ORIGINAL RESEARCH

Patient and Clinician Perspectives on Two Telemedicine Approaches for Treating Patients with Mental Health Disorders in Underserved Areas

Jennifer D. Hall, MPH, Maria N. Danna, MA, Theresa J. Hoeft, PhD, Leif I. Solberg, MD, Linda H. Takamine, PhD, John C. Fortney, PhD, John Paul Nolan, and Deborah J. Cohen, PhD

Background: Primary care practices in underserved and/or rural areas have limited access to mental health specialty resources for their patients. Telemedicine can help address this issue, but little is known about how patients and clinicians experience telemental health care.

Methods: This pragmatic randomized effectiveness trial compared telepsychiatry collaborative care, where telepsychiatrists provided consultation to primary care teams, to a referral approach, where telepsychiatrists and telepsychologists assumed responsibility for treatment. Twelve Federally Qualified Health Centers in rural and/or underserved areas in 3 states participated.

Results: Patients and clinicians reported that both interventions alleviated barriers to accessing mental health care, provided quality treatment, and offered improvements over usual care. Telepsychiatry collaborative care was identified as better for patients with difficulty developing trust with new providers. This approach also required more primary care involvement than referral care, creating more opportunities for clinician learning related to mental health diagnosis and treatment. The referral approach was identified as better suited for patients with higher complexity or desiring specific psychotherapies.

Conclusions: Both approaches addressed patient needs and provided access to specialty mental health care. Each approach better aligned with different patients' needs, suggesting that having both approaches available to practices is optimal for supporting patient-centered care. (J Am Board Fam Med 2022;35:465–474.)

Keywords: Medically Underserved Area, Medication Therapy Management, Mental Health, Patient-Centered Care, Primary Health Care, Psychiatry, Psychotherapy, Qualitative Research, Referral and Consultation, Rural Health, Telemedicine

Introduction

Patients with complex mental health conditions like posttraumatic stress disorder (PTSD) and bipolar disorder often rely on care provided in primary care settings. The majority of patients with these mental illnesses do not receive care in specialty mental health settings.[1,2] This is especially true in underserved areas where there are few mental health clinicians available. Mental health conditions are highly prevalent in primary care.[3–7] According to a systematic review,[8] PTSD prevalence in primary care approximated depression, and another study found that bipolar disorder occurs in 0.5%–4.3% of primary care patients.[3]

Corresponding author: Jennifer D. Hall, MPH, 3181 SW Sam Jackson Park Rd, Portland, OR 97239, (E-mail: haljenni@ohsu.edu).

Diagnosing and treating these conditions is complex, and the first-line treatment for PTSD includes trauma-focused psychotherapies[9] and mood stabilizers for bipolar disorder.[10,11] Yet, professionals familiar with these treatments are in short supply in rural or underserved communities.[12] As a result, primary care clinicians are increasingly caring for patients with these disorders without psychiatrist or psychologist support. Primary care clinicians have reported feeling obligated but unprepared to diagnose and treat patients with PTSD and bipolar disorder.[13] Consequently, only 10% of patients with these diagnoses receive adequate care in primary care settings.[1,14]

A promising approach for addressing this gap is to make use of telemedicine to facilitate necessary specialty consultation or management. While previous literature describes the effectiveness of collaborative care, including patient and clinician experiences,[15–22] and there is a growing literature on telepsychiatry/telepsychology,[23–25] telepsychiatry collaborative care has not been extensively examined qualitatively. The Study to Promote Innovation in Rural Integrated Telepsychiatry (SPIRIT) is a pragmatic randomized comparative effectiveness trial that compared 2 approaches for treating patients with PTSD and/or bipolar disorder: telepsychiatry collaborative care (TCC)[26–28] and telepsychiatry/telepsychology enhanced referral (TER).[29] Telepsychiatry and telepsychology use telecommunications technology to deliver psychotherapy and pharmacotherapy services to patients remotely.[30] TCC used collaborative care, which made a consulting telepsychiatrist and on-site care manager (CM) available to primary care clinicians and their patients.[18,31,32] TER did not include CMs, and telepsychiatrists and telepsychologists were directly available to patients. SPIRIT found that following treatment, patients with PTSD and/or bipolar disorder experienced substantial symptom improvements in both interventions.[33]

Given that both approaches were determined equally effective, this study identifies patient and clinician experiences and preferences regarding each approach. We interviewed clinicians and patients to identify attributes of these approaches that could help primary care practices decide which option is best for their practice and their patients.

Methods

Setting
Between November 2016 and June 2020, the SPIRIT trial was conducted in 24 practices that were part of 12 Federally Qualified Health Centers (FQHCs) serving underserved and/or rural patients in Arkansas, Michigan, and Washington.[34] We recruited FQHCs without psychiatrists or licensed clinical psychologists on-site and patients who screened positive for bipolar disorder and/or PTSD who had not been prescribed psychotropic medications by a psychiatric clinician. Eligible patients were randomized to receive the TCC intervention (n = 508) or TER (n = 496), and participating primary care clinicians had patients in both arms.[35] Telepsychiatrists and telepsychologists were credentialed and privileged to practice as FQHC providers and charted in their electronic health record.[36] Study participants received up to 12 months of treatment and received interactive-video encounters at the practice.

Telepsychiatry Collaborative Care
This arm had 3 components: the telepsychiatrist who met with patients via interactive video to develop a diagnosis and treatment plan; the primary care clinician who prescribed medication suggested by the psychiatrist; and a CM (usually a registered nurse or licensed clinical social worker), who coordinated care, promoted treatment adherence, monitored treatment response, and delivered behavioral activation psychotherapy.[37] In this approach, the primary care clinician retained patient care responsibility and the telepsychiatrist was a consultant.

Telepsychiatry/Telepsychology Enhanced Referral
This arm had 3 components: referral to a telepsychiatrist for initial diagnosis and treatment plan via interactive video, medication management televideo visits as needed, and an optional referral for psychotherapy based on patient interest, readiness, and need. Therapy was provided by a telepsychologist and included cognitive behavioral therapy (CBT)[38,39] or cognitive processing therapy (CPT),[40] both of which included standardized psychotherapy homework. Unlike the TCC arm, the telepsychiatrist delivered direct treatment to patients and monitored symptoms at the beginning of each interactive video session.

Sample

Patients participating in SPIRIT were purposively selected for this study to ensure variation by state, FQHC, treatment arm, diagnosis, and level of engagement (ie, engagers were defined as having 2 or more appointments with a telemedicine provider in the first 6 months of the intervention). A total of 153 patients were selected, and 49 were interviewed. We purposively selected nonengagers to participate because we wanted to understand factors that influence engagement. However, during interviews we learned they did not participate because of unrelated life circumstances (eg, moving to another state) or miscommunication issues where patients reported never receiving an invitation for services. Since nonengagers did not have experiences to recount, results were primarily from the perspective of engaged patients. Primary care clinicians who saw 9 or more SPIRIT patients and had patients in both arms were selected to ensure they had substantial experiences to recount. Clinicians were purposively selected to ensure variation on state, FQHC, medical degree, and the extent to which the clinician was familiar with the study. Thirty clinicians were selected, and 21 were interviewed.

Procedure

Researchers followed an interview guide (see Appendix) to conduct semistructured interviews. Patients were asked about their treatment experiences, access to mental health care, and satisfaction with care. Clinicians were asked about their experiences with each study arm and to compare the 2 approaches regarding patient benefit, care system burden, clinician benefit, and workflow impact. We approached these data inductively because there were few conceptual models appropriate for guiding a study of the integration of telemedicine in primary care. Interviews were conducted remotely by video or phone; averaged 60 minutes in length; were audio recorded, transcribed, and deidentified; and were entered into Atlas.ti for data management and analysis.[41] This protocol was approved by the University of Washington, University of Michigan, and University of Arkansas for Medical Sciences institutional review boards.

Analysis

We used an iterative process of analyzing and interpreting data to develop findings.[42] A 6-member interdisciplinary team with qualitative methods,

primary care/behavioral health integration, and clinical expertise conducted inductive analysis concurrently with data collection. As transcripts were available, we analyzed data as a group. We discussed passages and developed an initial set of inductively derived codes that denoted the meaning of a segment of text. The team selected and labeled text with codes related to each treatment group, participating health professional roles, and key components of the intervention according to patient and clinician experiences. We continued this process as more data were collected. When definitions were clear, and we applied codes similarly during analysis meetings, a smaller team coded the remaining data. We continued to hold meetings to ensure reliability, discuss analytic questions, and identify emerging findings. We used an iterative process of moving between sampling, data collection, and analysis, which allowed us to use early findings to refine recruitment targets, as needed, and monitor for saturation.

To compare and contrast patient and clinician experiences within and across treatment arms, we filtered the data by intervention arm and developed data matrices[43] to facilitate further comparison and discussion of emerging findings related to access to mental health care, perceptions about care quality and satisfaction, intervention suitability, and clinician involvement and skill development. Clinicians' reported preferences and experiences with the interventions did not vary by these characteristics, and patient experiences did not vary by diagnosis, state, or practice location. Preliminary findings were discussed and shared with the study's advisory boards, composed of clinicians, administrators, mental health advocates, and individuals with lived experience with PTSD and/or bipolar disorder. Board members found the findings aligned with their experience and identified areas where more details were needed.

Results

We completed 49 patient interviews; 29 patients received TCC and 20 received TER. Patient participants were distributed across states and screened positive for PTSD and/or bipolar disorder. Twenty-one clinicians completed an interview and varied by state, type of medical degree, and champion status (see Table 1).

Table 1. Participant Summary Table

	Total	Arkansas	Michigan	Washington
Patients	49	11	18	20
Telepsychiatry collaborative care	29	8	9	12
Telepsychiatry/Telepsychology enhanced referral	20	3	9	8
PTSD	28	6	11	11
Bipolar	21	5	7	9
Engagement status				
Engaged	36	11	12	13
Not engaged	13	0	6	7
Primary care clinicians	21	5	6	10
Degree: MD/DO	13	4	3	6
Degree: NP/PA	8	1	3	4
Champion status				
Champion	5	3	0	2
Nonchampion	16	2	6	8
Number of participating patients: 9 to 20	12	2	5	5
Number of participating patients: >20	9	3	1	5

PTSD, posttraumatic stress disorder.

Table 2 summarizes clinician and patient experiences with TCC and TER. Five areas of comparison emerged: access to mental health care, care quality and satisfaction, alignment with patient readiness and suitability, clinician involvement and responsibility, and clinician skill development. Below, we describe patient and clinician experiences in more detail.

Both Interventions Increased Access to Mental Health Care

Clinicians and patients in both groups reported that the interventions increased access to specialty mental health care and alleviated barriers, regardless of rurality or patients' ability to pay for care. Clinicians considered both approaches as viable options for addressing patients' unmet mental health needs and, if given the opportunity, would eagerly adopt either approach.

> I was very pleased with both arms. If one or the other service was offered to our community, boy, I would jump at either of them….As far as we were concerned, it was access to psychiatric care, and that made us really excited about both arms. (Michigan, Clinician #1)

Both approaches were also considered convenient, reduced the stigma associated with visiting a specialty mental health clinic, and increased patient comfort by meeting with the psychiatrist in the familiar setting of their primary care practice.

> [Patients] really like [coming] here and see[ing] us, or being able to come here to see the psychiatrist over telehealth.…They want to do everything here if they can. They're more open to get the help that they need if they find out it's here. (Arkansas, Clinician #9)

Both Interventions Provided High-Quality Care and Patient Satisfaction

Patients and clinicians were satisfied with the quality of care in both approaches. Patients described symptom improvements (eg, fewer medication side effects and fewer mania, depression, and PTSD symptoms) and satisfying relationships with new care team members (eg, telepsychiatrist, telepsychologist, CM). Receiving care from telepsychiatrists that were connected to respected institutions influenced patients' perception about the quality of their care.

> Another reason I agreed to join it is because [university] was involved.…So that was a big part, too. I don't know if that sounds stupid, but I trust [university clinicians]. (Michigan, Patient #10, TCC Arm)

This was echoed by clinicians who recognized the differences between the treatment approaches and reported that both approaches were effective at treating patients and improving outcomes.

Table 2. Study Findings by Telemedicine Approach

	Telepsychiatry Collaborative Care	Telepsychiatry/Telepsychology Enhanced Referral
Access to mental health care		
Provided access to specialty mental health care	X	X
Facilitated patient comfort by providing care in familiar primary care setting	X	X
Care quality and patient satisfaction		
Patients reported high-quality treatment	X	X
Patients experienced overall satisfaction and improvements	X	X
Alignment with patient readiness and suitability		
Better for patients with social anxiety, difficulty trusting and opening up to new people	X	–
Better for patients that needed local support and/or help addressing social needs	X	–
Better for patients ready for and in need of specific treatment modalities like CBT or CPT	–	X
Better for the most complex patients, patients whose needs were not met in primary care	–	X
Clinician involvement and responsibility		
Required greater clinician involvement in care	X	–
Reduced clinician workload and responsibility	–	X
Facilitated patient care continuity	X	–
Easier for clinicians to maintain awareness about patient care and needs	X	–
Clinician skill development		
Facilitated clinician skill development (eg, accurate mental health diagnoses and medication management)	X	–

Abbreviations: CBT, cognitive behavioral therapy; CPT, cognitive processing therapy.

Each Approach Offered Differing Benefits Based on Patient Need

TCC and TER varied regarding their abilities to address specific patient needs. Patients reported that TCC offered benefits for patients with social anxiety and reluctance to work with new clinicians, as care was received from familiar care teams.

> I like how it was all in one place. I have some social phobia in having to go to this place and that place. It's very stressful for me. And being able to stick to the place that I know, it's really a comfort…I like the people that I have been working with, and I don't want to have to deal with starting new. (Washington, Patient #25, TCC Arm)

Clinicians also reported that TCC worked especially well for these patients. Patients in this treatment group continued to receive most of their care from their primary care clinician, building on a previously established relationship, and considered the on-site CMs part of their primary care team.

Patients randomized to TCC may not have realized the CM was engaging them in therapy. They described receiving informal and practical advice from CMs but did not identify it as behavioral activation, a brief psychotherapy approach. Patients reported enjoying and benefiting from talking to CMs; they equated it to talking to a friend. Patients shared that CMs called them if they missed appointments, reminded them about their upcoming visits, and were readily available by phone. Clinicians reported additional benefits to the TCC model and CM role:

> It gives the patient a sense that somebody at the office is coordinating their care…It lessens the workload on the patient if they feel like they have someone locally who's right there that can help them with anything they need. (Michigan, Clinician #10)

Benefits of TCC, according to clinicians, included providing care coordination and barrier

mitigation and addressed a broad range of patient needs.

TER also offered unique benefits. Patients who may have benefited from CBT or CPT did not receive that type of treatment with TCC. Clinicians reported that TER was better suited for patients who desired or required CBT or CPT from a trained psychologist. Thus, there were patients whose needs were not fully met with TCC:

I have not found the quality of care that I feel is necessary to help me get past these problems. I liked [CM] as a person—super-nice person. And I know she means well...It was like I was going out to lunch with a friend and we're just shooting the breeze...[I never saw] anybody that would really give me—challenge me to work out my problems. (Washington, Patient #32, TCC Arm)

Clinicians speculated that these patients may have been better served if they had access to both treatment modalities:

Both [approaches] can be appropriate. There were certainly some patients, they kept trying to come back [to see me]. If we had the option, they would've been better for [TCC], and then others that wanted the more classic CBT therapy, would've maybe done better with [TER]...So I think they're just two different methods. They can be used both effectively within the clinic and to the same effect, especially if you're able to pick and choose and help guide patients to someone that might work better for them. (Washington, Clinician #6)

Clinicians saw the benefit of access to both approaches, which would allow them to align the treatment modality to patient needs, complexity, and readiness for therapy.

Telepsychiatry Collaborative Care Required Greater Clinician Involvement and Responsibility

Clinicians reported that TCC required more of their involvement than TER (eg, they saw patients more frequently and managed a fuller spectrum of their care needs). Clinicians reported having less contact with patients randomized to the TER arm, which operated like a traditional referral with reliance on the specialist to manage treatment. Clinicians varied in which arm they preferred. Some preferred TCC because it fostered greater involvement in care and facilitated better care continuity for patients.

We were in a better position for continuity with [TCC]. We were more involved in those cases I thought as family practice, so we were just more on top of it than the referral arm. (Arkansas, Clinician #5)

Others preferred TER for the ability to delegate medication management to a specialist and felt it was less time intensive, allowing clinicians to focus on patients' other needs. Clinicians did not describe additional work burden from either approach. While TCC had the potential to be more burdensome, CMs mitigated burden by monitoring patient symptoms and side effects and communicating and coordinating with the telepsychiatrist.

Telepsychiatry Collaborative Care Facilitated Clinician Skill Development

Clinicians reported that TCC created more opportunities for skill development than TER. Collaborating with the consulting psychiatrist was particularly helpful for complex patients, especially those unresponsive to treatment. Clinicians reported this collaboration fostered greater awareness, proficiency, and nuance in their ability to diagnose bipolar disorder and PTSD and to conduct a differential diagnosis between bipolar disorder and depression.

Since working with [telepsychiatrist], my prescribing practices now mimic hers. There is a level of comfort now, where I would be comfortable starting some medications for PTSD and bipolar while waiting to try to transition and get further help. Even just to simply try to recognize and diagnose is much more comfortable now. (Washington, Clinician #4)

Collaboration with the consulting psychiatrist was also described as enhancing clinicians' ability to treat these conditions (eg, improved awareness of medication side effects and their management, greater comfort prescribing specific medications they previously avoided, and confidence using new medication combinations and adjunctive medication therapies), all which were absent from TER.

Discussion

The clinicians and patients that participated in SPIRIT agreed that TCC and TER were effective at increasing access and providing high-quality care to patients in rural and/or underserved areas. However, these 2 approaches differed in the

following ways: TCC was better suited to patients with social anxiety and reduced the need to start anew, while TER was better suited for complex patients and/or those that were in need of CBT or CPT. Clinicians recognized the benefits of both approaches for different types of patients. TCC required greater primary care clinician involvement, workload, and responsibility compared with TER, but it was not perceived as burdensome because of the CM role and because it facilitated clinician skill development (eg, diagnostic accuracy). While it was possible to develop enhanced skills from reviewing the psychiatry notes for patients randomized to TER, this required clinician motivation to study the telepsychiatry notes. In contrast, consulting with the TCC telepsychiatrist made skill and knowledge acquisition comparatively effortless.

Given the unique benefits of each approach, it seems likely that primary care practices would benefit from having access to both approaches, particularly if clinicians understood when to appropriately select and how best to align each approach with patients' needs, readiness, and complexity. TCC offers some benefits that could address a larger population of patients with mental health needs, while preserving psychiatrist time for patients who need and would benefit from direct care the most.[33]

Our results share some similarities to other work that highlights the importance the CM plays in facilitating patient engagement,[44–47] as well as the development opportunities that collaborative care offers to clinicians wishing to expand their mental health medication management skill sets.[48–50] Despite its evidence base, there have been challenges to adopting and implementing collaborative care when treating mental illness outside of study trials, particularly for garnering clinician and staff buy-in, and securing the resources (time and money) needed to support implementation.[51–53] Although less studied, similar challenges to implementing collaborative care are likely to manifest when implementing a referral approach. These qualitative findings may mitigate many concerns clinicians might have about deploying these models in their practice.

The evidence base for collaborative care has focused on lower acuity mental health conditions, namely depression and anxiety.[48,49,51,52] Fewer studies have focused on its effectiveness for patients with complex psychiatric disorders.[16,17,28] While collaborative care trials have studied veterans experiencing PTSD,[54–56] few have focused on civilian populations in rural settings. Unlike these studies, SPIRIT clinicians compared 2 mental health interventions that differed from their usual procedures. The emphasis on the comparison offers valuable insight on benefits of each approach for certain patients, as well as the best way to support primary care clinicians treating acute mental health needs (eg, including CMs, levels of diagnostic support).

To make these important services available to practices and their patients, policy changes are needed to ensure the ability to pay for CMs and appropriate infrastructure to bill for telepsychiatrist time, as well as communicate, share, and exchange information with clinicians at external institutions.[13] In addition, some states restrict nurse practitioner prescribing practices, which particularly impacts the feasibility of implementing a collaborative care approach.[36,57] Future work could focus on scaling these interventions to a larger population through demonstration work or hybrid implementation trial. While our work did not focus on understanding implementation barriers to either model, surfacing these issues and ways to address them is another important area for future research.

The COVID-19 pandemic increased the need for mental health care but also expanded access to mental health specialists through telemedicine, opened billing codes, and facilitated investing in infrastructure needed to deliver telemedicine.[25,26] The policy changes that expanded the use of virtual modalities to deliver mental health care could address the growing need for these services, but it is unclear whether these policies will endure.

Our study suggests that if these policy changes were continued and if resources to support telemedicine did exist, this would improve access to mental health care for areas where specialists are scarce. The patients and clinicians in the regions we studied appreciated the partnerships with specialists from the local state medical school and liked receiving care from them.

Our study has some limitations. Selection bias is possible as we experienced difficulty recruiting patients, particularly nonengaged patients. Most nonengagers in our sample did not participate at all; therefore, we missed the opportunity to study reasons patients may stop engaging in these care models. In addition, interviewed clinicians saw relatively small numbers of patients, so it is unclear how their experience would scale to a full patient

panel. Recruitment was based on screening rather than primary care clinician referral, so it's unlikely that clinician buy-in influenced the number of SPIRIT patients on their panels. In addition, only primary care clinicians were interviewed, although telepsychiatrists, CMs, and telepsychologists were also involved in delivering the interventions and including their perspectives is an important area of research.[23]

Conclusion

TCC and TER were viewed favorably by primary care clinicians and their patients. This was encouraging as most primary care clinicians are not comfortable managing complex mental health disorders.[13,58] Since each approach is best aligned with different patients' needs, our study suggests that having both approaches available to practices is optimal for supporting patient-centered care, and clinicians will need to understand which approach is best aligned with each patient's needs. To make these services broadly available to practices and their patients, local, state, and federal leaders will need to adapt a complex set of policies that obstruct the ability to deliver telemedicine.

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Appendix

SPIRIT CLINICIAN INTERVIEW GUIDE

Introduction
Your health center participated in the Study to Promote Innovation in Rural Integrated Telepsychiatry or SPIRIT Trial. SPIRIT has two arms, and each arm tests a different way to manage patients with bipolar disorder and/or PTSD.

As someone who has had a number of patients in the study, we would like to get your opinion about which approach worked best for your patients and your health center. We would also like to hear your ideas for how to promote adoption at your health center and others like it. Your comments and observations will be combined with those from other clinicians, and your contributions will be de-identified to remain confidential.

[Please tell the participant a little about yourself. Turn on recorder and ask: Do I have your permission to record? Record response and begin interview.]

Clinician Information
Name of Health Center where clinician practices:

Degree: MD, DO, NP, PA

SPIRIT Champion Y/N [If Champion or in a leadership role, dedicate time to questions 9-10]

Gender:

# of Collaborative Care patients:

# of Telepsychiatry Enhanced Referral patients:

Note names of Care Manager(s), study contact/schedulers, and TER providers that worked with this Health Center:

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1. **Please tell me a little about yourself.**
   - How long have you been practicing?
     - How long have you been working at [Health Center]?
   - What is your current role in the health center?
     - How long have you been in your current role at [Health Center]?
     - Can you tell me a little bit about your experiences with caring for patients with mental health needs?

2. **We understand there were two different arms for the SPIRIT study and you had about [##] patients in the Collaborative Care arm and [##] of patients in the TER arm. Can you tell me – from your perspective – about the two SPIRIT study arms?**
   - How were the arms similar?
   - How were the arms different?

Now, I have a series of questions that are going to ask you to compare the Collaborative Care and TER arms. Please answer these questions from your perspective. We are interested in your thoughts and experiences. [NOTE TO INTERVIEWER, please make sure to ask and understand WHY for the following questions to ensure rich descriptions].

3. **Did your patients <u>benefit</u> more from Collaborative Care or more from TER?**
   - Why do you think that is?
   - In what ways did they benefit?

4. **Did some patients benefit more from Collaborative Care?**
   - If so, which types of patients and why?

5. **Did some patients benefit more from TER?**
   - If so, which patients and why?

6. **Did patients <u>engage</u> more with the Collaborative Care or the TER arm?**
   - Why do you think that is?

7. **Which approach (Collaborative Care or TER) worked better for you as a clinician?**
   - Why?
   - Was either approach more burdensome for you? Why?
   - Did either approach force you outside your comfort zone as a clinician? Tell me more.

8. **Which approach (Collaborative Care or TER) was a better fit for your health center? Why?**
   - Was either approach more compatible with the values of your organization? Tell me more.
   - Was either approach more compatible with the goals of your organization? Tell me more.
   - Was either approach more compatible with the Patient Centered Medical Home delivery model?
   - Did either approach fit better into your existing clinical workflow? Why?
   - Which approach required more modifications to clinical workflows? How so?
   - Was either approach more or less burdensome on your health center's staff? Why?

9. **What is the likelihood that your health center will maintain one of these approaches?**
   - What do you think will influences your health center's ability to maintain one of these approaches?

10. **If you are considering maintaining an approach, which one do you think your health center will use – Collaborative Care or TER?**
    - Why?
    - Which approach, if any, does your leadership support? Why?
    - How has the health center maintained the approach?
      - Have you adapted it to maintain it? How so?
    - Do you think leadership will devote the resources necessary to sustain either approach?
    - What is needed to support sustained implementation?
      - What evidence or proof about the value of these approaches do you think is needed for leadership to support sustained implementation?
    - As a clinician, would you want to make this approach part of your regular practice? Why or why not?

11. **Could you share how the changes in your practice related to COVID-19 might impact the feasibility of maintaining each arm of SPIRIT?**
    - Is there one arm in particular that you think is better suited to the current needs of your practice and/or patient population? Why?

12. **CLOSING QUESTION [If more time remains in the interview, please ask the Additional Questions prior to asking this question] What else would you like to share about your experience with the two arms of the SPIRIT study?**
    - What recommendations do you have for improving your experience?

<u>ADDITIONAL QUESTIONS.</u>

We wanted to make sure we spent time comparing the two arms, but since we have more time together, we would like to hear a little bit about your experiences in implementing these different models in your practice.

13. I'd like to specifically talk about the Collaborative Care arm. Can you talk more about your experience with the Collaborative Care arm? What was your role in mental health care for patients in the Collaborative Care arm? Could you reflect on your experiences communicating and working with the TCC care team?

Now I'd like to transition to asking you a few more questions about the Telepsychiatry Enhanced Referral (TER) arm.

14. Can you talk more about your experience with the TER arm? What was your role in mental health care for patients in TER arm? Could you reflect on your experiences communicating and working the TCC care team?

15. After the study was over, what happened to the patients regarding their mental health care?
   - If there was as transition, what did it look like?
   - Was there a difference between the arms?
   - Probe for facilitators and challenges.

16. Please think back to before SPIRIT started. How did you and your team manage patients with complex mental health problems?
   - What was your role in mental health care?
   - What services did you provide at your health center?
   - What types of staff did you have to help patients address their mental health needs?
     - Probe about adequate PCP/Nursing/Behavioral Health FTE in your Health Center.
   - What mental health services and resources were available in your community?
     - Probe about adequate Behavioral Health FTE in your community.
     - How did you use these services?
     - How did these services meet your patients' needs?

17. Did the Collaborative Care approach change how you managed MH care in patients?
   - If yes, how did the SPIRIT Collaborative Care approach change how you managed patients with complex mental health problems? What new skills have you developed?
   - If no, why not?

18. Please describe how you worked with other members of the Collaborative Care team.
   - What other members of the team were involved in this arm of care?
   - Probe about care manager role and tele-psychiatrist role if not mentioned.
     - What was their role?
   - What types of support, if any, did you receive from Collaborative Care tele-psychiatrist consultant?
     - Please describe your level of comfort prescribing medications recommended by the Collaborative Care tele-psychiatrist consultant.
   - How did you communicate about patient care with other Collaborative Care team members?
     - To what extent did you include patients in the communication process?
       - If so, how did you do that?

19. Did the TER approach change how you managed MH care in patients?
   - If yes, how did the TER approach change how you managed patients with complex mental health problems? What new skills have you developed?
   - If no, why not?

20. **Please describe how you worked with other members of the TER care team.**
   - What other members of the team were involved in this arm of care?
   - Probe about tele-psychiatrist and tele-psychologist role if not mentioned.
     - What was their role?
   - What support, if any, did you receive from the TER providers (tele-psychiatrist and/or tele-psychologist?
     - What types of support did you receive?
   - How did you communicate about patient care with other TER team members?
     - To what extent did you include patients in the communication process?
       - If so, how did you do that?

21. **Please think about what was happening in your clinic during the time of the SPIRIT study. What was happening during that time that might have influenced how you or your patients experienced the interventions?**
   - Probe for turnover, organizational changes, other disruptive events
   - Did anything happen that positively influenced how you or your patients experienced the interventions?
     - For which arm(s)?
     - How did this impact your experience?
     - How did this impact your patients' experience?
   - Did anything happen that negatively influenced how you or your patients experienced the interventions?
     - For which arm(s)?
     - How did this impact your experience?
     - How did this impact your patients' experience?

SPIRIT PATIENT TCC INTERVIEW GUIDE

The questions below are the general topic areas we will explore with interview participants. These questions will be modified in light of what is learned during the evaluation, to fit the timing of the interview (when it takes place during the course of study activities), and to fit the expertise of the interviewee.

[Interviewer:] *Thank you for participating in this interview. We are speaking with you today because we are interested in your experiences receiving mental health care since you started participating in this study, about 12 months ago. During the interview, we will ask you to tell us a little bit about yourself as well as your thoughts about the care you've received. We are talking with you because we really value and appreciate your thoughts and experiences. Please keep in mind that there are no right or wrong answers to the questions we ask. Also rest assured that everything we discuss will be kept confidential. Your answers will be used to make improvements to mental health services. I will not share anything you say with your healthcare providers or with their supervisors.*

Patient Information

Study ID:

Age, gender, race:

Name of Health Center where they receive care:

Intervention Dates:

Diagnostic Group: PTSD, Bipolar Disorder, Bipolar and PTSD [PCL 14+ indicates PTSD as well if in bipolar group. CIDI cutoff 8+ indicates bipolar.].

Names and roles of individuals who provide care:
1) PCP -
2) Care Manager -
3) Psychiatrist -

Study Arm: 1) Collaborative Care

Level of engagement in first 6 months: Engager or Non-engager [2+ contacts in first 6 months indicates engager]

Number of visits with care manager:

Number of visits with psychiatrist (note date):

Number of no-shows:

CMTS Notes: (e.g., # telepsychiatry visits or telepsychology visits) (not to be shared with interviewee):

Interviewer introduces themselves:
- Describe where you live, work, family, things that you like to do.

1. I would like to get to know you a bit. Please tell me about yourself.
- How long have you been going to [Health Center]?
- Who do you see when you go to [Health Center]?

I have some quick clarifying questions for you. It would be helpful for me to know some background information so we can have a better conversation about the mental health care that you received over the past year (i.e., the SPIRIT study).

2. **Who did you see at [Health Center]- over the past year, while you were part of the SPIRIT study?**
    - Who is your primary care provider?
    - Who else was part of your care team?
    - *[If patient doesn't mention a specific individual you know they saw in CMTS, ask about that individual – e.g., Did you meet with Dr. [name]?]*

3. **Why did you decide to enroll in the SPIRIT study?**

4. **What were you seeking treatment for?**

I want to fully understand your experience with your care team, which includes [name individuals discussed in question 3]. Let's begin by talking about your primary care provider.

5. **Tell me about your experience receiving health care from [name of PCP]?**
    - How would you describe your relationship?
    - How long have you been seeing [PCP]?
    - Probe for extent to which patient felt listened to, had enough time during appointments to discuss concerns, understood what was discussed.
    - What was helpful about the care you received? What could be improved?

[*If no/minimal discussion of mental health in response to #4, then please ask:*]

6. **Tell me about your experience receiving care for <u>mental health</u> from [name of PCP]?**
    - What's been [PCP name]'s role in your mental health care?
    - Has [PCP's name]'s role changed since participating in the study? [If yes] Can you tell me how?

7. **What was your role in treatment decisions with [name of PCP]?**
    - How did your role in treatment decision align with your preferred involvement?

Now, I'd like to ask some similar questions and talk about your care manager, [insert name of care manager].

8. **Please tell me about your experience with [name of care manager]?**
    - What was [name of care manager]'s role in your health care?
    - How would you describe your relationship?
    - Probe for extent to which patient felt listened to, had enough time during appointments to discuss concerns, understood what was discussed.
    - What was helpful about the care you received? What could be improved?

9. **What was your role in treatment decisions with [name of care manager]?**
    - How did your role in treatment decision align with your preferred involvement?

10. **[For patients who were non-engagers] Beside the things you already told me, what were the other reasons why you didn't use mental health services very much?**
    - Why didn't you have very many appointments with [insert treatment provider name]?
    - [Probe for access, scheduling, transportation, comfort or relationship with providers, privacy, technology issues, insurance and costs, stoicism, stigma, self-reliance, suitability/applicability of intervention/care
    - [If no shows indicated in CMTS] I understand that it can be challenging to make it to appointments sometimes. What makes it difficult for you to make your appointments?
    - What could be improved about the care you received during the SPIRIT study?

11. Did you use the SPIRIT Smartphone APP?
- *If No:* **What was the reason you didn't use it?**
- *If yes:* **Tell me about your experience using the smart phone app.**
  - ○ Probe for frequency of use, how it was used, what aspects of the app are used, utility, advantages/disadvantages, privacy concerns, and suggestions for improvement.
- How did you hear about the app? How was it presented to you?

It was quite a while ago, but you had a visit with [name of psychiatrist] via video. This might have been a year ago. I'd like to talk with you about that visit.

12. Tell me about receiving care using interactive video equipment?
- What do you recall about that visit?
- What was it like to meet with [name of mental health specialist] over video?
- Probe for advantages/disadvantages, technology issues, barriers, privacy concerns, the room the patient was in, improvements.

Now, I'd like to ask you about your <u>overall</u> experiences with the care that you received over the last 12 months while you were a participant in the SPIRIT study.

13. Can you describe for me how [insert names of care team members previously discussed] communicated together about your care?

14. How would you describe your ability to get care for your mental health needs?

- Was there anything that made it harder to get the services you wanted compared to before you joined the SPIRIT study?
- Was there anything that made it easier to get the services you wanted?
- *[Probe for other barriers, both internal and external to the health system that the patient may have experienced.]*

15. Overall, how helpful do you think the mental health treatment was that you received from [Health Center] during SPIRIT?
- Compared to 12 months ago, how are you doing now?
- What was the most helpful about your treatment (medications, counseling)
- What was the least helpful about your treatment?
- Would you recommend the care you received to a friend or family member? Why or why not?

16. Tell me about your experience transitioning out of SPIRIT and back into regular care.
- What, if anything, has changed about your care now that the study is over?
- Please describe what your experience was like transitioning out of the study.
- Tell me about how your mental health medications are being managed now.

It's important that the researchers who are developing new ways of delivering treatment get all the feedback they can so they can make improvements.

17. When you think about the health care that you received, what improvements could be made?
- What else would you like the researchers to know that we might have missed?
- What types of feedback do you think others might give?

SPIRIT PATIENT TER INTERVIEW GUIDE

The questions below are the general topic areas we will explore with interview participants. These questions will be modified in light of what is learned during the evaluation, to fit the timing of the interview (when it takes place during the course of study activities), and to fit the expertise of the interviewee.

[Interviewer:] *Thank you for participating in this interview. We are speaking with you today because we are interested in your experiences receiving mental health care since you started participating in this study, about 12 months ago. During the interview, we will ask you to tell us a little bit about yourself as well as your thoughts about the care you've received. We are talking with you because we really value and appreciate your thoughts and experiences. Please keep in mind that there are no right or wrong answers to the questions we ask. Also rest assured that everything we discuss will be kept confidential. Your answers will be used to make improvements to mental health services. I will not share anything you say with your healthcare providers or with their supervisors.*

Patient Information

Study ID:

Age, gender, race:

Name of Health Center where they receive care:

Intervention Dates:

Diagnostic Group: PTSD, Bipolar Disorder, Bipolar and PTSD [PCL 14+ indicates PTSD as well if in bipolar group. CIDI cutoff 8+ indicates bipolar.].

Names and roles of individuals who provide care:
1) PCP -
2) Psychiatrist -
3) Psychologist -

Study Arm: Telepsychiatry Referral

Level of engagement in first 6 months: Engager or Non-engager [2+ contacts in first 6 months indicates engager]

Number of visits with psychologist:

Number of visits with psychiatrist (note date):

Number of no-shows:

CMTS Notes: (e.g., # telepsychiatry visits or telepsychology visits) (not to be shared with interviewee):

Interviewer introduces themselves:
- Describe where you live, work, family, things that you like to do.

1. I would like to get to know you a bit. Please tell me about yourself.
- How long have you been going to [Health Center]?
- Who do you see when you go to [Health Center]?

I have some quick clarifying questions for you. It would be helpful for me to know some background information so we can have a better conversation about the mental health care that you received over the past year (i.e., the SPIRIT study).

2. **Who did you see at [Health Center]- over the past year, while you were part of the SPIRIT study?**
   - Who is your primary care provider?
   - Who else was part of your care team?
   - *[If patient doesn't mention a specific individual you know they saw in CMTS, ask about that individual – e.g., Did you meet with Dr. Fortney?]*

3. **Why did you decide to enroll in the SPIRIT study?**

4. **What were you seeking treatment for?**

I want to fully understand your experience with your care team, which includes [name individuals discussed in question 3]. Let's begin by talking about your primary care provider.

5. **Tell me about your experience receiving health care from [name of PCP]?**
   - How would you describe your relationship?
   - How long have you been seeing [PCP]?
   - Probe for extent to which patient felt listened to, had enough time during appointments to discuss concerns, understood what was discussed.
   - What was helpful about the care you received? What could be improved?

[*If no/minimal discussion of mental health in response to #4, then please ask:*]

6. **Tell me about your experience receiving care for <u>mental health</u> from [name of PCP]?**
   - What's been [PCP name]'s role in your mental health care?
   - Has [PCP's name]'s role changed since participating in the study? [If yes] Can you tell me how?

7. **What was your role in treatment decisions with [name of PCP]?**
   - How did your role in treatment decision align with your preferred involvement?

Now, I'd like to ask some similar questions and talk with you about [name of psychologist].

8. **Tell me about your experience working with [name of psychologist] over interactive video?**
   - What's been [name of psychologist]'s role in your mental health care?
   - Probe for privacy concerns, extent to which mental health specialist was part of the care team, relatability.

9. **What was your role in treatment decisions with [name of psychologist]?**
   - How did your role in treatment decision align with your preferred involvement?

10. *[If patient received psychotherapy noted in CMTS]* **Tell me about doing the homework that the therapist asked you to do between sessions.**
    - What challenges did you experience completing the homework?
    - What was helpful about the care you received? What could be improved?

[Interviewer: Note date and frequency of tele-psychiatry visits in CMTS.] It might have been a while ago, but you also had a visit with [name of psychiatrist] via video. I'd like to talk with you about that visit.

11. **Tell me about your experience working with [name of psychiatrist] over interactive video?**
    - What's been [name of psychiatrist]'s role in your mental health care?
    - To what extent did [name of psychiatrist] communicate with your other healthcare providers to coordinate your mental health care? [PCP, care manager, etc.*]*
    - Probe for privacy concerns, extent to which mental health specialist was part of the care team, relatability.

12. *[If patient received pharmacotherapy noted in CMTS]* **Tell me about how well you think your medications were managed.**
    - Some things can help or hinder people to take their medications. What influences your ability to take your medications as prescribed?
    - Probe for medication adjustments and side effects.
    - What was helpful about the care you received? What could be improved?

13. **Tell me about receiving care using interactive video equipment.**
    - What was it like to meet with [name of psychologist/psychiatrist)] over video (compared to in person)?
    - Probe for advantages/disadvantages, technology issues, barriers, privacy concerns, the room the patient was in, improvements.

14. **[For patients who were non-engagers] Beside the things you already told me, what were the other reasons why you didn't use mental health services very much?**
    - Why didn't you have very many appointments with [insert treatment provider name]?
    - Probe for access, scheduling, transportation, comfort or relationship with providers, privacy, technology issues, insurance and costs, stoicism, stigma, self-reliance, suitability/applicability of intervention/care
    - [If no shows indicated in CMTS] I understand that it can be challenging to make it to appointments sometimes. What makes it difficult for you to make your appointments?
    - What could be improved about the care you received during the SPIRIT study?

15. *[If randomized to Phone Referral Care and received care by phone]* **Tell me about receiving care by phone.**
    - What was it like to meet with the mental health specialists by phone (compared to in person or interactive video)?
    - Probe for privacy concerns, extent to which mental health specialist was part of the care team, relatability.
    - What could be improved?

Now, I'd like to ask you about your overall experiences with the care that you received over the last 12 months while you were a participant in the SPIRIT study.

16. **Can you describe for me how [insert names of care team members previously discussed] communicated together about your care?**

17. **How would you describe your ability to get care for your mental health needs?**
    - Was there anything that made it harder to get the services you wanted compared to before you joined the SPIRIT study?
    - Was there anything that made it easier to get the services you wanted?
    - [Probe for other barriers, both internal and external to the health system that the patient may have experienced.]

18. **Overall, how helpful do you think the mental health treatment was that you received from [Health Center] during SPIRIT?**
    - Compared to 12 months ago, how are you doing now?
    - What was the most helpful about your treatment (medications, counseling)
    - What was the least helpful about your treatment?
    - Would you recommend the care you received to a friend or family member? Why or why not?

19. **Tell me about your experience transitioning out of SPIRIT and back into regular care.**
   - What, if anything, has changed about your care now that the study is over?
   - Please describe what your experience was like transitioning out of the study.
   - Tell me about how your mental health medications are being managed now.

It's important that the researchers who are developing new ways of delivering treatment get all the feedback they can so they can make improvements.

20. **When you think about the health care that you received, what improvements could be made?**
   - What else would you like the researchers to know that we might have missed?
   - What types of feedback do you think others might give?