Increasing Veteran Mental Health Engagement via Telehealth Technology

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June 6, 2024

**Introduction**

Veterans across the nation struggle to maintain consistent contact with their mental health providers. For those who receive inpatient treatment, once they are discharged, follow up becomes challenging. Overall, 27.1% of veterans dropout of enrolled mental health services through Veterans’ Affairs for mental illnesses such as PTSD, (Edwards-Stewart A., et al,, 2021). The VA has published guidelines for providers to follow when treating veterans at risk for suicide. Following the proper inpatient or outpatient treatment, the provider is directed to “follow up”, (US Department of Veterans' Affairs, 2024). However, the guideline does not specify how, when or how many times the provider should follow up. The cycle of care for the veteran essentially ends at the follow up. This presents a huge opportunity for improvement for the VA.

 A pilot study was conducted at the W. G. (Bill) Hefner Veterans Affairs Health Care System in North Carolina to test the efficacy of clinical video technology, (CVT), (Brearly et al., 2020). The study involved issuing tablets powered by local internet service providers to veterans leaving the inpatient mental health units. Follow up care was scheduled and patients were educated on how to use the tablets all before discharge. Brearly, et al., (2020) found a 14% decrease in readmission rates for mental health issues related to this study. Patients who lived in rural areas, lacked transportation or experienced stigma in visiting a clinic were able to receive the same quality of care, while avoiding these barriers to their care. Rates of clinical visits and medication management also rose, according to Gujral, K., et al, (2023). The below chart shows the enumerated effects of clinical video-based technology.



(Gujral, K., et al, 2023).

While this intervention has been wildly successful, it is not nationally implemented as standard practice for the VA yet. The proposal for this project is to begin the implementation of clinical video telehealth technology into the VA in Columbia, South Carolina. A team including a nursing executive, informatics teams, research nurses and unit appointed champions will implement a similar protocol at William Jennings Bryan Dorn Veterans Affairs Medical Center. The goal of this initiative is to decrease the number of “no-show” appointments, increase overall patient satisfaction scores with their clinic and providers and show an overall improvement in keeping veterans engaged in their mental health care outside of the inpatient setting.

Government funding will be obtained for the issuance of tablets, serviced by local internet service providers through government contracts. Once the funding and tablets are secured, patients will be screened for viability for the intervention. Those patients who have a history of addiction or house instability may not qualify and will need to be cared for in other ways. Patients with tablets will be educated on its use, goals for treatment, and privacy rights. They will then take the tablets home and begin telehealth therapy and medication management while research nurses track their progress. Updates will be made monthly for the unit, and barriers to change will be discussed further in this publication.

**Literature Review**

 The literature reviewed in this publication examine the efficacy of treating veterans via telehealth in the mental health setting. Referenced articles discuss using app based telehealth, as well as tablet based. Overall, veterans receptiveness to their treatment modality was high, with criticisms limited to accessibility due to technology, and desire for more face to face contact with their providers. Results of the randomized controlled trials show a valuable increase in veteran participation of their mental health regimen. Overall, the level IV research reviewed supported the implementation of psychiatric telehealth, especially through government supplied tablets, to all veterans who qualify through the Veterans’ Health Administration.

 Betthauser, L. M. et al, (2020) conducted a three-month study which tracked veterans’ self-reported satisfaction and use of the Cogito app, derived from mHealth. 83 veterans were tracked over the study with 79% reporting the app as an acceptable method of care delivery, (Betthauser, L. M., 2020). Guracho, Y. D. (2023, November) found 78.9% of veterans in their literature review expressed interest and desire to use mobile technology for their mental health treatment. Their study found 88.63% of veterans own a smartphone but only 23.29% utilize it for their mental health (Guracho, Y. D., 2023, November). Additionally, a pilot study conducted at W. G. (Bill) Hefner Veteran Affairs Healthcare System, or VAHCS, showed a notable decrease of 14% in its readmission rate of veterans discharged from inpatient psychiatry through use of computerized video telehealth, or CVT, (Brearly et al., 2020).

 The most comprehensive study at this time was published by Gujral, K. et al, (2023), sampling over 16,000 tablet recipients and 1.4 million non-recipients. The study was further classified by sociodemographic and for a more accurate study. Participants were also classified by their health status and mental health conditions, such as PTSD. The study showed an overall increase in both tablet and not-tablet based psychotherapy visits across all demographics, with women showing the most significant increase in visits over men (30.5 % women versus 24.4% men). Usage of psychotherapy services across all modalities by black and white veteran tablet recipients increase by about 20%, (Gujral, K. et al, 2023). Of the 1,478,400 veterans studied, those who received a tablet for their telehealth appointments were slightly more likely to attend visits than those who used telehealth without a tablet. It is noted that those veterans who qualified for a government operated tablet were more likely to experience housing instability and substance abuse (Gujral, K. et al, 2023). Overall, this study provided empirical evidence tablet based psychotherapy can be advantageous to those veterans who may not have access to internet or mobile devices. The study also highlighted the effects of telehealth increasing psychotherapy visits across all study participants, both recipients and non-recipients. At the conclusion of the publication, the authors state their intention in conducting this study was to draw attention to the need for policy makers to support this modality in funding and standing up these programs, (Gujral, K. et al, 2023).

 Limitations in the study by Betthauser, L. M. et al, (2020) were limited to technological issues, such as compatibility of mHealth with both Android and iPhone operating systems. Service interruptions were reported due to app upgrades. Some aspects of the app required the participant to utilize text messaging, which some were either unable or unwilling to do, (Betthauser, L. M. et al, 2020). It is suggested by Betthauser L. M. et al (2020) further research should include fixes for these interruptions and assurance of compatibility across all operating systems. Limitations in the study by Guracho, Y. D. (2023, November) include its data limitation to studies already reviewed, dating back to 2014. The review also did not include any of its own randomized controlled trials and would benefit from expanding upon the data it presents by conducting cross-sectional trials. Brearly, T. W., et al (2020, February 7) found their limitations were related to coordination between inpatient and outpatient clinicians to ensure effective transfer of care of the veteran. They did not find issues with the software but did have difficulty securing tablets prior to discharge due to federal policy. This process also increased the number of necessary tasks for patient discharge, increasing staff workload and requiring a shuffling of responsibilities by management, (Brearly, T. W., et al, 2020, February 7). Finally, Gujral, K., et al, (2023) noted some differences between tablet recipients and non-recipients based on their eligibility for the tablet. That was mitigated by adjusting their analysis to include this factor. Timing of tablet shipment also posed a risk to the integrity of the study and therefore tablets were shipped in step wise manner to mitigate any calendar event. Future work is suggested to focus on facility specific contributors, and different sociodemographic samplings, (Gujral, K., et al, 2023).

 After reviewing the literature and randomized controlled studies, it can be inferred the delivery of mental health care has a promising opportunity to increase veterans’ engagement in their care, thereby improving outcomes and reducing the number of suicides and adverse events related to mental health disorders. There are some challenges with changes in modality, and funding remains an obstacle for this initiative. An increase in informatics and staffing will be necessary nationwide across the entire Veterans’ Health Administration, along with prudent execution of change theory.

**Discussion**

Over the last 20 years, studies have shown veterans who received VHA care were less likely to die by suicide than veteran who did not receive care through the VHA, (Office of Mental Health and Suicide Prevention, 2023). However, studies have also shown veterans who are over 70% disabled from mental health related disease are less likely to attend 8 or more sessions, (Grau, P. P., et al., 2024). One such study surveyed 26 randomized controlled studies and found out of 2894 veteran patients, 27.1% dropped out of treatment, (Edwards-Stewart, A., et al, 2021). Another study examined veteran patients with PTSD and their likelihood to initiate care with a mental health provider. Their study revealed only about 11% of veterans with diagnosed PTSD would reach out to contact a mental health provider, (Grau, P. P., et al, 2024). Review of these recent statistics presents an opportunity for quality improvement in relation to the delivery of mental health care to veterans.

 The United States Department of Veterans’ Affairs has published a protocol containing algorithms for care of patients who display signs and symptoms of serious mental illness, especially suicidal behavior. Screenings are in place, including the Columbia Suicide Severity Risk Scale (C-SSRS), to identify those who may require inpatient care or follow up. While the use of the scale is successful in screening patients in need, the algorithm does not specify how or when to follow up with patients, (US Department of Veteran Affairs, 2024). This leaves an opportunity for improvement in the process of follow up, while continuing the evidence-based practice of using the C-SSRS scale for screening, (Research Foundation for Mental Hygiene, 2018). A pilot study has already been conducted at W. G. Bill Hefner Veterans’ Affairs Health Care System, in North Carolina, using government funded tablets. The tablets are issued at discharge from an inpatient facility. The study showed significant improvements in the timeliness of follow up care in the outpatient setting, as well as increased patient satisfaction and overall engagement in mental health service through the VA, (Brearly, T. W., et al, 2020). The aim of this paper is to propose a similar pilot study in the metropolitan area of Columbia, South Carolina, while still following the existing VA guidelines for care of veterans under mental health care.

**Plan**

Senior leadership**,** Patricia Dzandu DNP RN PMHCNS-BC NEA-BC, Associate Nurse Executive Mental Health, will advocate for the project, and obtain funding for the distribution of tablets to patients who are admitted to the mental health unit at the Columbia VA Health System. Informatics teams will install the tablets with the mHealth app and establish connectivity with local cellular phone service providers via government contract. Project advocates will meet with the unit leadership to establish champions, or superusers, and brief leadership on accountability procedures, such as audits. This project is an initiative to increase overall patient satisfaction and engagement for veterans who receive mental health care through the VA. The project will be considered successful if there is a statistically significant increase in the average number of mental health appointments, as well as a decrease in no show appointments.

 The change will be implemented in the month of October 2024, after the new fiscal year, to give time to secure funding, tablets, team members and internet service providers. If all components are obtained prior to October 2024, the change will be implemented 1 October 2024. If not, it will be implemented on whichever day funding, components and team members are organized. If the plan has not been able to be implemented by 31 October 2024, then the preparation phase will be re-evaluated to identify deficiencies and addresses possible solutions. The program will run for a full year to allow time for accurate capture of attendance to mental health appointments, either virtually or in person, and allow for capture of improvement of symptoms over that time, or lack thereof, (Betthauser, L. M., et al, 2020).

**Ethical Considerations**

Ethical considerations for this project are related to integrity of stakeholders, patient privacy and healthcare equity. Phipps & Bayley (2023) discuss how research driven by private stakeholders can cause stop gates in progress due to lack of support or arouse suspicion of integrity of study. In this case, the main stakeholder is the US government, particularly Veterans’ Affairs. This proposed quality improvement project will require substantial monetary and logistical support to provide patients with tablets, software, cellular service and dedicated staff for implementation. Data privacy is also heavily considered when reviewing the ethics of this project. The protection of patient data is paramount, as this project is based on electronic delivery of healthcare. Participants must also be informed their unidentified data will be used to track the trajectory of this project. Upon their consent, patients must then recognize their rights to patient privacy by signing a patient agreement. Beneficence must be maintained through this process and inform all decisions about how patient data is used, (Adeniyi et al., 2024). There will inevitably be some patients who are unable to maintain continuity of care through telehealth. Those who struggle with home instability and addiction may not be able to maintain consistent communication after discharging due to mental instability. These patients still need to be cared for and deserve advocation. Their barriers to care should be tracked and discussions should be held for further solutions, (Adeniyi et al., 2024).

**Resources**

The Veteran Engagement Retention Project (VERP) team consists of Patricia Dzandu DNP RN PMHCNS-BC  NEA-BC,Associate Nurse Executive Mental Health, from the Columbia VA Health System, and the author of this publication, an RN, BSN student, operating room nurse, and veteran. Dr. Dzandu facilitates the timely and accurate delivery of mental health service to veterans within the VA health system. She analyzes and creates plans for improvement for processes related to veteran mental health care, including the implementation of programs and allocation of funds for mental health initiatives. Additional members of the project team consist of informatics nurses and specialists, unit level leadership and selected unit champions. In conjunction with personnel, resources such as government funding and cellular service are required for implementation. Protocols should also be made available to provide guidance to unit staff.

**Leadership Theory**

A servant leadership theory will be the best approach for this proposed change. Since care in the VA is mostly service focused, it makes sense to utilize an approach that capitalizes on existing motivating factors for nurses. By using the servant leadership model to focus on the nurses’ needs to carry out the change, potential throughputs can be identified and mitigated. The change will involve adding more responsibility to the nurse when discharging a patient, so taking the role of “helper” will allow the change to be more widely accepted and nurses to feel more supported. The audits will be nurse driven, based on their feedback of where it would be easiest to introduce the tool for accountability, (Haroon, M., et al,, 2022).

**Change Theory**

John P Kotter’s theory of change will be used to implement the program in a stepwise fashion. The 8 steps will unfold as follows:

1. A sense of urgency will be obtained by presenting the current statistics of veteran suicides, readmission rates for mental health, and overall approval of VA mental health care by veterans. The evidence from the pilot study will be presented to show there is something the nurses can do to affect change, that is already proven to work in other systems. This will create a sense of purpose and motivation in the staff to modify their practice.
2. We will present the proposed change and successful rates in other health systems alongside strong stakeholders and influencers in the organization. Dr. Dzandu will be the tip of the spear to instill confidence this is a worthy effort, and important enough that she is present to see its inception. Informatics teams will also be present to show nurses the ease of use of the operating systems and reassure them they will be supported throughout the process technologically.
3. We will create vision by sharing the current statistics nationally, alongside the statistics of healthcare systems who have already implemented this change to show the unit where we can go realistically. We will share our goal statistics and the proposed timeline to create a common goal.
4. Follow up communication will be conducted every month to remind the unit what the vision is and how we are progressing towards it. The results of the unit’s progress will also be posted on the unit bulletin board where it can be seen by all staff.
5. Listen to nurses’ concerns about barriers to the change and discuss what nurses feel may be challenging in complying with the protocol. Rely on champions to report barriers in monthly meetings, and keep email communication open to check in every week. Work with champions to understand the barriers and work to find a resolution.
6. Short term goals will be created such as achieving an 80% compliance rate for issuing tablets to patients at discharge within the first 60 days. Then 100% compliance by 120 days.
7. At each month mark, emphasis will be placed on the short term wins, and a new goal will be set for the next 30-60 days. Graphics will be updated every month on the bulletin board to reflect progress compared to the end goal at the end of 1 year, which will be 100% compliance with the issuance of tablets and patient education at discharge.
8. Once the program has passed its year mark and achieved reliable compliance, the unit’s success will be showcased to the rest of the organization through a published article in a healthcare magazine, and keynote speakers will be invited to speak to the unit during monthly meeting times to discuss the national impact of this program. This will instill pride in the unit and establish this change as part of the unit culture, (Beauvais, A. M. , 2018).

**Evaluation**

Similarly to Brearly, T. W., et al (2020), the number of no-show appointments will be polled for outpatient mental health clinics within the Columbia VA Health System. Qualitative polls will be conducted to determine the selected pilot program patient satisfaction with their care, symptom severity and overall contact with their providers. The same polls will be conducted once a month for one year and a graphic will be generated to track progress in visits, symptom severity, readmissions and patient satisfaction scores. We will know there is improvement if there is an overall decrease in appointment no-shows, and symptom severity. We are also looking for an overall increase in patient reported satisfaction and confidence in their treatment.

Additionally, team members will poll the number of readmissions for psychiatric evaluations and suicidal behavioral ED visits. These statistics can be polled prior to implementation to compare the results after implementation. Polls should include only the participants in the program to isolate the effect of the change on the affected group, (Brearly, T. W., et al, 2020)

Surveys will be conducted using the Columbia Suicide Severity Rating Scale C-SSRS to evaluate the increase or decrease in suicide risk and overall suicidal symptoms, (Research Foundation for Mental Hygiene, 2018).

**Alternative Interventions**

If the proposed quality improvement project proves to be less than successful, alternative interventions may be explored. Other interventions that can be attempted include installation of the mHealth app on the patient's personal cellular phone without the issuance of a government funded tablet. This will exclude patients who do not have access to mobile cellular phone service, or who are averse to learning the technology. Another intervention could involve simple phone calls to the patients without requiring them to come to the office for a visit, (Guracho et al., 2023).

If the change is successful, a paper will be published showcasing the results of the change to be posted for reading in the units which implemented the change. This will give validity to the change and educate nurses and staff on the real difference they are making by complying with the new discharge protocol. In addition, updates on the study will be briefed to the staff on a quarterly basis to maintain engagement. Executive leadership, including Dr. Dzandu, will personally address the unit to show support and raise awareness of the importance of the integrity of the study. Unit champions will be identified and trained by the informatics team to become superusers of the tablets and subject matter experts on the study protocol. They will be responsible for the in-person audits on each shift, ensuring that all patients have been screened for eligibility and assigned a tablet accordingly, (Cowie, J., et al, 2020). Since this change will be government funded, it is reasonable to assume that, if successful in the Columbia market, the change may be implemented in surrounding VA hospitals and throughout the United States**.**

**Sustainability**

The American Journal of Health-System Pharmacy conducted a study of state run hospitals, which provided tablets to veterans receiving inpatient care for psychiatric services. Pharmacists used a telehealth program, ATTEND, to manage patients’ medication dosage, education and administration remotely, at their discharge locations, (Brearly et al., 2020). This study was piloted in a VA outpatient mental health clinic in North Carolina, where rates of no show appointments are high. Veterans cited issues with transportation, anxiety surrounding healthcare providers, work conflicts and homelessness. The pilot program involved issuing tablets with 4G capability provided by the VA Denver Acquisition and Logistics Center, (Brearly et al., 2020).

In addition to the equipment required to implement this intervention, several team members are also required to facilitate services to the veteran. A technician who can troubleshoot and set up the programming is necessary, as well as trained individuals who can educate veterans on how to use the tablet. In this study, pharmacy specialists, psychologists, and registered nurses were included on the team to manage the veteran’s care via remote appointments. An informatics team is also required to install and operate secure filing systems to ensure HIPAA guidelines are intact.

While this intervention is heavily laden with technology and informatics labor, the pilot study resulted in all its participants expressing positive feedback for the convenience and accessibility of their mental health care via clinical video telehealth, (CVT), (Brearly et al., 2020) The criticism of the program included challenges in operating the tablet, and desires to incorporate face to face appointments in conjunction with remote telehealth. Overall, readmission rates dropped by 14%, and wait times for the first post discharge mental health appointment decreased by over a week, (Brearly et al., 2020).

Considering this intervention was funded and equipped through the VA facilities and services on the east coast of the United States, it is reasonable to believe the implementation of said intervention is feasible in the Columbia metropolitan area.

**Desired Outcomes**

**T**he previously mentioned quality improvement polls will be repeated monthly for the first year. Polling will be reduced to every quarter, once positive change and effective implementation has been established. Then, yearly data will be generated, and new, updated studies can be published, further solidifying this protocol as evidence-based practice. The change will be considered successfully implemented if tablet use stays stable, and demand for more enrollments increases. Clinics will become busier with more appointments, and overall veteran use of the mental health system will increase over time. These studies can be done yearly to determine whether the new protocol is still effective.

**Next Steps**

 Moving forward, protocols in caring for veterans who are discharged from inpatient mental health units should be informed by the research in this publication. Ideally, all patients should be discharged with a tablet, proper training on how to use it and internet connectivity if necessary. Data should be collected cyclically. This data should direct the next steps in implementing mental health telehealth in inpatient units and outpatient clinics throughout the Veterans’ Health Administration. Cyclic data should also serve as evidence-based practice.

**Conclusion**

The VA has endless opportunities for improvement, and preventing mental health decline and subsequently suicide must be at the top of that list. Patients who are admitted to mental health units for treatment are most in need of proper follow up care and careful oversight. Computerized telehealth technology must be leveraged to assist these veterans in their transition back to day-to-day life. This program will ensure even the most vulnerable veterans receive care securely and dependably. It is essential for multidisciplinary teams to work together to support the veteran through psychotherapy, screening, proper documentation, training on tablet devices and software support. Easily accessible mental health care is the first step to ensuring our nation’s veterans stay safe from the battles they fight in their own minds.

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