Implementation of telepsychiatry services in a county-based behavioral health setting: A quality improvement project

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Abstract

During the COVID-19 global pandemic, a county-based adult behavioral health clinic promptly transitioned from face-to-face patient encounters to telepsychiatry technologies. Due to a low resilience for change and scarcity of quality improvement norms and procedures, identification of staff responsible for patient anticipatory guidance and telepsychiatry education were contacted to engage in an on-demand module on the patient experience of telepsychiatry. A pre-and-post test survey was administered, classifying specific themes for quality improvement via grounded theory. Themes emerged were analyzed through the lens of the quality improvement model, Plan-Do-Study-Act (PDSA), and evidence-based procedures and models via nationally recognized and federal healthcare entities. Implications explored included upstream analysis of quality improvement at the county-based health department and behavioral health clinic, work-burden relative to mismanagement of telepsychiatry, and the necessity for continued quantitative and qualitative data collection on patient experience, attendance of tele-appointments, medication non-adherence, suicidal and homicidal behaviors, and emergency room visits, during the continued implementation of evidence based telepsychiatry.

Introduction

Due to the COVID-19 pandemic and the eminent risk of infection, healthcare settings have transitioned from face-to-face interactions to telehealth technologies (HHS.gov, 2020; Ravindran, et al., 2020). The United States Department of Health and Human Services (HHS) has issued a formal recommendation for healthcare providers to use two-way telehealth for routine appointments across all specialties (HHS.gov, 2020). The Office for Civil Rights, within HHS, has decreased HIPPA rules for commonly used technologies, with the exception of non-public publishing (i.e. TikTok), like FaceTime, Facebook messenger, Google Hangouts, Zoom, or Skype (HHS.gov, 2020). The Centers for Medicare & Medicaid Services (CMS) issued a provisional waiver to allow their patients to utilize telehealth services; telehealth to be conducted in providers' homes, across state lines, with both established and new patients, and for health services rendered, over video or audio, to be billed as if face-to-face (HHS.gov, 2020). HHS has supplemented their recommendations with a telehealth website, telehealth.hhs.gov, for patients and providers to effectively transition to virtual appointments (Health Resources & Services Administration, 2020; HHS.gov, 2020).

With federal and local support, a community-based behavioral health clinic (BHC) introduced telepsychiatry services for the first time. Telepsychiatry is novel for both patients and the clinical team. BHC serves hundreds of the county's residents; their telehealth education has been delegated to a singular patient support specialist and a paper handout. BHC has maintained patient safety their utmost priority during their transition to telepsychiatry. BHC serves individuals with severe and persistent mental illnesses (SPMI). The SPMI population suffers from mental health diagnoses with significant chronicity, incurability, and deleterious global functioning (Zumstein & Riese, 2020). The loss of face-to-face interactions have affected the

patient experience and clinical evaluation process. Due to varying accessibility, some patients are only capable of audio-only, while others have the privilege of video appointments with their psychiatric provider, case manager, or therapist.

Telehealth education for patients has been highlighted by a upstream quality improvement evaluation and anecdotally by BHC as a priority (Harvard Medical School, 2019; Marion County Health & Human Services, 2020). The quality and replicability of telepsychiatry education via a singular peer support specialist is uncertain due to absent quantitative and qualitative data. Via interview, the peer support specialist reported taking a high volume of calls; even on their personal mobile device outside office hours, in environments which may compromise confidentiality and education efficacy (Anonymous, 2020). As previously stated, BHC prioritizes patient safety. Through upstream quality improvement epistemologies, patient safety cannot be substantiated if individuals do not know how to effectively engage in telehealth technologies and interactions (Health Resources & Services Administration, 2020).

Framework

To effectively evaluate, disseminate current evidence, and effectually improve telepsychiatry practice at BHC, the PDSA model and upstream quality improvement science will be utilized (Harvard Medical School, 2019; Nelson, Cook, & Raterink, 2013). The four stage PDSA cycle guardrails a quality improvement initiative (Christoff, 2018). In the “plan” stage, predictions of outcomes are postulated, and tasks are clearly designated; the “do” stage is the implementation procedure or intervention in action; during the “study” stage data and results are garnered and then analyzed; the “act” stage includes the adaptation, adoption, or elimination of the postulated plan (Christoff, 2018). A PDSA cycle then starts again (Christoff, 2018). This project will be initiated during the PDSA “act” phase, since BHC has initiated a telepsychiatry

system due to COVID-19 and requires analysis of current procedures and practice (Rodriguez-Villa, et al., 2017).

Literature review

A literature review was performed on ScienceDirect by combining the terms "telepsychiatry" and "SPMI," yielding 40 results. Additionally, ScienceDirect was searched combining the terms "telepsychiatry" and "patient education," yielding 406 results. The search was limited to peer-reviewed, full text research, in the English language, and published in the last five years. To expand search results, the "Recommended articles" and "Citing articles" features were used. PsychInfo was searched with the term "telepsychiatry" with limitations of full text, English, and published in the last five years, yielding 10 results. OVID Medline was searched with the combined subject headings "Telemedicine," "Psychiatry," and "Mental Health Services" with limitations of full text, English, and published in the last 5 years, yielding 33 results. Credible educational and government websites were used for foundational information. The focus of this literature review will be on 1) initiation of telepsychiatry during COVID-19, 2) efficacious telehealth implementation models, and 3) patient experience and education. Attention will be given to the ethical and legal implications of these topics in addition to quality improvement practices.

Initiation of telepsychiatry during COVID-19

Psychiatric healthcare is undergoing a profound transformation in association to technological advancements and current demands relative to the COVID-19 pandemic (Chen, et al., 2020; Rashid Soron, et al. 2020; Shore, 2019). In March 2020, payer and regulatory changes

[1]were enacted reducing restrictions on telehealth and reimbursement due to COVID-19 (Chen, et al., 2020). The COVID-19 pandemic has quickly demanded modifications to the delivery of healthcare and psychiatric services (Chen, et al., 2020). Social distancing guidelines have propelled the essential delivery of mental healthcare via tele-services for continuity of care, prevention of psychiatric exacerbations, and the treatment of new onset symptoms, related and unrelated, to the financial, social, and interpersonal stressors of COVID-19 (Chen, et al., 2020). Coinciding with this, and a mediating variable, is the United States mental health provider shortage (Cowan, et al., 2019). Telepsychiatry proposes a solution to social distancing guidelines and sustains continuity of care for patients who are unable to be physically present for psychiatric appointments (Chen, et al., 2020; Fortney, et al., 2020).

Telepsychiatry allows an alternative platform of mental health care provision, increasing patient access to care and reducing barriers to appointment attendance (Fortney, et al., 2020). Synchronous telepsychiatry modalities use live video-audio through a digital device; asynchronous modalities, through a patient portal, store and forward messages, images, and relevant information The aforementioned data are then interpreted and responded to via a provider's clinical judgment and availability and remote patient monitoring, defined as the direct transmission of patient statuses to their provider who is outside of their proximity (Centers for Disease Control and Prevention, 2020), is utilized. Telehealth video technologies can be quickly implemented and used for meetings in circumstances which disciplines are not working in a centralized environment. Telehealth-specific video incorporates a digital waiting room, document sharing and payment or co-payment features. However, electronic health record embedded video is typically a costly option and a decision made by organizational

leadershipandleadership, and is slowest in implementation (Northwest Regional Telehealth Resource Center, 2020). Above all else, the telepsychiatry modality utilized should effectively allow the healthcare provider to host a humanistic, patient-centered, and effective encounter (Gopalan, et al., 2020).

Per patients, telepsychiatric options decrease wait times for appointments, travel time and costs, save patients 145 miles and 142 minutes per visit; and qualitatively, patients report comfort and satisfaction with telepsychiatric services after initial ambivalence (Cowan, et al., 2019). Telepsychiatry has been associated with reduced costs to clinics, patients, and relieves access burdens in mental health care (Hilty, et al., 2018). In outpatient settings, telepsychiatry has been found to be as comparable to face-to-face clinical services (Gopalan, et al., 2020). Furthermore, outpatient telepsychiatry services have been correlated with reduced emergency department visits (Gopalan, et al., 2020).

Efficacious telepsychiatry implementation models

Telehealth Implementation Playbook (TIP). TIP is a four-part, 128-page informational document for healthcare leaders modifying face-to-face appointments to telehealth technologies during COVID-19 (American Medical Association [AMA], 2020). In part one, TIP informs the reader about tele-healthcare germane to practice settings, and how to implement telehealth in their subjective environments; part two describes how to form a leadership team, define success, choosing a vendor, and garner buy-in; part three delineates how to organize workflow, the care team, how to collaborate with patients, and indicators of successful telehealth provision; part four of the document lists available resources for healthcare leaders to supplement their telehealth services through templates [See FIGURE A], worksheets, service codes, and information on cybersecurity (AMA, 2020, p. 3).

The Personalized Implementation of Video Telehealth (PIVOT). PIVOT [see Figure B] is a telehealth model created by the Veterans Health Administration to reduce clinic system silos, produce replicableand scaffold organizational management of telehealth services (Lindsay, et al., 2019). The initial step of PIVOT is collaborating with external facilitators, the health organization's leadership, and appropriate stakeholders to align with nationally established, system implementation goals, practice, and to collaboratively strategize implementation efforts (Lindsay, et al., 2019).

PIVOT proposes external facilitators, licensed clinicians with expertise in implementation science and telehealth services, gather quality improvement information in conjunction with training, supporting, and mobilizing internal facilitators to implement and maintain tele-services (Lindsay, et al., 2019). Internal facilitators, individuals delegated responsibility by external facilitators, are individuals familiar with the health organization and are interconnected with health providers deemed external facilitators (Lindsay, et al., 2019).

Internal facilitators are given the role of identifying clinical champion providers in the appropriate disciplines and clinics apart of the health organization implementing tele-services (Lindsay, et al., 2019). Clinical champion providers can be those working in health specialties or in social work, therapy or other relevant roles in the health organization (Lindsay, et al., 2019). External facilitators are positioned to train clinical champions in tele-health services, mentor and empower internal facilitators to support consistently positive tele-services messages (Lindsay, et al., 2019). External facilitators support internal facilitators with resources, troubleshooting, and create a sustainable tele-services program (Lindsay, et al., 2019). Throughout telehealth services implementation, external facilitators are responsible to review and compile federal, state, local,

and organizational evidence-based practices, ethical guidelines, laws, and regulations relative to telehealth services, technology, and compensation (Lindsay, et al., 2019; p. 566).

Consistent and regular communication [See Figure C] with early adopters, mental health clinicians, clinic management, and organizational leadership is paramount for accurate perceptions and experiences on the utility of the tele-technology. Through regular facilitation, or interdiscplinary collaborative meetings, designated external and internal facilitators meet to understand obstacles and mediators to telehealth implementation (Lindsay, et al., 2019). Faciliation is frequent for external encouragement, group feedback, and addressing any concerns or issues as they arise. In addition to facilitation, early and enthusiatic adopters of telehealth serve to and were found to increase efficency and organizational buy-in (Lindsay, et al., 2019).

Patient experience and education

HHS Understanding telehealth website. HHS designed and made a telehealth educational website for patients navigating teleservices during COVID-19 (HRSA, 2020). The informational resource offers a synopsis of what telehealth is, the categories of healthcare available over telehealth, and the benefits associated with telehealth services through text and an embedded HHS Youtube video (HRSA, 2020). Moreover, the website offers education on emergency hotlins, on-demand teleservices, and how to find a telehealth provider relative to insurance and location (HRSA, 2020). For individuals uncertain of what to expect during a tele-appointment, a link titled, “Preparing for a virtual visit details how to get comfortable with interpersonal interactions over technology, telehealth privavcy, how to prepare for a tele-appointment, and how to troubleshoot techonological issues (HRSA, 2020).

Supplementing the HHS telehealth website, the provider section of the site educates healthcare leaders how to prepare patients for telehealth (HHS, 2020). Topics covered include: how to communicate the availability of telehealth, introducing patients to telehealth, how to establish informed consent over a digital modality, how to set up a patient with a new techology, helping patients prepare for their appointment, and creating an emergency plan (HHS, 2020).

Therapeutic alliance. The collaborative relationship and therapeutic alliance between mental health providers and patients, over telehealth technologies, is foundational to psychotherapy and patient mental health outcomes (Ryu, Banthin, & Gu, 2020). Over telehealth modalities, patients will experience unique interactions with a mental health provider (Ryu, et al., 2020). Therapeutic alliance over technolgy is a flucuating, valuation, and dynamic interconnection with the self and provider (Ryu, et al., 2020). Significantly, internet based therapy has been correlated with therapeutic alliance and effective therapy outcomes (Kaiser, Hanschmidt, & Kersting, 2021).

Patient experience and the ritual of the table. In a perspective piece for the New England Journal of Medicine, Susan Hata, MD (2020) wrote about the provider and patient experience of transitioning to telehealth technology. Often a provider and patient meet at a table (Hata, 2020). The COVID-19 pandemic has restricted the rich ritual of a normative appointment (Hata, 2020). Hata (2020) writes, “I’ve always liked to think that seeing their doctor in person is also what helps buffer our patients against the frustrations induced bythe ineffciencies of even the best health care system [paraphrased].” Yet, Hata (2020) discovered a refreshing new perspective when she realized doctors are now invited into the patients’ space, their comfort zone. The patient “is the host and I am the guest” (Hata, 2020). Hata (2020) postulates maybe the technology and screen time vilified for generations could be reconciled as a pathway for

interconnection with patient and provider. To add, she elucidates the patient-provider relationship and ritual of a normative doctor's office can transcend the abrupt COVID-19 changes through our humanistic connection and compassion (Hata, 2020).

Purpose

The purpose of this project is to gather qualitative data on patients and improve telepsychiatry education at BHC.

Specific Aims. This project has three aims:

1. Train selected employees at BHC on telepsychiatry services;
2. Disseminate evidence based telepsychiatry patient education;
3. To improve telepsychiatry services through data collection, evidence-based adaptations and interdisciplinary collaboration.

Proposed method and measures

Setting. is located in the state capital of Oregon with an estimated population of 174, 365 (United States Census Bureau, 2019). The population is 80.9% Caucasian, 1.5% African American, 2.7% Asian, 1.3% Pacific Islander, 6.8% multiracial, and 23% LatinX (United States Census Bureau, 2019). The surrounding county's estimated population is 346,868 (Marion County, 2018). The county is located south of Portland and stretches from the Willamette River to the Cascade Mountains totaling 1,200 miles (Marion County, 2018). Prior to 2020, 15,876 Oregonians were houseless (United States Interagency Council on Homelessness, 2019). In August 2020, it was estimated there were 1,118 houseless folks in Salem and 400 individuals

houseless in local Salem parks, Wallace Marine and Cascades Gateway (Statesman Journal, 2020).

BHC is led by an elected board of commissioners and supported by the county Health Department, led by paid employees and licensed healthcare professionals (Marion County, 2020). The current board members do not have healthcare or psychiatric care experience (Marion County, 2020). During the emergence of COVID-19, the board of commissioners released videos to BHC and county Health Department employees with a negative response to Oregon State Governor Kate Brown's address to the public in cooperation with the Centers of Disease Control's recommendations. Due to this, COVID-19 precautions and effectual telehealth services were stymied by political ideations. Despite this, courageous healthcare providers and BHC leaders took efforts to protect patients and employees in the COVID-19 pandemic.

BHC is environmentally structured with a waiting room, nursing triage, clinical office spaces, cubicle offices for case managers, and a pharmacy. Typically, patients wait in the lobby until a provider, nurse, or case manager brings them back for their appointment. They can access the pharmacy for their prescriptions, labs, vaccines, and long-acting injections during office hours. During the COVID-19 pandemic, this has adapted to providers seeing patients from their homes or in a BHC office via telephone or video. Patients typically attend their appointment over the phone or video from their place of residence; or they come to the physical BHC building where a sanitized office space is fitted with video conferencing capabilities. This reduces the risk associated with COVID-19.

Organizational readiness to change. BHC is antiquated in many of its system processes. This is due to the management of the clinic being conducted by non-medical professionals who are unfamiliar with advancements made in health technology and quality

improvement norms. BHC utilizes paper health records and is slowly transitioning to an electronic health record system. The urgent need to transition to telepsychiatry for the service of patients with a SPMI diagnosis caused significant stress and distress for employees.

Anticipated barriers and facilitators. Evaluation of telepsychiatry at BHC has not been adequately assessed. Each member of BHC is experiencing a high work-load burden and the absence of quality improvement leadership is notable. A DNP-PMHNP provider in collaboration with the Adult Behavioral Health Manager spearheaded telepsychiatry changes necessary for mental health provision during COVID-19 in addition to, their regular work duties. In collaboration with both leaders, pertinent analysis of telepsychiatry practice and outcomes will be facilitated.

Participants. Telepsychiatry support specialists designated by case management administration will be selected by their supervisor to participate. In collaboration with administrators, selected support specialists will be contacted via email, and invited to participate in the quality improvement project, and complete informed consent.

Intervention

Together with recruited staff at BHC, patient education protocols will be gathered via a retrospective analysis and interviews. Evidence-based recommendations for the implementation of and current procedures for telepsychiatry appointments will be synthesized for a 10-minute education module on the patient experience of telepsychiatry. This module will be made available on demand and emailed to staff through BHC's secure email server. Evidence-based topics discussed in the module include the following in sequential order: the definition and benefits of telepsychiatry, workflow recommendations, making telepsychiatry inclusive,

telepsychiatry etiquette, day of and during visit considerations, the importance of garnering feedback, and emphasizing the importance of patient education relative to safety.

Recruited participants will complete a free text pre-test survey about their experience with telehealth services, featuring the prompts: 1) a) Do you have a specific role in the telepsychiatry process? b) What is your experience using telepsychiatry (video or telephone) at BHC; 2) How confident do you feel educating patients on the use of telepsychiatry services; 3) What difficulties have you experienced personally helping patients who utilize telepsychiatry? If any; 4) What information, education, or support do you feel you need as a staff helping patients utilize telepsychiatry effectively?

After completing the 10-minute module, they will complete a free-text post-test survey featuring prompts, 1) How confident do you feel educating patients on telepsychiatry services at BHC; 2) Are modules like the one you watched helpful for your role in telepsychiatry services at BHC; 3) How will you support patients differently, after watching the module; 4) Do you feel safe and confident advocating for inclusive patient practices with clinicians and providers?

Via grounded theory, participant responses will be analyzed, and emerging themes will be classified for the augmentation of quality improvement of telepsychiatry services at BHC. Qualitative data will be evaluated via the lens of quality improvement model, PDSA, and evidence-based procedures and models via nationally recognized and federal healthcare entities, to better understand patterns and recommendations for quality improvement (Jamali, 2018). Synthesized data will be presented to the BHC management and clinical team for continued quality improvement of telepsychiatry services (Christoff, 2018).

Cost. Implementation of this quality improvement project will have minimal-to-no cost for BHC. Participation will require 30-minutes in total; 10-minutes required for the module, and an estimated 20 minutes in total responding to the pre-and-posttest survey prompts.

Implementation of project

COVID-19 interruption. After the development of the COVID-19 pandemic, in January of 2020, preparation for, prevention and management of COVID-19 became predominate priorities while safeguarding healthcare workers (Al-Tawfiq, Al-Yami, & Rigamonti, 2020). On March 12th, 2020, Governor Kate Brown announced the closure of all public schools and on March 13th, 2020, Oregon Health & Science University announced the immediate suspension of all clinical rotations (State of Oregon Office of the Governor, 2020, March 8). Subsequently, healthcare procedures in Oregon, guided by the United States Centers for Disease Control and Prevention (CDC) and the Oregon Health Authority (OHA), revised long-held healthcare practices, necessitating innovative and adaptive approaches (Al-Tawfig, et al, 2020; OHA, 2021). Healthcare and public entities operated with the presumption all members of the public, including healthcare clinicians, could be asymptomatic and potentially positive (Al-Tawfig, et al. 2020). Social distancing, screenings, universal masking, and utilization of personal protective equipment were employed (Al-Tawfig, et al, 2020).

Remote services during COVID-19. Due to the COVID-19 pandemic and eminent risk of infection, healthcare settings transitioned from face-to-face interactions to telehealth technologies (HHS.gov, 2020; Ravindran, et al., 2020). These technologies and secure email were used by all BHC staff members for correspondence, meetings, and case management. The adaptation to a new model of healthcare provision, stymied quality improvement initiatives, and disrupted normative work routines for BHC staff. Key stakeholders and individuals identified as

telepsychiatry leaders shifted into different roles and responsibilities. As well, staff began to work remotely rather than at the BHC physical site. This proved to be a consistent obstacle for quality improvement of telepsychiatry services at BHC.

BHC-site based services. Training of BHC employees selected by management on patient education related to telepsychiatry services, was adapted to training the BHC Office Specialist II (OSII). This individual does not work remotely and is responsible for managing and rooming patients in what is called, "the med team room." This is a designated space for BHC patients who do not have the privilege of or access to a smart-phone, tablet, or computer for telepsychiatry technologies and software. The OSII sanitizes the confidential environment and devices, sets up the camera and computer for telepsychiatry services, rooms the patient(s), and collaborates with psychiatric providers for socially distanced telepsychiatry appointments. This individual has the most contact with patients who come to the BHC physical location for scheduled tele-appointments.

Results

Pre-test themes and findings. Prior to watching a ten-minute training module, "Telepsychiatry: the patient experience", the selected OSII was asked to answer the following questions over BHC secure email: 1) a) Do you have a specific role in the telepsychiatry process? b) What is your experience using telepsychiatry (video or telephone) at BHC; 2) How confident do you feel educating patients on the use of telepsychiatry services; 3) What difficulties have you experienced personally helping patients who utilize telepsychiatry? If any; 4) What information, education, or support do you feel you need as a staff helping patients utilize telepsychiatry effectively?

The OSII answered the pre-test questions via secure email and their responses were: 1) No, I set up the virtual appointment in the Med Team Room; 2) Due to the fact that this is my first time in this field/occupation, I have no experience or much knowledge on how virtual appointments are handled or processed. So, I'm not sure I'd be able to relay that information properly to the individual, as of right now; 3) I haven't experienced any challenges as of yet; 4) Honestly, any information/training would be appreciated in the future.

Key themes identified from the OSII responses were identified via each question and response. These themes of focus are congruent with the order of questions and responses; Key themes 1) role and responsibilities; 2) knowledge and competency; 3) perceived challenges; 4) desired and available training. Insights and reflections on these themes will follow in the discussion of results.

Post-test findings and themes. After watching a ten-minute training module, "Telepsychiatry: the patient experience", the selected OSII was asked to answer the following questions over BHC secure email: 1) How confident do you feel educating patients on telepsychiatry services at BHC; 2) Are modules like the one you watched helpful for your role in telepsychiatry services at BHC; 3) How will you support patients differently, after watching the module; 4) Do you feel safe and confident advocating for inclusive patient practices with clinicians and providers?

The OSII answered the post-test questions via secure email and their responses were: 1) I definitely feel more confident explain the service to individuals. Although, I would like further training on the subject; 2) Definitely!; 3) While some of the practices outlined in the module I already applied, I feel that being more informative with the individual, (i.e.: explaining why I'll be present before the appointment starts, and how I'll be available for technical issues that may arise, etc.) is highly important for the individuals comfort; 4) I can safely say, that my answer to

question one, most definitely applies to this questions as well. I grasp the concept and basics, but I feel more training and guidance would be incredibly beneficial.

Key themes identified from the OSII responses were identified via each question and response. These themes of focus are congruent with the order of questions and responses, key themes: 1) role and responsibilities; 2) knowledge and competency; 3) knowledge and competency; 4) desired and available training. Insights and reflections on these themes will follow in the discussion of results.

Discussion of outcomes

The predominate goal of this quality improvement project was to increase BHC employee knowledge of telepsychiatry services for improved patient education and support. This was postulated via three aims, train BHC employees on telepsychiatry services, disseminate evidence-based telepsychiatry patient education, and improve telepsychiatry services through data collection, evidence-based adaptations, and interdisciplinary collaboration.

Main findings from the pre-and-posttest survey underscored specific themes for BHC, to assess the quality of employee knowledge and patient education. These themes reflect areas of employee competency and necessitated quality improvement. The following themes will be discussed under the lens of the PDSA model and current research from the literature review, in subsequential order: 1) roles and responsibilities in patient education; 2) knowledge and competency; 3) desired and available training; 4) perceived challenges.

Roles and responsibilities in patient education. Successful telepsychiatry implementation requires the development of a team of individuals with diverse perspectives and specialties who openly communicate their insights on clinical, financial, administrative, information technology,

and legal topics (AMA, 2020, p. 24). Reflecting upon the AMA (2020) TIP, execution of telepsychiatry and the formation of an engaged team, requires unambiguously established roles, responsibilities, and expectations.

In the pre-test survey, the OSII was asked if they had role in telepsychiatry at BHC, they responded, “No, I set up the virtual appointment in the Med Team Room.” Highlighting a team formation gap in roles and responsibilities (AMA, 2020). The OSII was delegated responsibilities without understanding their role, responsibilities, and expectations in telepsychiatry; and, how valuable their perspective is for high quality telepsychiatry services. In the post-test survey, the OSII was asked, how confident they felt educating patients at BHC, they responded, “I definitely feel more confident explaining the service to individuals. Although, I would like further training on the subject.” Illuminating improved clarity of their role and responsibility in patient education relative to telepsychiatry, and the necessity for continued employee training.

The ten-minute module on patient education in telepsychiatry, improved the OSII’s confidence and illuminated their perceived need for further training on their role, responsibilities, and expectations (AMA, 2020). As mentioned previously, this project was initiated during the PDSA “act” stage, at BHC (Christoff, 2018). BHC had implemented telepsychiatry rapidly, due to COVID-19, and required analysis of current procedures and practice (Rodriguez-Villa, et al., 2017). Themes from qualitative results indicate the need for continued PDSA cycles and revisiting the plan stage (AMA, 2020; Christoff, 2018). The quality of telepsychiatry services can be augmented by continuing telepsychiatry as it is currently operating, and refining team formation (AMA, 2020).

BHC can refine and reexamine their team formation by re-identifying key leaders in their core leadership, advisory, and implementation team(s) (AMA, 2020, p. 25). Team formation is crucial for robust productivity, identifying barriers from all angles, scaffolding buy-in, delegating workload, and reducing workflow interferences (AMA, 2020, p. 25). Regular team and monthly advisory meetings can be scheduled, input from implementation leaders can be utilized, open communication and weekly emails can be prioritized, and core leadership can continuously clarify roles, responsibilities, and expectations related to telepsychiatry at BHC (AMA, 2020, p. 25; Lindsay, et al., 2019).

Knowledge and competency. Telepsychiatry is dependent upon effectual patient preparation and engagement (AMA, 2020, p. 59). Successful implementation is sustained by patient knowledge of telepsychiatry options, the empowerment to use appointment alternatives, and competency in the use telepsychiatry platforms (AMA, 2020, p. 59). Employee education on telepsychiatry, not only informs their clinical judgment, but allows employees to better facilitate patients using telepsychiatry (AMA, 2020; Lindsay, et al., 2019). Telepsychiatry education should strategically nurture an enthusiastic engagement in services (AMA, 2020).

In the pre-test survey, the OSII was asked, how confident they felt educating patients on the use of telepsychiatry. Their response was,

> "Due to the fact that this is my first time in this field/occupation, I have no experience or much knowledge, on how virtual appointments are handled or processed. So, I'm not sure I'd be able to relay that information properly to the individual, as of right now."

Indicating the need for staff education on telepsychiatry services, for the population of patients BHC serves. In the post-test survey, the OSII was asked, how they will support patients differently after watching the module. Their response was,

> "While some of the practices outlined in the module I already applied, I feel that being more informative with the individual, (i.e.: explaining why I'll be present before the appointment starts, and how I'll be available for technical issues that may arise, etc.) is highly important for individuals' comfort."

The OSII's response exhibits their increased knowledge of the patient experience, the importance of anticipatory guidance, and education for inclusive patient engagement (AMA, 2020). Prior to the module, the OSII was not aware of what they were already providing or how they could further support patients in telepsychiatry services.

Regarding employee knowledge and competency, BHC has been operating in the act phase, of the PDSA cycle; and requires continuing into the next PDSA cycle at the plan phase (Christoff, 2018). BHC can increase patient education, by improving employee knowledge and competency of telepsychiatry technologies (AMA, 2020). Current research suggests BHC can delineate clear employee and patient education goals, architect education and training policies, adopt available patient education resources, utilize materials that support diverse learning styles, and collaborate with the different perspectives on their team (AMA, 2020; HHS.gov, 2020; Lindsay, et al., 2019). Subsequently, BHC could move into the next phases of the PDSA cycle (Christoff, 2018).

Desired and available training. Training employees meritoriously on telepsychiatry services, and expectations for their roles and responsibilities, can be accomplished through a variety of avenues (AMA, 2020; HHS.gov, 2020). This can be achieved through recorded modules, group training sessions, and through faciliation or precepting (Lindsay, et al., 2019). First, a telepsychiatry team must be formed, for efficient delegation of roles, responsibilities, and expectations (AMA, 2020).

The OSII was asked about what information, education, or support, they perceived they needed, to help patients utilize telepsychiatry effectively. Their response was, "Honestly, any information/training would be appreciated, in the future." The OSII additionally shared their desire and the indication for more training, with their statement, "…I have no experience or much knowledge, on how virtual appointments are handled or processed."

Responses from the OSII underline the gap between employee knowledge and competency, and training available at BHC. Currently, training is done informally and scantly. It is unclear which administrators are responsible for managing telepsychiatry. Delegation of tasks and responsibilites are given by a variety of individuals and there is no clear protocol or policy for employee or patient education. This quality improvement project was the only source of education for the OSII during the course of this project. Thus, signifying the need for BHC to return to the plan phase of the PDSA cycle, to strategize employee and patient education on telepsychiatry services (Christoff, 2019).

BHC can reference the TIP, HHS' telehealth educational website, utilize clinicians or expert staff to facilitate training, and strategize how to enhance employee and patient understanding of telepsychiatry services (AMA, 2020; HHS, 2020; Lindsay, et al., 2019). Another option is using on-demand recorded modules. The OSII was asked if modules, like the

one used for this quality improvement project, are helpful for training. Their response was, "Definitely!" There are a variety of resources BHC can refer to and incorporate into employee and patient education on telepsychiatry. Evidence-based trainings and education can standardize procedures, increase employee and patient buy-in, reduce unconcious bias, increase inclusivity, streamline workflow, and prepare employees and patients when challenges arise (AMA, 2020; Lindsay, et al., 2019).

Percieved challenges. Evaluating the success of telepsychiatry, requires inquiry into employee and patient satisfaction, and quantifying patient and clinician engagement (AMA, 2020, p. 70). Gathering, centralizing, and monitoring employee and patient feedback can illuminate areas of needed improvement and successful processes (AMA, 2020; HHS, 2020; Lindsay, et al. 2019).

In the pre-test survey, the OSII was asked if they have experienced any difficulities helping patients utilize telepsychiatry. Their response was, "I haven't experienced any challenges as of yet." The OSII's response reflects a potential collateral effect of the culture of nil quality improvement models, initiatives, teams, or leaders at BHC. A current clinician at BHC detailed this further,

> "I think some of the biggest difficulties with making positive change at [the] county has to do with bureaucracy at a fairly big government agency. There are sometimes lots of levels of supervision and it can take a while to get approvals or having to do with lots of opinions. Historically, this hasn't been a huge problem for most of the quality improvement ideas that have come up for the medical team at [the] county but has been more of a problem in the last year or two with lots of changes in supervisors/management at all levels. As a result,

> there are different styles of leadership and people figuring out and changing roles. A good example from the past year might be trying to get telemedicine set up and established during the pandemic. It was kind of a disaster and it took a long time to get approval to use certain programs (like weeks) and then it really never became clear who and how patients would get directed to use telemedicine. In fact, I would say it still isn't clear (Annoymous, 2021).”

The clinician additionally stated, quality improvement is slowly developing relative to the hiring and acclimation of BHC’s and the county Addiction Service’s program manager. Currently, BHC is predominately reactionary in changes and improvements. BHC can cultivate employee growth mindsets and a culture of quality improvement by collaboratively utilizing the most commonly used tool in healthcare quality improvement, the PDSA. By using a quality improvement model, administrators and employees can better analyze what they are trying to accomplish, how they will know that a change is an improvement, and what change they can make, resulting in improvement (Christoff, 2018).

Implications

Qualitative data collection and analysis of the current use of telepsychiatry at BHC, highlighted key themes, indicating the need for a formalized team structure, employee and patient education protocol, increased availability of employee continuing education or training, and the need for a culture of quality improvement (AMA, 2020; Christoff, 2018; Anonymous, 2021). As mentioned by Anonymous (2021), the program manager is tediously and tenaciously developing quality improvement at BHC. As well, as mentioned by Anonymous (2021), the

bureaucracy at the county Health Department constrains quality improvement due to the known and unknown supervisors supporting or restricting change.

Key mediating variables related to quality improvement and change at BHC, is work load burden and the patient population served. The peer support specialist, who was originally guiding patients through the use of telepsychiatry, discussed taking phone calls during and outside office hours, in addition to their primary work responsibilities (Anonymous, 2020). The OSII currently supports patient use of telepsychiatry at the physical location of BHC in addition to their primary work responsibilities. Case managers, clinicians, and support staff address telepsychiatry questions during their scheduled interactions with patients, unpredictably and in addition to their primary work responsibilities. Moreover, BHC serves individuals with SPMI; this patient population is challenging, faces severe and chronic disabling symptoms, and significant functional impairment (Zumstein & Riese, 2020), thus reslting in increasing percieved work load burden.

A culture of quality improvement and a formal telepsychiatry leadership team, can bolster the efficiency, value, and success of telepsychiatry services at BHC. Moreover, quality improvement models, like PDSA, and evidence-based implementation of telepsychitary has shown to reduce organizational and patient financial burdens (Maeng, et al., 2020). BHC administration has implied a quality improvement leadership position is being created. However, the time line for a quality improvement leader is ambiguous, much like the organizational leadership at BHC. The county Health Department must adopt a growth mindset and a culture of quality improvement. If not, employee roles, responsibilities, and expectations will continue to reactionarily operate, regressing new initiatives, increase percieved work load burden, unaddress problems and challenges, and ultimately impact, the patients and public they serve (AMA, 2020).

Limitations

This quality improvement project was conducted at a specific community-based behavioral health setting and is limited in generalizability to other behavioral health settings. As well, there is a significantly low number of participants and no quantifiable data for testing significance. During the course of this quality improvement project, COVID-19 disrupted routine BHC procedures, delayed communication with employees, and increased staff work load burden creating obstacles for more BHC employees to engage with the project (State of Oregon Office of the Governor, 2020, March 8). Moreover, staff turnover at BHC increased dramatically during the course of the quality improvement project, disrupting contact with key stakeholders. Strengths of this project include upstream analysis of quality improvement at BHC and implications for evidence based and collaborative telepsychiatry services with individuals with SPMI (AMA, 2020; Harvard Medical School, 2019).

Conclusion

Due to the COVID-19 pandemic, multifarious healthcare entities transitioned to telehealth technologies and services due to risk of imminent infection (HHS.gov, 2020; Ravindran, et al., 2020). With federal and local support, a vanguard initiative led by BHC program manager and a DNP, PMHNP-BC introduced telepsychiatry technology and services for the first time. The rapid need to transition away from face-to-face encounters and disseminate telepsychiatry options for BHC employees, resulted in divergences in formal oversight, quality improvement, organized leadership, and formal delegation of roles, responsibilities, and expectations (AMA, 2020).

Despite access to telehealth implementation models, recommendations from nationally recognized healthcare and federal health entities, and the paucity of quality improvement and monitoring of implemented initiatives, BHC has not incorporated readily available procedures, models, or formally led the transition to telepsychiatry services. This reflects the difficulty and evolution of quality improvement, during a global pandemic, in a community-based behavioral health setting serving those with SPMI.

This project attempts to highlight the benefits of quality improvement and the use of evidence-based models for successful implementation and analysis of telepsychiatry technologies and services. The greatest risk of operating telepsychiatry services without evidence-based recommendations and oversight, is the unknown ramifications on patient treatment outcomes and potential increased safety risks for patients unable to navigate telepsychiatry appropriately. Further research and quality improvement initiatives are needed; as well as quantitative data on patient appointment attendance, no shows, and emergency room visits to specifically assess how BHC's mismanagement of telepsychiatry has obstructed the challenging population they serve.

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Figure A

APPENDIX G.2: DESIGNING THE WORKFLOW

Telehealth Workflow Example

Your telehealth workflow will vary depending on your organization, type, size and structure.

The example provided below illustrates an effective clinical telehealth workflow that involves a coordinated effort between the patient, administrative team and clinician. coordinated effort between the patient, administrative team and clinician.

SCHEDULING FIRST TELEHEALTH APPOINTMENT:

PATIENT SEEN IN-PERSON
- Provider orders telehealth follow-up appointment. * *
- Provider obtains general patient consent and gives instructions

→

ADMIN
- Schedules telehealth appointment with patient
- Manages authorization

→

PATIENT
- Receives appointment reminder
- Receives link to access telehealth appointment through patient portal

DAY-OF / DURING VISIT :

PATIENT
- Receive visit reminder
- Confirm visit
- Log into patient portal
- Test connection with clinic staff and troubleshoot

→

ADMIN
- Collect co-pay
- Confirm or collect electronic consent if needed
- Check-in patient in platform

→

CLINICIAN
- Join visit
- Provide virtual care
- Conclude visit
- Complete documentation, enter orders and care plan, enter charges

→

ADMIN
- Patient is checked out in platform
- Patient receives visit summary and feedback survey in portal
- Follow-up visit scheduled

*For illustrative purposes only, not to be interpreted as advice specific to your organization.
**Telehealth visits can be offered as an option, but should ultimately be up to the patient if they want to visit that way.
Source: CHLA

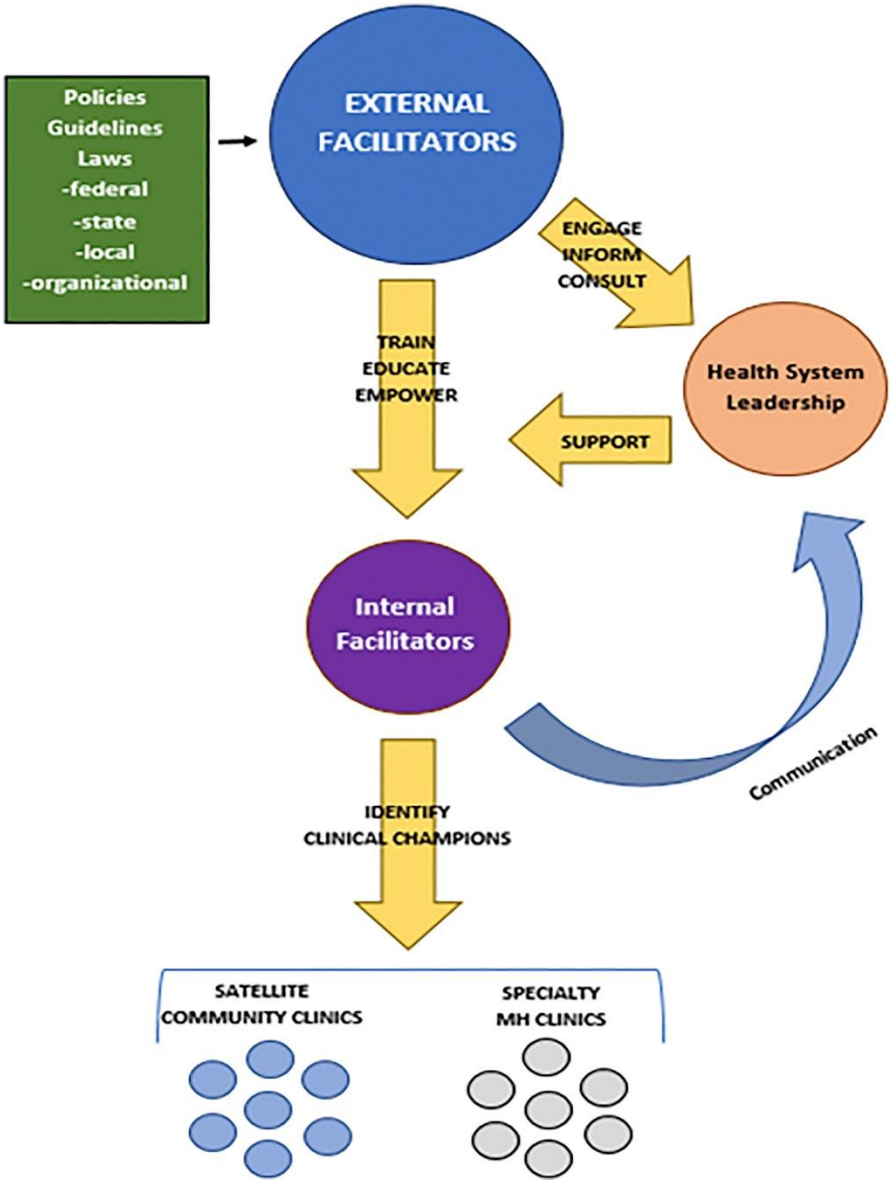
Policies
Guidelines
Laws
-federal
-state
-local
-organizational
EXTERNAL FACILITATORS
ENGAGE
INFORM
CONSULT
TRAIN
EDUCATE
EMPOWER
SUPPORT
Health System Leadership
Internal Facilitators
Communication
IDENTIFY
CLINICAL CHAMPIONS
SATELLITE
COMMUNITY CLINICS
SPECIALTY
MH CLINICS

Table 3
Application of Personalized Implementation for Video Telehealth

Recommendation	Considerations & Adaptations
Engage leadership early and often	• Obtain leadership buy-in and investment of resources • Establish ongoing communication to inform leadership on implementation progress/changes • Provide periodic feedback on outcome metrics from available data sources • Identify incentives to motivate provider adoption of VTH
Make facilitation key	• External facilitators provide expertise in innovation, engage leadership, and track policy changes • Local site internal facilitators need (1) protected time to support implementation and (2) training in facilitation and the clinical innovation
Start small to optimize success	• Engage stakeholders at every level of the organization • Collaboratively set realistic implementation goals • Early adopter providers and/or clinics to pilot the implementation plan • Identify motivating aspects/elements to boost provider and leadership adoption (eg, patient success stories; reduced no-shows)
Ensure flexibility	• Each site has unique barriers/facilitators • Adapt the implementation strategy to meet site needs • Capitalize on opportunities to illustrate the value of the innovation to ambivalent stakeholders
Assess multiple outcomes	• Identify outcome metrics of value to stakeholders • Identify persons responsible for outcome assessment • Additional outcome metrics are needed beyond those in national directives/policies • Revisit outcomes and how to measure/assess sustainability