Donald M. Hilty
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Our foundation for life, leisure, work, and community involvement is our families and extended families, who have been a great source of inspiration and provided much support and guidance. This book is dedicated to our families, and to mentors and colleagues, as well as to current and future partners in rural health and digital health.

Preface

Rural health care settings are challenged to provide timely and evidence-based care, particularly for patients and clients with mental or behavioral health concerns. Care provided via technology can improve access to quality care, including access to specialist care which may be missing in underserved areas, when technology is integrated into systems of care that meet the needs of rural patients, communities, and health providers, and leverage the strengths and resources available in these communities.

In this book, we focus on the use of telehealth to provide behavioral health care. A range of terms have been employed to describe the provision of behavioral or mental health care through video- and audioconferencing, including telebehavioral health (TBH), telepsychiatry, telemental health, and virtual mental health care. We chose virtual mental health care or TBH as broad and inclusive terms for mental health, behavioral health, and substance provided through videoconferencing technologies.

We appreciate the effort of those who have helped us, forged the roads before us, and extended a hand to help underserved settings – through service, advocacy, and empowerment.

We situate the chapters in this book at the intersection of two important areas, the unique strengths and needs of healthcare in rural and other underserved settings, and the continuously developing area of telebehavioral health.

Rural Behavioral Health Care

Rural health care systems have 25% of the population, yet face disproportionate rates of mental health and substance use challenges, and higher rates of socioeconomic adversity, such as poverty and lower educational attainment, compared with urban and suburban areas. This is compounded by challenges in access to health services. Poor access to care, particularly specialty care, workforce shortages, and inadequate health funding are chronic systemic issues in rural healthcare.

Primary health care is crucial to meeting behavioral health needs and care delivery in the United States and worldwide, particularly given reduced access to specialists. This requires primary care specialists to work to the full range of their scope of practice, often with high patient volumes. These systemic barriers can lead to lack of treatment and under treatment, and can contribute to poor outcomes for patients, such as lack of health prevention, mental health crises, and poor follow-up and medication monitoring, and also having to seek care at a distance. It can also place a great burden on the health system with overreliance on (e.g., high rates of suicide) and high utilization of emergency and hospitalization services.

Models have emerged that take leverage of the strengths of primary care in rural contexts to best meet the needs of local health systems, and address the lack of specialty care. Collaborative and integrated models of care, for example, use team-based approaches to support interprofessional primary care providers in meeting the mental health needs of patients and families. Educational and continuing professional development programs can also extend the skills of primary care providers.

There is great diversity across rural geographies and communities, with many racial and linguistic groups contributing different strengths and resources, and also having unique values, preferences, and needs. This necessitates that providers, particularly those providing care from outside of a community, engage with local communities and partner to deliver care that meets the needs and fits with the values of a community. For providers, developing competence in the delivery of compassionate and culturally safe care is essential. Rural providers who would like additional support can team up with specialists using technology, making referral, consultation, and the collaborative care options more accessible. This is a welcome way to learn and develop skills for primary care teams (physicians, nurses, managers/coordinators, and others).

Telehealth and TBH Contributions to Care

Videoconferencing, secure e-mail, and telephone interventions have been used to link psychiatric specialists at urban and academic health centers with rural underserved areas for decades. Technology has extended models of collaborative care, so that specialists from urban centers can be virtually co-located with primary care teams in rural areas, taking advantage of innovations in both models of care and technology

Telehealth has additional benefits, such as reducing provider isolation, providing opportunities for engagement and community of practice, and providing education and support. Telehealth can also avail help to those serving rural populations by identifying needs, building partnerships and support for implementation.

Providers at rural sites and those consulting to these sites via technology can benefit from practical tips on how to provide effective behavioral health care. For clinical care, adjustments can be made for therapeutic skills based on the patients' needs, model of care, and technology used. This book focuses on *outcomes* for

readers – in the form of behaviors, skills, and processes – more than ideas or knowledge. The authors use short chapters, learning objectives, cases, and summaries for the "what to do and how to do it."

This book will help readers reflect on a foundational question, "What are the components of good behavioral health care for rural patients and communities, particularly via TBH?" Additional questions are explored through each chapter, including:

1. What approaches have clinicians and systems taken to assess needs, and implement and evaluate service delivery of TBH?
2. What steps have researchers, organizations, and clinicians taken to integrate technological solutions and services into care?
3. What competencies been emphasized for behavioral health, telehealth, culture, and teamwork?
4. What administrative/organizational approaches and competencies can facilitate clinical care, education/training, and quality improvement/evaluation in order to overcome/prevent obstacles/barriers and promote sustainability?

Audiences and Sections of the Book

We have designed this book to be applicable to a wide, interprofessional audience, including:

- Health/behavioral health across professions and cultures, along with medicine/psychiatry
- Behavioral health, primary care, rural system, implementation, and technology teams and organizations
- US, Canadian, British, and international providers, researchers, and leaders, including those serving low- and middle-income populations
- Partnering organizations: behavioral health organizations, National Rural Health Association, Office of Rural Health, and American Telemedicine Association (including telemental health group)

The first section of the book, from Chaps. 1 to 5, focuses on the foundations of TBH for rural and underserved communities, including practical chapters that cover key clinical and administrative skills. The reader will learn how to take a person-centered approach to TBH, including an overview of competencies required for rural TBH. Chapter 4 emphasizes compassion, equity, and safety in care, and Chap. 5 focuses on the well-being of those who provide TBH.

Part 2, Approaches to Technology-Based Care, Teamwork, and Special Populations, Chaps. 6, 7, 8, 9 and 10, builds upon this foundation to consider the unique needs and competences across settings and technologies, exploring the integration of technologies into care, and the use of technologies both synchronously and asynchronously to provide care.

The final section, Implementation, Regulatory, and Leadership Issues, sets out an implementation roadmap to ensure that TBH has the highest likelihood of successful uptake, and introduces considerations for evaluation and quality improvement. Issues related to administration, legal factors, and organizational and leadership perspectives are also discussed.

Keywords and Themes

- Technologies: video, synchronous, consultation, management, training, education, app, care, distance, e-, health, mobile, phone, quality, rural, sensor, telebehavioral, telehealth, telemental, telepsychiatry, wearable.
- Concepts, outcomes, and themes
  - Synchronous telepsychiatry and telebehavioral or telemental health (Internet, online, store-and-forward, video, web-based)
  - Behavioral health, psychiatry, and psychology (behavioral, clinician, care, diagnosis, health, medicine, mental, patient, services, psychiatry, psychology, treatment)
  - Therapeutic relationship (alliance, boundaries, communication, engagement, empathy, intimacy, satisfaction, therapy, trust)
  - Competency (behavior, cognition, curricular, didactic, education, learner, methods, pedagogy, skill, teaching, training)
  - Culture competence, safe(ty), humility, indigenous, equity
  - Mobile technologies (Android, app, asynchronous, device, e-, e-behavioral, e-consult, e-mental, health, mhealth, mobile, phone, sensors, smartphone, social media, tablet, text, wearables)
  - Informatics (artificial intelligence, clinical decision-support, clinical decision-support system, electronic health record, information systems, information technology, machine learning, patient portal)
  - Outcomes, tools, quality improvement/ evaluation, and an approach to data
  - Needs assessment, workflow change, and administrative documentation
  - Privacy, safety, legal and regulatory tips, procedures, and policies
  - Resources on funding, and economic/cost assessment and reimbursement
  - Health systems perspectives on integration, planning, and leadership

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  - Persons, patients, families, health providers, leaders, and others from rural communities in California
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  - Behavioral health: University of Cincinnati and California Pacific Medical Center
  - Business administration: University of Cincinnati Lindner College of Business and Lean Enterprise
  - National and international organizations

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About the Editors

Donald M. Hilty is a scholar in psychiatric and medical education, health services, and telemedicine. He works with the Northern California Veterans Administration Health Care System and UC Davis. His current role is in healthcare administration and service delivery, post MBA training in 2018. He speaks internationally and researches models of care, health economics, and a variety of technologies (e.g., synchronous and asynchronous telepsychiatry, mobile health, and informatics). Dr. Hilty is also active with pedagogy, faculty development, and publishing work (e.g., telepsychiatry, telebehavioral health, social media, and mobile health competencies). Dr. Hilty serves as editor of both the *Journal of Technology in Behavioral Science* and *Psychology and Cognitive Science*. He is on the APA-IOM and APA-ATA Guideline Writing Groups.

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Matthew C. Mishkind is a scholar and administrator in the Department of Psychiatry at the University of Colorado School of Medicine, Anschutz Medical Campus. He currently serves as deputy director of the Johnson Depression Center, director of the community engagement service, and director of strategic facilitation for the Office of Telehealth and Technology Implementation for Behavioral Health Practice and Science. His current role focuses on healthcare administration, the development of innovative telehealth programs, and the development and implementation of community-based behavioral health training initiatives. He serves on the editorial boards of the *Journal of Technology in Behavioral Science* and *mHealth*, and is a lead for the APA-ATA Guideline writing groups. Dr. Mishkind speaks internationally about the use of technology to improve access to and quality of behavioral health care, and has published over 40 peer-reviewed papers and chapters primarily focused on improving access to behavioral health care.

Tania S. Malik, JD is a lawyer by trade and an entrepreneur by practice. She is the chief executive officer of the Virtual Medical Services (VMS) and Virtual Benefit Management Group, Inc (VBMS). VBMS is a management services company that builds telehealth technology. VMS is the first use case of that technology and provides independent medical opinions to veterans after a telehealth consultation. As a result of the Iraq and Afghanistan Wars, she started COPE Today, which is a telemental health company. Ms. Malik is the former ATA Telemental Health Special Interest Group Chair and ATA2020 Telehealth Woman of the Year, and has been elected to the College of Fellows for ATA in 2021. She also serves as an executive advisory consultant within the broader area of healthcare technology, which includes areas of mental health, telemedicine, telepsychiatry, remote patient monitoring, and physician/provider recruitment. She brings a wealth of experience in C-suite and board governance roles. Ms. Malik graduated from University of North Carolina at Chapel Hill and Georgia State University School of Law and a is member of the bar in North Carolina and Georgia.

Allison Crawford is a psychiatrist and an associate professor in the Department of Psychiatry, University of Toronto, where she is the director of the Northern Psychiatric Outreach Program and Telepsychiatry at the Centre for Addiction and Mental Health. She is also co-Chair of ECHO Ontario and co-Chair of ECHO Ontario Mental Health. Through these roles, Dr. Crawford advances health systems and the integration of technology into the provision of remote healthcare. Dr. Crawford has worked as a psychiatrist in Nunavut for over 10 years, and coordinates psychiatric services for the Government of Nunavut. She has consulted on suicide prevention and wellness to Inuit Tapiriit Kanatami, the Mental Health Commission of Canada, and the Inuit Circumpolar Council and the Arctic Council. Her clinical expertise is in psychological trauma, including trauma-focused cognitive behavioral therapy and narrative exposure therapy. Dr. Crawford's PhD in English literature adds arts-informed approaches to community engagement, clinical work, and education.

Part I
Foundations

Chapter 1
Introduction to Rural Telebehavioral Health: Key Clinical and Administrative Issues

Donald M. Hilty, Matthew C. Mishkind, Tania S. Malik, and Allison Crawford

Case Study

Theme: The interface of depression, psychosis, culture, and telebehavioral health in a rural emergency department.

HPI: A.B. is a 23-year-old English-speaking Hispanic American male who presented to the emergency department (ED) of a regional, rural (population 3000) hospital due to depression, hopelessness, and auditory hallucinations (AH) with commands to kill himself. He was admitted to the medical floor for unstable diabetes (i.e., glucose 311), but downplayed the AH or thoughts of suicide. His primary care provider (PCP) noted a superficially bright mood that did not fit with the previously described restricted and flat affect.

Telepsychiatric Consultation: The patient chose to speak English when offered this or a Spanish interpreter. The telepsychiatrist started with routine questions, but shifted to social questions after noting disinterest and/or resistance to discuss the symptoms. Using the Diagnostic and Statistical Manual Cultural Formulation

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Interview (CFI, American Psychiatric Association, 2013) as a guide, questions were asked about the patient's culture, heritage, experiences, and expectations for help. He was born in Mexico and the family immigrated to the USA at age 4, so he grew up in California and became the first of his family to speak English along with siblings. He had past periods of "depression," but stated, "We never talked about it much… they thought I was just being lazy." He was encouraged to push through school, go to church, and keep busy. He recalled a depression in his late teens. He reported trouble getting and staying asleep.

MSE: The patient was anxious and aloof, but warmed up over the first 15 minutes of the interview. English appeared to be very well spoken. Mood was "a little depressed" and affect restricted. Thoughts were linear and the content included worry and disbelief about the AH. His insight/judgment was fair, despite his initial hesitance to talk/share. He reported SI due to the intensity of AH, but not a preference to die; no HI. Cognition was intact.

PE/Lab/Imaging: Glucose lowered to 202; other laboratories were unremarkable except for cholesterol at 229; no head imaging was completed.

A/P: A.B. met the criteria for a recurrent, depression, severe with psychotic features. He was agreeable to start an antidepressant sertraline 50 mg AM or fluoxetine 10 mg AM and an antipsychotic Abilify 5 mg AM or olanzapine 5 mg HS. The consultation built in the PCP attending the last 5 minutes to discuss the findings and select medications (sertraline, fewer drug interactions, olanzapine due to concurrent insomnia despite metabolic risk). It was suggested that the term "worry" be used with family instead of depression, and A.B. was discharged 2 days later. When asked about telehealth, he stated, "I hardly noticed it… it's fine… we could really talk." A.B. also stated he had a preference seeing this telehealth provider again rather than seeing a new provider in person, if given the option.

Analysis

1. Telebehavioral health provided access to a specialist trained in mood and cultural issues.
2. Telehealth may offer a wide range of services and be augmented with interpreters and/or cultural consultants, depending on a patient's needs.

Introduction

The challenge to deliver appropriate rural behavioral health (BH) care has attracted national and global attention from all professions (Hilty et al., 2015b). Rural communities around the world face chronic shortages of medical, nursing, and allied health professionals that contribute to serious inequalities between urban and rural residents. Three concepts have been identified as relevant for health workforce recruitment and retention: sense of place (i.e., emotive bonds or experiences in particular locations and environments), place attachment (i.e., ongoing relationships), and belonging in place (Gillespie et al., 2022). Rural depressed patients have three times more hospitalizations and higher suicide rates (Rost et al., 1995, 1998). Rural

PCPs would like to help with consultation and in developing skills to manage BH issues (Geller, 1999; Geller & Muus, 2000). The Hispanic population in rural and frontier America is the most rapidly growing segment of the population in non-metropolitan countries since 2005, according to the US Department of Agriculture studies (US Department of Agriculture, 2015).

The delivery of BH services via video and technology requires "good" clinical, cultural, *and* technology skills for providers, clinical staff, and technology staff (Yellowlees et al., 2008; Hilty et al., 2020a). Culture itself and its components include race, ethnicity, spirituality, religion, sexual preference, gender identity, geography (urban, rural, global), special populations (e.g., incarcerated), and language (Lim & Lu, 2008); others add socioeconomics, education, and other parameters to this list. Cultural and language differences were initially believed to be more challenging for telebehavioral health (TBH) compared to in-person consultations (Shore et al., 2006), but descriptive studies have shown effectiveness in many culturally diverse populations including Hispanics/Latinos, Asians, Native American, and other populations (e.g., sign language) (Hilty et al., 2013). In this case, TBH specialist care to a rural setting allowed A.B. the opportunity to express his symptoms once culture concerns were addressed.

This chapter focuses on the three areas: (1) the intersection of rural health, telebehavioral health, and culture; (2) process improvement, teams, and sustainability; and (3) overview of key clinical and administrative topics based on book sections and chapters.

Rural Clinical Landscape: The Impact of Telebehavioral Health and Culture

The Role of TBH in Rural Health Care

PCPs in rural areas also report having inadequate skills to manage these mental health issues, and they would benefit from assistance (Geller, 1999). Video is a high-intensity model and it is the best-studied option, with collaborative and consultative care showing effectiveness. Low- and mid-intensity technology options, like telephone, e-mail, mobile health (e.g., text), and e-consults, may provide better access for patients and more timely provider communication and education. They are also probably more cost-effective and versatile for health system workflow (Hilty et al., 2018).

New models of psychiatric and behavioral intervention have improved the accessibility and quality of mental health care in the primary care setting, particularly in rural areas. This includes telehealth innovations like videoconferencing, telephone, e-mail, and other technologies, often with consultation-liaison service to primary care rather than direct clinical care (Hilty et al., 2018). Synchronous telepsychiatry or TBH – a term inclusive of other disciplines and used rather than telemental health

to be inclusive of addiction care – leverages care for diagnosis/assessment, consultation, and a range of treatments. It has been used in many populations (e.g., adult, child, geriatric), cultures, and settings (e.g., primary care).

TBH providers need familiarity and dexterity with a range of technologies (Table 1.1). The goal with technology is to simulate real-time experiences related to feelings, perception, images, and interaction. Even low-cost systems facilitate engagement and a "social presence" for participants to share a virtual space, get to know one another, and to discuss complex issues (Hilty et al., 2020c). For example, with asynchronous consultation, the specialist develops a treatment plan for the PCP to implement a brief psychotherapy (e.g., problem-solving therapy) and/or to prescribe a psychotropic medication. The PCP has the option of asynchronous or phone follow-up as needed.

Culturally Competent Care: Foundations, Approaches, and Challenges

Cultural issues include, but are not limited to, symptoms, presentation, meaning, causation, family factors, coping styles, treatment seeking, mistrust, stigma, immigration, and overall health status; likewise, the culture of the clinician affects the interaction, particularly the inability to speak the patient's language (Office of the Surgeon General, 2001). BH disorders in minority populations are often difficult to recognize and diagnose due to complex beliefs, differences in help seeking, and stigmatization. All of these factors affect access and/or treatment initiation/completion. A study of illness beliefs among Chinese Americans also showed that many patients with depression were reluctant to refer to their illness as psychiatric in nature for fear of being stigmatized (Yeung et al., 2004). A foundation in cultural humility, safety, and competency appears essential for patient assessment, triage, and treatment (Hilty et al., 2021).

Patients gain a sense from providers and clinics if culturally sensitive treatment is available (Shore et al., 2006). Patients may shy away if staff and providers do not "look like" them. In addition, some prefer alternative approaches (e.g., shaman, natural remedies, traditions). The patient-centered medical home (PCMH) (Rosenthal 2008) focuses on access, patient, and family engagement (Cené et al., 2016) – the gap there is the PCP clinic may not be the destination for help seeking. Socioeconomic factors that affect technological access include poverty, educational level, and geographic location. Poverty has been shown to be a significant barrier to receiving culturally appropriate psychiatric care, both in person and by telecommunication. Furthermore, rural ethnic minority groups have about twice the poverty rate of the white rural populations (Yellowlees et al., 2013).

Since the ability to communicate with less English proficient patients is essential in clinical care, it is a common practice to use "interpreters" on site; however, sometimes family members or untrained interpreters may miscommunicate medical complaints, de-emphasize information, and miss cultural metaphors (Hilty et al.,

Table 1.1 E-health continuum for behavioral health interventions for primary care

Tier	Source	Initiator goals/aims	Liabilities	Approaches
1	Website information	Health information: gain perspective, obtain standard and updated info Refer patients for somatic symptom disorders	Quality of information and lack of regulation, less of an issue if referred to site	Help patients, families, caregivers, and colleagues in medicine/surgery
2	Support/chat groups	Patient: education Caregivers: tips and perspectives on coping	Peer compatibility? Information quality	May help with adjustment to common medical problems
3	Social media (SM) one or two way	Easy and convenient Likely more convenient for one-time use Good option for patient and clinician prefer	Not privacy compliant Busy clinicians may not have time; see if "value added"	Important to set expectations, limits, and boundaries around time and content of matter
4	Informal education for self-assessment	Person/patient: education, tips Caregiver: education, supports, and advice Clinician: give assignments	Not as good as in person Use a team and give good sites for quality	Refer to sites that focus on longitudinal skill development
5	Resources for self-care decision-making	Person/patient/caregiver: additional options Clinician: skepticism unless known source; best within electronic health record (EHR)	Good for options, though, what if it depends on… should do A or B?	Information on topics Good for team members
6	E-consult between primary care provider (PCP) and specialist in EHR	PCP (pediatrician, family medicine, obstetrician): timely to visit and sent in time Specialist: simple questions (e.g., facts, steps to do) can be answered	May not work for difficult patient cases These take time to clarify question and review chart	Monitor timeliness, follow-up, and quality Build into care workflow and culture of care
7	Assisted self-care assessment and decision-making	Person/patient/caregiver: empowering as customized and supported Clinician: effective to distribute skills	Without help, may make decisions lacking context? Stay within scope of practice	Link with social work, hotline, and/or clinic, if needed

(continued)

Table 1.1 (continued)

Tier	Source	Initiator goals/aims	Liabilities	Approaches
8	Asynchronous, between-session patient-clinician contact (e.g., wearable, app text)	Person/patient/ caregiver has minor question or needs a detail ➔ e-mail/ text; tracking symptoms ➔ app Clinician: e-mail/ text for quick, simple advice; apps good for monitoring disorder	Align one to two apps with one to two purposes to focus Errors, miscommunications Time, documentation, and privacy issues	Provide training for faculty and team EHR integrative power Need evidence-based app and evidence-based approach
9	Synchronous, telepsychiatry (TP)	Person/patient: it really works and is much more convenient Clinician: if patients like it, it is a good option	It always has to be scheduled (and paid for)	A great option; not always needed due to lesser, easier options
10	Hybrid care: in person and e-option, TP and e-option	Person/patient: connect in different ways Clinician: ad hoc to planned	Requires discussion, prioritization, and feedback Takes willingness to change, time, and $	Folks will shift if health-care financing shifts? Paradigm shift is needed

2020a). This is potentially very significant in psychiatric care and led to a call for credentialing of interpreters (Carlson, 2010; Hilty et al., 2015b). In one TBH study, PCPs and staff rated the importance of valuing cultural differences and being able to speak (or use an interpreter) in the patient's primary language at 5.4 on a Likert scale from 1 to 7 (not important to very important); this overshadowed ratings of quality of care at 4.9 and availability of a competent trained interpreter at 4.4 (Hilty et al., 2015b). Subanalysis of PCP versus staff ratings did not differ.

Telebehavioral Health Programs and Sustainability

The overall goal with technology is to create value for patients, providers, staff, and leaders – for TBH care, that should include simple steps for users, ease of scheduling, good communication, and assistance (e.g., clerical, administrative, technical) when needed. Process improvement (e.g., lean) considers the users' experiences, needs, and expectations and includes all members of the organization in working together to improve (Table 1.2). While patients are the center of the system's approach, providers and staff are equally important as part of the Quadruple Aim, which includes: patient satisfaction; implementation research to further population-centered health; increase service delivery effectiveness; and reduce clinician workload burden, fatigue and burnout (Bodenheimer & Sinsky, 2014).

Table 1.2 Reasons for telehealth program failures and dos to ensure success

Assessment of need and planning
1. Inadequate or unavailable data in the region that the program is planning to serve
2. Inadequate overall and financial support of the program from senior leadership of the organization
3. Telemedicine and outreach are not consistent with overall mission of the organization
4. Inadequate attention up front to the appropriate policy and procedures (e.g., consent process)
5. Failing to build in adequate resources and procedures to document benefits of the program for both the service area and the provider organization (may be key for grant or organizational support)
6. Use clinically proven technology
7. Inadequate time to develop the program (e.g., time to develop financial stability after start-up funds)
8. Evaluate options, implementation, and maintenance of telebehavioral health with a team of clinicians, technicians, and administrators in both the hub and the spoke sites
Key contributions from users/participants
9. Unreliable or inconsistent service from specialists providing the consultations
10. Lack of a physician champion
11. Inadequate technical support or unreliable telecommunications
12. Beginning with too complex cases – in other words, doing cases that fail at the beginning so that you lose your referring physician support
13. Point person to evaluate satisfaction and outcomes for each consultation (patient, referring physician, and consulting physician) and the program (coordinator, technical staff, and administration); adequate feedback mechanisms of this information to telemedicine staff and providers
Additional steps for delivering quality services
14. For each consult, be certain that the technical quality equipment is appropriately matched to the service and needs of the patient and their condition
15. Adequately train the hub site coordinator and spoke site coordinator in the technical and procedural aspects of the service
16. Provide adequate training for the telepsychiatrist with the technology, work with them to adapt clinical practice to fit its use, and be certain that they are aware of its limitations
17. Ensure the telepsychiatrist has general and specific expertise (e.g., consultation-liaison for consults to primary care, geriatric psychiatry for a geriatric patient)
18. Develop referral and/or consultation guidelines, as well as adequate procedures for getting the key component(s) of the record to the consulting physician
19. Ensure satisfactory telecommunication by regular technical maintenance and prompt troubleshooting
20. Coordinate timing of consults (i.e., patients are there at the right time, telepsychiatrist has adequate time, and/or referring physicians or staff stop in if desired).

Hallmarks of "Good" Programs: Evaluation and Effectiveness

The premises for the good evaluation of outcomes begin with program fitness: organization, function, leadership, the "right" members/workforce, experience, and many other parameters. Thinking more broadly, the approach to evaluation may

start with how to set up a "good" team, program, organization, or other body – or in assessing its overall fitness in general and its ability to change. Ultimately, responsible, conservative implementation is safer than doing too much at once. A basic plan with an option or two for expansion works well. Timelines are crucial for the sake of urgency, to keep focus and be productive. It is prudent to expect the unexpected.

There will be layers of complexity, problems, complications, and other untoward events that are not foreseen. Resolution of the specific problem is key, but the "dos" of evaluation almost always include monitoring, gaining input, and ongoing improvement. Using existing, well-developed methods or procedures (e.g., standardized measures that have undergone multiple iterations, levels of review, and psychometric testing) is helpful. In addition, specific measures and generalized measures, accounting for confounding events, and accurate and time-efficient self-report/user completion are helpful. When possible, prospective data collection and someone with training (e.g., academic, statistics, process improvement) involved earlier rather than later are helpful. This requires planning and funding for evaluation.

Clinical and Administrative Outcomes

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. The current rapidly evolving health-care environment adds urgency to assessment and its effectiveness, in order to better define the value of TBH interventions to patients, communities, leaders, funding organizations, and other decision-makers in health care. TBH research has moved beyond general satisfaction to implementation, cost/economics, and other outcomes (Hilty et al., 2020c, 2022). For underserved populations, though, important information is gleaned when evaluation is properly designed, administered, and analyzed (Nelson, 1985).

For specifics of evaluating outcomes, the American Telemedicine Association TBH expert consensus produced a lexicon for outcomes in the following areas: patient satisfaction (i.e., access, distance to service, use of), provider satisfaction, process of care (e.g., no shows, coordination, completion of treatment), communication (e.g., rapport), reliability/validity (e.g., assessment, treatment vs. in person), specific disorder measures (e.g., symptoms), cost (i.e., length of service, travel, hardware and software), and other administrative factors (e.g., facility management, team staffing) (Shore et al., 2013).

Culture of Teamwork and Improvement

Team-based care with technology ideally offers a variety of options: learning by patients and clinicians (e.g., curricula), levels for low- to high-experienced members, attitudes and skills in addition to knowledge outcomes, explicit activities for teams to communicate (e.g., huddles), teaching methods with case/practice in addition to lecture/didactic, and perhaps, most-importantly, supervision for feedback, reflection, and developing good habits (e.g., text to supervisor in time for help). For example, care coordinators/managers can manage secure mail, nurse practitioner/physician assistant can initiate e-consults, and BH professionals may evaluate less complex cases – each of these options preserves physician time for analysis of data, complex cases, and supervision. Teamwork is facilitated by a shared mental model of expectation, roles, and outcomes (Ross & Allen, 2012). Physical (e.g., schedules, huddles), virtual (i.e., on-site and distant member), and other training interventions may substantially improve team-based care – coordination, communication, and teamwork (Hilty et al., 2020b).

There are a variety of reasons that TBH programs fail to succeed (Table 1.3). This may be divided into assessment of need/planning, key contributions by participants, and other steps for improving quality. A developmental approach to rural telepsychiatry emphasizes stages of needs identification, infrastructure survey, partnership organization, structural configuration, and pilot implementation (Shore & Manson, 2005). Alignment of the missions of partners, collection of data for needs, and prioritization of steps are essential. Key contributors are the team champions, providers, and those doing program evaluation. Interprofessional teams – and particularly mid-level practitioners – will play a role, as high-level trained clinicians are not best used for doing it all. BH practitioners may need to gain experience working alongside PCPs, getting "warm" handoffs, or dealing with emergencies. Providers 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., 2018). This shift also requires faculty development for teaching, supervision, and evaluation (Hilty et al., 2015a).

Overview of Key Clinical and Administrative Issues

The book is informally organized into three sections: (1) foundations for TBH in rural health; (2) approaches to technology-based care, teamwork, and special populations; and (3) implementation, regulatory, and leadership issues. This book focuses on *outcomes* for readers – in the form of behaviors, skills, and processes – more than ideas or knowledge. The authors use short chapters, learning objectives, cases, and summaries for the "what to do and how to do it." Direct living, clinical, research, and organizational (i.e., health system, policy, military) experience with rural, remote, and otherwise isolated populations is the foundation of this approach.

Table 1.3 Creating value for patients, providers, staff, and leaders via process 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

The first section which serves as a foundation starts with "Rural Telebehavioral Health Competencies, Models of Care, and Sustainable Administrative Approaches" as a reminder for participants – both on site with the patient and at a distance – that clinical and administrative or institutional competencies are needed to ensure

therapeutic engagement, quality of care, and sustainable practices. Purposeful selection of learning activities, models of care, and outcome monitoring guide the effort. The chapter "Person- and Patient-Centered Care Turns '30': Being Informed by Person and Patient Experience in Virtual Care" helps us to apply the patient-centered clinical method to the virtual care environment, while appreciating the potential challenges to the therapeutic relationship in doing so. "Digital Compassion, Health Equity, and Cultural Safety – from the Therapeutic Relationship to the Organization of Virtual Care" helps explain digital compassion and consider its manifestations at individual and organizational levels. It also defines digital health equity, cultural safety, and cultural humility as an approach for patients or people to best get help when they are suffering or in need. Likewise, "Self-Care and Well-Being for Providers, Teams, and Systems" provides principles for reflection and practice, which are important for in-person and virtual care, particularly for the latter as daily life presents challenges and workflows shift with a variety of technologies in health care.

The section on approaches to technology-based care, teams, and special populations provides approaches for nontraditional interventions, special populations, innovative treatment (e.g., computer-assisted cognitive behavior therapy and mobile applications), and service integration with in-person, synchronous, and asynchronous care. "Telemental Health Delivered to Nontraditional Locations and for Special Populations" provides tips for implementing nontraditional services, how to capitalize on the flexibility of TBH, adapting it to children/adolescents and geriatric patients, and processes to ensure quality and safety. The chapter "Approaches to Virtual Care in Underserved Communities and Settings: Bridging the Behavioral Healthcare Gap" emphasizes setting quality outcomes, efficient processes for evaluation, and alignment of provider, system, and institutional goals. Low- and middle-income countries have challenges, though in order to scale up community mental health programs, the processes above are essentially the same. Though video is most widely known in primary care and rural settings, "Practical Considerations for Emerging Types of Telebehavioral Health Care: Computer-Assisted Cognitive Behavior Therapy and Mobile Applications" offers other technological options for patients to seek help, which is particularly helpful for younger generations and technophiles. "Integrating In-Person, Video, and Asynchronous Technologies" emphasizes integration of in-person, video, and asynchronous options like mobile health into workflow. This requires patient, primary care team, and BH provider skill sets and team-based care for service delivery.

The last section focuses on implementation, regulatory, and leadership issues for providers, systems, and administrators. "An Implementation Roadmap for Virtual Care in Rural and Underserved Settings" outlines steps and approaches to facilitate acceptability, adoption, feasibility, implementation, cost, and sustainability factors that govern design, evaluate, and change in health-care services with technology. "Technology, Business, and System Implementation: Getting the Right Care to the Right People in the Right Place" adds to that approach with more rural emphasis, a useable and targeted reference guide, and illustrative case examples. While most providers and administrators have learned by building and refining systems,

"Implications of Legal and Regulatory Issues in Telebehavioral Health" covers a landscape systematically and with new changes to enhance outcomes. Likewise, "Resources on Funding, Economic/Cost Assessment, and Reimbursement" provides a real-life, nuts-and-bolts, lessons-learned approach to find and use resources to create a business approach based on economics of health care, compare estimated versus real costs, and maximize reimbursement. Finally, "Health Systems Perspectives on Integration, Planning, and Leadership" looks at infrastructure requirements for audio/video therapy in primary care or in a home environment, walks through challenges and solutions in building or improving care, and applies a case example to apply the material.

Conclusions

Rural health-care settings are challenged to provide timely and evidence-based care, particularly for culturally diverse patients with behavioral health disorders. Telepsychiatry and telebehavioral health improve access to care and leverage scarce resources. National organizations are beginning a shift to attitudes and *skills* in addition to *knowledge* – consistent with the competency-based medical education movement – and advocate for cultural skill development. A key issue is identifying the degree of alignment of providers and patients, at least in terms of linguistic, cultural, *and* racial concordance, which facilitates patient and provider satisfaction, as well as patient adherence to treatment (Hilty et al., 2020a).

Culturally competent care has shifted from knowledge to skills, from individual to team approaches, and from a specialization in a single culture (e.g., matching his/her own culture or training) to an approach that provides flexibility/versatility to help many diverse populations. More recently, there is a shift from cultural competence to cultural humility and/or cultural safety (Fisher-Borne et al., 2015; Curtis et al., 2019). A positive care and work environment, training, and "good" administration can address this to a large degree – particularly by importing expertise via telehealth.

There are a variety of TBH service delivery options available, but the key ingredients of a "good" model are fairly consistent: easy access, low cost, in-time help to the user (e.g., person, patient, consultee), and meaningful outcomes. While high-intensity models have substantially better outcomes, mid- and low-intensity models also have many benefits like building relationships and complementing in-person services. They may also be more sustainable (e.g., provider-to-specialist consultations by telephone, e-mail, and other modes). Regardless of the model, health-care organization and administration systems try to promote clinical responsibility and decision-making, co-location of services, integrated funding, integrated program evaluation, and integrated outcome measurement. When it comes to TBH, an e-platform for technologies and adjustments in reimbursement approaches are also necessary.