WICHE CENTER FOR RURAL MENTAL HEALTH RESEARCH

THE WICHE CENTER FOR RURAL MENTAL HEALTH RESEARCH IS SUPPORTED BY THE FEDERAL OFFICE OF RURAL HEALTH POLICY, HEALTH RESOURCES AND SERVICES ADMINISTRATION (HRSA), PUBLIC HEALTH SERVICES

Distance Learning in Depression for Rural Primary Care and Mental Health Providers

Scott J. Adams, Psy.D.
Mimi McFaul, Psy.D.
Fran Dong, M.S.
John Fortney, Ph.D.

June 2009
Working Paper

Western Interstate Commission for Higher Education
Mental Health Program
3035 Center Green Drive
Boulder, CO 80301

RHRC
Rural Health Research & Policy Centers
Funded by the Federal Office of Rural Health Policy
www.ruralhealthresearch.org

Acknowledgements: The WICHE Center for Rural Mental Health Research is one of seven Rural Health Research Centers supported by the Federal Office of Rural Health Policy (ORHP), Grant No.1 U1CRH03713-01. This project is funded by ORHP, Health Resources and Services Administration, U.S. Department of Health and Human Services. The specific content of this article is the sole responsibility of the authors.

Dr. Adams was the Senior Research Associate for the WICHE Mental Health Program. Dr. McFaul is the Associate Director of the WICHE Mental Health Program and WICHE Center for Rural Mental Health Research. Fran Dong, M.S., was the Statistical Analyst for the WICHE Mental Health Program. Dr. Fortney is a Research Health Scientist at the VA HSR&D, Center for Mental Health and Outcomes Research, Central Arkansas Veterans Healthcare System, North Little Rock, AR and an Associate Professor at the Division of Health Services Research, Department of Psychiatry, University of Arkansas for Medical Sciences, Little Rock, AR.

EXECUTIVE SUMMARY

The purpose of this project was to develop effective distance learning methods to train rural primary care providers (PCPs) in integrated care models for depression using computer based training ("E-Learning") and materials adapted from the MacArthur Initiative on Depression & Primary Care. Rural was generally defined as a county with a population less than 50,000 people. There were 41 participants in the webcast presentation, six (14.6%) were physicians, 13 (31.8%) were a different type of primary care provider (e.g., nurse, physician's assistant). Both pre- and post-surveys were completed by 17 (41.5%) participants. The findings related to the hypotheses were that there was 1) no significant increase in knowledge of or positive attitudes toward treating depression as a result of the training (likely because respondents already had high levels of each prior to the training), but there was a significant increased behavioral intent to participate in integrated care models (e.g., referral of patients to self-help programs and discussing different aspects of depression with patients) and ability to treat patients with depression (e.g., distinguishing between minor "reactive" and major depression, educating patients on depression); 2) no significant increase in readiness to adopt integrated care models of depression treatment; and 3) the majority (82.4%) of respondents indicated being "satisfied" or "very satisfied" with the overall webcast (with similar percentages of satisfaction related to particular aspects of the training content and technology). However, due to the small number of participants and respondents, findings should not be generalized to PCP populations.

TABLE OF CONTENTS

LIST OF TABLES

SUMMARY REPORT

Context: Although primary care providers (PCPs) provide most mental health treatment in rural areas, they typically have limited training in mental health diagnosis and treatment, as well as restricted time and resources to provide a high level of care.

Purpose: The purpose of this project was to develop effective distance learning methods to train rural PCPs in integrated care models for depression using computer based training ("E-Learning") and materials adapted from the MacArthur Initiative on Depression & Primary Care. Rural was generally defined as a county with a population less than 50,000 people.

Methods: We attempted to recruit PCPs in all 50 states to participate in the online training and then used a pre-test/post-test, within subjects design to evaluate how distance learning impacts PCP knowledge (K), attitudes (A), and behavioral intent (B) regarding integrated care for depression. Two recruiting efforts were undertaken. First, we mailed brochures to about 1,000 primary care physicians whose addresses we purchased from a service that provides this kind of data. This yielded a very low response. We then used a combination of brochures and e-mails (using the same service), which yielded a better response. While the training was primarily focused on PCPs, we also allowed mental health providers to participate.

Hypotheses:

1. After completing the Distance Learning in Depression training, rural PCPs will demonstrate greater knowledge, more positive attitudes, and increased behavioral intent to participate in integrated care models.
2. After completing the training, PCPs will have higher levels of readiness to adopt integrated practices for depression.
3. After completing the training, PCPs will report high levels of satisfaction with training content and with distance learning technology.

Data Sources: Sources of data were self-report, including the Clinician Background Questionnaire (CBQ), which was used by the Quality Improvement for Depression study[1] to measure PCP characteristics, Evidence-Based Practice Attitude Scale (EBPAS), as well as items related to knowledge, attitudes, behavioral intent, and satisfaction measures created for the study.

Findings: Recruitment of PCPs proved difficult and required two attempts. The second attempt was more successful than the first, but numbers of participants fell short of our goal. Furthermore, although all participants filled out a pre-test, less than half completed the post-test. The vast majority of those completing both pre- and post-tests were not primary care providers.

There were 41 participants in the webcast presentation, all of whom completed a pretest. Of those, six (14.6%) were physicians, 13 (31.8%) were a different type of primary care provider (e.g., nurse, physician's assistant), 17 (41.5%) were a mental health provider (e.g., psychologist, social worker, marriage and family therapist, and counselors), two (4.9%) were administrators,

[1] Meredith L.S., Jackson-Triche M., Duan N., et al. (2000). Quality improvement for depression enhances long-term treatment knowledge for primary care clinicians. Journal of General Internal Medicine, 15, 894-895.

and three (7.3%) were undefined students or educators. Of the primary care providers, nine (22.0%) indicated being in family practice, one (2.4%) was internal medicine, and the remaining 11 (26.8%) indicated "primary care." Thirteen (31.7%) reported being board certified in a specialty. The racial/ethnic breakdown is as follows:

Table 1: Respondent Race/Ethnicity

White (not of Latino origin)	23	**76.7%**
Black (not of Latino origin)	3	10.0%
Hispanic or Latino	1	3.3%
Asian or Pacific Islander	2	6.7%
American Indian or Alaskan Native	0	0.0%
Other	1	3.3%

In terms of other relevant data, 51.3% of respondents indicated that they "probably" or "definitely" need to change or improve management of patients with depression. One-third of respondents indicated having either read or referred to treatment recommendations for depression when treating depressed patients. However, 30% of respondents indicated never having heard of them. A vast majority (83.4%) of respondents indicated that it is either somewhat or very important for primary care clinicians to develop expertise in major depressive disorder. Factors identified as most limiting on respondents ability to recognize or provide optimal treatment for depression were "patient or family reluctance to accept diagnosis or treatment," "poor reimbursement or limited benefits," and "limited visit time for counseling/education."

For those who completed both pre- and post-tests, signed rank tests (which is used for paired ordinal response variables) indicated that there was no significant increase in knowledge of or positive attitudes toward treating depression as a result of the training (likely because respondents already had high levels of each prior to the training). However, there was a significantly increased behavioral intent ($p < .03$) to participate in integrated care models (e.g., referral of patients to self-help programs and discussing different aspects of depression with patients). There was also a significant increase in providers' self-evaluation in overall ability to treat and work with patients who are depressed ($p = .008$), particularly in terms of detection of and education about depression. There was no significant increase in readiness to adopt integrated care models of depression treatment

Tables 2 through 10 below present data regarding the quality of and satisfaction with the webcast format for training, as well as relevance to participants' work (it is noted that these items were asked on the post-test, which was completed by far fewer respondents than actually participated in the webcast). Regarding the training method (i.e., webcast), 88.3% of respondents reported that it was either "somewhat good" or "very good" (41.2%), while 58.8% said it was equally as effective as other trainings. Over 70% indicated that the method saved them time and money. The presenter was rated, on average, as somewhat to very effective in several areas. Over 35% indicated that they "very much" gained new information or insight into their work and 52.9% said they would "very much" use the information in their work. The majority (82.4%) of respondents indicated being "satisfied" or "very satisfied" with the overall webcast. A majority (52.9%) of respondents learned of the webcast via e-mail. The top three reasons for attending the webcast were for the topic, flexibility of the webcast format, and continuing education units (CEUs). All but one respondent indicated interest in information about future webcasts.

Table 2: Ratings of Training Method

Very poor	0	0.0%
Somewhat poor	1	5.9%
Neutral	1	5.9%
Somewhat good	8	47.1%
Very good	7	41.2%

Table 3: Effectiveness of Webcast Format

	n	%
Not at all as effective as other trainings	0	0.0
Somewhat as effective as other trainings	7	41.2
Equally as effective as other trainings	10	58.8
More effective than other trainings	0	0.0

Table 4: Training Method Saving Time and Money

	n	%
Yes	12	70.6
No	2	11.8
I don't Know	3	17.7

Table 5: Ratings of Presenter Skills

	Very Ineffective	Somewhat Ineffective	Neutral	Somewhat Effect	Very Effective	Average Rating
Was the presenter knowledgeable, organized and effective?	0 (0.0%)	1 (5.9%)	0 (0.0%)	4 (23.5%)	12 (70.6%)	4.59
Was the information presented in a clear an orderly manner?	0 (0.0%)	1 (5.9%)	0 (0.0%)	3 (17.6%)	13 (76.5%)	4.65
Were audio-visual aides used effectively?	0 (0.0%)	3 (17.6%)	1 (5.9%)	2 (11.8%)	11 (64.7%)	4.24

Table 6: Relevance of Training to Respondent Work

	Very little	Somewhat	Very much
Did you gain new information or insights to your work?	17.6% (3)	**47.1% (8)**	35.3% (6)
Will you incorporate this information into your practice/work?	11.8% (2)	35.3% (6)	**52.9% (9)**

Table 7: Overall Satisfaction with Webcast

	n	%
Very dissatisfied	0	0.0%
Dissatisfied	1	5.9%
Neutral	2	11.8%
Satisfied	8	47.1%
Very satisfied	6	35.3%

Table 8: How Respondents Learned of Webcast

		n	%
Website		0	0.0%
Personal Contact		1	5.9%
Brochure		0	0.0%
Email		9	**52.9%**
NRHA Announcement		6	35.3%
Other		3	17.7%
	Co-worker	(1)	
	UNMC Instructor e-mail	(1)	
	Information about WICHE which listed this webcast	(1)	

Table 9: Reasons for Attending Webcast

	n	%
Agenda/Topics	17	**100.0%**
Presenter	0	0.0%
CEUs	6	35.3%
Flexibility of web cast forum	10	58.8%
Other	1	5.9%
Technology used for delivery	(1)	

Table 10: Interest in Information about Future Webcasts

	n	%
Yes	16	94.1
No	1	5.9

Respondents were asked to identify the most important thing gained from participation in the webcast. Of the 16 written responses, 11 (68.8%) focused on the use of collaborative care models and how they are relevant to rural areas. Other comments focused primarily on depression-specific issues and experience with training in this format.

Table 11: Most Important Thing Gained from Participation in Webcast

Category 1: Collaborative Care Model and Rural
1. The discrepancy between urban and rural treatment successes in treating depression. 2. Insight with working with patients who have depression and that live in rural communities. This will help with research I am doing with migrant workers who also have depression. 3. I like the linkages with other providers. I would not hesitate to contact Scott and pick his brain about what we are doing in Montana. Probably more than anything else, I came away with a sense of validation and reinforcement that we are doing good and significant work here at our Center. 4. The use of collaborative care model in delivering mental health care in primary settings. 5. Ideas about communicating clearly to primary care provides about coordinating care for depression. 6. The evidence to use the collaborative team approach that we were already working to implement in our rural health clinic. 7. Knowing that there is a possibility of depression mental health being provided in primary care appropriately. 8. Validation that a great deal of my work has been appropriate to the treatment of the depressed clients with whom I work. 9. Reinforced currently used evidence based treatment strategies. The Cage Questionnaire. 10. Information on the McArthur Initiative. 11. To add more PHQ 9s to intake forms for more patients.
Category 2: Depression-Specific Issues
1. Depressive-like symptoms can be an idiosyncratic side-effect of some medications: antihypertensives and cardiovascular. 2. Evaluating suicide risk, Quest data presented to take back to my workplace.
Category 3: Experience with Training Method
1. Experience in this form of training. 2. I was personally more interested in the delivery method. However, my father has chronic depression, lives in a rural area, and it has been impossible to get appropriate care for him--in my opinion. Even when he and my mother try to discuss his problems, it is either ignored or treated as if he is wrong. No one offers options other than taking a pill--which my father refuses.
Category 4: Miscellaneous
1. Nothing, really. I had heard all that info.

Respondents were also asked to offer general comments not addressed by survey questions. The two primary comment categories were reports of audio/visual difficulty or problems staying connected to the presentation and thanks for the presentation. The audio/visual problems may have depended on the type of internet connection (e.g., dial-up vs. cable and high speed) a given participant had. The technology used to offer the training is supposed to account for that, but it appears it does not always do so (or did not at the time). A suggestion for the future would be to give participants advanced notice that slower connections might lead to problems in seeing, hearing, or staying connected to the presentation. Another comment regarded the marketing of the presentation as "evidence-based practice." This respondent did not think this was an evidence-based practice, or that there should have been more focus on research and methodological issues that support the contention that this is an evidence-based practice.

Table 12: General Comments

Category 1: Audio-Visual and Connection Problems
1. I had difficulty hearing and then I was kick out of the session a number of times. That part was frustrating. However, overall it was worth while and reinforced some of my previous knowledge and increased medication info.
2. Toward end of session, I was receiving dual audio which made it somewhat difficult to track presenting information; I did not know how to correct this issue. How will I be able to access archival materials next week?
3. Difficulty with sound and video at 4 or 5 different points.
Category 2: Thanks
1. I really liked the webcast format and learned a lot. Thanks.
2. Nicely done - personable and informative presentation.
3. Thanks!
4. Thanks for your help!!!
5. As a dietitian with 20+ years in clinical practice, I was able to relate to this more than you would have anticipated. Thank you for allowing me to participate.
Category 3: Criticism
1. Don't use the term "evidence-based" as a marketing term, then back it up with repeatedly saying you've looked at some literature. What you gave was NOT an evidence-based talk - it was a regular old CME lecture. To be evidence-based you should discuss the methodological limitations of the literature, or at least discuss the strength of the methods, acknowledge controversy and back up EACH recommendation with a level of evidence.
Category 4: Miscellaneous
1. I was already knowledgeable in this training. I am not a physician so most of the questions pre and post training did not apply to me.

Conclusions: Due to the small sample size of participants who completed both the pre- and post-surveys, as well as well as the fact that they were mostly non-primary care providers, results should be interpreted with great caution. Specifically, results should not be generalized to primary care provider populations. It appears that some value was taken from the training in terms of detecting/diagnosing depression, providing education to patients or referring them, and discussing various treatment options. However, it is not clear that participants were more likely to implement collaborative care models in their primary care practices, at least not fully. Additionally, the difficulty in recruiting participants and completing surveys likely reflects the ongoing difficulties integrating primary care and mental health more generally.

The WICHE Center for Rural Mental Health Research was established in 2004 to develop and disseminate scientific knowledge that can be readily applied to improve the use, quality, and outcomes of mental health care provided to rural populations. As a General Rural Health Research Center in the Office of Rural Health Policy, the WICHE center is supported by the Federal Office of Rural health Policy, Health Resources and Services Administration (HRSA), Public Health Services, grant number U1CRH03713.

The WICHE Center selected mental health as its area of concentration because: (1) although the prevalence and entry into care for mental health problems is generally comparable in rural and urban populations, the care that rural patients receive for mental health problems may be of poorer quality, particularly for residents in outlying rural areas and (2) efforts to ensure that rural patients receive similar quality care to their urban counterparts generally requires restructuring treatment delivery models to address the unique problems rural delivery settings face. Within mental health, the Center proposes to conduct the research development/dissemination efforts needed to ensure rural populations receive high quality depression care.

Within mental health, the Center will concentrate on depression because: (1) depression is one of the most prevalent and impairing mental health conditions in both rural and urban populations, (2) most depressed patients fail to receive high quality care when they enter rural or urban treatment delivery systems, (3) outlying rural patients are more likely to receive poorer quality care than their urban counterparts, (4) urban team settings are adopting new evidence-based care models to assure that depressed patients receive high quality care for the condition that will increase the rural-urban quality chasm even further, and (5) urban care models can and need to be refined for delivery to rural populations.

The WICHE Center is based at the Western Interstate Commission for Higher Education. For more information about the Center and its publications, please contact:
WICHE Center for Rural Mental Health Research
3035 Center Green Dr.
Boulder, CO 80301
Phone: (303) 541-0311
Fax: (303) 541-0291
http://www.wiche.edu/mentalhealth/ResearchCenter/ResearchCenter.asp

The WICHE Center for Rural Mental Health Research is one of seven Rural Health Research Centers supported by the Federal Office of Rural Health Policy (ORHP), Grant No. 1 U1CRH03713-01. This project is funded by ORHP, Health Resources and Services Administration, U.S. Department of Health and Human Services. The specific content of this paper is the sole responsibility of the authors.