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IN DEPTH ARTICLE: COMMENTARY

The Need to Implement and Evaluate Telehealth Competency Frameworks to Ensure Quality Care across Behavioral Health Professions

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Technology is rapidly becoming a key player in care delivery, lifelong learning, and education/training. The American Psychiatric Association Practice-Based Learning and Improvement Core Competencies include the use information technology and lifelong learning [1]. Current competency-based education (CBE) focuses on skills rather than on what is taught [2, 3]. Competency may be defined as a measurable human capability required for effective performance [4]. The Institute of Medicine (IOM) [5] suggested three key elements for patient-centered care: skills-focused education, interdisciplinary team-based care, and a technology/informatics-oriented administrative approach.

A key premise of telepsychiatric competencies published in 2015 [6] is that faculty clinicians and educators have to first improve their care via clinical and technological competence, in order to then oversee trainees' use of technologies in clinical care. Fundamental steps to this work are the alignment of clinical outcomes with teaching/supervisory methods, evaluation, and feedback [6, 7]. Professional association standards and guidelines typically do not focus on competencies, are complex, and are frequently incomplete (e.g., diverse populations and settings) [6–8], and comparisons across professions are rare [7].

Telebehavioral health (TBH) is a broad term inclusive across behavioral health professions and technically includes both mental health and substance use care; in this paper, it will also include TP. Each BH discipline and field has its own nomenclature for telehealth (e.g., telepsychiatry, telepsychology, distance counseling) [9], though competencies related to technological standards were suggested years ago [10, 11]. A TBH competency set arrived in [12] and a specific one for use of social media arrived in 2018 [13]. Care delivered by TBH may require additional skills—or adjusted behaviors—compared to in-person care [6, 7, 11–13].

The current paper will:

1. Review TBH evidence relevant to competencies, guidelines, and standards and compare similarities and differences across professions related to integrating technology in practice
2. Highlight TBH competency sets to date
3. Discuss implications of implementing TBH competencies across professions.

The Telebehavioral Health Evidence-Base

Clinical Services, Outcomes, and Evaluation

The most influential papers about TBH over the past two decades are on the following themes: (1) effectiveness [14], (2) guidelines by the American Telemedicine Association (ATA) [15, 16], (3) summary of outcomes including randomized controlled trials [17], (4) models of service delivery [18], (5) hybrid models of care [19], and (6) interventions with population-level impact [20]. Evaluation of TBH has gone through three phases related to effectiveness: ability to increase access to care, validity and reliability compared to in-person services, and delivery models for complex populations [14–16, 20–22].

TBH clinical assessment, psychological and cognitive testing, triage, and management/treatment services have reached patients of virtually all ages, disorders, and cultures [9, 13–16, 23]. This includes a wide range of psychotherapies (e.g., individual, family/system, group) and psychiatric interventions

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for the development of the therapeutic alliance [24, 25] and treatment, with outcomes similar to in-person care. For the "virtual" therapeutic connection, clinicians need to find replacements for in-person behaviors like handing a tissue box or a handshake (e.g., verbal statements conveying empathy) [26].

The "gold standard" for guidelines is the IOM's [27] collaboration with the Agency for Healthcare Research and Quality (AHRQ) and Cochrane Database of Systematic Reviews. These weigh evidence, provide consensus, and identify/manage financial conflicts. The inclusion of data on patient preferences and outcomes in a systematic manner has also now begun [28]. Standards and guidelines of particular interest to TBH competencies in medicine include (1) the ATA's videoconferencing and Internet-based care guidelines for adults [15] and children and adolescents [16] and (2) a joint effort by the ATA and American Psychiatric Association to develop a TP practice guideline at this time.

Research is now extending into two areas. First, evaluation focuses on the spectrum of new technologies with regard to their clinical effectiveness, feasibility for individual vs. team-based care and costs (i.e., synchronous in-person/video vs. asynchronous video, text, e-mail, apps, social media) [24, 29, 30]. Second, studies are comparing technology practices, standards, position statements, and policy of the American Counseling Association (ACA), Marriage and Family Therapy (AAMFT), Psychology (American and Canadian Psychological Associations), Social Work, and Psychiatry professions. The framework of ACGME domains used, as for the TP competencies [6, 7], and rated common clinical skills (e.g., informed consent, assessment, triage, treatment planning) into categories: tier 1 (mentioned as important in a document; given one checkmark; common); tier 2 (discussed in-depth (suggestions on how to approach and/or evaluate; given two checkmarks; less common); and tier 3 (evidence-based and given three checkmarks; rare) (Table 1) [7]. Overall, the scope of existing documents varied from narrow (e.g., asynchronous communication by e-mail and texts, using social media in social work) to broad (e.g., practice of telepsychology). There does not appear to be clear consensus across disciplines and with technologies embedded in practice already, clinicians could benefit from more guidance.

Recent Developments in Telepsychiatric and Telebehavioral Health Competencies

Most competencies use the Accreditation Council of Graduate Medical Education [31] domains of patient care, communications, system-based practice, professionalism, practice-based improvement, and knowledge. Additional input came from the evidence-based CanMEDS competency framework of the seven roles that all physicians play [32]. These competencies adapted the Dreyfus model for learners (Level 1—novice, Level 2—advanced, Level 3—competent, 4—proficient, and 5—expert) [33], but combined them into novice/advanced beginner, competent/proficient, and expert levels.

Table 1 A comparison of telebehavioral competencies, guidelines, and position statements across professions

Domain / competency	Psychology (Canadian and US combined)	Social/ work	Marriage and family therapy	PSYCHIATRY (US and Canadian combined)	American telemedicine association	CTIBS TBH competency set
Patient care (e.g., informed consent and adapting care)	√√	√	√√	√√	√√	√√√
Communication	√	√	√	√	√√	√√√
Systems-based practice (e.g., legal/regulatory issues)	√√	√	√	√√	√√	√√
Professionalism	√√	√√	√	√√	√√	√√√
Practice-based learning (e.g. quality improvement)	√	√	√	√√	√√	√√√
Knowledge	√√	√	√	√√	√√	√√√
Technology (e.g., selection, technical skills)	√√		√√	√√	√√	√√
Education/training (e.g., methods, evaluation)	√			√√	√	√√√
Other technology (e.g., social media, apps, e-mail)	√√	√	√√	√√	√	√√√

Footnotes

√ important, √√ discussed in-depth on importance and evaluation, √√√ evidence-based outcomes

Psychiatry/Medicine and the TP Competencies, 2015, and Updated

The TP competencies [7] (Table 2) included an approach to clinical care, teaching, and evaluation, including a combination of methods related to curricular, rotation, and supervisory feedback [6, 34]. A current addition to the competencies (Table 2) is prescribing skills. This was not specifically mentioned in the original set but is a key part of the biopsychosociocultural treatment plan [35]. This is important as prescribing may include benzodiazepines and narcotic pain medications, which are regulated by state and federal governments to avoid misuse and abuse. Physicians—both trainees and supervisors—need a framework to collect required practice information and interpret rules and regulations surrounding the prescription of controlled substances via telemedicine.

Social media and networking (see also Zalpuri, Liu Et al. 2018; this edition) [13, 36] and mobile health, Smartphone, and app competencies [7, 11]

These competency sets pose four substantial challenges [11, 13, 36]: (1) they are asynchronous not synchronous, so care cannot be "organized" or structured like traditional care; (2) they may affect the therapeutic frame and create additional boundary issues; (3) they may be conducted over public, private, and health system sites, making the data integration and security difficult, if not impossible; and (4) users overlap personal and professional life experiences, which causes complications similar to e-mail and texting. Many do not realize that once information is put out there, even if erased, it is permanently out there.

CTIBS' TBH Competencies

The Coalition for Technology in Behavioral Science (CTIBS) developed the interprofessional, evidence-based framework for measurable TBH competencies [12] briefly summarized here. The seven TBH competency domains are (1) clinical evaluation and care, with three subdomains addressing assessment and treatment, cultural competence and diversity and documentation and administrative procedures; (2) virtual environment and telepresence; (3) technology; (4) legal and regulatory issues; (5) evidence-based and ethical practice; (6) mobile health and apps; and (7) telepractice development. Overall, there are 51 discrete behavioral objectives, which are then distinguished by 149 cumulative and measurable behavioral practices [12].

Discussion of Implications of TBH Competency Implementation Across Professions

Overview

A rapidly changing marketplace and healthcare reform have increased the role of technology, challenging educational and service delivery systems to deliver professionals who are fully prepared to respond proficiently, as well as legally and ethically. If BH professions were to outline core telecompetencies and clarify how in-person care need be adjusted, they could help professional organizations and regulatory boards, which attend to clinical standards (i.e., professional conduct, practice and treatment guidelines, standards of care, scope of practice). This effort would be challenging, but proactive and preventative before deleterious sentinel events segregate telehealth even further across states and regulatory bodies.

Teaching, Assessment, and Evaluation

All BH, medical, dental, and nursing fields have proposed competencies that are primarily emphasized and evaluated during training. Thereafter, multiple-choice tests for becoming certified/boarded assess for/establish a minimum clinical care capacity. Most are in line with the competency definitions above and use the word "capability" or a synonym like "ability." The hope is that what is measured has fidelity to actual practice and verifiable competencies. Other forms of review in medicine (e.g., peer review, morbidity/mortality conferences) are meaningful but do not reduce the rate of medical errors [5, 37].

A longitudinal approach is needed for skills and teaching with attention to transitions—from training to ongoing practice [38–41] (e.g., in psychology, there are categories for entry level supervised, advanced level supervised, entry to practice through 3 years, and after 3 years of practice) [42]. Psychologists put forward guidelines for assessing competencies in practice [43–45], and this is particularly important when the clinicians' limits are reached to ensure quality results [46, 47].

For administrators, evaluation of skills/behaviors should dovetail with evaluation of clinical care. Perhaps a finite, but manageable subset of trainees' behaviors could be efficiently evaluated with regard to core concepts related to quality care and decision-making. Generally, selection of a standard behavioral measure of a target outcome that is already widely used could capitalize on existing evidence-bases and frameworks for clinical care (e.g., the Institute for Healthcare Improvement's Model for Improvement Measures).

Table 2 Abbreviated telepsychiatric (TP) competencies for patient care based on the domains of the accreditation council for graduate medical education framework

Other technology	Novice/advanced beginner (e.g., learn clinical and technology-based skills)	Competent/proficient (e.g., apply "good" in-person skill to technology-based care with appreciation of context)	Expert (e.g., has advanced knowledge, skill, and experience in TBH care, research, administration, and/or policy)
Patient care			
History-taking	Standard history	Informed consent for telehealth	Address informed consent problems
		Contextualized history related to technology (i.e., uses, preferences)	Overcome obstacles, unexpected events, and develop approaches for others
Engagement and interpersonal skills	Therapeutic alliance with trust and rapport	Adjust to technology (e.g., replace handshake with verbal comment)	Provide options to maximize engagement and avoid distractions (e.g., dress, plant)
		Avoid distractions and interruptions	Research problems and adjust objectives
Assessment and physical examination	Thorough stratify risk and protective factors	Assess danger risk and adjust follow-up plan vs. in-person	Synthesize information
	Learn tools (e.g., cognition)	Ensure full mental status or alternative	Adjust tools contextually (e.g., substitute score item for MMSE)
		Administer tools with adjustments	Teach on distance MSE vs. in-person
Management and treatment planning	Outline treatment plan	Contextualize treatment plan to patient, setting, and care continuum	Tailor recommendations to resources, culture, and patient preference
	Follow-up with others (e.g., PCP)	Pick consultation (e.g., PCP instructions to initiate and titrate medication) vs. management role	Engage patient and other team members
			Select supplemental technologies (e.g., e-mail, telephone or other) and assess impact on the process
		Arrange follow-up	
Prescribing	Inquire about past medication and medical conditions	Request information from distant site resources to complement history	Diagnose common "holes" in required information and teach substitution
	Learn consultation vs. management roles	Advise prescriber (e.g., PCP) with more than one option	Teach roles within consultation, collaborative and stepped care
	Learn regular prescribing process and by computer related to TBH care	Plan for prescribing electronically: request patient, site, pharmacy, and other information	Research, evaluate, and teach administrative barriers and solutions, within state and federal best practices
	Prescribe within skill set/scope (e.g., adult) and seek help for other populations (e.g., children) and/or controlled substances	Anticipate likelihood for regular vs. controlled medication and check state and federal requirements; assess alternative reasonable prescribers based on their roles and scope	Teach on legal standards and management of emergencies, research the validity of exceptions or so-called workarounds and advocate for patient care within reasonable legal/regulatory standards
Documentation	TP note hard copy and/or rudimentary EHR	EHR, with attention to informed consent, preferences, goals for technology, problems, and privacy	Teach standard, additional necessary item and model documentation
Privacy and confidentiality	Learn in-person basic regulations	Use TP regulations, and if none, apply judgment to convert in-person ones	Practice within all standards and evolving telepractice movements to make recommendations to others on parameters
		Inform patients of common errors (e.g., cell privacy limitations)	
Communication			
Communication	Clear communication with patient and professionals	Amplify communication (i.e., 15%) based on video literature to be "present" via TP	Trouble-shoot communication difficulties
			Optimize one's and other's telepresence
Cultural, diversity, and social determinants	Consider participants' needs and preferences	Adjust to patient culture/preferences for therapeutic relationship	Teach on cultural formulation, generalizations for practice and approach with humility
		Ensure language fluency and preferences	
Language/interpreter ability	Use the interpreter as best as possible with supervision	Manage time, pick best option (e.g., professionals > staff and family) and use interpreters on either site or on telephone	Verbal and non-verbal dimensions
			Teach differences of relationship when using interpreter and quality thereof (e.g., nurse vs. certified professional)
Systems-base practice			
Outreach to community	Participate and engage as issues arise	Identify potential resources, needs, and roles and include participants	Teach plan to assess, develop, and maintain relationships
			Anticipate barriers and solutions
Interprofessional education issues	Participate in and learn from experiences with others	Work with/lead IPE team and begin to teach within IPE framework	Problem-solve IPE provider and teacher problems
			Support inter-professional and disciplinary team care
			Serve as resource on extant telemedicine database
Care models	Perform role assigned and grasp care provider vs. consultant role	Evaluate preliminary role vs. flexibility along a stepped continuum of roles	Has facility with models of consultation, integrated, stepped, and hybrid care
		Adapt to collaborative, stepped care	Adept at practice with one that fits context
Rural health	Learn rural health basics related to care	Learn about rural access, epidemiology, and barriers	Teach, practice, and role model
Special populations	Adjust to a difference (e.g., child/adolescent vs. adult)	Recognize differences and adapts assessment and management (e.g., veterans, child/adolescent/parent, culture, geriatric)	Teach, practice, and role model

Table 2 (continued)

Other technology	Novice/advanced beginner (e.g., learn clinical and technology-based skills)	Competent/proficient (e.g., apply "good" in-person skill to technology-based care with appreciation of context)	Expert (e.g., has advanced knowledge, skill, and experience in TBH care, research, administration, and/or policy)
Licensure regulations for TP and model used	Learn in-person regulations and that states differ	Be aware that in-person and TP regulations may/may not differ and seek consultation if necessary	Research, teach and practice within TP regulations state-to-state or within federal system (e.g., VA)
Professionalism			
Attitude	Learn/be open to technology	Role model openness to technology, IPE, and care process Manage problems that arise	Apply work in human resources, business, and other fields to medicine
Integrity and ethical behavior	Demonstrate respect for others	Role model "best practice" when unexpected and/or untoward event Maintain quality/standard of in-person care	Teach on elements of, and how to build a culture related to, ethical practice
Scope	Help the patient be successful and seek consultation if needed	Identify potential concerns and practice within scope(s) after assessment of pros/cons	Provide feedback on scope and boundary issues Prevent/trouble-shoot/manage problems
Practice-based learning			
Administration	Learn basics of in-person care	Note important differences between in-person and telemedicine care	Teach practice adjustments for clinical, legal/regulatory, and other issues
Safety and quality improvement (QI)	Systematically assess Learn how to participate in QI processes as applicable	Identify, plan for, and manage risks Apply QI information to cases, training, and system	Research and suggest QI, medico-legal, and practice options with re-evaluation
Teaching and learning	Participates and contributes	Organize, contextualize, and evaluate training and identify future options	Provide context, pedagogical foundation, teaching strategies, and evaluation steps
Knowledge			
	Relevance, history of fundamentals	Relevance, history and evidence-base (e.g., apply guidelines)	Research on evidence-based and clinical guidelines
Technology			
Adapt to technology	Present self well with verbal and non-verbal aspects	Plan for differences, identify barriers, and put patient at ease	Additional ways to engage and express empathy
Remote site design	Observe	Identify problems and solutions Add toys or furniture for child TP	Pre-planning: iterative improvement Modification based on care options
Technology operation	Microphone, camera, and other basics	Operate hardware, software, and accessories; basic trouble-shooting	Optimize components based on clinician, plant, and other components

Movements by Professional Organizations and Boards

The American Psychological Association Educational Directorate published a guidebook on competency benchmarks in 2012 [48]. More recently, the Association of State and Provincial Psychology Boards (ASPPB) made notable efforts to define and measure competencies for psychologists who practice independently [49] and is currently developing a skill-based exam to be used by psychology licensing boards. The concept of maintenance of competencies and developing a skill-based assessment at the time of licensure renewal is a current project—similar to the work of the American Board of Psychiatry and Neurology (ABPN).

Future ABPN and American Psychiatric Association initiatives with technology will feature more online training, with simulated and/or electronic/virtual patients, and focus on skill development, team-based care, and interpersonal communication [50, 51]. As graduate medical education accreditation is moving longitudinal with data input and evaluation, continuing medical is also moving to a monthly or quarterly model of participation rather than quasi-annual or 10-year cycles of recertification. For example, The American College of Cardiology has rolled out the Lifelong Learning Portfolio (LLP)—largely conducted via technology—and tools like CardioCompass to search guidelines [52]. Another example is the MOCA Minute® (Maintenance of Certification Anesthesiology), which is an interactive learning being piloted to replace the cognitive examination. It consists of 30 multiple-choice questions per calendar quarter [53].

Limitations and Concerns

There are several immediate needs and concerns, based on the limitation to this paper and the literature. Competencies in TBH, TP, social media, and mobile health require implementation and evaluation. Competencies specific to particular mediums, professions, and/or medical specialties need further research and elaboration. Guidelines and standards need to be better defined, researched, and disseminated. Traditional methods of assessing knowledge and skill rely too much on multiple-choice tests, partly due to troubles with reliability and validity of other formats. Finally, telecompetencies

may be seen as a direct challenge—though well intended to ensure quality of care—to accreditation and board agencies' assumption that in-person care is already "good enough." Some organizations believe that additional training requirements will be too much or pigeonhole clinicians with higher expectations.

Conclusions

The TBH evidence-base is improving, and competencies are becoming clearer in comparison to in-person care. Supervision, feedback, and faculty development can translate TBH research from clinical outcomes and models of care to measurable skills/behaviors. Much more input is needed from various stakeholders, including the leadership of intraprofessional and interprofessional boards and accreditation bodies, to move toward consensus. Professional organizations that function across disciplines like the ATA and CTIBS—and those who essentially run capitated system of care (e.g., Veterans Healthcare Administration and Department of Defense)—are in a unique position to move training and competencies forward. More research is needed on implementation, measurement, and evaluation of competencies.

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Compliance with Ethical Standards

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