical sessions that are discussed in supervision later, email exchanges,

Exhibit 2.1-2: Technological Competencies Required of Clinical Staff

Knowledge	Skills	Attitudes
• How the technology works • Common technology terms • Ways that technology can enhance practice • Common ethical challenges related to use of technology • Privacy, confidentiality, and informed consent issues with use of the technology, including the Health Insurance Portability and Accountability Act (HIPAA), Title 42, Part 2, of the Code of Federal Regulations (CFR), and other legal requirements • Security risks that clients and providers may encounter and steps to minimize risks • Emoticons and acronyms clients may often use and boundary concerns surrounding their use in a professional relationship • Policies on scope of practice, coordination of care, security, informed consent and privacy, mandatory reporting, handling emergencies, keeping electronic records, security, and addressing privacy or security violations	• Access the Internet for information • Communicate with clients and peers using technology • Use technology with ease • Provide basic troubleshooting • Interact with others effectively using technology (e.g., video conferencing users understand how to frame the picture and look into the camera; text-based communication users can convey emotion in writing) • Minimize privacy, confidentiality, and security risks to clients • Establish and maintain relationships using technology • Have effective writing skills, especially regarding emoticon and text etiquette when using text-based communication in the context of professional relationships • Build referral relationships in the community, including emergency referrals	• Willingness to learn and use technology to support practice • Interest in adoption of new practice techniques • Willingness to work through technology interruptions and glitches • Recognition of the importance of clients and counselors always understanding what the other means when using symbols (e.g., counselors state how they interpret clients' use of symbols and ask clients to confirm accuracy; they clarify meanings of any symbols they themselves use to avoid misinterpretation)

online discussions or chats, store-and-forward technologies, and video conferencing. Some technologies are better suited than others to individual and organizational strengths, needs, and resources; therefore, supervisors should think critically about how technology may be most useful for the needs of the individual or group participating in supervision. It is also important to consider how the use of technology will improve care (Stamm, 1998). Use of email or Web-based supervision may improve access to and quality of care in rural areas or in cases where specialty knowledge is required, but it may detract from quality in areas where adequately trained supervisors are plentiful and in-person contact is accessible.

State licensing regulations may restrict or impose specific requirements on the delivery of supervision using technology. In some cases, it may be useful to supplement technology-mediated contacts with in-person supervision (Vaccaro & Lambie, 2007). These blended approaches that combine in-person contact, video conferencing, email, and asynchronous discussions provide flexibility in responding to the unique learning preferences of the supervisees and afford supervisors the ability to tailor their methods of communicating various types of information (Wood et al., 2005).

Clinical supervisors must communicate clearly and encourage supervisees to raise questions about the meaning of the communication,

Examples of Technology-Supported Clinical Supervision

Clinical supervisor's supervision, Phoenix House: This supervision approach consists of monthly telephonic supervision sessions with 10 to 15 clinical supervisors focused on issues arising in clinical supervision.

Web-based treatment and cybersupervision, Treatment Alternatives for Safe Communities Illinois: Clinicians conduct live counseling sessions with a laptop equipped with a Web cam. The clinical supervisor views the session live and meets online with the clinician after the session using video conferencing or telephone to debrief the session.

Use of store-and-forward technologies for recording sessions to be used in supervision: Store-and-forward products are available that allow the clinician to record live sessions with a remotely connected client, tag the recording prior to or during the supervisor session, and then immediately access the session recording. The recording can be played during a tele-supervision session where the remote supervisor can stop and start the recording on a portion of the screen while interacting with the supervisee on another portion of the screen using live video conferencing.

especially when using text-based communication (e.g., email) where visual cues are not available. Supervision benefits from use of a more structured format with clear guidelines, responsibilities, and expectations (Graf & Stebnicki, 2002). However, many of the same considerations that arise with using technology to deliver care are also present for technology-mediated clinical supervision. Clinical, legal, and technological training and support are essential for averting frustration and ensuring the effectiveness of supervision (Abbass et al., 2011; Maheu, McMenamin, & Pulier, 2013; Marrow et al., 2002; Vaccaro & Lambie, 2007). Because supervision relies on an exchange of clinical information across participants, supervisors and clinicians must be well versed in strategies that minimize risks to clients associated with data integrity, data security, privacy, and confidentiality.

As with any exchange of clinical information, your agency should have a policy to inform clients of the ways in which the supervision process will use and protect their data. Give clients a chance to consent to their information being shared (e.g., teleconferencing) and explain how the information will be used (Abbass et al., 2011; also see the Master Clinician Note on p. 52). Clinical supervisors delivering supervision via technology also need to be well versed in the state regulations dictating the delivery of technology-mediated supervision, and they must have an understanding of the risks when state regulations do not specifically address the use of technology. For a checklist of competencies for supervisors conducting supervision of TAC and using technology in supervision, see Exhibit 2.2-5 in Part 2, Chapter 2.

Continuous Monitoring and Evaluation

As an administrator, you can facilitate effective adoption of new interventions by putting a system in place to monitor and respond to implementation successes and challenges. Organizational cultures that support ongoing use of data to analyze problems and make needed corrections fare better in the adoption of new practices than those that do not typically rely on structured process improvement (Wisdom et al., 2010). Although continuous monitoring and evaluation can be viewed as an end stage of implementation, planning teams must grapple with the types of data necessary to conduct monitoring and evaluation activities during the initial phases of planning. Selection of data elements depends on the strategic goals of the project and the plans for sustainability; data elements should include both process and outcome measures. For example, process measures such as usage rates, dropout rates,

Data Elements To Consider in Monitoring the Impact of TAC

Process

- Technology/intervention usage rates
- Demographic characteristics of clients
- Dropout and retention rates
- Staff satisfaction
- Client satisfaction
- Equipment malfunctioning rates or downtime
- Fidelity or compliance measures
- Costs of care
- Workflow or business process changes

Outcome

- Rates of hospitalization or other high-cost services
- Criminal justice recidivism rates
- Changes in symptoms or behaviors experienced by clients
- Cost effectiveness or cost offsets
- Number and types of relapses in substance use or mental health symptoms

staff perceptions of the challenges and successes of implementation, compliance with the key ingredients of the intervention, and demographic characteristics of the client population can provide helpful information to refine technology-based interventions. Outcomes—including changes in hospitalization rates, symptom changes, and cost effectiveness—can help stakeholders buy into the concept of TAC and promote its sustainability in practice. A system for refining or enhancing TAC is critical to ongoing success.

Disaster Planning

As essential community providers, many behavioral health organizations are required to have disaster plans. In addition to resources such as SAMHSA's Disaster Technical Assistance Center (http://www.samhsa.gov/DTAC/), organizations may consider the ways in which technology can assist in responding effectively to disasters. Technology has the potential to be useful in addressing certain challenges that commonly result from disasters, such as by allowing access to information about medications or health histories via the Internet and enabling communication via text messaging, cell phones, and reverse 911 calling to disseminate information and dispatch providers.

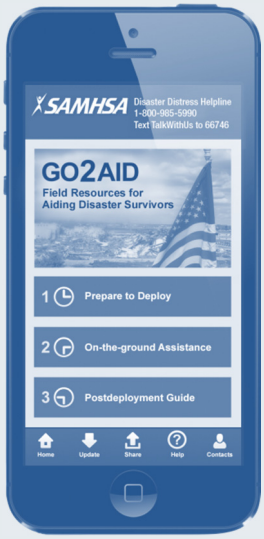
Technology can help ensure that professionals from outside the jurisdiction are properly

GO2AID

In a disaster, it's essential that behavioral health responders have the resources they need, when and where they need them. SAMHSA's GO2AID—Field Resources for Aiding Disaster Survivors application makes it easy to provide quality support. You can perform predeployment preparation, on-the-ground assistance, postdeployment resource delivery, and more, all at the touch of a button:

- **Be focused.** Spend less time worrying about logistics so you can focus on what really matters—the people in need.
- **Be prepared.** Rely on and access predownloaded resources on your phone in case of limited Internet connectivity.
- **Be confident.** Review key preparedness materials so you're confident about providing the best support possible.
- **Share resources easily.** Send information to colleagues and survivors via text message or email, or transfer to a computer for printing.

Source: SAMHSA, 2013c.



licensed and credentialed during disasters. In more widespread disaster environments, state regulations for licensure and practice may be waived for providers coming from outside the disaster area; teleconferencing, long-distance telephone consults, and other technology-based services may be allowed by state regulators on a temporary basis. The use of telemedicine, a cornerstone of most current disaster service plans, can bring remotely located providers to the affected area without the logistical challenges of travel (Yellowlees, Burke, Marks, Hilty, & Shore, 2008). Some states offer reciprocity specifically for physicians and nurses practicing telehealth in disaster environments; however, others do not offer such reciprocity, creating challenges during disasters. The Emergency Medical Assistance Compact (EMAC) provides protections for medical personnel who provide care across state boundaries during natural disasters and other emergency situations. See the EMAC Web site for more information about the compact (http://www.emacweb.org).

When considering how technology can be used in a disaster, think about how internal organizational communication as well as communication with other critical providers or responders might be affected. For example, having charged cell phones programmed with critical contacts may be vital to effective communication. This may include a plan to communicate with pharmacies to ensure that clients or disaster victims have access to needed medications. In addition to using technology to assist in disaster response, you and your implementation team must plan for technology failures in the event of disasters as reliance on technology to conduct business increases. This includes back-up power sources, access to electronic health records (EHRs), systems of communication with other providers and local authorities, and access to provider credentialing records.

Technological Capacity Considerations

TAC requires a level of expertise in information technology that was not often required of behavioral health organizations in the past. This section addresses considerations for technological capacity based on the type of technology to be adopted.

Data Security

HIPAA dictates the privacy and security safeguards required for the protection of protected health information (PHI). The security aspects of these rules, which address how health data are accessed, transmitted, and stored (U.S. Department of Health and Human Services [HHS], 2006; HHS, Office of the Secretary, 2013), must be considered when implementing TAC. HIPAA also addresses who is authorized to access data and how access restrictions are implemented. Organizations must establish a password management system that controls access to client data on devices owned and controlled by the organization, as well as remote devices or devices accessed from remote locations. In addition, organizations are advised to have policies that address lost and stolen passwords, automatic session logouts for unattended work stations, and virus protection on all computer equipment and other devices that store PHI (HHS, 2006).

Business Associate Agreements

Business associate agreements are required between HIPAA-covered healthcare providers and those performing business functions on behalf of providers, such as by providing technology solutions. The Office for Civil Rights Resources, which enforces HIPAA, offers resources related to such agreements on their Web site (http://www.hhs.gov/ocr/privacy/hipaa/understanding/coveredentities/contractprov.html).

Additional Data Security Resources

- HHS HIPAA Security Guidance (http://www.hhs.gov/ocr/privacy/hipaa/administrative/securityrule/remoteuse.pdf)
- Guide to Storage Encryption Technologies for End User Devices: Recommendations of the National Institute of Standards and Technology (http://csrc.nist.gov/publications/nistpubs/800-111/SP800-111.pdf)
- National Institute of Standards and Technology Guidelines on Electronic Mail Security (http://csrc.nist.gov/publications/nistpubs/800-45-version2/SP800-45v2.pdf)

Staff training effectively addresses many security risks, so dissemination of these policies is critical. Training should include information about risks associated with password sharing, saving logins and passwords in unsecured locations, and forgetting to log off.

HIPAA requires policies that prohibit the transmission of PHI via unsecured email and provide for email encryption. In addition, policies about remote access to PHI via networks and Web-based email are necessary (HHS, 2006). Data storage security as defined by HIPAA includes encryption of stored data and backups and policies about storage of PHI on devices that are outside the physical control of the organization, such as laptops, universal serial bus (flash) drives, and personal digital assistant devices (HHS, 2006). Policies must address the handling of security violations, equipment repair, and disposal of technologies no longer in use, and procedures must be put in place to train staff members on policies initially and on an ongoing basis.

These are just a few privacy and security issues to consider. The Office of the National Coordinator for Health Information Technology provides more comprehensive guidance and resources on compliance with HIPAA when implementing health information technology solutions (http://www.healthit.gov/providers-professionals/ehr-privacy-security/resources).

Video and Web Conferencing

The video conferencing systems telehealth and telemental health programs typically use take a hub-and-spoke approach to delivery, meaning that clients travel to a local health or behavioral health center to access services that are not available in their community. This model has the advantage of averting some of the technological, privacy, and security complications associated with clients accessing services in their homes. The implementation planning process should inform assessment of the technological infrastructure necessary to deliver TAC. If video conferencing will be central to the intervention, issues of bandwidth, image resolution, display size, and audio quality on both sides of the exchange are central to its effectiveness. Issues of bandwidth are particularly important for video conferencing. If using public Internet for video conferencing, it is important to consider fluctuations in Internet use and the impact of that use on speed. For instance, high Internet use times on the public

Resources on Video and Web Conferencing

- American Telemedicine Association Telemedicine Standards & Guidelines: http://www.americantelemed.org/resources/standards/ata-standards-guidelines
- National Center for Telehealth & Technology T2 Telehealth Programs: http://t2health.org/programs-telehealth.html
- Health Resources and Services Administration (HRSA) Telehealth: http://www.hrsa.gov/ruralhealth/about/telehealth/
- Telehealth Resource Centers: http://www.telehealthresourcecenter.org
- Addiction Technology Transfer Center Network: http://www.nattc.org

Video Conferencing During National Depression Screening Day

Video conferencing has increased awareness of issues and resources related to depression during National Depression Screening Day, an annual event run by Screening for Mental Health, Inc. (SMH) since 1991 (SMH, 2012). In one example, a lecture was broadcast to regional video conferencing sites through a coordinated effort among hospitals and regional mental health centers. After the lecture, local staff administered a screening tool to community members. If screening indicated possible depression, local staff connected the person with a professional for evaluation and counseling.

network may limit available bandwidth and slow the transmission to an unacceptable level.

Internet connectivity and bandwidth must be sufficient at both ends of the transmission. Bandwidth and encryption are as important for the client participating from home as for the primary transmission site. In addition, data security and storage are essential to consider and are related to unique risks when transmitting client images using video conferencing. Various videophone and video conferencing technologies are available and offer a range of solutions to these challenges. Audio Web conferencing can be used to conduct group discussions over the Internet. A number of vendors sell access to products useful for Web conferencing. Audio technologies are typically more familiar to providers and generally pose few challenges. However, mobile phone use for Web conferencing raises some privacy and security concerns. See the "Telephone/Audio Conferencing" section for additional information.

For providers, ease of use of the technology is important. Some approaches using video and Web conferencing require technology experts to operate and troubleshoot the equipment but still demand at least some technical skill from clinicians. Other models rely on clinicians to perform their own troubleshooting, requiring more advanced technical skills.

The physical location of counselors and clients while they participate in audio/video conferencing has implications for privacy. The American Telemedicine Association (2009b) addresses physical location requirements, including visual and audio privacy, room lighting, backdrops, and ergonomic considerations. Organizations should consider adopting policies that require individuals to introduce themselves upon entering the room during a session and that encourage discussing the privacy of clients' locations with clients at the beginning of each session. Planning teams need to grapple with these issues in advance of TAC delivery and have plans for monitoring and adjusting their

Telephone-Based Continuing Care

Telephone-based continuing care has been demonstrated to hold promise as a strategy to maintain more frequent contact with clients without the barriers associated with travel to treatment sites. In one study, clients completing an intensive outpatient program for substance use disorders were randomly assigned to in-person counseling twice weekly or to weekly telephone monitoring with a monthly support group. The outcomes of the clients participating in telephone continuing care were as positive as the outcomes of the clients who had in-person counseling (McKay, Lynch, Shepard, & Pettinati, 2005).

Based on these findings, AspenPointe TeleCare (http://www.aspenpointe.org) has implemented a telephone-based recovery support program for adults completing treatment for substance use disorders. For up to 2 years following enrollment in outpatient treatment, recovery case managers conduct brief telephone calls to help clients manage relapse risk and bolster mutual-help activities. Calls occur weekly early in recovery, but as clients maintain recovery and build support, the frequency reduces to monthly.

approach to troubleshooting technology issues as implementation proceeds.

Telephone/Audio Conferencing

Delivering treatment services via telephone is likely to be the most accessible, inexpensive means for providing TAC in organizations that lack existing technology infrastructures. Teleconferencing, or connecting multiple users into an audio discussion, can facilitate group discussions for treatment or supervision purposes. Various teleconferencing vendors with a range of contract terms are available. Although use of the telephone can be highly accessible, organizations should be aware that without additional protections, mobile phone transmissions are not secure. Voice communication over mobile phones must be encrypted to minimize the risk of third-party interception; when mobile devices transmit data, they should be treated like other remote devices (e.g., laptops) in terms of security.

Email

When protocols are specific and based in scientific evidence for the population, email can be an effective, accessible, and inexpensive way to conduct outreach with high-risk individuals (Luxton, June, & Kim, 2011) and to sustain contact with clients between scheduled in-person sessions (Alemi et al., 2007; Barak, Hen, Boniel-Nissim, & Shapira, 2008). There is a small body of evidence suggesting that the use of email to deliver primary clinical content may be effective (Luxton et al., 2011; Te Poel, Bolman, Reubsaet, & de Vries, 2009). Because email is not a secure form of communication unless it is encrypted, organizations and providers must implement safeguards to ensure privacy of communications. These precautions include having policies to prevent unintentional disclosure to someone other than the client, such as confirming an email address, and fully exploring risks related to someone other than the client having access to his or her email account. Furthermore, all email exchanges of treatment-related information must use email encryption to meet HIPAA Security Rule requirements (HHS, 2006). Various single-user and organizational solutions for email encryption are available and are generally quite affordable. The National Institute of Standards and Technology Guidelines on Electronic Mail Security provide detailed information on email security and encryption (http://csrc.nist.gov/publications/nistpubs/800-45-version2/SP800-45v2.pdf).

Another option for email is the use of secure, Web-based messaging systems. Several large online behavioral health service providers exist and often include proprietary systems for communicating with clients that may allow for the sending of encrypted email and the storage of text communication with clients. Because emails may be subpoenaed, you should develop policies for your behavioral health program on the storage of these communications. Research suggests that before implementing email or instant messaging interventions (or any technological intervention), behavioral health service providers and program administrators should carefully consider the needs and characteristics of the clients who are likely to benefit from the intervention. Consider implementing structured clinical protocols and procedures to

Therapeutic Email

A program of structured therapeutic emails sent daily in conjunction with electronic support groups, abstinence monitoring, and optional individual counseling sessions has been used as an adjunct to treatment for women who are pregnant and use drugs. Clients reported the ability to build strong relationships using the technology-based program and found it easier and more convenient than in-person sessions (Alemi et al., 2007).

cover the full range of ethical and legal issues discussed in this Treatment Improvement Protocol (TIP) and heed current research as you consider incorporating email into your program's delivery of behavioral health services.

Text Messaging

Text messaging can effectively provide brief interventions or resources to clients on their mobile phones. Text messaging-based interventions may include reminders for medications and appointments or regularly scheduled educational or preventative text messages. In some cases, these reminders may be managed through an EHR. Text messages are easy to send if the client has a mobile phone and a text messaging plan. However, clients may be charged per character or per message for text messaging, so it is important to seek consent to communicate by text message and to ensure that clients understand the security and privacy limitations of data transmission and storage via mobile phone. (For more information on informed consent, see Part 1, Chapter 1.)

Unencrypted text messages should not include PHI. Although there are some secure text messaging services, standard text messages may not be secure. They may be stored on a subscriber identity module card, which identifies the user to the cell phone network, and they can be easily visible to others. Encryption software downloads messages to computers and secures the mobile phone or device if it is lost, eliminating some—but not all—of the privacy and security risks inherent to this mode of communication.

Counselors should carefully evaluate the type of information they need to send to or receive from clients before using text messaging; if the information's inadvertent release could have serious consequences, text messaging is generally inadvisable. Consider establishing a means for counselors delivering TAC to verify their clients' identity before sending/receiving texts. Clients, too, may wish to consider using a screen lock and/or time-out feature to keep information from remaining viewable on their mobile devices to unauthorized viewers. Asking clients to confirm receipt of text messages and establishing measures such as auditing and remote wiping can protect sensitive information to a degree, but providers should generally avoid using text messaging for communication when privacy and security are of significant concern.

Text4Baby

For women who are pregnant or in their first postpartum year, the Text4Baby program provides three weekly text messages on a variety of maternal and child health topics, including nutrition, prenatal care, immunization, mental health, smoking cessation, family violence, and exercise. The messages are short and provide specific actions that women can take to care for themselves and their babies based on due dates. Between February 2010 and July 2011, the program enrolled 155,000 women (Jordan, Ray, Johnson, & Evans, 2011).

Web-Based Text Communication

Real-time instant messaging can serve as an alternative to asynchronous email or text message exchanges. Providers and clients can download chat programs, which are often free, quickly and easily from vendors; these programs require only a computer with an Internet connection. However, issues of data security and storage exist. Real-time chats and instant messaging features are widespread and can broaden access to social support, but the privacy and confidentiality risks inherent to this mode of communication are extensive. Your agency's TAC policies should remind clients that messages sent through chat programs and the chat or messaging features on social networking sites such as Twitter, Facebook, or LinkedIn are not secure and that posts to such

sites are not confidential. TAC policies should also discourage providers from interacting with clients via social networking sites and urge them to remind their clients that communications posted on such sites are public.

Avoiding the use of social networking sites can become particularly challenging when disgruntled clients post ratings or comments about their experience with your behavioral health program or your agency's personnel. You and your TAC implementation team should carefully consider establishing policies to guide agency responses to consumer ratings and comments that are posted on the agency's own Web site as well as on other public forums.

Self-Directed Therapeutic Tools

Self-directed therapeutic Web sites and applications are typically hosted by third-party vendors. Organizations will typically purchase a usage license for a group of clients; the clients then receive a unique user ID and password. The content of self-directed therapeutic tools is developed by the vendor and often restricts the client's ability to enter personal information.

Many self-directed therapeutic tools target prevention and treatment of mental and substance use disorders. For example, college campuses often purchase licenses so that their students can access substance use or mental health risk factor reduction programs delivered over the Internet. Another example is a secure Web site that provides self-directed education and secure messaging with a care manager for clients enrolled in outpatient mental health services (Hunkeler et al., 2012). In addition, many mobile applications have been developed that lead the user through a process of screening, education, and support. Applications vary in terms of data security and the amount of personal information entered.

Self-directed behavioral health applications frequently include Web-based messaging systems that send emails to clients prompting them to log in to a password-protected Web site. Before incorporating digital self-directed therapeutic tools into your agency's behavioral health program or recommending their use to your clients, your TAC implementation team should investigate how such applications address password protection, automatic logouts, firewalls, audit trails, encryption, and authentication. They should know what data the tool collects; how it stores and protects those data; and the extent to which it may share the data, including any third-party access to the data. Online therapy service providers may serve as an alternative for secure communication with clients. These services help manage privacy and security concerns by providing encrypted chat stream identifiers and storing text communication with clients, but you must carefully examine the reputations of such services before choosing one.

Self-directed therapeutic tools can be attractive to clients and providers because they require little investment in infrastructure other

Programs To Reduce Health Risks

MyStudentBody (http://www.mystudentbody.com), AlcoholEdu (http://www.everfi.com/alcoholedu-for-college), and Alcohol eCHECKUP TO GO (http://www.echeckuptogo.com) are online self-directed therapeutic programs designed to reduce health risks among college students and others. They include alcohol and drug courses and general wellness resources in the areas of sexual health, nutrition, stress, and tobacco use. For example, MyStudentBody allows participants to develop an individual profile that will direct them to topic areas based on their risk and provides links to local emergency resources. This program, along with similar campus education and risk reduction approaches, holds promise in reducing risky behavior on college campuses (Hustad, Barnett, Borsari, & Jackson, 2010; Walters, Miller, & Chiauzzi, 2005).

than access to the Internet, allow clients to work at their own pace, and are accessible (assuming an Internet connection) whenever and wherever the user wishes. Although some of these tools allow for clients to share information with their behavioral health service providers, they generally operate outside of the formal treatment process.

Organizational Web Sites

Organizational Web sites can provide information about behavioral health service systems in a way that can motivate people to seek services (Maheu, Pulier, Wilhelm, McMenamin, & Brown-Connolly, 2004). More active approaches that include discussion groups, built-in chat or email features, and other opportunities for digital interaction with staff members are more likely to engage people into service delivery. That said, organizational liability increases as the organization's Web sites become more active. Although the design and maintenance of professional Web sites are beyond the scope of this document, administrators and TAC implementation teams are urged to consider the risks and opportunities associated with embedding email and discussion group features into Web sites. These more active approaches to Web site design pose challenges and raise concerns similar to those for stand-alone approaches to email and discussion groups.

Budgeting Considerations

When estimating technology costs and related personnel costs to your agency in adopting a TAC approach to behavioral health service delivery, you must consider a full range of issues, including the hardware, software, technological support, training, and staff support required to deliver TAC. Try to project costs for infrastructure development (startup) along with ongoing TAC delivery. Unfortunately, investment in the initial infrastructure to facilitate TAC can be costly (McGinty et al., 2006). It is critical that you have a clear understanding of the costs and a plan to finance the development of the infrastructure necessary for your agency to deliver TAC successfully.

Cost Categories

Costs associated with various technology-mediated interventions vary widely. In addition to identifying the specific expenses related to the type of intervention selected, agencies have the option of leasing, contracting, or buying equipment and services. Your organization's strategic goals, existing technology infrastructure, and cost considerations dictate which options you select. In planning to implement TAC, you will benefit from careful investigation of the following cost categories.

Infrastructure development cost considerations include:

- Equipment, including computers and servers, mobile devices (for both client and staff use), video conferencing equipment, and telephones.
- Cabling and other communications lines, building reconfiguration, equipment, and cooling systems.
- Internet service provider fees.
- Software, including encryption systems, virus protection, applications, storage, and security systems.
- Expert consultation in technology.
- Content development (e.g. clinical materials, protocols, procedures).
- Initial staff training, including staff time, expert trainer time, and content development.
- Legal and accounting consultation (e.g., sufficient and explicit insurance coverage).
- Development and/or revision of forms, such as informed consents and privacy disclosures.

Ongoing costs considerations include:

- Equipment maintenance, insurance, and replacement costs.
- Ongoing Internet service provider fees.
- Annual licensing or hosting fees.
- Software renewal licensing fees.
- Expert consultation and/or troubleshooting services.
- Ongoing staff training for new staff recruits and refresher training for existing staff members.
- Content refinement and updating of client materials.
- Legal and accounting consultation.
- Inclusion of extra client data and client privacy/consent management information.

Reimbursement for Technology-Mediated Care

Medicaid and Medicare reimbursement guidelines for telemedicine have been developed and are available through the Centers for Medicare and Medicaid Services (CMS). Currently, Medicare authorizes reimbursements for telehealth services delivered by designated professionals in underserved areas or as demonstration projects (HHS, CMS, 2012, 2013). Some state plans dictate Medicaid reimbursement for telehealth. Some private payers also reimburse for video conferencing, and others are piloting video, text, and telephone interventions (Maheu et al., 2004). Although these and other reimbursement structures for TAC under other private and public health insurance plans are emerging, depending on state licensing and reimbursement policies, providers may have the ability to recapture their costs in other ways. For example, the use of technology-mediated interventions may be incorporated as a value-added service that assists providers in meeting other contractual obligations, such as improving care coordination or reducing rehospitalization; the costs may thus be recovered in other service areas.

Gilman and Stensland (2013), of the Medicare Payment Advisory Commission, analyzed 100 percent of telehealth Medicare claims for 2009 (the most recent available data). They reported roughly 38,000 telehealth visits in 2009. Of the providers who delivered 10 or more Medicare-covered telehealth services, 44 percent were psychiatrists, 3 percent were clinical psychologists, and 2 percent were licensed social workers (although the nonpsychiatric providers could be underestimated, as services are sometimes billed under the name of a physician). The authors noted that there were only 26,000 Medicare telehealth visits in 2006, but they considered the increase to 38,000 in 2009 to be "modest," with only 185 mental health professionals providing 10 or more telemental health visits. Although Medicare recognizes the potential of TAC and has made changes by increasing reimbursement and decreasing regulatory burden between 2006 and 2009, the barriers to implementation described throughout this TIP may continue to restrain reimbursement of telemental health services provided to clients who are covered by Medicare or Medicaid.

Vendor and Consultant Selection Considerations

Selecting a vendor to facilitate TAC is a critically important endeavor. Security, privacy, confidentiality, and regulatory requirements must be addressed in addition to cost, usability, and sustainability of the technology. A first step in soliciting bids from vendors is to develop a detailed scope of work and request for proposals. Many organizations choose to hire a consultant who is not invested in a particular technology solution to assist in the development of the request for proposals and selection of vendors. This approach can bring

a level of attention and expertise to vendor selection that may be attractive, especially to organizations that do not have internal technology expertise. Nonetheless, it is important to involve a broad range of stakeholders, including the clinical team and potential clients, in the vendor selection process to assess ease of use of the technology and any technological support the vendor will provide. The vendor selection process should also include demonstrations that allow potential users to operate the technology in situations that mirror anticipated live conditions as closely as possible.

Much guidance is available in selecting technology vendors and experts. Factors to consider vary based on setting, approach, and degree of internal organizational expertise available. Your agency will benefit from careful analysis of the strengths and weaknesses of vendors prior to entering into binding agreements or sharing confidential client information.

When reviewing vendor and consultant credentials, consider:

- Demonstrated experience in implementation of similar applications or services (e.g., whether the vendor has developed or implemented similar applications in other behavioral health settings).
- Stability of the vendor's company or agency.
- Availability of training and support.
- References from other customers.
- Anticipated software upgrades and the process for upgrades.
- Reporting ease and capacity.
- Security, privacy, and confidentiality protections.
- Company and technology sustainability.

Vendor Selection Resources

- Telehealth Technology Assessment Center: http://telehealthtechnology.org/toolkits
- The Telemental Health Guide: http://www.tmhguide.org
- Agency for Healthcare Research and Quality Health Information Technology Tools and Resources: http://healthit.ahrq.gov/health-it-tools-and-resources

Data Management Considerations

The data management challenges associated with TAC cannot be overlooked. This section offers guidance on common risk management challenges associated with data retention, EHRs, and client access to devices owned by the organization. Because some of the examples of technology-assisted services cited in this document originate outside the United States, and given that the regulatory environment surrounding the delivery of these services in the United States is rapidly changing, administrators should remain diligent in monitoring the regulatory and legal environment within their state. You should seek legal advice specific to state laws and regulations applicable to your behavioral health program, risk and liability, and insurance coverage when determining how to address risk management issues associated with TAC.

Data Management

The issues of data management, quality, and security as dictated under HIPAA are discussed earlier in this TIP. As for how much of the content in digital or audio exchanges between clinicians and clients should be stored, you must consider whether to retain every email communication or transcripts of every chat, and if so, whether to contain such information within client records. Although storing more information about clinical interactions may improve continuity of care, it also creates storage space challenges, and the information may be subject to subpoena. The sheer volume of information text-based communications generate, as well as added challenges associated with video storage, suggest

the need for clear administrative policies about retaining and storing information.

In addition to data management and security, issues of data quality can arise when clinicians or clients make data entry errors (e.g., misreporting a weight that a physician then relies on for medication dosage, understating or overstating symptoms). The use of crosschecking software and other internal procedures to ensure data quality can minimize these risks.

EHRs

A comprehensive look at EHRs is beyond the scope of this publication, but EHRs do often include integrated tools that are relevant to direct service delivery. For example, EHR systems can generate reminder phone calls and text messages. EHRs that let providers share access to a client's clinical record are helpful when coordinating care. Sharing clinical information among providers and their supervisors can enhance care and promote technology-mediated supervision. (See also http://www.healthit.gov/providers-professionals/benefits-electronic-health-records-ehrs)

Client Access to Organizationally Owned Devices

In addition to addressing PHI-related data security issues when providing computers and other Internet-enabled devices for client use, you must decide whether to control client access to Web sites that distribute pornography or provide downloading software that gives access to illegal or unhealthy activities. These can be particularly thorny issues for your agency's TAC implementation team to weigh.

Privacy and Confidentiality Considerations

Much has been written about HIPAA privacy rules and 42 CFR Part 2 and behavioral healthcare; therefore, this TIP's discussion of these matters will focus specifically on privacy issues related to TAC. Privacy is defined as the right of the client to control his or her own health data, whereas confidentiality relates to the duty of professionals who are granted access to private information to protect its privacy (Kotz, Avancha, & Baxi, 2009). The issues of privacy and confidentiality are distinct from data security issues, which deal with administrative and technological protections meant to ensure that PHI is not disclosed to unauthorized individuals. Privacy issues are equally important and have unique implications in technology-delivered interventions.

Earlier sections have identified the risks associated with the device-based storage of text messages and the security concerns related to unencrypted email exchanges. In addition, some mobile applications use the Internet or telephone to store or send client information back to providers. For example, a mobile application might record the whereabouts of a client using a global positioning system and provide warnings or support messages about his or her proximity to relapse triggers. Medication levels can also be monitored and the resulting information sent back to the clinician. These applications can be helpful tools for clients and clinicians; however, just as clinicians are responsible for documenting their rationale for recording sessions, clients must sign a written informed consent document outlining the rationale, risks, and benefits along with the protection, storage, and disposal of any identifying information retained by the provider.

Informed Consent

In addition to the usual elements of an informed consent to participate in services, a number of considerations emerge when delivering care through technology. As with all informed consent, the consenting process must ensure that clients fully understand the risks and benefits associated with participation in

the intervention. Technology introduces a new level of complexity and jargon that may be unfamiliar to some clients. Thus, TAC implementation teams must be diligent about ensuring that clients are fully informed of risks and benefits in language that they can understand. This includes a full disclosure of the risk of losing real-time control of personal data through systems that intrude into clients' homes or personal environments for the purpose of monitoring health and wellness, in addition to privacy and confidentiality risks.

Advising clients of the risks and benefits of participating in TAC should be an ongoing process. Clinicians must be well versed in these risks to identify when risk potential changes, to detect client ambivalence, and to initiate discussions of new risks or concerns. Informed consent processes should address the limitations of the technology-based intervention and the alternative interventions available (Barnett, 2011). Although documentation of these discussions and agreements is essential, ensuring that the client fully understands and agrees to the risks and benefits is paramount (Maheu, McMenamin, & Pulier, 2013).

Consider how your agency will secure written informed consent from clients who will primarily engage in services remotely. Clients can provide electronic signatures or select a box on a Web page to acknowledge reading and understanding the information; however, there are concerns in ensuring that clients fully understand and agree to risks and benefits in this manner. Some programs use the low-tech option of having the client sign and fax the form to the provider (Midkiff & Wyatt, 2008); others require telephone or in-person intake sessions to ensure that clients are fully informed. Informed consent should include information about the roles and credentials of each staff member who will participate in a client's care. This includes direct service providers, support staff, and supervisors (Maheu et al., 2004).

It can be difficult to verify identity remotely (e.g., when engaging with clients primarily over the Internet or telephone), so some programs require validation of identity, such as photo identification or a signature declaration of identity (Midkiff & Wyatt, 2008). Another way that programs address verification of identity and age is to require an initial in-person or telephone interview prior to the inception of remote care (Abbott et al., 2008; Midkiff & Wyatt, 2008). In remote areas, video conferencing may provide an alternative to in-person sessions. Biometric authentication devices such as iris scan, voice print, and thumbprint readers may provide cost-effective alternatives for organizations. Agencies should also establish policies for verification of guardian consent (Maheu et al., 2004).

The process of obtaining informed consent from clients should include their provision of emergency contact information and their receipt of a disclosure of the procedures their counselor and/or other agency staff will use, should the counselor determine that the client may endanger himself or herself or others (Mallen, Vogel, & Rochlen, 2005). Verify clients' emergency contact information at the time of intake to ensure that your agency has valid information about the client to use in the event of an emergency or for mandatory abuse reporting. The informed consent process should also clearly indicate who the client should contact in the event of a crisis or emergency and should define the response time clients can expect. You may also wish to advise clients not to use email to communicate about emergencies (Maheu et al., 2004).

Informed consents should outline how and where the client's data are being transmitted and the risks and benefits associated with transmission. This includes seeking explicit

consent to transmit the image of a person, such as through video conferencing. Informed consent should address risks of being overheard during audio transmissions and of text-based communications being intercepted by third parties. The informed consent process should also clarify how information will be transmitted and stored for clinical supervision.

In addition to explaining risks, give clients information about what they can do to protect themselves from privacy breaches. Advice may include not sharing passwords or email accounts with family members, logging off Web sites after each session (especially for clients in group living situations), and using virus protection software. Introducing clients to the Internet or mobile technology creates potential for benefits and risks that extend beyond TAC itself, so providers have an obligation to help clients become informed consumers of technology in general. Responsible providers give their clients information on topics such as viruses, malware, and spyware risks and protection; vetting Internet resources; the risks of sharing personal information on social media; the risks associated with sharing software, such as music files; the importance of passwords; and password management. Information available to clients should be understandable, accessible, and—for very vulnerable populations—delivered in various ways.

Explain how fees for technology-based interventions are charged and how payments for TAC are made (Barnett, 2011; Maheu et al., 2004). This may require explaining insurance reimbursement and limitations of reimbursement, which types of interactions are billed, and the logistics of payment. If clients wish to use credit cards, issues can arise regarding recurring payments, the name listed on the invoice, and where receipts may be sent. Depending on the type of technology used and the intervention's intensity, advise clients about how technology failures will be handled, including backup plans for clinical intervention and plans for handling technological problems (Mallen, Vogel, Rochlen, & Day, 2005).

Scope of Practice, Boundaries of Competence, and Credentialing

In any setting, a behavioral health service agency plays a role in ensuring that its counselors, supervisors, and other clinical staff provide services within their scope of practice and competence; this is often accomplished through formal credentialing and privileging procedures. Remote service delivery not only presents challenges in ensuring that providers are licensed to deliver a particular type of service in a specific jurisdiction, but also demands that counselors develop new TAC-specific competencies. Organizational TAC competencies differ from those required for agencies providing traditional in-person services. For example, program implementers need to be sensitive to such issues as naming of moderated forums and ensuring that the scope and role of the staff members responsible for moderating it are clear (Midkiff & Wyatt, 2008). Another example would be a client's potential inability to distinguish easily between a licensed professional's email and that of a support person who is responsible for logistical arrangements; you may wish to establish a policy requiring staff members to use full signatures that clarify who is sending the message, the role the sender plays, and alternative contact information for reaching the sender, such as a phone number (Maheu et al., 2004).

It is important for behavioral health organizations providing TAC to adopt policies and practices that ensure coordination of care among the various staff members who will communicate with a given client. You may wish to consider providing clients with an acknowledgment that explains the limits of any technology-based service that will be provided

Emergencies

In addition to requiring the collection and verification of clients' emergency contact information at the time of intake, you should establish policies for handling emergencies when the client is not physically present at the service site (Barnett, 2011). These policies may include adding warnings to notify clients when an immediate response cannot be expected and how to reach a live person in the event of an emergency. Policies that define the timeliness of providers' responses to email and telephone calls, along with clinical backup procedures during a provider's absence, are also helpful (Maheu et al., 2004).

Behavioral health service providers should keep information on local emergency services and should have well-established protocols regarding the responsibilities of partner providers and agencies (Shore, Savin, Orton, Beals, & Manson, 2007). This is particularly true for remote agencies, where providers will have the most direct contact with clients but may not have the expertise to address an emergency situation adequately. For example, it is important to be knowledgeable of the civil commitment process and the available emergency mental and substance use disorder resources; in addition to this knowledge, it is essential to have clear agreements about roles and responsibilities so that local partners have a working relationship with your agency and its staff. Ongoing partnerships allow for confidentiality and privacy concerns to be addressed in advance of an individual crisis situation (Shore et al., 2007).

You may wish to institute procedures that document the circumstances in which providers can terminate treatment and ways that providers should respond to both overt and subtle requests from clients to terminate treatment. These procedures should include active referral of the client for continuing services with another reputable provider.

Introducing TAC to rural and frontier areas has raised some concerns about the handling of emergencies that are unique to the delivery of TAC in such settings. The American Telemedicine Association (2009a) recommends that behavioral health service providers working with rural populations discuss firearm ownership and safety with their clients, assess clients for substance use, and be familiar with the local emergency and behavioral health resources. They should also note the impact of emergency disclosures on confidentiality with regard to overlapping relationships in small communities.

and the terms of participation, either as a part of the informed consent process or separately. You must also establish a process for identifying situations in which the use of technology may be counterproductive or dangerous and enact policies for handling these situations, including when and how services should be discontinued (Murphy, MacFadden, & Mitchell, 2008).

Regulatory Considerations

As TAC rapidly expands, states and payers are scrambling to establish regulations to keep pace. A survey of state mental health and substance use disorder agencies found that most states were using some form of telehealth, most often in mental health service delivery via Web conferencing (National Association of State Alcohol and Drug Abuse Directors [NASADAD], 2009). At the time, only a handful of states reported using other technology for service delivery; fewer than half had implemented regulations. Of the 14 states with regulations, 5 required telehealth providers to meet the same standards required for in-person services, 3 required providers to have formalized protocols, 2 required provider certification, and 2 modified their requirements from the standards for in-person services (NASADAD, 2009).

A 2010 survey of state regulatory boards responsible for counselor certification found that 14 states had regulations for technology-assisted counseling, but only 6 states had

regulations for technology-assisted supervision (McAdams & Wyatt, 2010). Twenty states had regulations either under discussion or in development. Seven themes were identified among the states with regulations, including a tendency to regulate technology-assisted counseling and supervision as a discrete specialty versus another mode of counseling or supervisory activity. States tended to limit TAC to special circumstances, such as geographic isolation, and required additional disclosures of the risks and benefits of TAC either by incorporating the information into existing consent processes or by using additional consent forms. Most states required licensure in all states where TAC was delivered, but few states required specialized training.

Telemental health services using two-way audio and video transmissions are addressed by The Joint Commission, reimbursable under Medicaid in many states, and reimbursable by Medicare in rural areas (American Telemedicine Association, 2009a; California Telemedicine & eHealth Center, 2006). Detailed practice guidelines for delivery of telemental health services and clinical supervision using video conferencing technologies have been established by the American Telemedicine Association (2009b). These guidelines cover clinical specifications, such as ethics, emergencies, and general practice issues; technical specifications; and administrative issues (e.g., policies that organizations should adopt).

Most states require that professionals engage in telemedicine practice within their professional scope and have a license to practice in the state where the client resides. Some states have state reciprocity regulations regarding licensure; abiding by these state licensing regulations is often a condition of malpractice insurance coverage (Mallen, Vogel, Rochlen, & Day, 2005). Clients must be fully informed of the potential risks and benefits related to TAC and must also consent to the transmission of their data and images. Current TAC best practices thus include:

- Limiting practice to working with clients who live in the state in which the professional is licensed (Mallen, Vogel, & Rochlen, 2005).
- Providing TAC services within the scope of practice authorized by the professional license.
- Explicitly discussing with clients the risks and benefits of TAC (McAdams & Wyatt, 2010).
- Participating in specialized training prior to engaging in service delivery or supervision (Maheu & Gordon, 2000; Midkiff & Wyatt, 2008).

The U.S. Food and Drug Administration (FDA) is developing regulations requiring certain tools and mobile applications to be approved as medical devices. The FDA deems certain devices to be low risk; these can be used without FDA approval. See the "Confidentiality, Privacy, and Security" section in Part 1, Chapter 1, for a summary of FDA developments and references to recent FDA documents. TAC implementation teams should monitor the FDA Web site and sign up for email updates from FDA and other sources, such as the Office of the National Coordinator for Health Information Technology (http://www.healthit.gov).

Resources on TAC Regulations and Financing

- American Telemedicine Association (http://www.americantelemed.org/)
- Center for TeleHealth & e-Health Law (http://www.ctel.org/)
- HRSA Rural Health IT Adoption Toolbox (http://www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/index.html)
- HHS's Explanation of Health Information Privacy (http://www.hhs.gov/ocr/privacy/)

Introduction

A variety of materials can be found online to assist behavioral health service providers who use technology in their practice and to help clients use technology to support their recovery. This chapter includes selected resources for providers and administrators who are implementing technology-assisted care (TAC). The materials included in this chapter are intended for modification based on the unique context, service design, and staffing configurations of a given program or organization; they are only a small sampling of the wide array of resources available.

In exploring TAC implementation opportunities, understanding the various TAC-specific terms you may encounter is key; the glossary in Exhibit 2.2-1 is by no means exhaustive, but it does cover most common terms.

Tools for Clinicians

Written Statements To Communicate or Elicit Emotional Responses

Relying on written words to express emotion is quite different from having in-person exchanges, but written exchanges can be particularly useful for specific types of people or circumstances (Anthony, Nagel, & Goss, 2010). In particular, people who have previously experienced discrimination, who have service access barriers, or who are concerned about preserving the anonymity of their participation in treatment can benefit from counseling and support that relies on the written word rather than in-person exchanges. Nonetheless, providing clinical services via the written word presents challenges for counselors and clients. Exhibit 2.2-2 shows how a counselor might phrase questions to elicit particular

Exhibit 2.2-1: Glossary of Common Technology Terms

Application (app)	A software program that runs on a computer, tablet, or mobile phone.
Asynchronous communication	Communication that, once sent, can be responded to later. For example, email allows recipients to respond whenever they wish, whereas synchronous communication requires sender and recipient to communicate at the same time, often back and forth, as in a phone conversation. Email can be considerably slower than text messaging, but some consumers may be more comfortable with a slower form of communication. Younger clients are often more experienced with texting and prefer the more rapid communication exchange that is possible via this medium, as do many others of any age who are familiar with texting.
Authentication	Some form of verifying the user of a given technology, such as through a password, key code, thumbprint, retinal scan, or photo likeness.
Avatar	An icon, picture, character, or graphic that represents a person's online identity. Avatars allow people to portray online identities without revealing their real images.
Bandwidth	The capacity of the transmission connection. Large bandwidth allows more information to be sent in less time.
Blog	Written thoughts, links, opinions, and commentaries posted on a Web site.
Broadband	Bandwidth adequate to transmit high-quality audiovisual data.
Chat	Online communication that occurs in real time; includes chat rooms, where people (usually several individuals) exchange dialog, as well as instant messaging (usually involving just two people).
Desktop	The first display you see on a computer after the startup is completed. It is often a background or wallpaper where icons of files and programs are saved.
Desktop computer	A personal computer (PC) to be used in one location, as compared with a laptop or portable computer, which is meant to be carried around and used in many locations.
Domain	The last two parts of an email or Web address that show the organization's name, such as "gmail.com" or "SAMHSA.gov."
Encryption	Encoding data on an email or Web page so it has to be decoded by the person or system that is authorized to see it.
Firewall	Hardware or software that prevents unauthorized access to a computer network.
Frame relay	The streamlined process of sending and receiving data.
Malware	A program loaded on a computer system to compromise the confidentiality or integrity of the data, applications, or operating system of the computer.
Network	A set of locations, points, or computers connected for information exchanges.
POTS	Plain Old Telephone System or landline (versus a mobile, or cellular, phone system).
Real time	A form of sharing data or communicating where there is no perceivable delay between the time something is sent and the time it is received.
Redundant	A backup approach to data processing or communications to ensure that even when one critical element of the system fails, the system continues to operate.

(Continued on the next page.)

Exhibit 2.2-1: Glossary of Common Technology Terms (continued)

Smartphone	A mobile telephone that can do more than make phone calls or send text messages. Smartphones often can send and receive email, access the Internet, display photos, and play videos.
Social media or networking	Web sites (e.g., Facebook, Google+, LinkedIn) that allow people to create Web pages with personal information and exchange messages with others.
Store-and-forward	Transmission of images or audio clips to a storage device where a behavioral health service provider can view them, thus reducing the bandwidth required.
Synchronous communication	Communication where there is no lapse between the time the sender communicates something and the receiver gets the message, allowing the participants to communicate in real time.
Tablet	A small, lightweight computer that often uses a touchscreen instead of a keyboard.
Teleconferencing	Interactive communication among multiple users at different sites; can include voice, video, and data.
Telehealth	Use of electronic information and telecommunications to support long-distance clinical healthcare, health-related client and professional education, public health, and health administration.
Telemedicine	The exchange of medical information from one site to another through electronic communications to improve clients' clinical health status; can sometimes be used as a synonym for telehealth.
Text message (SMS)	Brief message typed in a phone or other handheld device that is sent by wireless telephone to another user.
Tweet	Brief online posting distributed to a group of users that are registered as followers of a particular person's tweets.
Twitter	An online service that manages subscribers' tweets.
Uniform resource locator (URL)	An Internet address.
Video conferencing	Real-time, two-way transmission of video images across multiple locations.
Videophone	These types of phones include an imaging device that lets the caller and receiver view each other, as on a television.

responses or communicate a collaborative and accepting attitude to a client. For additional discussion of research (Simon et al., 2011) related to online text messages in a trial of depression treatment follow-up, see Part 1, Chapter 2, as well as the online-only literature review in Part 3 of this Treatment Improvement Protocol.

Text-Based Communication Shortcuts

The use of emoticons and acronyms is not recommended for behavioral health service providers because of the risk of misinterpretation and the blurring of professional and personal relationship boundaries. However, providers engaged in text-based client communication should understand some

Exhibit 2.2-2: Statements To Elicit Responses From Online Clients

Expressing empathy	Obtaining permission	Normalizing
• How sad. • That is terrible. • What an incredible ordeal.	• Is it okay if I ask you some questions about...? • Are you up to some questions now?	• Often it is hard to... • Often it is hard not to... • It is okay if you...
Restating	**Nurturing collaboration**	**Eliciting commitment**
• Correct me if I'm wrong… • I get the impression that… • I sense that you…	• Do you think it would be advisable to...? • As we have both said…	• What are one or two things that you should do first? • How would you know if the effort was worth it? • So are you saying that you are willing to try doing _____?
Promoting credit for change	**Emphasizing strengths and nurturing hope**	
• How were things different this time than they were last time? • What do you think accounts for the change? • What, if anything, did you do differently this time?	• Somehow you got past the obstacle of... Is that correct? • What allowed you to...in spite of...? • How did you do that?	**Assisting with goals** • Does your goal seem realistic? Should you establish subgoals? • Of your goals, which one should you begin with? How should you choose? • How can you go about achieving these goals? • Do you have a plan? Do you need help?
	Gathering more information	
Enhancing motivation	• In order to understand your situation, I would like to ask you some questions. • Can you describe the situation you are in now? • How often does this behavior occur? • What else should I know about you and your situation to help you with this problem?	
• What is different when the problem is manageable? • How would you like things to be different? • Of the things we have discussed, which are the most important reasons to change?		

common emoticons and acronyms that their clients may use. Exhibit 2.2-3 lists some of the more common emoticons and acronyms used in text-based communication. Providers should verify the meaning of communications from clients using emoticons; they often carry multiple, ambiguous meanings.

Determining the Appropriateness of TAC for Clients

As with all modes of service provision, some clients are better suited to TAC than others. For the services to be effective, the client's strengths and resources must match the selected treatment approaches. The International Society for Mental Health Online (2010) identifies some considerations when screening clients for TAC (Exhibit 2.2-4).

Internet Security and Privacy Considerations for Clinicians and Clients

Social networking and online mutual-help groups present a host of support opportunities that transcend geographical boundaries and create opportunities for anonymity that

Exhibit 2.2-3: Common Emoticons and Acronyms in Text-Based Communications

Common Emoticons		Common Acronyms	
:) *or* :-)	Happiness, joke, sarcasm	AAMOF	As a matter of fact
:(	Unhappiness	BBFN	Bye bye for now
:-/ *or* :-// *or* :-S	Undecided, confused	BFN	Bye for now
:@	Shock or screaming	BTW	By the way
|-O	Yawn	BYKT	But you knew that
>_< *or* ><	Angry or frustrated	FITB	Fill in the blank
T_T	Crying	FWIW	For what it's worth
D:	Total fear	FYI	For your information
>O	Ouch	HTH	Hope this helps
X-(	Angry	IMO/IMHO	In my opinion/In my humble opinion
:_(*or* :'(*or* QQ	Crying	LOL	Lots of luck/love or laughing out loud
:o	Surprised	NC	No comment
		NP	No problem
		NRN	No reply necessary
		OMW	On my way
		TIA	Thanks in advance
		TTYL	Talk to you later
		TYVM	Thank you very much

Source: Anthony et al., 2010, p. 19. Adapted with permission.

in-person support cannot offer. Nonetheless, social networking and online support also expose users to new risks. Providers delivering TAC, as well as behavioral health program administrators, should know the opportunities and risks associated with social networking, online support, and Internet privacy; they should help their clients minimize Internet security and privacy risks. Many federal, state, and community-based organizations provide information on using social media and other Internet resources safely. The Office of the National Coordinator for Health Information Technology offers information about protecting personal health information, including protecting health information when using mobile devices (see http://www.healthit.gov/patients-families/what-you-can-do-protect-your-health-information). The National Cyber Security Alliance's Stay Safe Online Initiative provides fact sheets, toolkits, and other information on cybersafety. The checklists that follow provide information on cybersafety; administrators, providers, and clients can use them to minimize the risks associated with seeking online support:

- Safety Tips for Social Networking (http://www.staysafeonline.org/stay-safe-online/protect-your-personal-information/social-networks)
- Privacy Tips for Teens & Young Adults (https://www.staysafeonline.org/data-privacy-day/teen-and-young-adult-resources)
- Safety Tips for Mobile Devices (http://www.staysafeonline.org/stay-safe-online/mobile-and-on-the-go/mobile-devices)

Exhibit 2.2.-4: Considerations Regarding the Appropriateness of TAC

Communication preferences:
- Does the client prefer in-person communication, video messaging, phone, email, instant messaging, or chat?
- Is the client able to benefit from communication methods that he/she does not prefer?

Computer knowledge, skill, and resources:
- Does the client have access to a computer system and the Internet?
  Is the client knowledgeable of his or her computer system and the Internet?
- Does the client have the motivation and capacity to experiment with new technologies?
- Are the client's computer resources compatible with the agency or clinician's system?
- Does the location where the client accesses the computer or Internet pose privacy or technological concerns (including firewalls)?
- If Internet access is interrupted, are there workable alternatives, such as email or telephone?

Online communication knowledge:
- Does the client already use technology to communicate with others?
- What type of experience does the client have with online communications?
- Does the client participate in online support groups? What is the quality of these interactions?

Suitability for text-based communication:
- What kinds of experiences has the client had with reading and writing?
- Are there physical, cognitive, or literacy limitations that would interfere with the client's ability or comfort with reading and writing?
- How well does the client type?
- Does the client enjoy in-person and phone conversations? Why?
- Does the client prefer spontaneous communication, such as chat or IM, versus taking the time to compose, edit, and reflect, such as when using email?

Prior or current treatment experiences:
- How might prior treatment experiences or expectations of treatment influence the client's attitude about participating in online therapy?
- Does the client currently participate in counseling or therapy, and how might this experience influence the online therapy experience?

Presenting or co-occurring problems:
- What is the most appropriate level of care for the presenting problem, and will online therapy be able to meet the needs of the client?
- Is the client suicidal or engaging in risky behaviors?
- Does the client have problems or behaviors that might prevent him or her from responding to online therapy (e.g., impulsiveness, difficulty with boundaries)?
- Does the client have physical health conditions or disabilities that may influence his or her ability to use online therapy?
- Does the client have mental or physical health problems that need to be continuously assessed visually, such as slurred speech, tremors, or flat affect?

Cultural considerations:
- Are there language barriers that may create obstacles to text-based communication?
- Are there cultural considerations that enhance or detract from the usefulness of online therapy?

Other resources or referrals:
- Are there other resources that would better serve the client?
- Are there other supports or resources that can supplement online therapy?

Source: Suler, 2001. Adapted with permission.

Checklist of HIPAA Security Policy Considerations Related to Remote Access and Mobile Devices

User authorization to access electronic PHI

- ☐ Authorization based on role
- ☐ Authorization based on need for access
- ☐ Workforce training prior to access

Security of devices outside physical control of organization

- ☐ Devices covered, such as mobile phones, laptops, flash drives, backup devices
- ☐ Virus protection for remote devices
- ☐ Unattended offsite workstations
- ☐ Prevention of lost or stolen devices
- ☐ Deterrence of access to electronic PHI if devices are lost or stolen
- ☐ Backup and other procedures to avoid loss of electronic PHI if devices are lost

Electronic PHI sent over networks

- ☐ Anticipated uses and risks such as e-prescribing and Web mail
- ☐ Use of secure connections
- ☐ Email encryption

Workforce training

- ☐ Access, storage and transmission of electronic PHI
- ☐ Password management
- ☐ Protection of remote devices from loss or unauthorized access
- ☐ Prohibitions and procedures for transmitting PHI using email
- ☐ Prohibitions and procedures for downloading PHI to remote computers
- ☐ Consequences of policy violation

Procedures and sanctions for loss of control of PHI

- ☐ Lost or stolen logins or devices
- ☐ Unauthorized access to networks or devices
- ☐ Unattended workstations
- ☐ Virus introduction to mobile devices

Source: HHS, 2006. Adapted from material in the public domain.

Checklist of Technology Fluency

What kinds of technology do you use in your work?

- ☐ Email
- ☐ Electronic health records (EHRs)
- ☐ Internet
- ☐ Social media (Facebook, Twitter, LinkedIn)
- ☐ Office software (spreadsheets, documents, presentations)
- ☐ Video equipment
- ☐ Conference calling telephone
- ☐ Mobile telephone

What kinds of technology do you use in your personal life?

- ☐ Email
- ☐ EHRs
- ☐ Internet
- ☐ Social media (Facebook, Twitter, LinkedIn)
- ☐ Office software (spreadsheets, documents, presentations)
- ☐ Video equipment
- ☐ Conference calling telephone
- ☐ Mobile telephone

How often do you use a computer for work or personal reasons?

- ☐ More than once a day
- ☐ Once a day
- ☐ 2–6 times a week
- ☐ Once a week
- ☐ 2–3 times a month
- ☐ Once a month or less
- ☐ Never

How long have you been using the Internet?

- ☐ Never have used it
- ☐ Less than 6 months
- ☐ 6–12 months
- ☐ 1–3 years
- ☐ 4–6 years
- ☐ 7 years or more

How comfortable do you feel using computers, in general?

- ☐ Very comfortable
- ☐ Somewhat comfortable
- ☐ Neither comfortable nor uncomfortable
- ☐ Somewhat uncomfortable
- ☐ Very uncomfortable

How comfortable do you feel using the Internet?

- ☐ Very comfortable
- ☐ Somewhat comfortable
- ☐ Neither comfortable nor uncomfortable
- ☐ Somewhat uncomfortable
- ☐ Very uncomfortable

Source: Bunz, 2004. Adapted with permission.

The use of mobile devices and external storage devices in the delivery of clinical services creates additional challenges to ensuring the security of protected health information (PHI). Entities that are covered by the Health Insurance Portability and Accountability Act (HIPAA) must implement policies and procedures to ensure that the electronic PHI they generate or share meets all HIPAA security requirements. The following checklist extracted from the U.S. Department of Health and Human Services (HHS) HIPAA Security Guidance (2006) summarizes some of the key considerations for organizations using mobile devices in the delivery of behavioral health services.

Staff Recruitment and Supervision

Screening Staff Members for Technology Competence

A variety of measures assess computer use, attitudes, and fluency and are available for organizational use (Bunz, 2004). Use the following checklist to initiate a discussion with staff members about their comfort with and skills using technology. The list includes items from the Computer-Email-Web Fluency Scale (Bunz, 2004). More detailed questions about computer use appear in the original scale. You can also ask staff members to demonstrate their computer skills in a timed session.

Supervisor Competencies

There are distinct competencies that supervisors who oversee TAC must master. These competencies are generally derived from using technology in their own practice. In addition, supervisors who use technology to deliver long-distance clinical supervision must have a distinct set of competencies if they are to be adequately prepared to use technology to conduct supervision effectively. Exhibit 2.2-5 depicts the knowledge, skills, and attitudes required for two types of supervisors: those who supervise care providers in their delivery of TAC and those who use technology to deliver supervision.

Sample Telehealth Policies

Policies and procedures vary based on the type of technology used, risks associated with the intervention, the organization's regulatory climate, and the size and scope of the organization itself. The sample policies that follow are adapted from an internal policies and procedures manual developed by The Billings Clinic in Billings, MT, and provided by TIP Consensus Panelist Thelma McClosky Armstrong, M.A. They provide a snapshot of some issues that organizations may wish to consider in developing policies for technology-assisted services. Some of the sample policies clearly relate to telehealth for physical disorders or when a telehealth provider may need a close or thorough physical view of the client. Although telebehavioral health will not often require such a physical review of the client, the policies have been included to foster integrated care in case the telebehavioral health administrator wishes to share these sample policies with a general telehealth administrator.

Room Evaluation

The goal of this section is to provide a process for evaluation of a room to ensure optimal conditions during a telemedicine consult.

Sound:

- A quiet room is ideal. Fabric (e.g., curtains, walls) and carpeting are beneficial to reduce the reflection of sound in the room.
- Be aware of ambient noise. Listen for fans, furnace, air conditioning, overhead speakers, vacuuming, and noises from nearby rooms. Eliminate noises if possible.

Exhibit 2.2-5: Technological Competencies for Supervision

Knowledge Area	Supervision of TAC	Supervision via technology
All of the knowledge-related competencies required of clinicians	✓	✓
Ethical and confidentiality concerns related to transmitting clinical information	✓	✓
Benefits of technology-delivered supervision		✓
Scope of practice requirements and risks	✓	✓
Regulations related to delivery of technology-based care	✓	
Regulations related to delivery of technology-based supervision		✓
Organizational policies on privacy, confidentiality, security, and informed consent	✓	✓
Common ethical, privacy, security, and risk management issues faced when providing technology-based clinical care	✓	
Common ethical, privacy, security, and risk management issues faced when providing technology-based supervision		✓
Skill Area	**Supervision of TAC**	**Supervision via technology**
All of the skill-related competencies required of clinicians	✓	✓
Development of working alliances with and discerning nonverbal cues of supervisees when using technology		✓
Identification of red flags in clients through text, video, clinical records, and clinician reports	✓	✓
Strategies to structure technology-delivered supervision		✓
Ability to make a remote supervision session lively and relevant to clinical rather than administrative supervision needs		✓
Attitudes	**Supervision of TAC**	**Supervision via technology**
Interest in adoption of new practice/supervision techniques	✓	✓
Willingness to work through technology interruptions/glitches	✓	✓

- If the room has a phone, turn the ringer down. Mute or turn volume down on intercom systems if this is an option.

Walls and windows:

- Solid blue or gray walls are ideal. Avoid patterns on the wall or wallpaper.
- Walls behind the client may be covered with blue cloth. Blue enhances skin tones.
- Cover windows with darkening curtains.
- Note objects in the room that may be distracting to cameras and participants. Keep items such as light switches, screens, or reflective items out of frame.

Lighting:

- Fluorescent lighting creates good video. The bulbs should be 3200 to 4700 degrees

Kelvin. (Average fluorescent lighting is 3500 degrees Kelvin.)
- Most fluorescent lights are directed down into a room, resulting in darkened eyes.
- Ideal lights are directed to reflect off the ceiling, resulting in indirect lighting. Other options include front lighting or lights mounted on the walls to direct light at the front of participants.

Key points
- Solid backgrounds without patterns are preferred for video conferencing.
- Eliminate background noise.
- Curtains should block daylight coming through windows.

Client Positioning

This section provides instruction on positioning a client for an exam over telemedicine for the ultimate visual clarity and safety:
- Seat the client so that he/she has a clear view of the consultant on the monitor.
- Place the monitor so that the presenter may also see the video being sent to the provider.
- Note the camera angles needed to ensure that the provider sees the exam without the presenter blocking the view. This may involve the use of more than one camera for various parts of an exam.
- Determine the client's mobility status. The client may be asked to walk, jump, balance, squat, and arise from a seated position. Inform the provider of any concerns. Stay by the client's side for these assessments.
- Provide a safe, obstacle-free environment.
- The client may be initially seated in a chair and later move to an exam table.
- The client may need to turn so the camera views the back while assessing lung sounds or other views involving the back. This may also be accomplished by using two camera presets.
- Have blue cloth draping available during a consult. Blue enhances skin tones.

Key points
- A presenter needs to see both client and monitor during a telemedicine exam.
- Use blue towels or pads when examining skin to ensure accurate skin tones.

Camera Placement

This section gives instruction in the use and placement of cameras during a telemedicine consult. Several cameras can be used to evaluate clients for clinical visits, including polycom video conferencing cameras, document cameras, and peripheral cameras.

The high-definition camera:
- Is the primary camera.
- Frame the client in the picture slightly left of center to allow space for the picture-in-picture (PIP) at the consulting site without obscuring the client.
- If more than one person is attending the consult, place chairs close to one another.
- Preset camera settings so that each individual is visible alone in a close shot and together in another shot.
- Preset a close shot of the client's upper body and a full-body shot. The provider can better assess posture and nonverbal communication with these views.
- When adjusting your camera, try to fill the screen as much as possible with people rather than with the table, chairs, walls, lights, or the floor.

The document camera:
- Use a preset for the document camera.
- May be used by either the provider or the client to share printed matter, pictures, X-rays, or three-dimensional objects.
- May be used to assess hands or arms. The lighting and magnification are ideal. Use a blue background to enhance skin tones.

The peripheral camera:

- Use a tripod. Even minimal movement made while holding the camera is magnified on the screen. When practical, it is preferable to use the tripod.
- Use a preset for the peripheral camera.
- Refer to the camera instructions to white balance and focus the camera prior to each use. Compare skin color on the monitor screen with actual color off camera to determine accurate color settings.
- To assess gait, place the camera 12 to 18 inches off the floor. The provider must see the feet, legs, arms, and torso of the client.
- When assessing skin, use a blue cloth pad or blue drape for the background.
- For close shots of the skin, it is best to set the camera for a wide shot and then move the camera very close to the skin.
- Be aware of camera angles when showing the right and left sides of the body—for example, when shooting arm reflexes. Allow the presenter to be in the alignment needed and work around her/him.

Key points

- Ensure that the peripheral camera has been white balanced every time it is used.
- Set the camera on wide angle and bring it in close to get a clear picture of the skin.
- Fill the screen as much as possible with the individual(s) in the room.

Microphone Use

This section directs the placement and use of the microphone for telemedicine consults:

- Place the microphone at least 3 to 5 feet away from the video conferencing unit.
- Place the microphone at least 2 feet from the speaker facing away from the monitor.
- Speak in a normal voice; do not shout.
- Note that the microphone is very sensitive and will pick up and amplify noises such as clicking pens and shuffling paper.
- If the microphone must be relocated during a conference, mute the microphone and then move it to the new location.
- If one site hears an echo or sound distortion over the video conferencing equipment, the most likely cause is microphone placement at the site. The solution is for the offending site to move the microphone away from the monitor speaker and/or turn down the volume.
- Mute microphones when a call comes into the site to protect the confidentiality of the participants until they are ready to join the conference.
- Instruct the users in the control of the mute button and the volume adjustment on the remote.
- Limit side conversations if there are additional people involved in the consultation.
- Ask the people at the other site if they can hear. Have them introduce themselves to evaluate sound quality.
- Pause briefly for others to answer or make comments, due to the fact that the audio has a very slight delay.

Key points

- Place the microphone at least 3 feet from the video conferencing unit.
- Check the microphone after the call connects to ensure that the mute is off.
- Ask the site you are connected with to check microphone placement and volume if your voice echoes back,.

Privacy

This section offers instruction for ensuring that telemedicine visits are private:

- Place a sign on the room's door to noting that a private consult is in session.
- Allow the consulting provider or designee to introduce any other individual(s) in the room and ask the client's permission to have that individual(s) present during the

consult. If the client denies permission, the individual(s) will exit the room.
- Allow the consulting provider to pan the room with the camera at the client's request to assure the client that no other parties are attending the consult.
- Ask the client his or her preference regarding the site facilitator staying in the room. Repeat this question at each visit.
- Have the site facilitator wait outside the room or leave a number that the client may call for assistance if he or she is not in the room for the consult.
- If the facilitator will not remain in the room for the consult, adjust the camera prior to exiting so that the provider sees the upper half of the client's body, unless instructed otherwise.
- Inform clients about the video conferencing system and its capabilities, risks, and benefits. Review with them the process that will occur during the consultation.
- Obtain consents for participation in the telemedicine consultation. Maintain the original in the client's medical record at the consulting site. A copy may be made for the records at the client's site.
- Give clients the option of terminating the telemedicine encounter at any time and opting to see the consulting physician in person.

Key points

- A client shall sign a consent form for a telemedicine consult.
- The client shall be made aware of all individuals in the room at the far site.
- The site facilitator shall be available to the client during a consult.

Client Preparation

The goal of this section is to provide instruction in educating the client in preparation for a telemedicine encounter:

- When the initial telemedicine appointment is made, instruct the client to arrive 15 to 30 minutes prior to the appointment with the consultant. Instruct those who must complete registration forms to arrive 30 minutes prior to the appointment and to bring insurance cards and a copy of their current prescriptions.
- In some cases, the consulting doctor's office may send forms to the client to be completed and brought to the visit or mailed back prior to the visit. If a client arrives with completed forms, fax these forms to the consulting provider.
- Give the client the site location name and address and the site facilitator's name and phone number.
- If the client is seeing a [agency name] provider, the rural site will register him or her as a [agency name] client. In the case of a follow-up visit by a previously registered client, further registration may be unnecessary. The telemedicine nurse will notify the site if registration is required. The client bill will come from the consulting provider.
- Introduce yourself to the client and escort the client to the exam room.
- Explain the telemedicine visit and give the client a chance to ask questions.
- Cover these points:
  - The provider is located at an office in a distant town.
  - The client sees the provider on a monitor just as the provider sees the client on a monitor. There are cameras and microphones at both sites.
  - The consultation is private.
  - Ensure the introduction of each person in the rooms at both sites and the issuing of statements as to the role each person plays.
  - Introduce any additional peripheral devices to be used: cameras, electronic stethoscope, document stand, and video

otoscope. There may be a need to get a close view of the client using a camera during the consult.
  - The client may be asked to don a gown so that the physical assessment may be completed.
  - Take turns speaking so that all participants can hear the conversation. If the provider wants a certain person in the room to answer a question, the provider will specifically address that individual. Allow the queried individual to respond. Sometimes, providers are assessing speech, cognition, or memory.
  - If the client is uncomfortable with any part of the exam, he or she may refuse to continue that portion of the exam.
  - If the client wants to speak to the provider privately, instruct him or her to let the site facilitator know.
  - Encourage the client/family to ask the provider questions.

Key points

- Only clients seeing a [agency name] provider will register using the [agency name] forms.
- The site facilitator shall explain that the telemedicine visit is private.
- Clients should be instructed to take turns speaking during a visit.

Scheduling Telemedicine Appointments

This section describes a process for scheduling telemedicine appointments.

Option one:

1. When a provider or client requests a telemedicine appointment, call the telemedicine office. (Provider <phone number> or Main Office <phone number>)
2. Initial information required includes the type of specialty consult needed, the referring provider's name and number, and the sites connecting for the consult.
3. Telemedicine staff may need to contact a consulting provider to determine whether the request can be met. The consulting provider may request further medical information to determine whether a client is appropriate for a telemedicine consult.
4. The telemedicine office will set the date and time after consulting with the client, provider, and any other individuals who must be present (presenters or referring providers) and the schedule. Site facilitators may assist in this communication.
5. Client initials are logged in the scheduler. The telemedicine nurse or consulting office staff notifies the site of the client's name.
6. The telemedicine nurse will determine what equipment needs there will be for the appointment and inform the site; note these in the reservation.
7. The appointment scheduler will email appointment information automatically to all involved parties.
8. The scheduling of follow-up appointments will occur in the same manner as described in Steps 1-7.

Option two:

1. When a client or provider requests a telemedicine appointment, place a call to the telemedicine office, the central appointment desk <phone number>, or the consulting specialist's office.
2. Request client information from the caller.
3. The scheduling process continues with steps 5, 6, 7, and 8 under option one.

Key points

- A medical consult over telemedicine requires scheduling of the client, the consulting provider, the rooms at both sites, and possibly a presenter.

- The telemedicine site knows which equipment to set up by referring to the telemedicine scheduler.
- Client information on the telemedicine scheduler is limited to the client initials.

Telemedicine Visit Documentation

The goal of this section is to provide instruction to ensure that proper documentation occurs with telemedicine consults:

- Ensure that a client who participates in a telemedicine visit signs a Client Consent for a Telemedicine Encounter form. If the client previously signed this document, the client need not sign again. Send the original to the consulting site to be filed in the medical records the provider's office keeps. Give a copy to the client.
- Register clients seeing [agency name] providers for the first into the system. Clients must complete forms in the registration packets located at the rural site including Conditions of Registration, [agency name] Face Sheet, and Medicare Secondary Payer (if Medicare eligible). Refer to the [agency name] Telemedicine Registration for New Clients instructions. Send original documents to the telemedicine office for inclusion in the [agency name] chart.
- Offer each client a question and answer form to complete and a self-addressed stamped envelope to mail the completed form back to the [agency name] office if desired. The site facilitator will send the completed form to the [agency name] office in the event that the client leaves the form at the rural site.
- Allow clients to bring to the visit any forms they have received from providers to complete prior to the visit, and send these forms to the appropriate provider.
- Before the visit, review clinical guidelines to determine if this type of visit requires additional information or questionnaires.
- Consider making copies of these documents accessible on the members-only section of the [agency name] Web site.
- Prepare for visits that may require documentation of client vital signs (e.g., weight, temperature, pulse, respiration, blood pressure). The site facilitator may document vital signs on the visit template if appropriate and send them to the provider or verbally report them to the consultant.
- Keep all original documentation at the consulting provider site, as is the case with in-person care. Keep copies at the client site at the discretion of the regional center.

Key points

- Have clients sign a consent form for a telemedicine visit even if you are uncertain as to whether it is necessary.
- Keep all original telemedicine documents at the consulting site in the client's chart.

Records Access

This section ensures that consultants have documents in place for a telemedicine consult:

- Make client records stored at the client site readily available during the consult.
- The consulting provider or staff person working with the provider may request that you provide certain documents prior to the consult.
- Follow the rules that govern sharing of medical information; a consulting provider may access client information from a referring doctor.
- Documents requested may include a referral note, lab reports, X-ray reports or films, scans, or other studies.
- Send client records at the consulting site to the provider in the same manner as occurs with an onsite visit.
- Make a computer with access to the client's electronic medical record available for use by the consultant at the time of the visit.

Key points

- It is permissible to share site medical records with a consulting doctor.
- Send documents requested by the consultant via secure fax, mail, or a picture archiving and communication system.

Prescriptions

This section describes a process for ensuring that a client receives the required prescription(s) following a telemedicine encounter:

- During a consult, a provider may choose to order a new medication or to change the medication the client is currently using.
- The provider may ask the client what pharmacy he or she uses and order the prescription directly.
- The provider may mail a prescription to the client.
- The provider may fax a prescription to the pharmacy used by the client.

Key points

- The provider may call a new medication order into the client's pharmacy directly.
- The provider may mail a prescription to the client.

Additional Tips

- When presenting a client or planning to be on camera for another reason, be aware of clothing choices. Solids are preferable to checks, plaids, geometric shapes, or stripes. Red, vibrant orange, hot pink, and white may cause a color bleeding effect over video. The color of choice is blue, as it enhances natural skin tones.
- A blue drape or cloth pad should be available for all medical consults. Covering carpet to examine feet or draping the client to better examine a limb or face or cover distracting clothing is important to provide quality pictures.
- Client gowns shall be blue (preferably) or a solid color.
- If a provider inquires about a specific area on the client, offer to show that area to allow for assessment. Providers may not be certain of the technology or the convenience of moving the cameras.
- Observe the client for gait, posture, affect, care of clothing, odor (alcohol or body odor), and tremors. Report observations to the provider via the system or by phone when the client is not present. If appropriate, bring up the topic during the encounter. You may say, "I noticed that you are unsteady when you are walking."
- Model good communication for the client. Encourage the client to ask questions of the provider. If the client has shared a concern prior to the visit, be certain to bring up the topic for the provider to address (e.g., "Mary mentioned that she has noted increased ringing in her ears since she last saw you").
- You are the connection to the provider. You are the key to a successful consult.

Key points

- Presenters should wear clothing in a solid color without patterns.
- Clients may forget important questions once the provider enters the room. If a client shared a concern prior to the provider being present, be certain that it is addressed in the visit.
- Show the provider areas mentioned so that he/she sees everything in question.

The policies presented in this section serve only as an example of how one agency has formulated its telehealth policies. Every administrator must make decisions that reflect the clients, the agency, the services, and the circumstances at hand. Such policies will require updating due to changing needs, circumstances, and technologies.

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“This course was developed from the public domain documents: Substance Abuse and Mental Health Services Administration. Using Technology-Based Therapeutic Tools in Behavioral Health Services. Treatment Improvement Protocol (TIP) Series 60. HHS Publication No. (SMA) 15-4924. Rockville, MD: Substance Abuse and Mental Health Services Administration, (2015).”