Published in final edited form as:
J Gerontol Soc Work. 2012 July ; 55(5): 382–391. doi:10.1080/01634372.2011.644029.

A Community Treatment Intervention AdVancing Active Treatment in the Elderly (ACTIVATE): A pilot study

Jo Anne Sirey, Ph.D.,
Weill Cornell Institute of Geriatric Psychiatry, Well Cornell Medical College

Charles P. Hannon,
Villanova University, 2010 Travelers Summer Research Fellow Weill Cornell Medical College of Cornell University

Debra D'Angelo, and
Weill Cornell Institute of Geriatric Psychiatry, Well Cornell Medical College

Katherine Knies
Weill Cornell Institute of Geriatric Psychiatry, Well Cornell Medical College

Abstract

A growing population of older adults receive treatment for depression but remain symptomatic. We report on a feasibility pilot study of an intervention (ACTIVATE) to improve depression care by encouraging the older person to take a step to intensify the existing treatment. Older adults (N=43) receiving home-meal service and in depression treatment, but still symptomatic, participated in the ACTIVATE intervention. Assessments were conducted to evaluate change in treatment. Many (66.6%) participants took a step to change their treatment; the rate (88.2%) was higher among individuals with major depression. ACTIVATE may be a useful social work intervention to improve depression care.

Keywords

Depression; Intervention; Treatment

Depression in older adults is a growing global health concern, with the older adult population expected to increase 140 percent by 2030 (Aging, 2007). The rates of depression among older adults depend on the site and population sampled. In a representative community sample 2.3% of individuals 65 or older had major depression (Gum, King-Kallimanis, & Kohn, 2009) with 3.1% among the 65–74 year old group (Byers, Yaffe, Covinsky, Friedman, & Bruce, 2010). The rates of depression are higher among individuals with medical illness or disability, with 10% of community suffering from minor and major depression (Steffens, Fisher, Langa, Potter, & Plassman, 2009) and up to 30% of older persons receiving home meals endorsing major depression (Gum, Iser, & Petkus, 2010).

With the increasing awareness of the deleterious costs of depression, older adults are more frequently being prescribed antidepressant medication, often by their primary care physicians. In a recent study of older persons receiving aging services, 60% of those adults who met criteria for major depression were prescribed antidepressant medication with an additional 15% participating in other mental health treatment (Richardson et al., 2011). This increase in depression detection and treatment can result in decreased symptoms for many

JoAnne Sirey, Ph.D., 21 Bloomingdale Road, White Plains, NY 10605, 914-997-4333, 914-682-6979 fax, jsirey@med.cornell.edu.

older adults. However, there is evidence that many do not respond fully to antidepressant therapy leading to greater use of more costly and intensive services (Knoth, Bolge, Kim, & Tran, 2010).

As a group older persons remain less likely than younger adults to use mental health services (Bartels, 2005) and have among the lowest rates of mental health use, even when education and income level are accounted for (Swartz et al., 1998). Among a sample of clients receiving aging services, we found that half of individuals diagnosed with depression do not perceive themselves as suffering from an emotional illness. (Sirey J, 2008)

There are multiple models proposed to understand the factors that affect service use. To guide our identification of barriers (Sirey, Bruce, Alexopoulos, Perlick, Friedman, et al., 2001; Sirey, Bruce, Alexopoulos, Perlick, Raue, et al., 2001) and intervention development we used the Anderson Behavioral Model of Health Service. In this model, individual factors that affect service use include need, enabling factors, and predisposing factors (R. Andersen, 1968; R. M. Andersen, 1995). Need reflects both perceived and evaluated symptoms. Enabling factors include family and community resources. Predisposing factors are demographic factors and health beliefs that include attitudes towards health services. Perceived need for care and attitudes towards mental health services can be powerful catalysts and barriers to accessing services. Research from our group and others have found a relationship between individual's perceived need for care, perceived illness severity, stigma and treatment participation and adherence (Aikens, Nease, Nau, Klinkman, & Schwenk, 2005; DiMatteo, Haskard, & Williams, 2007; Sirey, Bruce, Alexopoulos, Perlick, Friedman, et al., 2001).

When an older adult begins depression care he or she may have overcome individual barriers (e.g. attitudes, mobility), systemic barriers (e.g., availability of mental health care, lack of parity) and societal costs (e.g., ageism, stigma) to access mental health treatment. But what happens when the treatment is unsuccessful in resolving depressive symptoms? In a study of community dwelling older adults, Gum and colleagues (2010) found that greater than 70% of individuals who had a diagnosed depressive disorder were taking a psychotropic medication. Just under a third of the individuals with a diagnosed mental disorder on medication (30%) still met full disorder diagnostic criteria (Gum 2010). The group of older adults with depression who are in treatment but remain symptomatic is the target of the ACTIVATE intervention.

ACTIVATE is a brief, personalized, psychosocial intervention designed to help an older person with depressive symptoms intensify his or her depression treatment. To intensify a treatment is defined as taking a step that is consistent with the guidelines provided by the American Psychiatric Association Practice Guideline for Major Depressive Disorder (http://www.psychiatryonline.com/pracGuide/pracGuideChapToc_7.aspx). As an example, for an older adult taking antidepressant medication for depression, the treatment can be intensified by: 1) discussing with the physician raising antidepressant dose, augmenting or changing antidepressant medications, or 2) adding an additional service (e.g., psychotherapy, supportive service) to existing treatment. For an older adult who is participating in psychotherapy for depression, a treatment can be intensified by: 1) increasing the frequency of sessions; or 2) changing to a different modality of psychotherapy. In each case, the step would help the older person work towards decreasing existing symptoms.

The focus of the ACTIVATE intervention is based on the targets identified for the Treatment Initiation and Participation programs which include tangible, psychological and illness barriers to active participation in depression treatment (Sirey, Bruce, & Alexopoulos,

2005; Sirey, Bruce, & Kales, 2010). The ACTIVATE intervention is a mental health services intervention that is responsive to the needs of the 'end user' and is designed to improve outcomes (Chambers, Wang, & Insel, 2010). It is personalized to address the challenges faced by the older adult taking into account the current treatment, history of care and opportunities and preferences for treatment. ACTIVATE strategies include psychoeducation, problem-solving techniques, and goal setting.

To test the feasibility of ACTIVATE among community older persons, we conducted a pilot study to examine the implementation and acceptability of the new intervention among older adults receiving aging services and already receiving depression care (Leon, Davis, & Kraemer, 2011). We selected this group of older persons as they face multiple barriers to accessing mental health care and have documented high rates of depression. Consistent with the rates reported by Gum 2010, we expected that at least one third of older adults who endorsed depressive symptoms would meet DSM IV criteria for Major Depressive Disorder (MDD). To document feasibility of delivering the intervention we expected all participants to meet with the interventionist for at least 2 sessions. Research participation was expected to be consistent with the strong participation rates in our prior intervention studies with drop-out rates no higher than 25% (Bruce et al., 2004; Sirey, Bruce, et al., 2005; Sirey, et al., 2010).

Method

Sample

The study received approval from the Weill Cornell Medical College Institutional Review Board (IRB #08100010028). Eligible study participants were older adults (age ≥ 60) who endorsed depressive symptoms on the PHQ-2 or PHQ-9 (Kroenke, Spitzer, & Williams, 2001; Lowe, Unutzer, Callahan, Perkins, & Kroenke, 2004) as part of an interview to certify home meal delivery needs, and reported current treatment for depression (either antidepressant medication or psychotherapy). Subjects with active suicidal ideation, presence of significant alcohol or substance abuse, psychotic disorder, cognitive impairment, aphasia interfering with communication, or who were unable to communicate in English were excluded from the study.

Research Assessments

Entry research assessments for the study were conducted by the social work intervention Counselors. This is not a traditional design for clinical trials research. However, we use this design in community-based intervention studies (R01 MH079265) to be more consistent with real world applications of interventions and to minimize the research burden on older participants. Follow-up (12 weeks) assessments to evaluate changes in treatment and symptoms were conducted by Research Assistants trained by our Advanced Center for Intervention and Services Research (P30 MH085943). Inter-rater reliability was conducted to document consistency in ratings of clinical measures of depression diagnosis and depression severity between Counselors and Research Assistants. To date the reliability has been acceptable (ICC=.856).

At the entry research assessments, the Counselors assessed depression diagnosis using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) (Spitzer, 1995) and the severity of depressive symptoms was assessed using the Montgomery Asberg Depression Rating Scale (MADRS) (Montgomery & Asberg, 1979). The use of support and mental health services in the prior three months was documented using the Cornell Services Index (Sirey et al., 2005). The adequacy of antidepressant therapy was measured using standardized ratings of dosing and during measured by the revised Composite

Antidepressant scale (CAD) (Alexopoulos et al., 1996). Adherence was measured based self-reported adherence using a 1–6 point scale that has been validated in our own work against recorded antidepressant blood levels (Glick et al., 1985; Sirey, Bruce, Alexopoulos, Perlick, Raue, et al., 2001).

ACTIVATE Intervention

The ACTIVATE intervention addresses barriers to active participation in depression treatment. Barriers are organized into three categories: psychological, illness and tangible barriers. Modifiable factors include psychological barriers such as stigma, beliefs about self-efficacy and depression etiology, resignation about limitations, fears about treatment, and misattribution of symptoms. Illness barriers that may be less modifiable per se (but may have an impact and are potentially modifiable) include depression severity, somatic anxiety, alcohol use, mild cognitive impairment. Tangible barriers such as level of disability, distance to care, and treatment cost also affect access to mental health services. The tangible barriers may affect the 'ability' to access mental health services. Some tangible barriers may be specific to advancing age, such as impaired mobility, limited transportation, and living on a fixed income. For instance, older adults it has been reported that greater distance to travel decreases service use; however once care is initiated, service volume is found to be unaffected by distance (McCarthy & Blow, 2004). Non-modifiable factors include gender and race. It should be noted that while the latter demographic factors are obviously not modifiable, attitudes and other factors that are associated with gender and race may be intervention targets (e.g. stigma beliefs in African-American older adults).

Conducting the ACTIVATE intervention in a given geographical area required knowledge of the available resources in that area. For this intervention participants were from Bronx, NY and Westchester County, NY. In its design, the intervention is can be delivered by a social worker as it is consistent with the primary social work mission of enhancing well-being with attention to their needs and empowerment of vulnerable individuals (NASW code of ethics). In the context of aging services, a social worker may be coordinating support services and can evaluate mental health needs of an individual. If need is determined, he or she may connect the older person with appropriate community resources and advocate for the individual when needed.

ACTIVATE sessions were conducted in the home and began the entry research assessment of symptoms, functioning and attitudes. The intervention begins with an assessment of the barriers to intensifying depression treatment that are identified by the participant. Once identified, these barriers become the focus of the follow-up ACTIVATE meeting. Collaboratively the older person and counselor developed an action plan. In the pilot study the intervention was delivered by two social workers trained in the intervention. The intervention was delivered in at least two 30-minute meetings with the participant after the research assessment.

ACTIVATE training

Training on the intervention began with lectures on depression, aging and barriers to accessing mental health services, and the intervention techniques delivered by Dr. Sirey. Reading materials were provided on problem solving strategies, motivational techniques, and depression care options and their efficacy. After initial training, role-play and experience with the intervention is provided with supervision. Illustrative cases will be reviewed and counselors will discuss their own experiences encountering stigma, ageism and depression before they address these concerns with older adults. This training increases their sensitivity to commonly reported barriers. All counselors observe a video which illustrates assessment of depression in the context of medical symptoms and suicide risk

evaluation using the standardized Suicide Risk Assessment used by our Center (Raue, Brown, Meyers, Schulberg, & Bruce, 2006). To document the delivery of the intervention for the pilot, each counselor completed a checklist during intervention sessions of techniques used with each participant.

Results

Sample characteristics

Baseline assessments were conducted on 43 participants. The baseline sample was 76.7% female (n=33), 90.7% white (n=39) and 9.3% black (n=4). Fourteen percent (n=6) of participants were of Hispanic origin. The mean age was 77.5 years (SD = 8.9, range: 60–95) with an average of 13.1 years of education (SD = 3.6, range: 6–20).

At baseline, nearly half of the participants (48.8%; 21/43) met SCID criteria for major depressive disorder (MDD). Participants with MDD had a mean baseline depression severity score of 24.1 (SD=5.1) on the MADRS. An additional 16.3% (7/43) of participants met SCID criteria for minor depression. In sum, 65.1% of older adults who endorsed symptoms and were in depression treatment met diagnostic criteria for either minor or major depression.

All participants were taking an antidepressant medication for depression at study entry. Most of the medication regimens were adequate according to ratings on the CAD, even among participants who met criteria for major depression (71.4%; 15/21 of participants with MDD). Based on self-report, most participants (79.1%; 34/43) were adherent to the recommended regimen. A small percentage (18.6%; 8/43) of participants was in psychotherapy at study entry. Those participants in psychotherapy had attended an average of 3.25 (SD=3.65) sessions in the previous three months.

Follow-up

Of the 43 older persons enrolled in the study, all participated in at least two meetings with an ACTIVATE counselor; 13/43 (30.2%) had an additional visit. Research follow-up assessments were collected on 83.7% (36/43) of the initial study sample. Seven participants (16.3%) were unavailable for follow-up assessments: one refused, two moved, three had serious medical complications (e.g., hospice, nursing home admission) and one passed away. There were no significant differences in the number of intervention sessions or follow-up assessment rate between the minority (N=10) and majority (N=33) participants.

Two thirds of all participants (66.6%; 24/36) indicated that they took a treatment-concordant step by the week 12 follow-up research assessment, with no race/ethnicity differences. Among the subgroup of participants with major depression the rate was higher (88.2%; 15/17). Overall, a general reduction in depression severity was observed when comparing MADRS scores from baseline and the week 12 follow-up. At follow-up, all participants were still on an antidepressant and most (85%) remained adherent. Consistent with baseline report, a majority (77.1%; 27/35) of participants continued to be on an adequate dosage. There were no differences in the outcomes between individuals from minority ethnic/racial groups and those individuals who were white.

The most frequent guideline concordant step was the addition of psychotherapy with one third of participants (12/36; 95% CI: 17.9%–48.7%) in psychotherapy at follow-up--an increase of 14.7% from baseline. Over half of participants with MDD (52.9%; 9/17; 95% CI: 29.21%–76.7%) were in psychotherapy at follow-up. Other actions taken include working with the prescribing physician to increase the antidepressant dose or adding sessions to the psychotherapy regimen, adding medical services, or participating in other research studies.

Conclusions

The goal of this pilot study was to demonstrate feasibility and acceptability of the ACTIVATE intervention. Our findings demonstrated that the ACTIVATE intervention was feasible to deliver and the majority of participants were retained in the research, and received the intervention session. Most participants were able to define a plan that would intensify their depression treatment and reported taking the planned step.

Our findings are consistent with an intervention such as Healthy IDEAS (Casado et al., 2008) where in-home interventions are offered to improve detection of depression and delivery of care. However, we know if no other intervention designed specifically to help older persons improve existing treatment. The study offers initial feasibility of the ACTIVATE intervention as a way of mobilizing older adults with major depression to take additional steps to improve their care. However, it is preliminary data and documenting clinical impact of the intervention is beyond the scope of a pilot study of this type (Leon, et al., 2011). A randomized controlled trial would provide an opportunity for full testing of the usefulness of this intervention. Limitations of the study include its delivery in an academic setting where psychotherapy referral sources may be more available. It is possible that referral resources cultivated for this pilot study may not be available to all community dwelling older adults. Identification of available referral resources is a necessary step prior to delivery of an ACTIVATE to modify treatment. However, since the goal of ACTIVATE is to intensify existing treatment, the intervention may be less reliant on community resources than some other interventions.

As an individualized psychosocial intervention, ACTIVATE seeks to address the psychological barriers to improving treatment effectiveness in community dwelling older adults with depression. By setting personalized goals and solutions, the intervention mobilizes the older adult to become more active in the management of their depression treatment. The ACTIVATE intervention has the potential to improve depression outcomes in a vulnerable population of community-dwelling older adults with major depression. This intervention has the potential to modify community practice where older adults are offered depression care, but may not achieve full depression treatment benefits.

Acknowledgments

Research supported by CITRA P30 AG022845 (PI Pillemer) and R01 MH079265 (PI Sirey).

The authors thank study participants and the research staff on the ACTIVATE project. Support provided by a grant from the CITRA P30 AG022845 (PI Pillemer) and R01 MH079265 (PI Sirey).

References

Aging, NI. Why Population Aging Matters: A Global Perspective. 2007. Retrieved from http://www.nia.nih.gov/NR/rdonlyres/9E91407E-CFE8-4903-9875-D5AA75BD1D50/0/WPAM.pdf.

Aikens JE, Nease DE Jr, Nau DP, Klinkman MS, Schwenk TL. Adherence to maintenance-phase antidepressant medication as a function of patient beliefs about medication. Ann Fam Med. 2005; 3(1):23–30. [PubMed: 15671187]

Alexopoulos GS, Meyers BS, Young RC, Kakuma T, Feder M, Einhorn A, et al. Recovery in geriatric depression. Arch Gen Psychiatry. 1996; 53(4):305–312. [PubMed: 8634008]

Andersen, R. Behavioral model of families' use of health services. Chicago: Center for Health Administration Studies, University of Chicago; 1968.

Andersen RM. Revisiting the behavioral model and access to medical care: does it matter? J Health Soc Behav. 1995; 36(1):1–10. [PubMed: 7738325]

Bartels SJ, Drake RE. Evidence-Based Geriatric Psychiatry: An Overview. Psychiatric Clinics of North America. 2005; 28(4):763–784. [PubMed: 16325728]

Bruce ML, Ten Have TR, Reynolds CF 3rd, Katz II, Schulberg HC, Mulsant BH, et al. Reducing suicidal ideation and depressive symptoms in depressed older primary care patients: a randomized controlled trial. Jama. 2004; 291(9):1081–1091. [PubMed: 14996777]

Byers AL, Yaffe K, Covinsky KE, Friedman MB, Bruce ML. High occurrence of mood and anxiety disorders among older adults: The National Comorbidity Survey Replication. Arch Gen Psychiatry. 2010; 67(5):489–496. [PubMed: 20439830]

Casado BL, Quijano LM, Stanley MA, Cully JA, Steinberg EH, Wilson NL. Healthy IDEAS: implementation of a depression program through community-based case management. Gerontologist. 2008; 48(6):828–838. [PubMed: 19139256]

Chambers DA, Wang PS, Insel TR. Maximizing efficiency and impact in effectiveness and services research. Gen Hosp Psychiatry. 2010; 32(5):453–455. [PubMed: 20851264]

DiMatteo MR, Haskard KB, Williams SL. Health beliefs, disease severity, and patient adherence: a meta-analysis. Med Care. 2007; 45(6):521–528. [PubMed: 17515779]

Glick ID, Clarkin JF, Spencer JH Jr, Haas GL, Lewis AB, Peyser J, et al. A controlled evaluation of inpatient family interventionIPreliminary results of the six-month follow-up. Arch Gen Psychiatry. 1985; 42(9):882–886. [PubMed: 3899049]

Gum AM, Iser L, Petkus A. Behavioral health service utilization and preferences of older adults receiving home-based aging services. Am J Geriatr Psychiatry. 2010; 18(6):491–501. [PubMed: 21217560]

Gum AM, King-Kallimanis B, Kohn R. Prevalence of mood, anxiety, and substance-abuse disorders for older Americans in the national comorbidity survey-replication. Am J Geriatr Psychiatry. 2009; 17(9):769–781. [PubMed: 19700949]

Knoth RL, Bolge SC, Kim E, Tran QV. Effect of inadequate response to treatment in patients with depression. Am J Manag Care. 2010; 16(8):e188–e196. [PubMed: 20690785]

Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. J Gen Intern Med. 2001; 16(9):606–613. [PubMed: 11556941]

Leon AC, Davis LL, Kraemer HC. The role and interpretation of pilot studies in clinical research. J Psychiatr Res. 2011; 45(5):626–629. [PubMed: 21035130]

Lowe B, Unutzer J, Callahan CM, Perkins AJ, Kroenke K. Monitoring depression treatment outcomes with the patient health questionnaire-9. Med Care. 2004; 42(12):1194–1201. [PubMed: 15550799]

McCarthy JF, Blow FC. Older patients with serious mental illness: sensitivity to distance barriers for outpatient care. Med Care. 2004; 42(11):1073–1080. [PubMed: 15586834]

Montgomery SA, Asberg M. A new depression scale designed to be sensitive to change. Br J Psychiatry. 1979; 134:382–389. [PubMed: 444788]

Raue PJ, Brown EL, Meyers BS, Schulberg HC, Bruce ML. Does every allusion to possible suicide require the same response? J Fam Pract. 2006; 55(7):605–612. [PubMed: 16822448]

Richardson TM, Friedman B, Podgorski C, Knox K, Fisher S, He H, et al. Depression and Its Correlates Among Older Adults Accessing Aging Services. J Nurs Care Qual. 2011

Sirey JBM, Carpenter M, Booker D, Reid MC, Newell KN, Alexopoulos GS. Depressive Symptoms and Suicidal Ideation among Older Adults Receiving Home Delivered Meals. International Journal of Geriatric Psychiatry. 2008; 23(12):1306–1311. [PubMed: 18615448]

Sirey JA, Bruce ML, Alexopoulos GS. The Treatment Initiation Program: An Intervention to Improve Depression Outcomes in Older Adults. Am J Psychiatry. 2005; 162(1):184–186. [PubMed: 15625220]

Sirey JA, Bruce ML, Alexopoulos GS, Perlick DA, Friedman SJ, Meyers BS. Stigma as a barrier to recovery: Perceived stigma and patient-rated severity of illness as predictors of antidepressant drug adherence. Psychiatr Serv. 2001; 52(12):1615–1620. [PubMed: 11726752]

Sirey JA, Bruce ML, Alexopoulos GS, Perlick DA, Raue P, Friedman SJ, et al. Perceived stigma as a predictor of treatment discontinuation in young and older outpatients with depression. Am J Psychiatry. 2001; 158(3):479–481. [PubMed: 11229992]

Sirey JA, Bruce ML, Kales HC. Improving Antidepressant Adherence and Depression Outcomes in Primary Care: The Treatment Initiation and Participation (TIP) Program. Am J Geriatr Psychiatry. 2010; 18(6):554–562. [PubMed: 20220604]

Sirey JA, Meyers BS, Teresi JA, Bruce ML, Ramirez M, Raue PJ, et al. The Cornell Service Index as a Measure of Health Service Use. Psychiatr Serv. 2005; 56(12):1564–1569. [PubMed: 16339619]

Spitzer, R.; Gibbon, M.; Williams, JB. Structured Clinical Interview for Axis I DSM-IV Disorders (SCID). Washington, D.C.: American Psychiatric Association Press, Inc.; 1995.

Steffens DC, Fisher GG, Langa KM, Potter GG, Plassman BL. Prevalence of depression among older Americans: the Aging, Demographics and Memory Study. Int Psychogeriatr. 2009; 21(5):879–888. [PubMed: 19519984]

Swartz MS, Wagner HR, Swanson JW, Burns BJ, George LK, Padgett DK. Administrative update: utilization of servicesIComparing use of public and private mental health services: the enduring barriers of race and age. Community Ment Health J. 1998; 34(2):133–144. [PubMed: 9620158]