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Primary Care Provider Perspectives on Virtual and In-person Depression Management during the COVID-19 Pandemic

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Abstract

Introduction—During the COVID-19 pandemic, primary care providers (PCPs), nurses, and integrated mental health specialists continued to collaboratively manage depression among

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patients using both in-person and virtual (i.e., hybrid) modalities. Few studies have characterized how hybrid services are currently delivered within interdisciplinary primary care teams. This study aimed to understand frontline PCPs perspectives on providing hybrid virtual and in-person depression care during the pandemic.

Method—From September to November 2020, 12 semi-structured individual interviews focused on depression management were conducted with PCPs in two Veterans Health Administration (VA) clinics in Los Angeles, which resumed in-person services while balancing rising COVID-19 cases. Interviews were audio-recorded, transcribed, and coded for depression management patterns. Themes were derived using a team-based constant comparative analytic approach.

Results—The pandemic and subsequent expanded use of virtual care necessitated clinic adaptations to depression assessments and procedures. PCPs perceived increased depression and anxiety among patients with existing psychiatric conditions, attributed to social distancing and isolation restrictions. They expressed acceptance of virtual care modalities for patients' depression management. PCPs did not perceive delay in mental health care delivery in the shift to virtual care but noted the possibility of patients being lost to follow-up.

Conclusions—During the pandemic, there has been heightened PCP concern for patients' emotional well-being and adaptations of clinic processes to meet needs for depression care. While PCPs were optimistic about new virtual care options for depression management, virtual care transfers remained poorly defined and the extent to which patient care experiences and health outcomes have been disrupted remains unknown.

Keywords

COVID-19; depression; mental health; primary care; telehealth

Depression affects one in five Veterans (Yano et al., 2012) and contributes substantially to the current COVID-19 pandemic-related mental health crisis (Vahratian et al., 2021). Given widespread social and economic disruption, COVID-19 has even been said to be a confluence of conditions that worsened the mental health of Veterans (Na, Tsai, Southwick, et al., 2021). Veterans have 50% higher baseline prevalence of depression (Fortney et al., 2016), as well as higher risk for loneliness/social isolation (Fitzke et al., 2021), than non-veteran civilians. Since pandemic onset, the prevalence of depression among Veterans has increased and as much as doubled (Peterson & Berghammer, 2020; Ramchand, 2020). Of great concern, individuals with depression may be reluctant to seek psychiatric consultation, which delays effective treatment and worsens outcomes, including physical health and mortality (Greenberg et al., 2015).

The Veterans Health Administration (VA) has long integrated mental and physical health services (e.g., with co-location or collaborative care models) (Ilgen et al., 2010; The Lancet, 2019) detecting and treating depression in three stages (Identification, Assessment/Triage, Management) based on Clinical Practice Guidelines (Department of Veterans Affairs & Department of Defense, 2016). In Identification, primary care nurses screen all Veterans for new depressive episodes (Leung, Post, et al., 2019). In Assessment/Triage and Management, primary care providers (PCPs) follow up for confirmation of diagnosis and treatment via antidepressant medication. Meanwhile, integrated mental health specialists (i.e., primary

care-mental health integration [PC-MHI]) stand-by to collaboratively care for affected patients through brief behavioral interventions or to refer for non-primary care services (e.g., substance use treatment) (Leung, Rubenstein, et al., 2019). Research has shown that such collaborative care services can be successfully and cost-effectively delivered using telehealth (Fortney et al., 2013; Pyne et al., 2010). While telehealth (e.g., secure email, telephone care, e-consults, video visits) has long been available (Heyworth et al., 2020), its use in the VA sky-rocketed during the pandemic (Ferguson et al., 2021).

Depression care processes are complex, involving multilevel stakeholders. Beginning in March 2020, these processes have been subject to significant disruption from two related variables—COVID-19 and the resulting expansion of telehealth. During the pandemic, PC-MHI services have declined (Cornwell et al., 2021), potentially worsening depression care quality. To continue delivering uninterrupted depression services, healthcare systems have rapidly incorporated virtual care into traditional in-person care delivery models creating hybrid models, which vary from site to site. Little is known about how hybrid depression care services are currently being delivered by interdisciplinary teams in primary care (e.g., virtual services for whom, in which diseases, under which conditions) (Rosen et al., 2021; Veazie et al., 2019). Since hybrid care models are likely to persist, there is an opportunity for the VA to improve implementation of hybrid in-person/virtual integrated care delivery for Veterans with depression. Building on previous work with PC-MHI providers (Leung et al., 2020), this study aimed to understand frontline PCPs perspectives on providing hybrid virtual and in-person depression care within interdisciplinary primary care teams during the COVID-19 pandemic.

Method

Study Design

This qualitative study included individual interviews with PCPs in two VA Greater Los Angeles (GLA) primary care clinics. Data collection occurred as part of a research effort to obtain multilevel stakeholder input on a new online depression treatment (Leung et al., 2020). From these data, we analyzed PCP-perceived impacts of the COVID-19 pandemic on primary care clinic workflow related to depression care coordination. All procedures were approved by the VA GLA Healthcare System Institutional Review Board (IRB #1616118) and PCP interview participants who provided their subject matter expertise were determined to be non-human subjects.

Participants and Recruitment

VA GLA leadership provided the study team with contact information for all 53 PCPs, including physicians (MD/DOs) and nurse practitioners, in its two largest primary care clinic sites. The study team then sent PCPs an e-mail message to introduce the project and schedule participation and up to two follow-up messages, as needed. We achieved 23% (n=12) voluntary participation via e-mail recruitment. Recruitment occurred from September to November 2020 and coincided with a slow return to in-person services after an abrupt switch to virtual services in March 2020, while balancing rising COVID-19 cases

across GLA and nationally. Participants provided verbal consent for participation. No study incentives were offered.

Data Collection

A semi-structured interview guide (pertinent interview questions provided in Appendix 1) was developed with input from PCPs and refined by clinical and research experts prior to use. Domains of inquiry included current identification and care practices for Veterans with depression, and clinic readiness to adopt virtual care options for depression management. Authors (LL, KD, CB) conducted all interviews, which were designed to be short to accommodate PCPs unusually busy schedules during the COVID-19 pandemic and lasted an average of 30 minutes (DeJonckheere & Vaughn, 2019). All interviews were conducted via video conferencing or telephone, audio recorded, and professionally transcribed verbatim. Descriptive data about VA GLA's patient population were obtained from VA electronic databases.

Data Analysis

Themes were derived using a team-based constant comparative analytic approach. Interview transcripts were summarized using a template, checked for technique consensus between team members, and discussed by the analysis team (LL, KD, JC, CB, AH) to assess the breadth and depth of providers' perspectives on depression care management (Hamilton, 2020). Using matrix analysis techniques (Averill, 2002), summarized data were mapped onto the following a priori categories: Identification, Assessment/Triage, and Management (Department of Veterans Affairs & Department of Defense, 2016). All mapped data were agreed upon between analysis team members. Matrix analysis allowed the research team to assess the breadth and depth of information collected, and informed targeted coding of data specific to these categories. Deidentified interview transcripts were then imported into a qualitative analysis software (Scientific Software Development GmbH, 2017) for manual coding related to perceived impacts of the pandemic; specifically impacts on patients, as well as clinic workflow processes in the identification and treatment of depression within VA primary care clinics. All coding required agreement consensus across coding techniques before independent coding occurred. Two investigators (LL, CB) independently reviewed the coded segments to identify and group key themes. A third investigator (JC) reviewed the themes generated; discrepancies were resolved by consensus. Finally, a saturation grid (Brod et al., 2009), which visually aligns support for themes across interviews, was developed to cross-check and confirm evidence of themes against the dataset. To enhance the validity of our data analysis, we undertook member checking (Birt et al., 2016) from our sample. All participants, except one whom we were unable to reach, verified that results resonated with their experience. Selected quotations were examined to ensure that no participants were over- or under-represented.

Results

Study Setting and Participants

VA GLA is among the largest VA healthcare systems. In fiscal year 2021 (10/1/2020–9/20/2021), it served mostly urban patients with higher-than-average proportion of patients

with depression diagnoses (18.2%, versus 16.9% nationally) and with high overall medical complexity (see Table 1). While VA GLA delivers more telehealth services, compared to the national VA average (43.5% versus 39.8%), fewer than a quarter of primary care patients access same day integrated mental health services (24.4%, versus 31.3% nationally). GLA provided a mix of integrated care services, including brief behavioral health visits by co-located specialists and depression care management by nurses, as noted in a pre-pandemic study (Leung et al., 2020). This study included 12 PCPs (9 physicians, 3 nurse practitioners) from one hospital-based (n=9) and one community-based (n=3) GLA clinic. Study PCPs were consistent with the overall VA GLA PCP sample, in that two-thirds were women and one-third additionally provided Women's Health primary care (see Table 2).

Identification of Depression

Most PCPs perceived an increase in anxiety and depression symptoms among patients during the pandemic. They suggested social distancing and isolation practices impacted patients' well-being: "I have had a lot of patients saying that they feel more depressed lately, and helpless. They feel isolated, obviously, because of social distancing."

Some PCPs suggested that symptoms worsened for patients both with and without existing psychiatric conditions. A PCP described this across both groups:

A lot of people who have depression or anxiety or features of both, or PTSD [posttraumatic stress disorder], have had mood changes during the past few months, especially right at the beginning with the shutdown.... People who had no diagnosis or may have had a diagnosis that was stable, reported changes.

There were perceptions of increased help-seeking behaviors, including requests for help managing anxiety. One PCP described an influx of requests for mental health resources: "Right now a lot of people are calling me, when I try to evaluate them for the first time. The first thing they tell me is, 'I'm depressed, I want to talk to somebody.'"

While some PCPs described their patients with psychiatric histories as having worsening symptoms, several PCPs felt that the overall rate of clinical depression had not necessarily increased compared to pre-pandemic. Sadness, as described by one PCP, was expected, and not to be confused with clinical depression. "People have expressed more sadness, upset, but in terms of depression, I'm not sure. Maybe some. But a lot of it is just, if you will, sadness at the current situation, which isn't really equating to depression."

Another PCP described an increase of mental health symptoms among persons of color, attributing this disparity to race tensions amplified by concurrent civil unrest in the United States: "I would say that it's more so in Black patients, because we're not just dealing with a pandemic, it's also a lot of racial tension, and so that combined has weighed heavily on a lot of my patients."

Older patients were identified as having struggled more with increased depression during the onset of the pandemic - particularly those living alone or challenged by telehealth and virtual appointment learning curves. "I have noticed that a lot of our patients who are older, seem to really struggle with using computers. They are not that inclined to do it."

PCPs described adaptations to their depression screening. Most perceived that screening occurred virtually since there were minimal in-person visits. “The LVNs [licensed vocational nurses] used to ask the screening questions about depression, but now that it’s more virtual than coming in face-to-face, it basically comes to us [PCPs], so we are the ones who are asking about the screening questions.”

Another PCP shared a similar sentiment in that secondary screenings or assessments for depression and PTSD were reduced to a single screening during the patients encounter with their PCP. Nurse-initiated screenings were felt not to occur, as nurse pre-visits (e.g., vital sign checks, flu vaccine reminders) were misaligned with patients’ actual visits with PCPs (e.g., pre-visits occurring well in advance, or even after, visits with PCP). As a result, PCPs often screened for depression, in lieu of available nurses or mental health staff.

The LVN would see them right before the appointment and then they would do the screening, and then we would get them [the patient] and do the secondary screening. But now the LVN is calling them ... maybe a week before the appointment and so they’re not doing any PTSD or depression screenings when they call.

One PCP speculated why depression screenings were not carried out by nurses during their reminder calls and expressed concern for the missed opportunity in not having nurses perform screenings.

So, my concern is, what if a patient is really depressed and they are not asked, when the LVN contacts them, and then they’re not available for a call? ... I just feel like it’s kind of a missed opportunity.... I feel like it’s this resistance, like if we screen for it, if we mention it, and the clinician isn’t right there, then what do we do?

Assessment/Triage of Depression

PCPs described various ways in which the pandemic impacted typical depression referrals and treatment pathways. Clinics were described as quieter with PCPs, nurses, and integrated mental health staff no longer in the same physical environment. The remote workforce across primary care and mental health clinics resulted in virtual and phone-based warm handoffs between providers at various linkage points. The complexity of navigating these new referral processes and the potential implications for the patient was captured well by one PCP:

I think our changing workflows can impact people initially in the door with say, a separate mental health provider.... Whenever there’s a handoff to another provider and we’re navigating a new relationship over virtual modalities, it just becomes a little more complex, and so I think [that] acceptability to patients is something that we’re navigating.

Coordination workarounds to triage patients to remote mental health providers were dependent upon the patients’ risk profile, such as symptom severity. For instance, if a patient expressed active suicidal/homicidal thoughts, a PCP would perform a telephone-based warm handoff – essentially, keeping the patient on the phone to introduce and connect them to the

referred specialist. If patient symptoms were urgent (non-emergent), PCPs described sending an email to integrated mental health specialists to initiate mental health care consults. For less acute and urgent referrals, PCPs relied on instant messaging to communicate with specialists rather than email and phone correspondence. Patients were also reminded to go to the ER if necessary.

One PCP described with detail the extent to which a virtual care transfer (as opposed to traditional in-person warm handoff) might require simultaneous narration to the patient and coordination to safely triage the patient to mental health care. This sentiment was represented across other PCPs who underscored the coordination differences between virtual care transfers compared to in-person warm handoffs:

We would just send a message to the mental health PCMH [integrated mental health] team ... while I'm keeping the patient on the phone and letting them know what's going on, telling the patient [that] ... somebody's going to be calling them, and then when they [the patient] say[s] they have an incoming call or when one of the team members tell me they're about to call the patient, then I'll say—'Okay, that's probably them calling.' I usually try to keep them on the phone.

Given the nature of the clinical triage, PCPs suggested that the response time between initiating consult requests and the patients assessment by mental health providers was not affected by the handoff medium (traditional versus virtual).

I mean, if they're suicidal, then it's a warm handoff. If they're just feeling depressed, but [no] red flags, then it doesn't have to be a warm handoff. That's a consult [instead].... I find that our mental health people [are] calling the patient within a few hours [of a consult] to do a preliminary assessment.

Management of Depression

While PCPs provided in-person and virtual primary care, they perceived that most mental health specialty visits were over the phone. Phone visits were followed by some video visits, and very limited in-person visits with mental health. Specifically, psychiatry medication evaluations, and individual and group-based psychotherapy transitioned to virtual platforms.

Many providers perceived virtual care modalities to be an acceptable means by which to access healthcare, including depression care. Moreover, PCPs suggested that the ongoing pandemic uniquely positions patients to become more accepting of virtual care options. "The whole COVID thing has primed people who were not previously comfortable with technology.... So, I think that it may be more accepted now."

One PCP suggested that the pandemic has encouraged healthcare systems to implement more virtual programs with less resistance:

I do feel like we're at this time in primary care where all our processes are so up in the air, and we're all trying more virtual care, that I can see a lot of openness to trying this as well.

Another PCP underscored the appeal for some patients to access mental health visits using virtual care options: “Just them knowing that they don’t have to come on campus and find a building, find a room, and wait in the waiting room. That’s helped.”

The therapeutic alliance between the patient and mental health provider was paramount, and the mode for communication was less of a concern for patients, suggested another PCP: “I don’t think it [the visit type] matters as much as the connection.”

Another PCP suggested that pandemic adaptations concerning limited staff in clinics may have inadvertently impacted care follow-up.

And now, with the COVID pandemic, I’ve noticed ... how messy, I think, just the whole healthcare system has gotten, because of all the changes we’ve had to make to protect staff and patients.... People seem to have gotten kind of lost to follow up a little bit more than usual.

Discussion

The COVID-19 pandemic and resulting virtual care expansion necessitated adaptations to depression assessments and clinic procedures, which was accompanied by positive and negative changes. Our interviews corroborated that there were constraints on health care services (e.g., appointments not immediately available, staffing strain and shortages) during the pandemic (Kuehn, 2021). That said, PCPs spoke about how virtual care helped to mitigate negative impacts on depression treatment access, such as newly engaging patients through convenient phone or video appointments for mental health specialty care. Such feedback from PCPs builds on growing evidence in support of using tele-mental health services across populations and settings (Bashshur et al., 2016; Shigekawa et al., 2018). Our study elicited perspectives from frontline PCPs and thus filled an evidence gap in understanding perspectives from those whom may not have voluntarily participated in telehealth research trials (Connolly et al., 2020; Veazie et al., 2019). Future research should move beyond examining acceptability of telehealth services to determining its effectiveness across real-world settings.

Also noteworthy was how PCPs described a hasty and poorly defined transition from in-person to virtual care transfers, instead of intentional coordinated handover of patient care from one provider to another. Correspondingly, PCPs noted that patient care experiences and health outcomes may have been impacted, especially during depression screening. Again, the pandemic allows for naturalistic study, as well as improvement, of depression care models that deliver a combination of hybrid virtual and in-person services for Veteran populations, especially hybrid safety monitoring protocols (e.g., suicide risk management). Our qualitative findings suggested that greater attention to provider-to-provider handoffs was needed during the pandemic. Quantifiable data on the extent to which patient care quality (e.g., screening and treatment rates) have been impacted would lend support to further exploring this mechanism of potential care disruption. We still do not know which in-person or telehealth care modality is best for whom, under what conditions, etc. (Rosen et al., 2021). Furthermore, because telehealth adoption and implementation varies across VA providers and clinical settings (Jacobs et al., 2021), researchers should continue to obtain

multilevel stakeholder perspectives, including patients and providers, as part of improving primary care and mental health care delivery (Connolly et al., 2021).

Study PCPs perceived increased depression and anxiety symptoms among Veterans with existing psychiatric conditions and expressed heightened concern for patients' emotional well-being. PCPs felt Veterans had worsened mental health in part due by increased social isolation related to the pandemic (Fitzke et al., 2021). Alarming, researchers have shown that increased psychiatric symptoms and loneliness during the pandemic were associated with suicidal ideation (Na, Tsai, Hill, et al., 2021). Our study contributes qualitative data about the extent of pandemic-related disruptions from the perspective of PCPs; yet future research utilizing quantitative data is necessary to fully understand the scale of disruption. Depression has long been associated with deferred chronic disease and preventive care (Magnezi et al., 2014) and, concerning, increased overall mortality (Cully et al., 2008). Veterans rely heavily on the VA for mental health services and have been found to preferentially seek psychiatric treatment from the VA mental health care infrastructure, compared to the private sector (Liu et al., 2010). As a result, VA provider perspectives, especially broad-based PCPs, are critical to ensuring timely and appropriate system-wide response to the Veteran population's mental health needs.

This study provided us in-depth information regarding current depression care processes from the perspective of PCPs, but it does have limitations. First, our study providers were recruited mid-pandemic and therefore low in number. However, providers were recruited from two large metropolitan VA clinics and were consistent (in gender, clinical practice) with other VA PCPs. Second, we conducted interviews only with PCPs. We interviewed mental health providers prior to pandemic onset, (Leung et al., 2020) and therefore, did not obtain their recent perspectives. The case study is bounded by the context of two GLA clinics during the COVID-19 pandemic. On average, VA primary care patients and clinic models here are more complex and can inform care practices more broadly.

In conclusion, PCPs perceived a considerable pandemic-related toll on Veterans' mental well-being and adaptations of clinic processes to meet Veterans' needs for depression care. While PCPs were optimistic about new virtual care options for depression management, virtual care transfers remained poorly defined with potential to negatively impact patient care experiences and health outcomes. VA and other healthcare systems have made major strides toward universal depression screening and invested heavily in primary care models to avail patients to accessible treatment. As hybrid depression care models persist beyond the pandemic, however, more research is needed to improve upon virtual interdisciplinary care transfers and engage patients with depression in their preferred treatment modality.

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Appendix

Relevant Questions from the Interview Guide

1. Can you tell me a little about patients at your clinic?
 - a. What proportion of the primary care patients in your clinic would you say have depressive disorders? Have you noticed a change in the past few months?
 - b. Based on your experience in the VA, what are the top three barriers that prevent Veterans from engaging in depression treatment? That facilitate their engaging in treatment?
2. If a Veteran screens positive for mild to moderate depression, what are the next steps? (Probe for details)
 - a. Who does the next level of mental health assessment to determine if the condition is present and its severity?
 - b. How are decisions made regarding mental health referrals? How is the patient connected to the mental health provider, such as a warm handoff or formal consult?
 - c. If you believe the depression may be severe or it's a complicated case, what then is the next step?
 - d. Who discusses mental health treatment options with the Veteran?
 - e. Who usually manages (or follows-up with) these Veterans for their depression?
3. What kinds of depression treatment are usually offered? In what settings are they offered? [probe: Could you describe how treatment and management are divided among providers—for example what does the PCP do; what would an integrated mental health provider do; what would be done in a mental health clinic?]
 - a. What tele-mental health services are available to Veterans in your clinic, if any? [or: Do your patients conduct video visits with mental health? Do they have access to remote depression care management services, such as mental health nurses monitoring symptoms and treatment adherence over telephone?]
 - b. Is anyone trained to provide cognitive behavioral therapy or any other evidence-based psychotherapy to patients with depression?
 - c. Does anyone use non-traditional ways of delivering therapy, such as with VA mobile apps?

References

- Averill JB (2002). Matrix analysis as a complementary analytic strategy in qualitative inquiry. *Qualitative Health Research*, 12(6), 855–866. 10.1177/104973230201200611 [PubMed: 12109729]

- Bashshur RL, Shannon GW, Bashshur N, & Yellowlees PM (2016). The empirical evidence for telemedicine interventions in mental disorders. *Telemedicine and e-Health*, 22(2), 87–113. 10.1089/tmj.2015.0206 [PubMed: 26624248]
- Birt L, Scott S, Cavers D, Campbell C, & Walter F (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research*, 26(13), 1802–1811. 10.1177/1049732316654870 [PubMed: 27340178]
- Brod M, Tesler LE, & Christensen TL (2009). Qualitative research and content validity: Developing best practices based on science and experience. *Quality of Life Research*, 18(9), 1263–1278. 10.1007/s11136-009-9540-9 [PubMed: 19784865]
- Connolly SL, Miller CJ, Lindsay JA, & Bauer MS (2020). A systematic review of providers' attitudes toward telemental health via videoconferencing. *Clinical Psychology: Science and Practice*, 27(2), e12311. 10.1111/cpsp.12311
- Connolly SL, Stolzmann KL, Heyworth L, Weaver KR, Bauer MS, & Miller CJ (2021). Rapid Increase in Telemental Health Within the Department of Veterans Affairs During the COVID-19 Pandemic. *Telemedicine and e-Health*, 27(4), 454–458. 10.1089/tmj.2020.0233 [PubMed: 32926664]
- Cornwell BL, Szymanski BR, & McCarthy JF (2021). Impact of the COVID-19 Pandemic on Primary Care-Mental Health Integration Services in the VA Health System. *Psychiatric Services*, 72(8), 972–973. 10.1176/appi.ps.202000607 [PubMed: 33397142]
- Cully JA, Zimmer M, Khan MM, & Petersen LA (2008). Quality of depression care and its impact on health service use and mortality among veterans. *Psychiatric Services*, 59(12), 1399–1405. 10.1176/ps.2008.59.12.1399 [PubMed: 19033166]
- DeJonckheere M, & Vaughn LM (2019). Semistructured interviewing in primary care research: a balance of relationship and rigour. *Family Medicine and Community Health*, 7(2), e000057. 10.1136/fmch-2018-000057 [PubMed: 32148704]
- Department of Veterans Affairs, & Department of Defense. (2016). VA/DoD Clinical Practice Guideline for the Management of Major Depressive Disorder. <https://www.healthquality.va.gov/guidelines/MH/mdd/VADoDMDDCPFINAL82916.pdf>
- Ferguson JM, Jacobs J, Yefimova M, Greene L, Heyworth L, & Zulman DM (2021). Virtual care expansion in the Veterans Health Administration during the COVID-19 pandemic: Clinical services and patient characteristics associated with utilization. *Journal of the American Medical Informatics Association*, 28(3), 453–462. 10.1093/jamia/ocaa284 [PubMed: 33125032]
- Fitzke RE, Wang J, Davis JP, & Pedersen ER (2021). Substance use, depression, and loneliness among American veterans during the COVID-19 pandemic. *American Journal of Addictions*, 30(6), 552–559. 10.1111/ajad.13211
- Fortney JC, Curran GM, Hunt JB, Cheney AM, Lu L, Valenstein M, & Eisenberg D (2016). Prevalence of probable mental disorders and help-seeking behaviors among veteran and non-veteran community college students. *General Hospital Psychiatry*, 38, 99–104. 10.1016/j.genhosppsych.2015.09.007 [PubMed: 26598288]
- Fortney JC, Pyne JM, Mouden SB, Mittal D, Hudson TJ, Schroeder GW, Williams DK, Bynum CA, Mattox R, & Rost KM (2013). Practice-based versus telemedicine-based collaborative care for depression in rural federally qualified health centers: A pragmatic randomized comparative effectiveness trial. *American Journal of Psychiatry*, 170(4), 414–425. 10.1176/appi.ajp.2012.12050696 [PubMed: 23429924]
- Greenberg PE, Fournier AA, Sisitsky T, Pike CT, & Kessler RC (2015). The economic burden of adults with major depressive disorder in the United States (2005 and 2010). *Journal of Clinical Psychiatry*, 76(2), 155–162. 10.4088/JCP.14m09298 [PubMed: 25742202]
- Hamilton A (2020, September 29). *Rapid qualitative analysis: Updates/developments* [Video]. VA Health Services Research & Development Cyberseminar, Virtual. https://www.hsrd.research.va.gov/for_researchers/cyber_seminars/archives/video_archive.cfm.
- Heyworth L, Kirsh S, Zulman D, Ferguson JM, & Kizer KW (2020). Expanding access through virtual care: The VA's early experience with COVID-19. *NEJM Catalyst*, 1(4), CAT.20.0327. 10.1056/CAT.20.0327

- Ilgén MA, Bohnert AS, Ignacio RV, McCarthy JF, Valenstein MM, Kim HM, & Blow FC (2010). Psychiatric diagnoses and risk of suicide in veterans. *Archives of General Psychiatry*, 67(11), 1152–1158. 10.1001/archgenpsychiatry.2010.129 [PubMed: 21041616]
- Jacobs J, Ferguson JM, Van Campen J, Yefimova M, Greene L, Heyworth L, & Zulman DM (2021). Organizational and external factors associated with video telehealth use in the Veterans Health Administration before and during the COVID-19 pandemic. *Telemedicine and e-Health*, 28(2), 199–211. 10.1089/tmj.2020.0530 [PubMed: 33887166]
- Kuehn BM (2021). Despite improvements, COVID-19's health care disruptions persist. *JAMA*, 325(23), 2335. 10.1001/jama.2021.9134
- Leung LB, Dyer KE, Yano EM, Young AS, Rubenstein LV, & Hamilton AB (2020). Collaborative care clinician perceptions of computerized cognitive behavioral therapy for depression in primary care. *Translational Behavioral Medicine*, 10(3), 565–572. 10.1093/tbm/ibz122 [PubMed: 32766864]
- Leung LB, Post EP, Jaske E, Wells KB, & Rubenstein LV (2019). Quality of mental health care in integrated Veterans Affairs patient-centered medical homes: A national observational study. *Journal of General Internal Medicine*, 34(12), 2700–2701. 10.1007/s11606-019-05310-1 [PubMed: 31485971]
- Leung LB, Rubenstein LV, Yoon J, Post EP, Jaske E, Wells KB, & Trivedi RB (2019). Veterans Health Administration investments in primary care and mental health integration improved care access. *Health Affairs (Millwood)*, 38(8), 1281–1288. 10.1377/hlthaff.2019.00270
- Liu CF, Chapko M, Bryson CL, Burgess JF Jr., Fortney JC, Perkins M, Sharp ND, & Maciejewski ML (2010). Use of outpatient care in Veterans Health Administration and Medicare among veterans receiving primary care in community-based and hospital outpatient clinics. *Health Services Research*, 45(5 Pt 1), 1268–1286. 10.1111/j.1475-6773.2010.01123.x [PubMed: 20831716]
- Magnezi R, Glasser S, Shalev H, Sheiber A, & Reuveni H (2014). Patient activation, depression and quality of life. *Patient Education and Counseling*, 94(3), 432–437. 10.1016/j.pec.2013.10.015 [PubMed: 24331277]
- Na PJ, Tsai J, Hill ML, Nichter B, Norman SB, Southwick SM, & Pietrzak RH (2021). Prevalence, risk and protective factors associated with suicidal ideation during the COVID-19 pandemic in U.S. military veterans with pre-existing psychiatric conditions. *Journal of Psychiatric Research*, 137, 351–359. 10.1016/j.jpsychires.2021.03.021 [PubMed: 33756377]
- Na PJ, Tsai J, Southwick SM, & Pietrzak RH (2021). Factors associated with post-traumatic growth in response to the COVID-19 pandemic: Results from a national sample of U.S. military veterans. *Social Science & Medicine* (1982), 289, 114409. 10.1016/j.socscimed.2021.114409 [PubMed: 34537394]
- Peterson A, & Berghammer L (2020). Invisible wounds and Covid-19: Heightened risk for wounded warriors. Wounded Warrior Project https://www.woundedwarriorproject.org/media/wfbjwylf/wwp20_0135_exe_covid_wpaper.pdf
- Pyne JM, Fortney JC, Tripathi SP, Maciejewski ML, Edlund MJ, & Williams DK (2010). Cost-effectiveness analysis of a rural telemedicine collaborative care intervention for depression. *Archives of General Psychiatry*, 67(8), 812–821. 10.1001/archgenpsychiatry.2010.82 [PubMed: 20679589]
- Ramchand RHM; Berglass N; Lauck M (2020). Veterans and COVID-19: Projecting the economic, social, and mental health needs of America's veterans. The Bob Woodruff Foundation. https://bobwoodrufffoundation.org/wp-content/uploads/2021/09/BWF_WhitePaper-COVID19-5.0-Final.pdf
- Rosen CS, Morland LA, Glassman LH, Marx BP, Weaver K, Smith CA, Pollack S, & Schnurr PP (2021). Virtual mental health care in the Veterans Health Administration's immediate response to coronavirus disease-19. *American Psychologist*, 76(1), 26–38. 10.1037/amp0000751 [PubMed: 33119331]
- Scientific Software Development GmbH. (2017). ATLAS.ti (v.8) [Computer software] <https://atlasti.com/>
- Shigekawa E, Fix M, Corbett G, Roby DH, & Coffman J (2018). The current state of telehealth evidence: a rapid review. *Health Affairs*, 37(12), 1975–1982. 10.1377/hlthaff.2018.05132 [PubMed: 30633674]

- The Lancet. (2019). Suicide risk in US veterans. *Lancet*, 394(10201), 806. 10.1016/S0140-6736(19)32043-4
- Vahratian A, Blumberg SJ, Terlizzi EP, & Schiller JS (2021). Symptoms of anxiety or depressive disorder and use of mental health care among adults during the COVID-19 pandemic - United States, August 2020-February 2021. *Morbidity and Mortality Weekly Report*, 70(13), 490–494. 10.15585/mmwr.mm7013e2 [PubMed: 33793459]
- Veazie S, Bourne D, Peterson K, & Anderson J (2019). Evidence brief: Video telehealth for primary care and mental health services. Department of Veterans Affairs. <https://www.ncbi.nlm.nih.gov/books/NBK538994/>
- Yano EM, Chaney EF, Campbell DG, Klap R, Simon BF, Bonner LM, Lanto AB, & Rubenstein LV (2012). Yield of practice-based depression screening in VA primary care settings. *Journal of General Internal Medicine*, 27(3), 331–338. 10.1007/s11606-011-1904-5 [PubMed: 21975821]

Public Significance Statement

This study suggests heightened primary care provider (PCP) concern for patients' emotional well-being and adaptations of clinic processes to meet needs for depression care during the COVID-19 pandemic. While PCPs were optimistic about new virtual care options for depression management, virtual care transfers remained poorly defined and the extent to which patient care experiences and health outcomes have been disrupted remains unknown.

Table 1

Characteristics of VA Greater Los Angeles Healthcare System, as compared to the entire Veterans Health Administration

	VA Greater Los Angeles	VA nationally
Clinic characteristics		
Clinic size (# primary care patients)	67,164	5,520,301
Mental Health access (% same day visit)	24.4	31.3
Mental Health reach (% patients seen by MH)	7.75	7.94
Telehealth (% use)	43.5	39.8
Patient characteristics		
Gender (% male)	90.8	89.8
Rurality (% urban)	87.4	65.7
Case-mix (average Nosos Risk Score [*])	1.08	0.96
Depression diagnosis (%)	18.2	16.9

* Nosos Risk Score is a measure of the average clinical risk or complexity for a Veteran. It is derived from diagnostic codes, age, gender, pharmacy records, VA priority status, and VA-computed costs. Higher numbers denote higher average clinical risk or complexity.

Table 2

Characteristics of VA Greater Los Angeles Primary Care Provider Study Participants

	Number of Providers (n=12)
Gender	
Female (%)	8 (66)
Male (%)	4 (33)
Role	
Physician (%)	9 (75)
Nurse Practitioner (%)	3 (25)
Clinic	
Primary Care (%)	9 (75)
Women's Health Primary Care (%)	3 (25)
Location	
Hospital-based clinic (%)	9 (75)
Community-based clinic (%)	3 (25)