



# Communiqué

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## **Enhancing Access to Care through Advances in Technology: Meeting Older Veterans Where They Are @**

By Kristen H. Sorocco, Ph.D. and Patrick J. Mason, Ph.D.

A couple of years ago, Dr. Mason and myself, in collaboration with Home Based Primary Care and Care Coordination Home Telehealth Services at the Oklahoma City VA medical center began a journey to use technology to improve access to care for older Veterans living in rural Oklahoma. With funding from the VISN 16 Office of Telehealth and Office of Rural Health, we set out to evaluate the benefits of integrating VA Care Coordination Home Telehealth and Telemental Health within Home Based Primary Care. This pilot project allowed us to: 1) expand the current catchment area and enrollment of Home Based Primary Care; 2) provide state of the art healthcare to medically complex Veterans with mental illness whose distance from regular VA care made access a challenge; and 3) maximize the mental health of medically compromised individuals.

This program, located at the Oklahoma VA medical center, is co-led by two psychologists and includes staff from VA Care Coordination Home Telehealth and Geriatrics & Extended Care Services, which is home to Home Based Primary Care. Key members of the Home Based Primary Care interdisciplinary team were trained and involved in program implementation. We used the LifeView Patient Station by American Telecare, which combines clinical video telehealth, remote monitoring of daily vitals (e.g., weight, blood pressure, blood glucose, and pulse oxygenation) and psychoeducational disease modules. It also includes a Caretone digital stethoscope to monitor heart and breath sounds. We chose this station because it was the only technology approved for home-based clinical video telehealth at the time. Patients were provided a simple touch screen computer with televideo capacity and the necessary peripherals to monitor daily vitals. A psychologist went to patient's home to install the technology and provide initial training. Patients take their own vitals each day, and the results are automatically downloaded at midnight to be reviewed by a clinical nurse the following business day. The psychologist scheduled home-based telemental health visits using the technology and medical providers checked in on Veterans remotely as needed. In addition, the Occupational Therapist conducted interactive televideo exercise sessions.

We used a case study design to determine quality assurance and quality improvement of incorporating additional home telehealth equipment within Home Based Primary Care. Six Veterans with complex medical conditions and their caregivers who live in rural Oklahoma were enrolled in the program. Standard Home Based Primary Care program measures were used to assess

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program success. Assessments from all disciplines on the Home Based Primary Care team were taken at baseline, 3, 6, 9, & 12 months. Participants were interviewed about their satisfaction and the psychologists co-leading the program assessed the benefits of integrating technology into standard care delivery within the Home Based Primary Care program.

Veterans enrolled in the program (Mean Age = 72 years) were previously ineligible for Home Based Primary Care because of their distance from the medical center and range of chronic physical health conditions. Primary mental health conditions included depression (N = 1), dementia (N = 1), anxiety (N = 2), and PTSD (N = 2). Mini Mental Status scores ranged from 18 to 30, indicating that older Veterans with mild to moderate cognitive impairment with caregiver assistance could interact with the technology. We found that patients were satisfied with receiving home-based telehealth services and how the technology worked, experienced improvements in physical health and mental health, and exhibited greater compliance with their treatment plans. The program also decreased caregiver burden.

A major success of the project has been demonstrating that older Veterans and their caregivers are accepting of the use of home-based telehealth technology. Overwhelmingly, patients and their caregivers indicated that they would recommend televideo and telehealth services to other Veterans (96%). They also felt strongly that home telehealth monitoring, along with the contact with a telemental health provider, helped them to manage their health better (86%). Study attrition was not due to problems with the technology (Death N = 1; Nursing Home N = 1).

Successes related to improved health are noteworthy. At twelve months, 3 out of 4 Veterans showed healthy weight loss. Average glucose levels decreased from 197 at baseline to 161 at twelve months. At six months, one Veteran said the program helped him drop his average blood glucose control level (A1C) test scores. He stated that he could easily sum up his success by saying his, "...A1C has dropped from 8.5 to 6.3." Daily monitoring and sending data to the VA made him more accountable. Twelve months after he began the program, one Veteran's glucose level dropped more than half, from 331 at baseline to 153. Another Veteran had a significant decrease in pain, which he rated as a 7 on a scale from 1 to 10 at baseline and then as a 4 at six months. This was consistent with the other Veterans' experience. At twelve months, there was an overall average drop in pain (2.5 at baseline to 1.5 at twelve months).

All Veterans showed a decrease in depression scores on the Geriatric Depression Scale. At twelve months, the average score fell more than 2 points (on a scale of 0 to 15). There was a noticeable drop in caregiver burden total score, as measured by Zarit Caregiver Burden Measure (Zarit, Reever, & Bach-Peterson, 1980) from baseline to three months (43.3 to 34.7, respectively). However, caregiver burden fluctuated during the course of the study relative to the patients' medical status.

Despite the successes of the program, we have encountered two major challenges implementing home-based telemental health. The first challenge is the additional time needed for start up, documentation, and trouble-shooting technical problems. All interdisciplinary staff needed to be certified in telehealth in addition to their routine duties and, at the time of the study, the technology did not integrate directly into the electronic medical records. Although we hoped to reduce the number of home visits required to provide optimum care with the use of the home-based telemental health technology, without a project coordinator who was also responsible for technical support, the number of home visits was not reduced.

The second challenge was the limitations of the technology and internet connectivity in rural areas. Participants required additional equipment, such as surge protectors, to protect equipment and reduce likelihood of the equipment needing to be reset. They also had to learn how to reset the equipment to decrease the need for providers to make a home visit specific to technical support. Often, the transmission speeds of private direct subscriber line (DSL) connections and "Plain Ole Telephone Systems" (POTS) of the local telephone company were found to be low quality. Only 68% of the participants in our study were satisfied with the quality of the video.

These initial findings demonstrated the acceptance and benefits of home-based telehealth services for older rural Veterans. As new technologies have become available our site saw the potential to expand the home based telemental health component of our initial project to Veterans with a primary mental health treatment need who may not require daily monitoring of medical symptoms. The Oklahoma City VA medical center is now expanding home-based telemental health to improve access to mental health care for rural Veterans. With support from the South Central MIRECC, we aim to expand home-based telemental health in VISN 16 by using the three-phase model that was successfully utilized in the Oregon Rural Mental Health Implementation project,

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The SC MIRECC is pleased to announce a five-year renewal of our center. We are excited to see the impact the SC MIRECC will make on Veteran healthcare in the next five years. Our success results from a culture that places value on inclusiveness and collaboration; our commitment to work with clinicians and mental health leadership; the support we receive from our network; and our genuine concern for the welfare of Veterans.

We have been fortunate to attract so many excellent investigators, educators, and outstanding leaders to the SC MIRECC. We would like to thank everyone who participated in the renewal process for their assistance, especially Ashley McDaniel, Melonie Shelton and other SC MIRECC administrative staff. We remain committed to developing and implementing innovative educational, clinical, and research initiatives that improve mental health care for Veterans in VISN 16 and nationally. We want to share with all of you some highlights of the renewal document that describes the SC MIRECC's contribution to Veterans' healthcare. The first excerpt in our SC MIRECC Renewal Series is below:



Greer Sullivan, M.D., M.S.P.H.

### **SC MIRECC Renewal Series: Improving Access by Integrating Mental Health and Physical Health Services**

For some time, the VA has worked to open more “portals” for delivering health and mental health services for Veterans, including establishing CBOCs and providing mental health services more broadly within VAMCs, such as in primary care. Other approaches to improving access to care have been devised and tested by SC MIRECC investigators. Following are descriptions of some of the primary care-related projects SC MIRECC investigators have worked on over the past five years.

#### **Assisting VISN 16 to implement primary care mental health (JoAnn Kirchner, M.D.)**

Providing mental health services in non-specialty settings, such as primary care, has been a high priority in the VA (Veterans Health Administration, 2008). Most rural patients nationally receive mental health care in primary care settings, making primary care and mental health integration highly relevant to our rural mission. The SC MIRECC has promoted Primary Care Mental Health Integration (PCMHI) in VISN 16 at medical centers and CBOCs. Associate Director for Improving Clinical Care, JoAnn Kirchner, M.D., worked closely with the VISN 16 Mental Health Product Line to provide education for a network-wide implementation effort. Working across the network in concert with Lawrence Daily, LMSW, from the VISN 16 Mental Health Product Line office, Dr. Kirchner's group made significant strides in integrating mental health services into VISN 16 primary care programs. The SC MIRECC supported two waves of clinician training led by Drs. Kirchner, Fortney, Kauth, and Henderson. One year after start up, over 7,000 Veterans had received mental health treatment in the PCMHI programs in VISN 16. Dr. Kirchner assisted with the national roll out of PCMHI and continues to support national PCMHI efforts in a VA Central Office role.

Other examples of improving access to mental health within physical health programs include:

#### **Collaborative care for depression in VA HIV specialty clinics (Jeff Pyne, M.D.)**

Collaborative care in the VA consists of both mental health and primary care practitioners being physically present in the primary care setting, with shared responsibility for evaluation, treatment planning, and monitoring outcomes for common mental health conditions (Veterans Health Administration Primary Care Program Office, n.d.). In a QUERI-funded

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randomized controlled study with three VA HIV clinics, the off-site depression care intervention led to improved depression and HIV symptom outcomes (Pyne, Fortney, Curran, Tripathi, Atkinson, Kilbourne, et al., 2011). A similar collaborative care research project for Veterans with hepatitis C has also been initiated.

### **Collaborative care for anxiety disorders (Greer Sullivan, M.D., M.S.P.H.)**

The NIMH-funded Coordinated Anxiety Learning and Management (CALM) study found that a collaborative care intervention for anxiety disorders (GAD, SAD, PTSD, and panic, with or without depression) conducted in 17 primary care clinics nationwide was clinically superior to treatment as usual (Roy-Byrne, Craske, Sullivan, Rose, Edlund, Lang, et al., 2010). We plan to adapt the computer-aided CBT component of the intervention for providers in CBOCs as part of the HSR&D CREATE mechanism.

### **Treating depression and anxiety in older Veterans with chronic breathing problems (Mark Kunik, M.D.)**

In a large sample of primary care patients, Dr. Kunik and colleagues found that 80% of Veterans with chronic breathing problems screened positive for depression, anxiety, or both, while less than one-third received treatment for depression or anxiety (Kunik, Roundy, Veazey, Soucek, Richardson, Wray, et al., 2005). In a comparison study, both CBT and education/support significantly improved depression and anxiety symptoms for Veterans with chronic breathing problems at 8 weeks and improvements were maintained at 12 months (Kunik, Veazey, Cully, Soucek, Graham, Hopko, et al., 2008).

*Join us next month to learn more about the SC MIRECC's role in improving access to mental health care. For more information about the SC MIRECC, visit [www.mirecc.va.gov/visn16](http://www.mirecc.va.gov/visn16).*

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## **ATTRIBUTION: ACKNOWLEDGEMENT OF MIRECC RESEARCH SUPPORT/EMPLOYMENT**

SC MIRECC researchers and educators have a responsibility to ensure that the SC MIRECC receives proper credit for SC MIRECC-supported studies or projects in articles, presentations, interviews, and other professional activities in which the results of those projects are publicized or recognized. All investigators should credit the SC MIRECC if they receive either direct or indirect support from the SC MIRECC. For example, "This work was supported in part by the VA South Central (VISN 16) Mental Illness Research, Education, and Clinical Center." If you receive salary support from the SC MIRECC, you should list the SC MIRECC as an affiliation.

# RECENT SC MIRECC PUBLICATIONS

## CORRELATES OF ANTIRETROVIRAL AND ANTIDEPRESSANT ADHERENCE AMONG DEPRESSED HIV-INFECTED PATIENTS

Bottonari, K. A., Tripathi, S. P., **Fortney, J. C.**, Curran, G., Rimland, D., Rodriguez-Barradas, M., Gifford, A. L., & **Pyne, J. M.**

*AIDS Patient Care and STDS*, 2012, 26(5), 265-73

Although crucial for efficacy of pharmacotherapy, adherence to prescribed medication regimens for both antiretrovirals and antidepressants is often suboptimal. As many depressed HIV-infected individuals are prescribed both antiretrovirals and antidepressants, it is important to know whether correlates of nonadherence are similar or different across type of regimen. The HIV Translating Initiatives for Depression into Effective Solutions (HI-TIDES) study was a single-blinded, longitudinal, randomized controlled effectiveness trial comparing collaborative care to usual depression care at three Veterans Affairs HIV clinics. The current investigation utilized self-report baseline interview and chart-abstracted data. Participants were 225 depressed HIV-infected patients who were prescribed an antidepressant (n=146), an antiretroviral (n=192), or both (n=113). Treatment adherence over the last 4 days was dichotomized as "less than 90% adherence" or "90% or greater adherence." After identifying potential correlates of nonadherence, we used a seemingly unrelated regression (SUR) bivariate probit model, in which the probability of adherence to HIV medications and the probability of adherence to antidepressant medications are modeled jointly. Results indicated that 75.5% (n=146) of those prescribed antiretrovirals reported 90%-plus adherence to their antiretroviral prescription and 76.7% (n=112) of those prescribed antidepressants reported 90%-plus adherence to their antidepressant prescription, while 67% of those prescribed both (n=113) reported more than 90% adherence to both regimens. SUR results indicated that education, age, and HIV symptom severity were significant correlates of antiretroviral medication adherence while gender and generalized anxiety disorder diagnosis were significant correlates of adherence to antidepressant

medications. In addition, antiretroviral adherence did not predict antidepressant adherence ( $\beta=1.62$ ,  $p=0.17$ ), however, antidepressant adherence did predict antiretroviral adherence ( $\beta=2.30$ ,  $p<0.05$ ).

## CHARACTERISTICS ASSOCIATED WITH INPATIENT VERSUS OUTPATIENT STATUS IN OLDER ADULTS WITH BIPOLAR DISORDER

Al Jurdi, R. K., Schulberg, H. C., Greenberg, R. L., **Kunik, M. E.**, Gildengers, A., Sajatovic, M., Mulsant, B. H., Young, R. C., & The GERI-BD Study Group

*Journal of Geriatric Psychiatry and Neurology*, 2012, 25(1), 62-68

This is an exploratory analysis of ambulatory and inpatient services utilization by older persons with type I bipolar disorder experiencing elevated mood. The association between type of treatment setting and the person's characteristics is explored within a framework that focuses upon predisposing, enhancing, and need characteristics. Baseline assessments were conducted with the first 51 inpatients and 49 outpatients 60 years of age and older, meeting criteria for type I bipolar disorder, manic, hypomanic, or mixed episode enrolled in the geriatric bipolar disorder study (GERI-BD). We compared participants recruited from inpatient versus outpatient settings in regard to the patients' predisposing, enabling, and need characteristics. Being treated in an inpatient rather than an outpatient setting was associated with the predisposing characteristic of being non-Hispanic Caucasian (odds ratio [OR]: 0.1;  $P=.005$ ) and past history of treatment with first-generation antipsychotics (OR: 6.5;  $P<.001$ ), and the need characteristic reflected in having psychotic symptoms present in the current episode (OR: 126.08;  $P<.001$ ). Ethnicity, past pharmacologic treatment, and current symptom severity are closely associated with treatment in inpatient settings. Clinicians and researchers should investigate whether closer monitoring of persons with well-validated predisposing and need characteristics can lead to their being treated in less costly, but equally effective, ambulatory, rather than inpatient, settings. ♦



### Attention all VA mental health providers!

Visit the VISN 16 Mental Health Practice, Research and Education Portal (MH PREP) to interact with other mental health providers about clinical care issues, access educational products and services, and discover the latest continuing education opportunities. The MH PREP is accessible from a VA computer at <https://vaww.visn16.portal.va.gov/SiteDirectory/mhp/default.aspx>. ♦

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(funded by the Office of Rural Health). Oklahoma VA medical center mental health providers who are interested in providing home-based telemental health will be trained to use webcams to provide care to rural Veterans. Inexpensive webcams will be connected to participants' home computers using Tandberg MOVI security and encryption software.

Our initial pilot study and current projects are only possible due to our collaborative relationships with other VA providers and employees both within our VISN and nationally, who are working together to find ways to

overcome the challenges of implementing home-based telemental health. For more information about home-based telemental health, please contact me at [Kristen.Sorroco@va.gov](mailto:Kristen.Sorroco@va.gov). The SC MIRECC also hosts a monthly technology interest workgroup conference call. For more information about this workgroup, contact Dr. Michael Kauth at [Michael.Kauth@va.gov](mailto:Michael.Kauth@va.gov).

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## **MENTAL HEALTH RESOURCES-WEBINAR**

### **Children of Deployed Parents: Health Care Provider Strategies for Enhancing Coping Skills**

Stephen Cozza, M.D.

Associate Director, Center for the Study of Traumatic Stress

Michelle Sherman, Ph.D.

Director, Family Mental Health Program of the Oklahoma City Veterans Affairs Medical Center;  
Core SC MIRECC Investigator, Clinical Professor, University of Oklahoma Health Sciences Center

Since the onset of Operation Enduring Freedom/Operation Iraqi Freedom, military families have experienced multiple and extended deployments. Although many children adjust well, the stress of parental deployment may increase the risk for adjustment problems, emotional difficulties and internalizing/externalizing behaviors (e.g., physical aggression/substance abuse). Health care providers frequently serve military families struggling with deployment-related issues. Drs. Cozza and Sherman's webinar discusses the impact of parental deployment on children's psychological health and identifies strategies and resources relevant to coping. To download the audio and the slides from the April webinar, visit <http://www.dcoe.health.mil/Training/MonthlyWebinars/2012Webinars.aspx>.♦

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