

VIRTUAL TREATMENTS IN AN INTEGRATED PRIMARY CARE-BEHAVIORAL HEALTH PRACTICE: AN OVERVIEW OF SYNCHRONOUS TELEHEALTH SERVICES TO ADDRESS RURAL-URBAN DISPARITIES IN MENTAL HEALTH CARE

WILLIAM E. HILLS¹ A-F

• ORCID: ORCID: 0000-0001-7319-9629

KAREN T. HILLS² E,F

¹ Coastal Carolina University, Conway, SC, USA

² Beaufort Jasper Hampton Comprehensive Health Services, Ridgeland, SC, USA

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ABSTRACT

A quiet revolution underway is leading to changes in healthcare for many countries of the world. The sentinels of health have always been physicians; the medical model, representing the research, education, and experience of medical doctors, has worked well for treating acute conditions of injury and physical illness and been very successful in reducing disease-producing morbidity and mortality. But pressing contemporary issues, such as spiraling healthcare costs, population aging and the need to manage chronic conditions, and recognition that mental health care is necessary for societies to be physically healthy, are forcing a reevaluation of existing conceptualizations of care. In response, physicians are increasingly working in integrated practices with other specialists to broaden care coverage to include social and behavioral conditions empirically demonstrated to influence medical care outcomes. Aiding the development of these new, more inclusive models of healthcare are advances in communication technologies. Practitioners are now using synchronous and asynchronous forms of communication to deliver physical and mental health services beyond the boundaries of traditional brick-and-mortar practices, into communities where clients live and work. This brief review of the potential of telehealth to address disparities in healthcare has two purposes: 1) examine an innovative model of comprehensive, integrated biopsychosocial services useful in single- and multiple-location practices; and, 2) identify challenges of using synchronous, virtual technologies for client-centered, mental health care service provision in rural, underserved areas.

KEYWORDS: integrated care, behavioral health, rural mental health, telehealth, virtual technology, synchronous

BACKGROUND

Healthcare has become central to policy discussions, with consumers in many countries identifying overall service access, the need to balance costs with service provision [1], and mental health care as primary concerns [2,3]. Growing challenges of population aging [4] and research demonstrating links between behavioral issues and medical outcomes [5–7] are prompting healthcare providers to look for new approaches to effectively provide coverage for a broad range of medical, psychological, and social issues [8].

Chronic healthcare needs are highlighted through an increasing number and larger percentage of older adults for all countries of the world [4] and by the global short-

ages of specialists to manage unique, aging-related needs of all adults [9,10]. This includes addressing the rapidly growing need for informal caregivers for home-based care [11,12, pp. 325–327] and professionals to manage expected global surges in dementia conditions [13]. Chronic care needs have also been identified for conditions that afflict all age groups, such as obesity, arthritis, diabetes, anxiety disorders, and depression; impact workforce participation; create dependence; and, predict disability [14–16]. It is clear that care management is moving beyond traditional models of care [17]; the shift in focus from treating acute care needs, still a central concern of primary care practices, increasingly includes the management of long term, chronic care conditions.

PRIMARY CARE-BEHAVIORAL HEALTH INTEGRATED PRACTICE

One innovative approach to more comprehensive care includes the integration of primary care with behavioral health (PCBH). Behavioral health is a relatively new specialization that "...encompasses prevention, intervention, and recovery from mental health and substance use conditions" [18, p. 5]. The concept is similar to mental health, but the focus of behavioral health also includes the promotion of health and wellness behaviors. Behavioral health is becoming the preferred term in clinical applications: it avoids the stigma of mental health labels; and, by recognizing that behavior is a critical component of mental health conditions, includes the possibility of behavior change [19,20].

The PCBH model employs a biopsychosocial perspective [21] to provide medical, psychological, and social care in one practice, albeit sometimes in multiple locations at distance from one another. The providers in a PCBH practice work together as an interdisciplinary team: under the direction of the physician(s), additional team members, consisting of nurses and nurse practitioners, social workers, mental health providers, community health workers, and other specialists, as needed, engage in task sharing (i.e., task shifting) [22] to provide medical, psychological, and social care. Utilizing complementary skill sets, team members provide professional assessment of the full range of client behavior [19]. A physician can begin a medical examination with behavioral health information prepared ahead of time or note issues during an examination and request further assessment(s). Patient information, shared through a common record keeping system, is made available to and updated by all providers. A substantial body of research has demonstrated the efficiency of the PCBH approach; among reported benefits are better cost control, improved treatment outcomes, increased satisfaction for providers and clients, and better coordination of services promoting client independence within communities [23,24,19].

MENTAL HEALTH CARE

An advantage of the PCBH approach is the ability to assess and treat behavioral health – i.e., mental health care – needs of clients [18]. It makes sense that primary care is the first point of access for people with medical issues; indeed, people think of physicians when a physical health problem arises. As a result of this behavioral conditioning, however, persons with mental health needs also look first to medical professionals for answers [3]. The increasing prevalence of mental health problems [21] has become a major challenge for primary care, as physicians acknowledge a lack of substantive training for serious mental illness, and two thirds report they cannot secure an appropriate referral for clients with mental health issues [3,25]. Mental illness has become the leading cause of disability in the

United States, with access to treatment available for less than 20% of persons needed it [25]. Moreover, one in four persons in the United States has two or more multimorbid conditions, defined as the conjoint presence of physical and mental health problems, influencing their overall health status [21,26]. In other words, the presentation and treatment of many physical health-related problems are complicated by interactions with mental health conditions, including anxiety and depression and conditions with social components, such as loneliness, isolation, trauma history, and substance abuse [27].

The provision of mental health treatment and social work services in a PCBH practice offers the possibility of care planning based on comprehensive assessments [8]. For people who live in urban areas, where healthcare is readily available, primary care is typically accessed through visits to brick-and-mortar establishments. In rural areas, however, where primary services are less or not available, people in need cannot always walk into a doctor's office or clinic. This is especially true for persons with mental health conditions [28], even as research shows that mental illness prevalence in rural areas is similar to that seen in urban areas. Rural areas are known to be underserved for mental health services, which disproportionately affects ethnic and racial minorities and low-income persons who report work schedule conflicts, childcare needs, and transportation difficulties as barriers for service reception [29–31]. In the United States, even though two thirds of all counties are considered rural, less than 10% of the mental health workforce is located in rural settings [28]. Research has shown that practitioners of disciplines that provide specific training in mental health conditions, including social work, psychology, and psychiatry, are more likely to locate their practices in urban, affluent, high population areas [32,3]. This mal-distribution of services is further complicated by stigma and embarrassment associated with mental health conditions, and attitudinal differences, with persons residing in rural areas being more distrustful of and less likely to seek mental health treatments [33].

TELEHEALTH CARE OPTIONS

The transition to PCBH comprehensive treatment and care planning has been made possible, in part, through advances in communication technologies. There now exists a wide range of care options utilizing online capabilities – collectively called telehealth – to replace or supplement traditional care, which has required providers and clients be in the same location at the same time. This extension of the therapeutic relationship – the foundation for successful mental health treatments – beyond the standard "appointment" is providing professionals and clients with unprecedented access to one another, creating new opportunities for types of care not previously available in traditional practices [29], and reducing disparities by bridging the geographic gap for rural and urban mental health service provision [34].

Telehealth comes in two forms: synchronous and asynchronous. Synchronous telehealth refers to in-person, real time connections that include audio and video data streams [35]. Although telephone calls technically fall into this category, the virtual communication increasingly seen in PCBH settings employs videoconferencing techniques: secure, face-to-face, two-way interactions allow providers and clients to connect to one another virtually, with more possible ways for interactions to occur [36] and more options for patient empowerment [37]. Other communication tools, such as texts and email, although useful in the management of patient care, are referred to as asynchronous because they lack the real-time component of in-person communication. It is possible, of course, for patient care to bridge the gap, utilizing both synchronous and asynchronous forms of communication, such as when asynchronous techniques are used as supplements to in-person treatments, often as reminders, boosters, or for self-management purposes. Asynchronous tools are collectively called behavioral intervention technologies (BITs) and include automated, preprogrammed content of interactive, computer-based applications [38]. There are already thousands of BITs available [29,35,39]; a review of asynchronous technologies is beyond the scope of the present report.

VIRTUAL TELEHEALTH CARE DELIVERY

Synchronous telehealth interventions using virtual (i.e., videoconferencing) technology can be offered in supervised and unsupervised settings [29], depending on whether clinical staff persons are available at the client site. For PCBH providers located in single settings, the supervision of services (including logistics of intake and client escort within the facility, etc.) can take place by staff members and through onsite referrals; face-to-face service-delivery sessions are conducted in-person, with a provider and client in the same room. Telehealth service delivery in single site PCBHs comes into play when a needed specialist, such as a tele-behavioral health provider (i.e., a mental health counselor) is not available onsite and so synchronously connects with patients. Virtual service delivery is increasingly common in PCBHs with multiple locations, when a need arises to share specialists across locations; in these situations, a patient can check in at any of the PCBH locations for assessment and/or treatment, and then, as needed, be connected virtually to the additional provider(s).

Given the complicated nature of virtual technologies [40,29], it is recommended that an IT (information technology) person be on staff to coordinate technical aspects of equipment; this includes such issues as purchase and setup of equipment, connecting and maintaining virtual links during sessions, software and hardware updates, and trouble-shooting in moments of equipment failure (due to storms, power surges and outages, etc.). There is also a need in synchronous telehealth for technical proficiency on both ends of a con-

nection (i.e., where the service is provided and where the service is received) and for providers to be able to talk-the-talk with IT personnel in moments of system interruption and failure. This requirement for competency in telehealth equipment usage makes unsupervised service delivery (i.e., where staff are not present at the client site) largely untenable, at this point in time; although technology in the home setting is increasingly common, many prospective clients for mental health services lack the expertise to maintain the virtual service continuity necessary for providers to meet ethical standards for mental health service delivery [41,30,31,35].

The consideration of how to securely transmit and store digital information is also of paramount importance in virtual care delivery. Two categories of videoconference platform are in use: 1) standards-based, which uses a connection specific for a freestanding system (e.g., a PCBH); applications must be installed in computers at both provider and client sites; and, 2) consumer-grade, which uses the internet to transmit information from one IP address to another. The standards-based platform is more expensive to install and maintain, but more secure. Consumer-grade platforms are commercially available and gaining in popularity, but are slower and may use third party servers, which raises concerns about offsite storage of electronic records and regulation of access to confidential data. For similar security issues, public platforms, such as Skype and smartphones, are considered inappropriate for clinical usage, at this time [see 29,40, for detailed explanations of technology issues].

Some PCBHs using standards-based videoconference platforms partner with existing community services, such as schools, where supervision by personnel (e.g., nurses, social workers) can readily be provided. Schools in the United States have offered nursing services as a way to effectively provide healthcare in communities for many decades [42]. School-based services, with mostly asynchronous links to physicians and pharmacies, offer families convenient and efficient access to care. With the addition of social workers, present now in most schools in the United States [43,44], services are increasingly going online, and schools can offer synchronous mental health services. For example, a child with an identified mental health need can be virtually connected from the school site to a tele-behavioral health counselor operating under the aegis of a PCBH-school relationship. With the aforementioned difficulties of maintaining technical access, and in light of existing ethical and operational standards, such as needs for confidentiality and informed consent, schools are nonetheless seen as good points-of-contact and points-of-entry for clients to real time access to medical and mental health services.

CHALLENGES FOR VIRTUAL SERVICE DELIVERY

Mental health care is becoming a priority for health-care systems, and great strides have been made toward

incorporating telehealth services into overall diagnostic and treatment processes [2]. Significant hurdles remain, however, for virtual mental health service providers to be fully accepted in the PCBH setting. Among identified areas of challenge specific for providers are legal [45] and ethical [34] concerns. There are two regulatory structures outlining legal and ethical responsibilities of practicing mental health professionals in the United States: the Health Information Portability and Accountability Act (HIPAA) [46] and the Health Information Technology for Economic and Clinical Health Act (HITECH Act) [47]. Both sets of guidelines specify “reasonable” (45, p. 3 of 10) standards for what providers can and cannot do when using technology in service provision, including how to create, transmit, and maintain secure digital records.

Two core ethical principles, beneficence and non-maleficence – provide benefit for the client and do no harm – have been central in the development of ethics guidelines for mental health practice, as persons with mental health conditions are considered to be an especially vulnerable population [48]. There are now concerns, however, that technological advances are outpacing ethical guideline development [36]. Campbell and Norcross [49] provided a framework for issues of competency and identified four areas of focus for “telepsychology” – the term approved by the American Psychological Association in 2013 for the use of telehealth technologies in psychological practice – to reach the standard of care acceptable to meet ethical guidelines of the field: 1) clinical competence, 2) technology competence, 3) client/patient competence, and 4) cultural competence. Other disciplines engaged in clinical mental health service provision, such as social work, are having similar conversations and recognize the need for education and training for practitioners engaged in team-provided telehealth services and private practice. As it is common for social workers to become behavioral health providers and join PCBH teams, Olfson suggested that current and future mental health workforce shortages could be addressed by “...training social workers in relevant evidence-based psychosocial interventions; and building team-based mental health services in primary care” [3, p. 988]. This can help reduce disparities in care, as there are more social workers practicing outside of urban areas (i.e., in rural settings) than the number of psychiatrists and clinical psychologists combined [3]. Further, clinical social workers are licensed and qualified to provide mental health diagnoses and treatments as tele-behavioral health providers and are already the go-to discipline for community-level organization of care. In any event, the demand for virtual services is expected to increase. The ubiquity of familiar devices, such as smart phones and online-access tablets, has led an increasing number of people to become more comfortable with virtual technology and accept its everyday use as inevitable. People now routinely reach for their phones for information and entertainment purposes, and video-based chatting has

become commonplace and a viable choice for communication with family and friends. This acceptance of technology has allowed its spread into the healthcare arena, as people search online for medical information and shop for treatments. Although many clients still show preference for traditional treatment modes [31], providers report that clients increasingly expect to use technology as part of the treatment process [41,45].

There are opportunities to use virtual therapy in an unsupervised setting, e.g., a client’s home, to reach someone in need who might not be served otherwise [45]. A significant strength of this approach is the development of a more thorough understanding of a client’s home environment [50], and there are treatment-based comparison studies of tele-mental and office-based care showing good retention of clients, good client engagement, and equivalent measures of therapeutic alliance for both treatment modalities [29]. Provision of services in unsupervised settings, however, includes revisiting basic issues, long addressed in face-to-face interactions, such as client distraction, reduced ability to assess body language (non-verbal cues) of clients during sessions [51,31], maintenance of professional boundaries [45], and how to obtain informed consent of clients for treatment [52,53]. A suggestion for informed consent is to obtain “teleconsent” [53, p. 57], which includes a digital signature based on facial verification of a client. This technique is discussed by Lopez and associates [53] for research purposes but might also have relevance for clinical practice.

CONCLUSIONS

The acceptance of behavioral health and tele-behavioral health providers in PCBH practices holds great promise for increasing access to mental health services, particularly for persons in underserved rural areas. The most common form of mental health service in integrated care includes supervised, synchronous connections, but tele-behavioral health providers are increasingly being shared across PCBH settings and working in private practices to address shortages of mental health specialists. Policies for telehealth provider licensing (i.e., where the client is located relative to where the therapist is located) and reimbursement for virtual service provision are under development at this time [45,51]. Telehealth communication technologies are also proving useful in other areas of healthcare, for example, in the diagnosis (but not treatment) of dementia and cognitive decline [54] and to reach special management populations, such as inmates [55] and children with autism [56]. Researchers in all areas of usage, however, recognize the immaturity of telehealth approaches and support the further development of the field through empirical examinations [57]. Indeed, the commonly expressed sentiment throughout the literature for disciplines actively pursuing telehealth, even as formal training lags behind, is, nonetheless, that “...technology is here to stay in mental health practice and research” [49, p. 4 of 5].

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Correspondence address:

William E. Hills, PhD, MSW
Professor of Psychology
Coastal Carolina University
Conway, South Carolina, USA
Phone: (+1) 843-349-2276
E-mail: hillsw@coastal.edu

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