




Competent Cultural Telebehavioral Healthcare to Rural Diverse Populations: Administration, Evaluation, and Financing

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Abstract

Medical healthcare settings have begun to use telepsychiatry and telebehavioral health to improve access to evidence-based care for culturally diverse patients. This paper is a companion paper to another, which focused on components of culturally competent clinical care, fundamental approaches, and linkage of outcomes to competencies. An administrative foundation is needed to address workforce, program evaluation, and short- and long-term financing and reimbursement issues. This paper focuses on three questions, particularly related to medical settings: (1) What administrative approaches facilitate culturally competent care via telebehavioral health? (2) What outcomes should be prioritized for program evaluation? (3) What financing and reimbursement approaches help to overcome/prevent obstacles/barriers and promote sustainability? Administrators need an approach to evaluation, interprofessional/disciplinary teams, stepped/comparable models of care, and telebehavioral health to leverage expertise. Clinicians and team members need integrated cultural and telebehavioral health skills and all members of a clinic/system need to support diversity by reducing stigmatization, facilitating language access and flexibly adapting practices. On one hand, telehealth and culturally competent care are just part of regular services, but on the other hand, few accommodations are made for these in short- and long-term financing and reimbursement streams. Building a viable system and sustaining requires prevention/management of many barriers/obstacles. Populations need culturally competent care and telebehavioral access. More quantitative/qualitative research/evaluation is suggested to improve the approach and outcomes.

Keywords Telepsychiatry · Culture · Behavioral health · Academic health center · Finance · Administration

Case Study

Theme: The interface of depression, culture, and telepsychiatry in a rural outpatient clinic.

HPI: A 59-year-old English-speaking Hispanic American female presented to the medical clinic of a rural city (population 11,000) due to inadequate self-care according to her daughter, who suspected depression due to low drive and withdrawn behavior. Her husband of 40 years passed the year before and she had some tears when daughter raised this. She focused, though, on a host of somatic complaints. The provider was a male Caucasian who spoke “very good” Spanish—reasonable enough to manage patients without an interpreter daily. Asked why she had not come in sooner, some things were not clear, though. The daughter began translating and reported that handling it within the family and through church seemed to be more fitting—the clinic was not seen as a helpful destination. Daughter became tearful, too, at this point and shared how worried she was—this inadvertently appeared to stiffen the conversation.

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Patient-centered care (Institute of Medicine (IOM) 2003) and the patient-centered medical home (Rosenthal 2008; National Committee for Quality Assurance 2008) are the preferred treatment modalities, but nonetheless, due to cultural beliefs and help-seeking patterns, patients may not access the initiatives or evidence-based models of integrated mental health in primary care (Unützer et al. 2006). When the natural history of an untreated chronic disease leads to a severe medical problem, a family member's concern or trouble with coordinating care may precipitate recurrent outpatient visits and/or urgent/emergent care visits. Care coordination is key in all geographic settings—particularly rural ones with few resources—and outcomes are improved with community care teams, team facilitators, attention to behavioral health needs, and access to specialty care through technology (Conway et al. 2016; Sorocco et al. 2013).

Introduction

An approach to providing culturally appropriate behavioral healthcare in rural and other settings suggests that clinicians need competencies in both telepsychiatry (or telebehavioral health) and culturally competent care (Hilty et al. 2018a). This challenge has attracted national and global attention across professions in diverse medical settings and geographical settings (Office of the Surgeon General Report 2001; Institute of Medicine 2004; Ton et al. 2005; Hilty et al. 2015a). The Hispanic population in rural and frontier America is the most rapidly growing segment of the population in non-metropolitan counties since 2005 (U.S. Department of Agriculture 2015). Historically, rural depressed patients have three times more hospitalizations, a 70% likelihood of an inadequate trial of antidepressant per national guidelines, and higher suicide rates (Rost et al. 1995; Rost et al. 1998). Primary care providers report having inadequate skills to manage behavioral health issues (Katon et al. 1995; Geller and Muus 2000; Hilty et al. 2007).

Emergence of culture as central to care is not new (Agency for Healthcare Research and Quality 2017; Institute of Medicine 2004), but its central role in facilitating patient-centered care is new to many (Hilty 2016). Care becomes patient-centered when patients are questioned on their illness or suffering, the reason(s) for it and how it is viewed in their social group. It also includes understanding how their culture influences the doctor-patient relationship (Hilty 2016). Administrators, staff, and other team members must also face cultural, language, and emotional barriers to care (Lim and Lu 2008; Ruiz and Primm 2010; Lewis-Fernández et al. 2014; Office of the Surgeon General Report 2001; Agency for Healthcare Research

and Quality 2017). Lack of available interpreter services may contribute to poor healthcare access and utilization for patients with limited English proficiency patients (Kim et al. 2010) and there are dialects within a language that may require interpreters at a distance. Additional time is usually required when interpreting, particularly for a less commonly used language or dialects within a language (e.g., Laotian).

Health networks, academic health centers (AHCs), federal (e.g., Veterans Health Administration), and statewide/county networks have used telepsychiatry (TP)—or telemental health (TMH) or telebehavioral health (TBH; inclusive of substance disorders and services)—to connect with rural primary care offices, using a variety of models of consultation and care (Hilty et al. 2006; Yellowlees et al. 2013; Hilty et al. 2015b, 2018b). This includes traditional video/synchronous, novel (e.g., asynchronous or asynchronous, social media), and emerging (e.g., web- and mobile/wireless-based) models.

Effective program evaluation is a systematic way to improve and account for public health actions by involving procedures that are useful, feasible, ethical, and accurate (Centers for Disease Control and Prevention 2018). The steps to translate research into action include the following: (1) Reaching/providing access to the target population; (2) Effectiveness or efficacy; (3) Adoption by target staff, settings, or institutions; (4) Implementation consistency, costs, and adaptations made during delivery; and (5) Maintenance of intervention effects in individuals and settings over time (RE-AIM 2018). Treatment fidelity and adaptation for culturally diverse populations in diverse settings are a constant challenge. A developmental approach to telehealth emphasizes stages of needs identification, infrastructure survey, partnership organization, structural configuration, and pilot implementation (Shore and Manson 2005).

Clinician competencies are needed to ensure quality of care including those for TP and broader interprofessional education (Hilty et al. 2015, Hilty et al. 2017a; Maheu et al. 2017). These refer to cultural competence and diversity, though they have not been assessed for a specific gender (Itakura and Tsui 2004) nor many cultures (e.g., Japanese) (National Center for Cultural Competence 2004). The World Health Organization (WHO 2010) and the Institute of Medicine (IOM 2003) also advocate for using an interprofessional education (IPE) approach for training healthcare professionals and after formal professional education. The IPE approach encourages individuals and training programs to actively work together in developing healthcare competencies during and after formal professional education. Training, certification/accreditation, and lifelong learning are suggested to ensure quality care (Hilty et al. 2017a).

This paper will help the reader(s) reflect on three questions: (1) What administrative approaches facilitate culturally competent care via TBH? (2) What outcomes should be prioritized

Table 1 National Standards for Culturally and Linguistically Appropriate Services (CLAS) culturally competent care

Principal Standard

1. Provide effective, equitable, understandable, and respectful quality care and services that are responsive to diverse cultural health beliefs and practices, preferred languages, health literacy, and other communication needs.

Governance, Leadership, and Workforce

2. Advance and sustain organizational governance and leadership that promotes CLAS and health equity through policy, practices, and allocated resources.

3. Recruit, promote, and support a culturally and linguistically diverse governance, leadership, and workforce that are responsive to the population in the service area.

4. Educate and train governance, leadership, and workforce in culturally and linguistically appropriate policies and practices on an ongoing basis.

Communication and Language Assistance

5. Offer language assistance to individuals who have limited English proficiency and/or other communication needs, at no cost to them, to facilitate timely access to all health care and services.

6. Inform all individuals of the availability of language assistance services clearly and in their preferred language, verbally and in writing.

7. Ensure the competence of individuals providing language assistance, recognizing that the use of untrained individuals and/or minors as interpreters should be avoided.

8. Provide easy-to-understand print and multimedia materials and signage in the languages commonly used by the populations in the service area.

Engagement, Continuous Improvement, and Accountability

9. Establish culturally and linguistically appropriate goals, policies, and management accountability, and infuse them throughout the organization's planning and operations.

10. Conduct ongoing assessments of the organization's CLAS-related activities and integrate CLAS-related measures into measurement and continuous quality improvement activities.

11. Collect and maintain accurate and reliable demographic data to monitor and evaluate the impact of CLAS on health equity and outcomes and to inform service delivery.

12. Conduct regular assessments of community health assets and needs and use the results to plan and implement services that respond to the cultural and linguistic diversity of populations in the service area.

13. Partner with the community to design, implement, and evaluate policies, practices, and services to ensure cultural and linguistic appropriateness.

14. Create conflict and grievance resolution processes that are culturally and linguistically appropriate to identify, prevent, and resolve conflicts or complaints.

15. Communicate the organization's progress in implementing and sustaining CLAS to all stakeholders, constituents, and the general public.

for program evaluation? (3) What financing and reimbursement approaches are needed to overcome/prevent obstacles/barriers and promote sustainability?

Administrative Approach to Culturally Competent Care: Principles, Barriers, and Outcomes

Cultural and Linguistic Appropriate Services (CLAS) Standards

In 1998, the U.S. Department of Health and Human Services Office of Minority Health requested a review and comparison of existing cultural and linguistic competence standards and measures on a national level, and proposed draft national standards language. An analytical review of key legislation, regulations, contracts, and standards currently in use by federal and state agencies and other national organizations was conducted. Proposed standards were then developed with input from a national advisory committee of policy administrators,

healthcare providers, and health services researchers. Fifteen standards for culturally competent care, including language service access and organizational supports, have been put forward (U.S. Department of Health and Human Services 2018) (Table 1).

Cultural Issues Affecting Help-Seeking and the Clinic Environment

Barriers to behavioral health and culturally competent care exist at the level of patients, clinicians, clinics/hospitals, and systems. Clinical patient barriers include stigmatization, low awareness of a “problem,” and limited sharing/denial of behavioral health symptoms. Patients may also shy away if staff and providers do not “look like” them, that is, may be subject to explicit (i.e., consciously endorsed) and/or implicit (i.e., based on cultural stereotypes) (Devine et al. 2002). This process has been called reverse language stereotyping (Kang and Rubin 2009). In addition, some prefer alternative approaches (e.g., shaman, natural remedies, traditions). Even with a focus on patient and family engagement (Cené et al. 2016)—the gap

is that the primary care clinic may not be the destination for help-seeking. Poverty has also been shown to be a significant barrier to receiving culturally appropriate psychiatric care, both in person and by telecommunication. Furthermore, rural ethnic minority groups report about double the poverty rate of the White rural populations (Yellowlees et al. 2013).

Picking the “Best” Evidence-Based Cultural Practice to Use—Which One Is “More” Culturally Competent?

There are many key decision points for rural clinics, usually on how to upgrade from “good” care to evidence-based care. In consideration of culture, some simple evidence-based models may be more efficient clinically and in other dimensions. For diabetic care, for large low-income Latino patient populations a *Diabetes Self-Management Support Empowerment Model* and a community-based *Chronic Care Model* have unique advantages, but a self-management program does not always create cultural competence in a way that makes sense in relation to patients’ lives or improve their health. A program that is most culturally and contextually situated can empower (i.e., activate) and provide strategies to deal with life stress—and translate into the most “culturally competent” one (Page-Reeves et al. 2017).

Telepsychiatry and Telebehavioral Health: Principles, Barriers, and Models

Systems are increasingly seeing TBH as an opportunity to leverage behavioral health expertise across sites in a way that increases efficiency—the basic idea is no different that using national interpreter system for distributing interpreters. However, efforts do not work if people and patients of many cultures do not seek help at medical clinics, regardless of the reason. At first glance, many issues appear to involve just the patient, but further examination suggests that they are “the tip of the iceberg.”

Barriers to Implementation of Telepsychiatry

Barriers regarding physician implementation of TP have been characterized into three categories: (1) personal barriers; (2) clinical workflow and technology barriers; and (3) licensure, credentialing, and reimbursement. Personal barriers include concerns that they will have difficulty establishing rapport, establishing a good clinical relationship, and be able to assess for non-verbal signs of psychiatric illness (e.g., initial greeting, poor hygiene, alcohol on breath). This is best handled by technology training, sitting in on others TBH clinics, and experience. The generation of provider may be a key determinant, with both younger and more recently trained providers more interested in, and adept with, TBH. If a provider is

working with TBH part- or full-time, visiting another’s practice with a clinic manager and staff may be both efficient and informative for workflow, as well.

Clinical workflow and technology barriers include the additional time to plan and organize operations for a TBH visit, which are not needed for an in-person encounter (e.g., room preparation, different location, equipment). An instrumental step is the creation of a culture in which in-person and TBH care is part of workflow—this can work well in behavioral health due to the regular patient appointment schedule (e.g., 15-, 30- or 60-minute visits), unusual timeliness of the therapeutic “hour,” and generalizable care across private, clinic, and AHC practices. Workflow barriers of TBH include orienting patients to it, staff flexibility and dependability, and provider-distant site coordination—TBH has more demands than in-person care. If TBH is combined with in-person visits for other patients and/or additional technologies, the transitions take coordination.

Licensing and credentialing may be significant, but with planning these can partially be overcome. Licenses are needed in all the states in which patients are located, unless they are doing a consultation or one-time assessment. This process is both complex and expensive for those drawing patients in/around many small states and additional exploration of state/federal laws may be necessary. Credentialing is easier if providers have had TBH training or experience, there are existing TBH proctors (who may teach/train at the same time), and there is reciprocity between health systems (e.g., rural hospital accepts an AHC’s credentialing).

Characteristics of Successful Telehealth Models

Successful telehealth models that improve quality of care have some common denominators, according to work in the USA, Australia, Canada, and England: (1) mutual incentive for primary care and specialty partners (e.g., Veterans Health Administration quality metrics for primary care-mental health integration evaluate both services; collaborative care for a system like Group Health Cooperative); (2) commitment from physicians, staff, and administration to pursue telemedicine and alternate modes of consultation; (3) systematic or multiple interventions that meet the needs of the site; (4) a system approach for the primary care system to monitor the flow of patients and measure outcomes; and (5) consultants who are able to bridge the differing philosophies that may be unique to rural primary care, urban academic settings, and specific cultural groups (Hilty et al. 2018b, 2007).

The choice to employ a mid-level intensity consultation and training model appears well advised, since other models (e.g., managing the patient) are time intensive for the psychiatrist and are less apt to develop skills for the primary care provider (Hilty et al. 2015b; Katon et al. 1995). The con is whether these have impact like a high-intensity model (e.g., collaborative care) at a

population level (Fortney et al. 2015). Low-intensity telepsychiatric care service interventions may or may not involve seeing patients directly, but it may involve regular contact and an ongoing relationship between a psychiatrist and one or more primary care providers. Examples are as follows: in-person, telephone and e-mail doctor-to-doctor “curbside” consultations; case reviews related to primary care provider patients; one-time cultural consultation, and distance neurocognitive assessment. These interventions emphasize the liaison portion as the psychiatrist provides training to primary care providers.

Overall, telemedicine may reduce provider isolation, provide case-based learning (Greenberg and Paulsen 1996), and aide decision support (Armstrong and Haston 1997). Consultation helps them provide care without delay (Hilty et al. 2006) and accelerate the service delivery (Hilty et al. 2006). These interventions help providers’ patients receive adequate doses of antidepressants and recover from depression (Simon 2000; Hilty et al. 2007). Rural providers appear to rely on telepsychiatric consultations more for triage, new treatment plans, and changes in treatment plans rather than for diagnosis compared to suburban providers (Hilty et al. 2007). Without telemedicine, patients may not receive treatment, be delayed in obtaining it, or be referred out of the community (Marcin et al. 2004).

Follow-Up on the Case Study

Telepsychiatric consultation: The question about language triggered the telepsychiatrist to request an interpreter via telephone conference, since a trained one was not available at the rural site. The 45-minute interview started with routine questions, but shifted to social questions after noting anxiety in discussing these issues. Questions were asked about the patient’s culture, heritage, interpretation of her experiences, and expectations for help. She was born in Mexico and the family immigrated to the USA at age 7, so she grew up in California and became the first of her family to go to an American school and speak English. She was encouraged to downplay the tough periods, go to church, and keep busy. Eventually, she reported loneliness, decreased interest, decreased concentration, and trouble with insomnia. She denied active suicidal ideation, but sometimes wished she could join her husband. She referred to each of her many medications by color, stating that they “all helped very much,” but wondered, “Is there any problem taking so many medications together?”

Program/System Evaluation

Hallmarks of “Good” Programs

Good outcome evaluation requires a program with fitness: organization, function, leadership, the “right” members/

workforce, experience, and many other practices. Thinking more broadly, the approach to evaluation may start with how to set up a “good” team, program, organization, or other body (i.e., structure)—or in assessing its overall ability to change (i.e., function). Responsible, incremental implementation is safer than doing too much at once. A basic plan with an option or two to prioritize works well. Timelines are crucial for the sake of urgency, to keep focus, and be productive. It is prudent to expect the unexpected, as there are layers of complexity, problems, complications, and other unforeseen events. Management/resolution of a specific problem is key, but the approach is essential to explore issues, facilitate communication, and build relationships—all intended positives.

Evaluation helps individuals and programs prioritize outcomes when providing culturally competent care via TBH. For learners, evaluation suggests that it should include four different levels: (1) reaction, (2) learning, (3) behavior, and (4) results (Kirkpatrick and Kirkpatrick 2009). Level one evaluation assesses a participant’s reactions to setting, materials, and learning activities, ensuring learning and subsequent application of program content (Rouse 2011), and can be captured through satisfaction ratings. Level two of evaluation involves determining the extent to which learning has occurred, often employing performance testing, simulations, case studies, plays, and knowledge exercises (e.g., pre-and post-test). Level three attempts to determine the extent to which new skills and knowledge have been applied “on the job.” Level four of evaluation involves measuring system-wide or organizational impact of training.

A brief analysis of the example of setting up the team is directly applicable to evaluation/outcomes for culturally competent TBH. What are the characteristics or components of such a “high-functioning” TBH team? It would include, but not be limited to the following:

The parts:

- Leader(s)
- Clinician(s)
- Administration: business, manager, staff
- Cultural consultant(s)
- Computer skill: databases, basic stats, software, and other
- Technical: telemedicine hardware/software, hands-on problem-solving in a timely way, and other
- Evaluation/research: design, options for the formality (or informality) of outcomes, quantitative/qualitative skills, logic models/approach, clinical measures of outcomes, supervision of statistical analyses, and other
- Academic/scholarship: grant/funding proposal, business plans, academic manuscripts, federal vs. state/county vs. private/non-profit fluency, and other, and
- Other: economist/business, large database “hygiene” and organization, interface with electronic health record (EHR; if applicable), review of human subjects’ issues

(if applicable); short- and long-term integration (i.e., a pilot grant leads to outcomes used for the next grant).

The qualities/exhibited functioning:

- Unified goal(s) or missions
- Vitality, purpose, and well-being
- Interdisciplinary work: ability share knowledge, varied experiences, and good working relationships
- Role definition and overlap/interchangeability (when possible)
- Communication and increased opportunities for contact
- Personal bias reduction strategies (e.g., stereotype replacement, counter-stereotyping imaging, individuating, perspective-taking)
- Collaboration
- Support
- Stability
- Time to “get [back] on the same page,” and
- Conflict management/resolution.

While the focus of most systems related to culture and diversity issues is the patient-staff/clinician relationship, it is just as important to work on staff-staff, staff-clinician, and clinician-administrator attitudes and skills (Macrae et al. 1994). This could emphasize interprofessional and/or uniprofessional (Bonifas and Gray 2013) TBH teams using the Interprofessional Education for Collaborative Patient-Centered Practice (IECPCP) (D’Amour and Oandasan 2005). It focuses on assisting professionals with understanding their roles, communication, trust, and respect in a healthcare team (Bajnok et al. 2012; Park et al. 2014).

Evaluation: General Themes and TBH

The “Do’s” of evaluation almost always include the following: standardized measures already in use, as they typically have undergone multiple iterations, levels of review and sometimes psychometric testing; specific measures rather than generalized measures; account for issues that confound measures/results; time-efficient self-report/patient completion if it is accurate; prospective data collection; an academic type, a statistician or a person who does evaluation for a living to help—involved earlier, not later; and a “good” evaluation budget (e.g., 30% of the grant). A much more detailed summary of do’s and don’ts of evaluation may be helpful (Hilty et al. 2014).

The current rapidly evolving healthcare environment adds urgency to assessment and its effectiveness, to better define the value of TBH interventions to patients, communities, leaders, funding organizations, and other decision-makers in healthcare. TBH research has moved beyond general satisfaction—to the issues of feasibility, validity,

reliability, cost/economics, and clinical outcomes. For underserved populations, though, important information is gleaned when surveys are properly designed, administered, and analyzed (Nelson 1985). Strategic planning necessitates evaluation of external and internal factors that affect the organization and ethnic attitudes and behavior influence program utilization and steer communications, hiring and training, and program structure. This is consistent with process-based implementation and evaluation, with attention to access, engagement, technology, and other factors (Table 2). Satisfaction and iterative feedback from patients, providers, and staff is very important as programs start, maintain, and improve (Table 3).

Effectiveness of TBH, too, needs to be considered from the perspective of the patient, provider, program, community, and society (Hilty et al. 2013). TBH is effective in terms of providing access, improving outcomes, and gaining acceptance by participants (Hilty et al. 2013). TBH is judged to have broad utility for clinical disorders, empower patients, and enable positive educational outcomes. Today, its effectiveness includes a variety of models of telepsychiatric care (Hilty et al. 2006) and populations served (e.g., rural, underserved, children). Inter-agency collaboration, too, is key particularly in aligning missions, resources, and leadership on culturally competent care. Each stakeholder party can participate by adjusting structure and function (e.g., academic participants are trainees, faculty, and administration; rural participants are clinics, networks, and the community) (Table 4).

Measuring Outcomes Related to Culture and Telepsychiatry

As a comparison between the cultural “fit” of two evidence-based models of care for diabetes was discussed previously, a closer look at the impact of TP is indicated here. Traditional in-person care may be insufficient alone in addressing population and global health needs (e.g., 22% of Americans with a current mental health disorder receive specialty mental health services and only 12% receive care from a psychiatrist) (Fortney et al. 2015). From a public mental health perspective, there are capacity and equity (e.g., geographic distribution) issues related to care.

The overarching goal is to maximize the “population level effectiveness.” This may be defined as how many patients are reached (i.e., treated) and the clinical effectiveness of the treatment for those reached. Since not all patients respond to treatment and even fewer achieve remission, telepsychiatric models (e.g., consultation, integrated care, collaborative care) may help by placing mental health specialists in primary care, improving cultural access, and destigmatizing mental health treatment (e.g., American Indian may prefer TP to local providers who know them).

Table 2 Process-oriented measures to evaluate and improve clinical services

Type of process	Specific measure
Access to services	Average wait times for initial evaluation
	Average wait for follow-up appointment
	Number of patients seen/number of new patients seen
	Number of referrals made
	Percentage of encounters where patients chose follow-up date
	Number with specific diagnosis receiving specialty care
Engagement/missed opportunities	Average number of appointments in episode of care
	Reduction or number of canceled appointments
	Reduction or number of no-shows
	Reduction or number of rescheduled appointments
	Reduction in clinician “down-time”
	Reduction in telehealth equipment/room “down-time”
Patient-oriented care	Number of canceled in-person appointments facilitated by telehealth
	Number of after-hours encounters accommodated
Guideline-oriented	Number of home-telehealth encounters, or encounters offered % of offered/accepted telehealth appointments to facilitate desired appointment date
	Number patients with diagnosis receiving specifically earmarked care
	Number of patients screened with identified and tracked measures, e.g., substance use, suicidality, smoking
Technology	Time between screens: for screens which re-occur
	Percentage of successfully completed connections
	Percentage of dropped calls
	Average down-time during dropped calls

Collaborative care with a registry to monitor engagement is patient-centered with proactive outreach to engage, activate, promote self-management and treatment adherence, and coordinate services; it is also cost-effective in diverse practice settings and patient populations (Fortney et al. 2015).

Follow-Up on the Case Study

Many patients and providers can talk in several languages, and due to their preference and/or pride, will talk in English (or in this case the provider in Spanish), but in BH care details and context can be lost. Family members and/or untrained interpreters may miscommunicate medical complaints (Brooks 1992) or de-emphasize information (Brua 2008). Though nurses fare better with concrete medical complaints of patients, they struggle in capturing the narrative or cultural metaphors (Elderkin-Thompson et al. 2001), which is potentially very significant in psychiatric care (Ton et al. 2005; Hilty et al. 2015a). This has led to a call for credentialing of interpreters (Carlson 2010).

The primary care provider joined in the room for the last 5 minutes of the session and was briefed on symptoms and concerns about her various pills. The provider—using the interpreter—reviewed the indication for each

pill and assured her that the questions were appropriate and that the combination was safe. They would meet in 2 weeks and schedule a follow-up TP appointment in 4–8 weeks. She reported spotty adherence with 75 mg BID Venlafaxine—as another antidepressant failed and the brand medication had copays that were troubling—but aimed to do better.

Financing, Reimbursement, and Cost Analysis

The Landscape of Healthcare in the USA

The Affordable Care Act and other trends in healthcare are reshaping services significantly. Though there is significant money spent on healthcare in the gross national product (GNP), there is also in dealing with budgets, recessions, and other events, which have impact at global, national, academic health, center, and clinical care levels (Table 5). While costs could increase in the future (Keehan et al. 2016), the rate of growth in the GNP has slowed since 2008 and is lower than before the Great Depression (Aaron 2015).

Consumers and payers expect more accountability of clinicians, clinics, and health systems. The focus is on access, safety, and quality care—and systems need to consider many

Table 3 The importance of assessing patient, provider, and staff satisfaction for quality improvement

All

- Ease of scheduling, rescheduling
- Openness of program/participants for input or feedback
- Ease of communication with each participant (i.e., patient, provider, staff, technical support)
- Ease of integration into daily life or clinical workflow vs. disruption
- Cultural acceptability
- Simplicity/ease of use
- Sense that telehealth empowers: patient in general, provider to help others
- Availability of technical help

Patient’s overall subjective satisfaction

- Ability of telehealth services to meet specific health needs
- Would patient use telehealth services again?
- Would patient refer others to this service?
- Preference for this or in-person in follow-up
- Fit of or readiness for the telehealth modality
- Clarity of transmission signal and volume and/or interruptions in transmission
- Ability to establish personal connection with provider
- Comfort of clinical space and modality
- Missed work time and/or miles of travel avoided
- Improved access and/or quality of care

Provider satisfaction with telehealth modalities

- Ratio of negatives vs. positives regarding the modality
- Therapist recruitment
- Therapist retention
- Sense of efficacy as a provider
- Positive endorsement of patients’ experiences (i.e., that patients like the telehealth modality)
- Ease of physical transition between in-person and telehealth modes of care during work day
- Degree of valuing telehealth encounters when interacting with patients
- Aspects of in-person care missed when doing telehealth
- Satisfaction with plan for handling clinical emergencies
- Technical competency
- Perceived value of improving care to remote side (e.g., diagnosis, treatment, and/or disease management)
- Sense of isolation during workday
- Reports of telehealth/technology burnout (e.g., increased “screen time”)

Support staff satisfaction

- Comfort with operating in a more clinical realm than normal (i.e., walking patients to rooms)
- Comfort/satisfaction with plan for handling clinical emergencies
- Avenues of communication to providers and technical staff

factors and ask questions about the impact of TBH (Table 6). Basic tenets are waste elimination, efficiency, and integration. Americans are plugged into the Affordable Care Act (ACA), which has increased access but is not fully efficient (e.g.,

Table 4 How organizational partners promote culture and diversity

Overview of the two partners

Example Organization (Academic) and Stakeholders:
Faculty–Trainee–Department–School/Academic Health Center/University Level

Partnering Organization: Rural Clinic, Hospital and Health Network and Community (Local/Regional/National/International)

Academic organization

Faculty

- Experience, attitudes, and interest
- Excellence in clinical care with culture and diversity
- Evaluation and scholarship of educational activities
- Prioritization in curricula, grand rounds, special events, retreats
- Local, regional, national, and international involvement and leadership

Trainees

- Experience, attitudes, and interest
- The expectation to serve a diverse, complex, and challenging population
- Trainee input, feedback, partnership, and leadership
- Scholarship, quality improvement, and health services projects

Department Administration

Central

- Mission inclusion of culture and diversity
- Budgetary items and alignment
- Faculty-managerial-staff integration of roles
- Response to critical incidents
- Recruitment, promotion, and retention of leaders, faculty, staff, and others
- Critical mass of faculty teachers and medical educators

Education and other faculty leaders

- Vice-chair(s), fellowship directors, the residency training director and associate directors, clinical sites directors, and the director of medical student education in psychiatry are equally participatory and well-integrated
- Adherence to, and initiative/innovation beyond, national accreditation standards (e.g., ACGME, LCME)

Patient care and outreach to clinical partners

- Encouragement of, expectation toward, and support of other departments and other affiliates (e.g., county, veterans affairs, community mental health, private healthcare organizations) who partner in educational, clinical, and research missions
- Enhancement and support of patient-centered, culturally competent care by providers
- Adherence to, and initiative/innovation beyond, national accreditation standards (e.g., Joint Commission)
- Facilitating clinical care via new technologies and e-services to the points-of-care needed by patients, along with use of interpreters and other professionals, to maintain a high level of care for the entire population served, regardless of race, ethnicity, language, geographic, and other potential obstacles

School/Academic Health Center/University Level

- Leadership, faculty, and workforce
- Faculty development (as above)
- Education (associate deans, directors, course, and other leaders)
- Healthcare

Partnering Organization (Community, Rural Network)

Table 4 (continued)

<i>Clinic/hospital</i>
•Sense of ownership in mission
•Interprofessional teamwork
•Stepped or comparable model of care
<i>Network/system</i>
•Communication
•Shared expertise
•Standardization
•Registry, if feasible
<i>Community including persons, patients, families, and other interested partners</i>
•Local, state, and federal organizations that facilitate access to, and treatment for, the underserved
•Funding and programming directed clinical populations with diversity of languages, cultures, ages, and other differences represented (e.g., threshold languages as defined by the California Cultural Competence Plan)
•Faculty development, education/training, and other initiatives for baseline, incremental, and critical incident-based learning and application
•Recruitment, promotion and retention of leaders, faculty, staff, and others

administration, exchanges) (Aaron 2015). Healthcare organizations and many providers focus on payment issues, which have moved from fee-for service (FFS), bundled payments, relative value units (RVUs), managed care, cost-plus reimbursement, and prospective reimbursement. The ACA instructed the Center for Medicare and Medicaid Services (CMS) to develop “value-based purchasing” and reduced payment for hospitals with high rates of readmission (Shi and Singh 2015, pp. 195–245).

Quality/performance improvement has moved from a component of the care process to a central piece (Institute of Healthcare Improvement 2018). Interdisciplinary teams—and particularly mid-level practitioners—play an increased role, as highly trained clinicians cannot do it all. There is more effort to integrate medical and behavioral health services. This can be done with behavioral health practitioners working alongside primary care providers, getting “warm” handoffs, and/or dealing with emergencies. Clinicians with combined psychiatry/family medicine or psychiatry/internal medicine training can facilitate integration naturally. Physicians are a crucial leverage point in these systems, complemented by interdisciplinary teams and stepped care models (Hilty et al. 2015b). This shift also requires faculty development for teaching, supervision, and evaluation (Litzelman et al. 1998; McLean et al. 2008).

Evaluation of Cost

With regard to assessing cost outcomes, the most straightforward and conservative approach is to involve a health economist with specialized expertise—mainly *consulted in the planning stages* to come up with a feasible plan. In cases where no help is available, there are benefits to understanding and

delineating between differing types of cost analyses (Weinstein and Stason 1977). Programs utilize a variety of methods, including cost-offset, break-even (i.e., output necessary for programs to break even with costs or subsequently have cost savings), cost-effectiveness, and cost-benefit analyses. No one framework is likely adequate for a given program, rather the types of analyses are meant to vary by the relevant questions related to metrics or measures.

Regarding culture and diversity, most of the research has been on the costs of *not* providing treatment and/or inadequate systematic prevention. For example, the Robert Wood Johnson Foundation’s Commission to Build a Healthier America published a report entitled *Overcoming Obstacles to Health* (2008) that stated that health is influenced by income and education (e.g., doubled infant mortality rates for mothers who are non-high-school graduates, increased incidence of chronic illnesses such as diabetes and coronary heart disease). Among the findings were that those with higher incomes live up to 6.5 years longer and ethnic minorities have poorer health outcomes when incomes are matched. They concluded that these poor/lowered health outcomes resulted in increased healthcare costs of over one trillion dollars a year, and that improving the quality of primary/secondary education and community safety could reduce health disparities.

The American Telehealth Associations (ATA) has a framework for cost consideration that (Shore et al. 2013) has been amplified and broadened (Hilty et al. 2015b). The ATA has thoroughly evaluated specific dimensions (Shore et al. 2013) of cost frameworks and concluded that standardized metrics and clear definitions do not exist for many of the cost structures. This may be appropriate as costs are derived and perceived differently across contexts. However, there are several cost factors that were identified as important to measure objectively, compiled by the ATA (Shore et al. 2013).

Typically, there are many resource-related costs and benefits to TBH programming worth tracking for program evaluation. Cost assessments and value assessments overlap (Shore et al. 2013) and a systematic plan for evaluating both in relation to a program’s predefined goals can aid a program significantly. Generally, programs vary in what they value and calculate in terms of cost. For example, large institutions may choose to operate specific TBH programs at a (comparative) loss to meet some larger clinical mandate, while smaller programs, or individual practices may be utilizing telepsychiatric modalities specifically to increase revenue streams (Hilty et al. 2015b).

Funding and Reimbursement

Long-term financing and reimbursement have been the primary problem for systems’ sustainability throughout the USA and reimbursement barriers still exist. Start-up grants generally pay for technology, but not for ongoing staff coordination and psychiatric (physician) service. Insurance or third party

Table 5 Health care changes that affect service delivery of culturally competent telebehavioral healthcare

Stressors/changes/trends to healthcare and the “global” parties involved	Changes, trends, and stressors in the healthcare ecosystem	Challenges moving from traditional practice to a new model/ecosystem of healthcare
\$		
% GNP	1/6 of the GNP is more than other countries spend, not sustainable and contains duplication/inefficiency/waste	Change is the primary obstacle, assuming that a new paradigm could be agreed upon and integration could occur
Recession and unbalanced budget	Economic times are not good and most likely, over time, more “pressure” will arise	Short-term costs, fear and loss of existing frameworks will be used as reasons to not change
National leadership		
Accountability	Leaders want more accountability from providers and institutions Medicine leaves itself vulnerable by “blind spots” (e.g. lack of self-policing, COIs) and an ineffective, unintegrated lobby	Fiefdoms, systems in isolation, and even private practices are being assailed The “rich” get richer and the “poor” get poorer at least in research and AHC grants
Control vs. free market tension	The current system has “ballooned” as much as it can, it will deflate, parties will “leave” due to inadequate profits and reform will cut costs and technology goes “around” current obstacles for those with means	Cost will be cut in a “good” or “worse” ways => there is incentive to look at this for patients, payees and payors? Obama care will re-sort populations e-Health will re-distribute care
Decrease disparities	Many Americans support better access and the costs of SES determinants (e.g., lack of education) for uninsured are more obvious	Many parties’ dissatisfaction will unite toward reform; ACA and 2014; communities are mobilizing
Payors/reimbursement		
Metrics are changing or need to shift	Reimbursement based on non-outcomes (e.g., a trainee providing care, service delivered) do not result in the “best” outcomes	The movement for quality, affordability, access, portability, safety, and other indices is strong
MD-centered to patient-centered		
What should be the unifying or organizing model of service delivery?	The AHC or clinic model of care works for only a few, is not efficient, is costly and not patient-centered	How do we partner with patients to share decisions (better), work with communities, and define goals based on populations?
Parameters of “good” care are?	Systems were set up on “best” care models what were defined by AHCs or specialties, not always tested in all populations and not accessible to many	The “best” care by “best” provider “Fast,” timely, portable, and Cheap/inexpensive or affordable Culturally and linguistically sensitive
Provider/team satisfaction		
How do we define it and what are our values?	“Traditional” metrics were “good” care, expert-based (now EBM), training the new generation, making scientific advances and knowledge My career is not everything to me?	Additions or reform questions: How can I see impact better, enjoy what I do, be helpful to high utilizers or those with differences, make a good living be independent, and team up?
AHC-centered to patient- or community-centered systems		
What is the difference, really? We already work to help patients, right?	We (AHCs) “know” best and are the leaders—why do we need help? Why do things have to change? Do our skills need to change? Translational research is a ‘good’ idea but not for everything Of course we want quality and safe care...we do that already	If we do include others, who should they be and what do we have to change? How do a “stay” a doctor and shift from knowledge→skills→leadership and improvisation? We have to do translational education, clinical care and administration too? How do I learn to collect different data, enter it, analyze it and measure outcomes?
Transformed training: quality, safe		
Other	Medicine moves slowly to maintain the patient-doctor relationship, ensure validity of diagnosis and treatments, and preserve the profession	Use technology for integration and access Vertically and horizontally integrate care Make care transparent and predictable Shift evaluation to a primary role Maintain privacy, confidentiality and such

Abbreviations: *GNP* gross national product, *SES* socioeconomic status, *COI* conflict of interest, *ACA* Affordable Care Act, *AHC* academic health centers, *EBM* evidence-based medicine

Table 6 Administrative and cost-related outcomes and questions to help systems evaluate the impact of telehealth services

1. Consider cost constructs applied to financial, time, space, travel, clinical and any resource-related unit, outcome, benefit, or drawback to services stratified by institution, program, clinician, patient, and community.
2. Distinguish between:
 - a. Cost (how much?)
 - b. Value per cost (worth or desired outcome by units of cost)?
 - c. Cost reduction (how much saved)?
 - d. Cost-avoidance (preventing typical costs).
3. Consider measuring cost avoidance rather than cost-reduction. Cost avoidance is generally much easier and cheaper to estimate because it focuses on specific domains (e.g., estimate road-miles saved per encounter over a clinical year and the related avoidance of institutional travel vouchers for eligible patients rather than money saved by the institution after factoring in all the necessary inputs of cost outlay for the program).
4. Are clinicians able to be more productive with services (i.e., have more clinical encounters due to service implementation)? Note: this applies both to remote specialty providers actually engaged in telehealth services, and also to local patient-end referring providers who may be able to service/screen more patients in general settings due to the added availability of having specialty care providers to refer to via telehealth.
5. Did clinicians experience more, equal, or fewer no-shows and cancelations via telehealth modalities? If so, what is the associated cost avoidance (waste avoidance) in unproductive person hours?
6. Cost of travel, missed work, and hotel accommodations avoided by patients due to the availability of telehealth services locally.
7. Did patients utilizing telehealth services experience shorter wait times than usual for a given area/patient population (worth/value)?
8. Did patients have access to and utilize more services appropriately with telehealth implementation?
9. Did patients utilize fewer services inappropriately with telehealth implementation? Service utilization is a both a positive and negative outcome depending on clinical context. For example we may want to use telehealth modalities to increase utilization of specialty care services for patients with a particular diagnosis, and at the same time decrease their utilization of general health services over the long term (ostensibly due to the specialty care amelioration of targeted problems).
10. Cost of administrative and technological telehealth infrastructure per clinical encounter. This can be compared to cost of in-person encounters or to additional revenue created by telehealth development. Compare start-up costs/investment from ongoing program costs.
11. Cost avoidance, or compounded cost avoidance over time, related to providing timely and clinically matched services to patients who otherwise would have gone un- or underserved in the early stages of a diagnosis.
12. Comparative ratios of cost to clinical encounters
13. Comparative ratios of cost to desired outcome (i.e., diagnosis remission, or quality of life). If ongoing program costs per time unit of capture (i.e., quarter or year) are known, compare to number of diagnoses in remission due to telehealth treatment over same period of time.

payors have fallen into line, though they often require preliminary educational and administrative interventions. Patient care may or may not be covered in the medical sector: (1) behavioral health service is carved out or poorly reimbursed; and (2) state transfers the responsibility to county mental health systems. Patients prefer this sector due to less stigmatization, the ongoing relationship with the primary care provider, and perceived inadequate care in the mental health sector. Federal programs were established with high specialist reimbursement for rural patients in federally qualified health clinics (FQHCs) and rural health clinics (RHCs), but TP and TBH services have not qualified because of inexplicably being viewed as provided “outside” the clinic. Services for indigent patients remain problematic. Rural patients remain underserved, though some statewide telepsychiatric programs have set up (e.g., South Carolina).

Telemedicine and TP have been covered by grants (Lauckner and Whitten 2015), but funding is limited and requires re-application. Often when the funding ends, so does the program. A case study by Whitten and Adams (2003) found that issues of reimbursement had a strong negative impact on sustainability, primarily due to a fixed process for

reimbursing for telemedicine services has not been properly established. Health policymakers have recently addressed this issue and currently 46 states now have some type of Medicare or Medicaid reimbursement for TBH. This has improved the accessibility, but many restrictions on its use still exist (Lauckner and Whitten 2015). Several approaches using technology could be cost-effective and meaningful (e.g., asynchronous, social media, web- and mobile/wireless-based), but are still new and clinicians (much less administrators and those governing reimbursement) will need time and resources to include them. Members of congress understand TBH’s ability to increase access. Its effectiveness and efficiency for consultation, emergencies/crises, and direct care needs to be more broadly communicated.

The most significant, necessary paradigm shift in the US model of healthcare related to telehealth and culture may be related to reimbursement. There is trending toward greater telemedicine and limited telephone care (e.g., hematology and thromboembolic diseases) reimbursement. Mobile health, telemedicine, remote monitoring, and data infrastructure (Phillips 2015) may add efficiency and not increase costs (Frakt 2016). Veterans Affairs and other capitated or managed

care organizations see the utility and efficiency of low-end technology. But technology is not high on the radar of value-based care (VBC) and accountable care organizations (ACOs) that are driven by the CMS and the ACA (Hilty et al. 2017b). Some states, though, are accessing Medicaid payment for interpreter services to provide culturally competent care at a rate of \$15 for every 15 minutes of service via code T1013 (e.g., Vermont).

Follow-Up on the Case Study

On follow-up about 1 month later, she still reported spotty adherence with 75 mg BID Venlafaxine—and endorsed several depressive symptoms. The provider called the psychiatrist switched it to Paroxetine 20 mg HS and the plan was to monitor and potentially increase it. The telepsychiatrist spoke with the provider a month later and suggested a raise to 30–40 mg HS. At 3 months total, the patient was much less depressed and free of somatic complaints for the first time since her husband's death. Indeed, her frequency of visits for medical appointments decreased from one-to-two times per month over a 1-year period to only a quarterly visit.

Discussion/Conclusions

Rural healthcare systems need to adapt significantly to provide culturally competent care via TBH, including clinician competencies in both areas (Hilty et al. 2018a). That work focused on components of culturally competent clinical care, fundamental approaches (e.g., the cultural formulation interview, bio-psycho-socio-cultural model), and linkage of outcomes to competence. Those endeavors need a foundational, set of administrative approaches that include program evaluation, as well as short- and long-term financing and reimbursement streams. Building a viable system and sustaining requires prevention/management of many barriers/obstacles. In the broader context, though, the principles, approaches/interventions, and evaluation of culturally competent care and administration are equally important in health and mental health, that is, for all disorders in and in both rural and urban settings.

The overall administrative approach should attend to process, procedures, policy, and evaluation—there are many do's and don'ts related to planning, implementing, and managing a program (Table 4), including TBH aspects of implementation (Hilty et al. 2014, 2018a). Flexible basic or advanced approaches to culturally competent care, TBH, and program administration are suggested—all should include evaluation/outcome components and all stakeholders. Clinical managers, clinicians, and TBH experts must employ an approach and processes that guide “good” evaluation and outcome targets and this requires a fundamental shift in philosophy—from

seeing what happens with planned services—to advanced planning of outcome targets and then subsequent design of the services. The foundation of good program administration includes support from all levels of the organization and an interdisciplinary team who shares responsibilities and overlaps roles. The administrative plan/approach considers a change in the context of the amount of preparation/depth of work, ease of implementation, and scope).

At the organizational level, utilization-focused evaluation—defined as “the systematic collection of information about the activities, characteristics, and outcomes of programs”—may reduce uncertainties, improve effectiveness, and inform decisions on the goals, concerns, and perspectives of program stakeholders. This often determines the effectiveness and accountability of non-profit organizations and helps infuse evaluative logic, values, and thinking into the planning and management processes. Furthermore, stakeholders can identify program priorities, what constitutes “success,” and the data sources that could serve to answer questions about the acceptability, possible participation levels, and short- and long-term impact of proposed programs. Attending to cultural and mental health issues may also have tangible and/or intangible impact on (1) workforce recruitment and retention, (2) team and interdisciplinary-based collaboration, and (3) community partnerships that extend to other areas of human services and general education in schools. Indeed, the integration of cultural care, diversity, and leadership paradigms transforms community practices (Shapiro et al. 2006).

The most significant, necessary paradigm shift in the US model of healthcare would relate to reimbursement. There is trending toward greater TP and limited telephone care (e.g., hematology and thromboembolic diseases) reimbursement. Mobile health, telemedicine, remote monitoring, and data infrastructure (Phillips 2015) may add efficiency and not increase costs (Frakt 2016). Veterans Affairs and other capitated or managed care organizations see the utility and efficiency of low-end technology use. But technology is not high on the radar of VBC and ACOs that are driven by the CMS and the ACA (Hilty et al. 2017b). Medicaid pays for interpreter services to provide culturally competent care at a rate of \$15 for every 15 minutes of service via code T1013 (Healthcare Common Procedure Coding System Codes 2018).

Limitations of this work include its brief overview of complex topics (e.g., culturally competent care, TBH) in order to lay a foundation toward integration between them. In addition, the work is summarizing key tenets from a variety of fields to operationalize a path that has been paved by individual programs and discussed at length in books, but has not been succinctly reviewed like this. The tables are an attempt to outline the processes and scope of work involved. Third, this work is based on the literature, but not vetted via a consensus process of experts (e.g., Delphi). Fourth, while there is established literature on TBH and ethnic groups, additional

prospective qualitative and quantitative research and evidence is needed about culturally competent TBH.

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