Chapter 12
Technology, Business, and System Implementation: Getting the Right Care to the Right People in the Right Place

Sarah Schwenk and Michaela Craft

Introduction

Rural telebehavioral health (TBH) is a lifeline for some communities, assuring access to high quality psychiatric services outside what is otherwise locally available. In many rural areas of the United States, a confluence of factors including stigma, minimal-to-absent access to psychiatric specialty care and a "lack of psychiatric health literacy" (Pradhan et al., 2018) have resulted in poorly addressed psychiatric needs, even in those patients with access to a primary care provider. It is estimated that as many as 65% of nonmetropolitan counties in the United States do not have any practicing psychiatrists, with over 60% of rural Americans living in designated mental health provider shortage areas (Morales et al., 2020). Many rural residents appreciate telebehavioral health because it offers greater privacy and anonymity than otherwise found in small communities.

The provision of this care, however, does have some programmatic hurdles which can be successfully mitigated by identifying patients appropriate for TBH care, understanding patient needs, and matching them with the right clinician and type of service. Through careful planning and execution, the clinical and administrative team, inclusive of both the remote clinicians and the local care team, can assure these services are clinically appropriate, high quality and evidenced-based, and functioning within the limitations and cultural nuances of the community being served.

S. Schwenk (✉)
Department of Psychiatry, Aurora, CO, USA
e-mail: sarah.schwenk@cuanschutz.edu

M. Craft
Northern Vermont University, Fairbanks, AK, USA
e-mail: mac03050@vsc.edu

D. M. Hilty et al. (eds.), *Virtual Mental Health Care for Rural and Underserved Settings*, https://doi.org/10.1007/978-3-031-11984-2_12

For the purposes of this chapter, we will refer to the people and community being served as the local care team, and the behavioral health providers (encompassing psychiatrists, psychiatric nurse practitioners, psychologists, and therapists) as the remote clinicians. The terms telebehavioral health and telemental health will be used interchangeably to indicate the provision of therapy and medication management services, which occurs via synchronous, HIPAA-secure video connection with the patient and provider located at a distance from one another. Patient and client will also be used interchangeably, reflecting the unique perspectives of the remote clinician and the local care team. The objectives of this chapter are to:

1. Provide an overview of necessary steps to develop a TBH service especially in rural communities;
2. Serve as a useable and targeted reference guide; and
3. Illustrate points with case examples.

Implementation Steps

Needs Assessment: Gain Local Understanding

We can't be all things for all people, but how do we become the right things for the right people?

A careful needs assessment should be conducted prior to initiating rural TBH services. Given the sensitivities of providing behavioral health care in rural, often low-population communities, a needs assessment should, ideally, be conducted with those receiving services as they are the experts in the needs as well as the strengths and limitations of their organization and community. This planning should also include those knowledgeable about the provision of TBH from the beginning, so the program design is respectful of the workflow of the clinicians involved. Shore et al. (2019) describes this process in detail as it relates to work with Rural Native Veterans. Although caution should be employed in applying this beyond the population studied, the core of programmatic development described in this chapter is a useful framework to consider.

A needs assessment begins, like most clinical questions, on identifying a solution to a problem, often one that currently has a poor clinical outcome. The solution sometimes arises from limitations in the provision of clinical care or may arise from persistent barriers in meeting patient needs identified by an astute local clinician or patient. In only rare exceptions should the needs be defined by those outside of the local community, as this pits intervention against tradition, and has the potential to set the remote clinicians up to be seen as putting their services *upon* the local community, rather than providing them *in service of* the local community. As Richman et al. (2019), note, "each population will optimally benefit from tailored interventions that incorporate unique shared perspectives." Although patient and community need are the most important considerations, clinicians considering whether they are

well positioned to provide TBH services should consider additional variables such as licensure, billing limitations, and malpractice. This issue is explored in greater detail in the article by Adams et al. (2018).

An important consideration for developing rural TBH services is the availability of appropriate telecommunication services, specifically high-quality internet coverage and telecommunications equipment. Rural communities have a shortage of audio/visual equipment needed and reliable internet connection. As of 2018, the Pew Research center found that in rural America 58% of people reported access to high-speed internet as a "problem" or "major problem." Prior to considering any patient as being a candidate for telebehavioral health, the agency and clinician must be sure to assess whether it is logistically and technologically feasible for the organization and the patient. Recent increases in the use of audio-only or lower-bandwidth services may provide options for those most in need of services beyond traditional synchronous services using audiovisual technologies (Samuels et al., 2020; Chen et al., 2021). Some issues to consider when conducting a needs assessment include:

1. What problem(s) is the group attempting to (re)solve?
2. What services would solve this problem?
3. How many patients per month, quarter, or year are in need of these services?
4. What is the organization willing to provide in the form of financial support, person power, technical assistance, and more to meet this need?
5. What type of provider will be most appropriate for the needs of patients and the organization?
6. What limiting factors do we anticipate might be barriers to initiating this service?
7. Do we have the technological ability to initiate these services?
8. How does the local community view the use of technology for health care?
9. Is the local community receptive to clinicians from outside the community?

Case Example: Engaging Patients in a Needs Assessment

A rural, multisite substance use treatment center serving Alaska Native and non-Native adults identifies that the mental health needs of some of their patients are preventing full engagement in care and may be compromising the sobriety efforts of their clients. The organization viewed the lack of engagement and long wait time for care as poor clinical outcomes and decided to conduct an assessment to find better solutions focused on in-home TBH care. Marie is a 38-year-old Alaska Native Woman who presents for treatment of a severe alcohol use disorder, in early remission and a history of chronic individual and cultural trauma. She lives in a rural part of her state and has intermittently sought psychiatric care but never continued due to lack of consistent access to care. She demonstrates insight as to the role that her history of physical and sexual assault places in her alcohol use. She is experiencing nightmares, hyperarousal, depersonalization, derealization, anxiety, and low mood. She wants to return to her village. Marie participated in the needs assessment and the organization found that patients were open to TBH care, that the organization was able to facilitate care, and that a larger hospital-based provider group nearby was able to assume care following the initial period of diagnostic and management

for those who needed it. The needs assessment also determined that bandwidth in general was limited, for example, Marie's village had only recently received high speed wireless internet. It was determined that a home-based TBH care program would not work, due primarily to bandwidth concerns, but a program based out of the local clinic would be a solution to wait lists and ultimately engagement concerns.

Building Your Team

It is a common misconception that telebehavioral health is as simple as placing a patient in a room with a computer and a camera, but the reality is that a team-based model assures the process runs smoothly and predictably for all involved. Therefore, once a clear vision of the need is defined, the ability to initiate and sustain a successful program is largely predicated on building a team that works collaboratively and flexibly. The connection between the patients, the clinical and administrative staff local to the patient, and the remote TBH provider and team requires the use of asynchronous (e.g., email) and synchronous (e.g., videoconference) methods. A clear understanding of each individual role, with appropriate redundancies, will help ease the provision of TBH and result in minimal disruption or concern to the patient. While it is important to focus on both technical competences such as clinical expertise and program management, the ability to understand the flexibilities and imperfect aspects of TBH and to truly understand rural patient needs and concerns is equally if not often more important. Below are some key roles to consider. Within each role it is recommended to focus on competencies such as divergent thinking, customer-service orientation, curiosity, and cultural competence mindset (Table 12.1).

Patient Selection

Patient selection is a key component to the successful utilization of TBH as not all patients will be appropriate for these services. There may be times when a clinician, utilizing their clinical knowledge as well as understanding of the program/community, decides that a referred patient may not be clinically or programmatically appropriate. This should be respectfully challenged by the local clinicians, when needed, but also supported as indicated. Appropriate patient selection is key to the success of TBH. Additionally, the patient may decide that a virtual visit is not the best fit for them. Although there are no formally described contraindications to TBH care, it is important to consider disease presentation, patient acuity, and patient–clinician preferences when determining fit of service. In rural communities, cultural considerations are also important and may be a barrier or a promoting factor to successful engagement in care. Other factors to consider when determining appropriateness of care in clinically unsupervised settings include:

Table 12.1 Key telebehavioral health roles

Role	Description	Competencies
Manager	Writes the policies and procedures for your telebehavioral health program Ensures credentialing, procures licenses Providers overarching programmatic oversight	Clinical training helpful
Site Liaison	Understands the community, its resources (or lack thereof), and the population you are serving Provides orientation to the culture Provides information to streamline appropriate patient referrals	No clinical expectations needed In-depth local knowledge beneficial Social work background could be helpful
Scheduler	Manage schedules, consider needs of patient, clinician, and facilitators	Clinical knowledge not necessary IT skills recommended Personnel knowledge (especially if multiple sites involved) key
Counselors	Onsite behavioral health counselor to provide continued engagement with the patient between psychiatric appointments Provide warm hand-off to remote clinician	Bachelor's or master's level clinician ideal for this role Nursing, social work, counseling, or other equivalent skill sets particularly valuable
Nurse or Health Aide	Medication management for residential clients Address side effects or other medical concerns if they arise as it relates to new medication	Associate degree in nursing or related field Depending on state licensing requirements, a QMAP or similar could be appropriate as well
Case Manager	Support patient in acquiring medications Support patient in establishing local care provider, as indicated	Clinical background helpful, but not required
Facilitator	Assuring patient is logged into the virtual meeting Maintaining availability during virtual clinic in case of connectivity or equipment failure	Nonclinical Technological skills required
IT Administrator	Manage, maintain, and provide end user support for the audio/video aspect of telebehavioral health	Nonclinical Technological skills required Access required

- Patient's cognitive capacity, history regarding cooperativeness with treatment professionals, personality and history of disruptive behavior, current and past difficulties with substance abuse, and history of violence or self-injurious behavior
- Geographic distance to the nearest emergency medical facility, efficacy of patient's support system, and current medical status
- Lack of a private and/or safe environment to receive services
- Limited bandwidth such that audio and/or visual connections are not seamless

Patients who have an established therapeutic relationship with a current provider may also be inappropriate if the current therapeutic relationship is effective. Other patients may benefit from a hybrid relationship where some services are delivered in-person and others via TBH. Depending on the care setting in which services are being provided, there may be legal involvement that requires certain types of providers, or providers trained in specific types of evaluations, to conduct the patient visit. As best as possible, the program should be developed in consideration of these parameters to avoid concerns arising during time better utilized in the provision of direct clinical care.

One limitation of particular importance, largely for those prescribing medications from a remote locale is the Ryan Haight Online Pharmacy Consumer Protection Act of 2008, colloquially known as the Ryan Haight Act. This act mandates limitations in the prescribing of controlled substances without having conducted at least one in-person evaluation with the patient prior to the writing of that prescription. Although regulations were more flexible during the COVID-19 pandemic, adhering to this Act remains a best practice to protect patients from inappropriate treatment and without proper examination. Therefore, patients whose presentation may require the prescription of controlled substances may not be appropriate for these services lines. The needs assessment, if carefully completed, should serve as a backbone for defining the appropriate, and less than appropriate, patient all the while approaching each case with flexibility and care.

As an additional point of note, many services provided in rural communities may involve the provision of care to marginalized populations, potentially by clinicians who are not of the same cultural or ethnic background. Myers provides an excellent assessment of this in her article on the use of telehealth specific to rural communities (2018) with particular focus on the heterogeneity of the communities that urban cores often describe under the umbrella term of "rural." Care should be taken to acknowledge and mitigate the differential presented in this relationship, recognizing that these inequities may influence the success of the therapeutic relationship. At no point should these services be put upon a patient, nor should they be framed as punishment for challenging behaviors. They should be offered freely and without judgement, and the inherent power differential should be openly and honestly explored as indicated.

Case Example: Is the Following Patient Appropriate for TBH Care?
Marsha is a 48-year-old Caucasian, divorced, gay, woman with a history of a bipolar diagnosis conferred in her college years, and notably has a history of head trauma from athletics as an adolescent. She presented for care for alcohol use disorder following an arrest for DUI. After some weeks of virtual meetings with her primary substance counselor, her behavior was best described as paranoid and erratic, and she was referred to telepsychiatry and was scheduled to be seen virtually from her apartment. Marsha is living in a boarding house at this time and is recently separated. She presents with poor internet connectivity, calling into her appointment via cell phone. She is tangential, pressured and paranoid, and is perseverative around the intentions of her ex-wife, which progresses to anger during the course of the

initial visit. She reports not sleeping, she is labile, and difficult to redirect. She reports current sobriety from alcohol and substances, but the remote nature of her visits with her substance use counselor makes this difficult to verify through typical means of urine tox screens. Marsha is nearly impossible to redirect and is paranoid about the security of her information relayed via video chat.

There are a few reasons why this patient may not be appropriate for telepsychiatry. Most pressing, Marsha presents with symptoms which could constitute a psychiatric emergency as she is manic and angry, making vague nonspecific threats against her ex-wife. She also presents with symptoms which could be consistent with active substance use, which requires us to consider whether a higher level of care for detox may be warranted. Her paranoia at baseline could make a video visit not appropriate, although a recently published set of case studies on the management of psychosis may provide a counter to traditional wisdom on the management of psychosis in the virtual realm (Donahue et al., 2021). Further, her symptoms are likely going to require ongoing management by a psychiatrist or psychiatric NP, and as such connection to the local community from the onset may be best to prevent unnecessary transfers of care. Most plainly, however, her connectivity may be compromised either by lack of privacy or inadequate bandwidth. That said, in keeping with our recognition that the remote community may not have options for care more readily available, an initial stabilization and referral could be necessary and in the best interest of the patient with the following caveats:

- *Safety*: Prior to any patient being seen, the collective care team's ability to define the process for intervening if safety is of concern is paramount. In this case, a mental health hold (MMH) may be appropriate and is likely best completed by a local clinician as law enforcement may require to be involved.
- *Warm Hand-off*: Protocols for a transfer of care to local providers should be well delineated to assure a clear, warm hand-off to providers in the community.
- *Documentation*: The remote provider, as well as the local agency, should be adept at charting the safety assessment and warm hand-off process to assure a clear accounting of all involved.
- *Team Integration*: Managing a patient like this via telepsychiatry requires a team effort. Ensuring a clear pathway as to who organizes the distribution of video links, who coordinates with local providers, who can call for a welfare check when needed is key.

Knowing Your (Local) Resources

Understanding the available resources within your patient's community is essential in meeting the complex and variable needs of your patient, as well as assuring the patient's establishment in long-term care, as indicated. To do this, the remote clinicians rely on the community know-how of the site liaison (and the rest of the local team). The TBH providers, however, can grow their knowledge exponentially

through periodic visits to the rural community. The ability to see the community firsthand, is invaluable in providing a more complete understanding of the patient. Meeting the clinical team in person provides a greater intimacy and team cohesion than can be formulated through the virtual platform alone. It is recommended that, at a minimum, the telemental health providers attend in-person meetings at least annually, and ideally twice per year. These meetings allow the remote providers, often coming from urban cores with blind spots to the unexpected challenges of working in rural communities, an opportunity to see firsthand the barriers and challenges which exist. In addition to the overarching value of aligning the care team, these meetings provide opportunity for networking with local primary care providers, as well as specialty care teams within the community, including Indian Health Service providers and the Medication Assisted Treatment teams local to the patient. These "meet and greets" serve as an opportunity to discuss the care provided by the remote team, and align interests and troubleshoot sore spots, with the goal of improving the services provided. Some of the cases described, below, describe in more detail the complexity of managing needs across the virtual divide to assure optimal patient care for all.

Working in rural communities brings a complexity to care which is often hard to appreciate by clinicians who are based in urban centers. Rural communities often serve a population spread across hundreds of square miles with limited access to specialty services. Accustomed to managing a wide range of concerns within their communities, local providers may be hesitant to embrace those from outside their community. Outside telehealth providers, however, need to nurture these partnerships in the interest of patient care and a shared sense of community. Breaking down the urban–rural cultural barrier is key to building a sustainable and well-rounded system of care which functions in the best interest of the patients (Cortelyou-Ward et al., 2020).

There is a miscellany of unanticipated challenges which arise in rural communities. Consider the case of Matthew, a 37-year-old male with a severe and persistent alcohol use disorder. The legal consequences of his drinking have left him with no options to accessing care in his local community as he has been banned or fired from the only agencies in town which provide mental health treatment and are covered by his insurance. Further, he has been banned from every store in the community whereby one could fill a prescription. Another client, Joseph, will only be able to receive his medications every 4 weeks once he returns to his home as the mail is delivered by air, yet his insurance will not cover medications for the scripts in the timeframes needed to initiate treatment through this modality. Insurance coverage, which presents a multitude of challenges broader than the scope of this chapter, can prove to be insurmountable for a provider located hundreds or thousands of miles from the patient. In all these cases, the solution requires the creative collaboration between the site liaison, the patient, and the remote provider to identify a solution.

The remote providers must not provide care within the vacuum in which they work. We must consider the larger workflow, the needs of the patient in relationship to their local community but in response to the limitations therein. The system must support the providers in caring for the greatest number of patients to access care. As such, planning for the transition to an appropriate local resource, whether that is one

of the few local psychiatric providers or whether care is reasonably transitioned back to a primary care provider (PCP) is planning that should begin at the initiation of care. This may involve creative collaboration between the remote providers and local agencies should coverage of a medication be of concern. It may involve creative problem solving to help a patient obtain a medication when they are unable to attend visits with local providers. A team-based approach, coupled with open and consistent communication will assure these barriers are surmountable and patient needs are met.

Consider the case of Keko, 24-year-old heterosexual, cis-gendered, single, Alaska Native woman who presents for management of psychosis in the context of an opioid use disorder, in early remission and is in an early (but known) stage of pregnancy. She has two living children, ages 2 and 4. The older child is staying with family, but the younger child is with her in treatment. She has no known mental health history but presents to staff in the facility as being responsive to internal stimuli and is dressing and acting in bizarre manners such as taking all the spoons from the communal kitchen and wearing a bathing suit over her clothing. She is at an unknown stage in her pregnancy, having confirmed positivity at home and having not yet seen an OB. She verbalized feeling paranoid as to the nature of her pregnancy accusing staff of being involved in the conception, "what is in there, anyway? Did YOU put something in there?".

Question: Is this Patient Appropriate for Telepsychiatry?

The answer to this is more ambiguous than in the case of Marsha. On one hand, she may be particularly inappropriate owing to the need for medical assessment and intervention as new onset psychosis in a patient without history of such likely requires labs, and physical assessment. Often, patients with psychosis struggle with virtual visits as their paranoia may be worsened by this modality. On the other, a delay in assessing this patient could result in safety concerns for her, her young child, and potentially the health of her pregnancy. As with Marsha, careful consideration will be required to determine next steps in her care.

- *Connection to Community Resources*: Reflecting on the organizational process for referring into the community is key. What features of this case increase options for access? Her pregnancy may facilitate quicker access to medical care than would otherwise be possible, which would include laboratory evaluation.
- *Safety*: An assessment of safety of self and others should be conducted. Depending on the agency's resources, this would ideally be completed by a mental health clinician on site, as placing the patient on a hold, if warranted, and transferring care to local resources is difficult when completed remotely. If no other option is available, however, the telehealth clinician will need to consider their knowledge of local resources with their ability to care for a patient legally and safely in crisis

and consider whether a safety assessment is appropriate despite the limitations presented, above.

Evaluating Your Work

As with any intervention, it will be important for formal and informal evaluation of the services provided. This evaluation, which may be multimodal in nature, should consider a range of metrics, from individual clinical excellence to continued provision of services in accordance with the needs of the served community. Payors or other organizations may conduct evaluation of clinician competence, but this alone may miss other areas for improvement. In 2021, Haidous et al. sought to understand programmatic evaluation approaches which exist in the literature. They identify a range of perspectives to consider, recognizing that clinical and nonclinical metrics should be employed. In particular, a kaleidoscopic view of the service, assessing satisfaction and outcomes from the perspective of the organization, the clinicians, the patients, and the local community may be needed to gather an adequate understanding of strengths and areas for improvement. As no single standardized tool exists to evaluate TBH programs, they recommend more investigation may be needed for their work to be fully generalizable (Haidous et al., 2021).

Conclusion

Building a successful TBH program requires a notable amount of work prior to seeing patients. It requires a careful assessment of the needs of the local community to assure that the program design will be well positioned to serve those in need. This needs assessment should account for both the limitations and needs of the local community, as well as the prospective clinicians involved. It requires the engagement of remote clinicians who are willing to support and align with the local team. The selection of patients, including recognizing those who will and will not be appropriate, is key to avoid diluting the provision of care and compromising patient safety or the quality of care. With the use of a well-designed service, evidence supports the use of TBH to fill critical gaps in care for rural patients.

CE/CME Questions

1. When considering the implementation of telebehavioral health in a rural community, the following individuals/systems should be included?
   (a) The clinicians in the local community seeking increased access to services

(b) The clinicians providing care from a remote location
(c) Representatives from the demographic community being served
(d) The administrative and technologic individuals managing the proposed service
(e) All of the above

2. Building a telebehavioral health program is as simple as turning on a computer?

(a) True
(b) False – you can use telephone only communication just as easily
(c) False – success relies on planning before the first patient is seen
(d) False – federal law prevents the provision of psychiatric prescribing via technologic means
(e) False – people do not have access to computers in rural areas

3. A patient with a current PCP provider is not appropriate for TBH?

(a) True – they should see their PCP
(b) True – you cannot bill for both services
(c) False – a psychiatric specialist can help support the PCP in improving outcomes for the patient
(d) It depends on the details of the service created, local regulations, and the needs of the community
(e) It depends on what the patient wants

4. A patient with psychosis is never a candidate for TBH?

(a) True
(b) False
(c) Depending on the patient's preference
(d) Depends on clinician judgement
(e) Both C and D

5. A comprehensive team to support TBH on the day of service includes:

(a) Patient
(b) Remote clinician
(c) Facilitator
(d) IT support
(e) All of the above

Answer

1. (e)
2. (c)
3. (d)
4. (e)
5. (e)

References

Adams, S., Rice, M., Jones, S., Herzog, E., MacKenzie, L., & Oleck, L. (2018). Telemental health: Standards, reimbursement, and interstate practice. *Journal of the American Psychiatric Nurses Association, 24*(4), 295–305.

Chen, J., Li, K., Andino, J., Hill, C., Ng, S., Steppe, E., & Ellimoottil, C. (2021). Predictors of audio-only versus video telehealth visits during the COVID-19 pandemic. *Journal of General Internal Medicine, 37*(5), 1138–1144. https://doi.org/10.1007/s11606-021-07172-y

Cortelyou-Ward, K., Atkins, D. N., Noblin, A., Rotarius, T., White, P., & Carey, C. (2020). Navigating the digital divide: Barriers to telehealth in rural areas. *Journal of Health Care for the Poor and Underserved, 31*(4), 1546–1556. https://doi.org/10.1353/hpu.2020.0116

Donahue, A., Rodriguez, J., & Shore, J. (2021). Telemental health and the management of psychosis. *Current Psychiatry Reports, 23*(27), 1–6. https://doi.org/10.1007/s11920-021-01242-y

Haidous, M., Tawil, M., Naal, H., & Mahmoud, H. (2021). A review of evaluation approaches for telemental health programs. *International Journal of Psychiatry Clinical Practice, 25*(2), 195–205.

Morales, D., Barksdale, C., & Beckel-Mitchener, A. (2020). A call to action to address rural mental health disparities. *Journal of Clinical Translational Science, 4*(5), 463–467.

Myers, C. (2018). Using telehealth to remediate rural mental health and healthcare disparities. *Issues in Mental Health Nursing, 40*(3), 233–239.

Pradhan, T., Six-Workman, A., & Law, K. (2018). An innovative approach to care: Integrated mental health telemedicine in rural school-based health centers. *Psychiatric Services, 70*(3), 239–242.

Richman, L., Pearson, J., Beasley, C., & Stanifer, J. (2019). Addressing health inequalities in diverse, rural communities: An unmet need. *SSM – Population Health, 7*, 100398. https://doi.org/10.1016/j.ssmph.2019.100398

Samuels, E., Clark, S., Wunsch, C., Jordison Keeler, L., Reddy, N., Vanjani, R., & Wightman, R. (2020). Innovation during COVID-19: Improving addiction treatment access. *Journal of Addiction Medicine, 14*(4), e8–e9.

Shore, J. H., Goss, C. W., Dailey, N. K., & Bair, B. D. (2019). Methodology for evaluating models of telemental health delivery against population and healthcare system needs: Application to telemental healthcare for rural native veterans. *Telemedicine and e-Health, 25*(7), 628–637. https://doi.org/10.1089/tmj.2018.0084