

Research Article

Memory Care and Wellness Services: Efficacy of Specialized Dementia Care in Adult Day Services

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Abstract

Purpose of the Study: This investigation evaluated participant and caregiver outcomes of a program of specialized dementia adult day services (ADS; Memory Care and Wellness Services: MCWS).

Design and Methods: One hundred eighty-seven participant–caregiver dyads were enrolled in a quasiexperimental research investigation; 162 attended MCWS and 25 were comparison dyads that met eligibility criteria but did not have access to ADS within their communities. The objectives of this investigation were to evaluate whether MCWS improved quality of life, mood, behavior, or functional status for participants with dementia and whether caregivers experienced decreased stress, burden, or depression, compared with comparison dyads.

Results: No significant differences were seen between MCWS and comparison dyads at 3 months. However, after 6 months, MCWS participants exhibited significantly fewer depressive behaviors ($p < .05$) and a trend toward fewer total behavior problems ($p < .10$) than comparison participants, and MCWS caregivers exhibited significantly less distress over behavior problems (total behavior problems, memory problems, depressive problems, all $p < .05$) than comparison caregivers.

Implications: Although modest, outcomes represent a reversal of the typical direction of change in both behavior problems and caregiver distress, despite the progression of cognitive and functional impairment. Caregivers were highly satisfied with the services. The MCWS program provides a model of a community-based dementia ADS and results provide support for further development of the program.

Key Words: Dementia, Caregiving, Adult day services

With the aging of the baby boomers and given current treatment options, the number of people with Alzheimer's disease (AD) and related dementia in the United States will more than double between now and 2050, from 5.1 million to 13.2 million (Alzheimer's Association, 2012). Most older adults prefer to live at home for as long as possible (Eckert, Morgan, & Swamy, 2004), and more than 70% of Americans currently diagnosed with AD and related dementia live at home or in the community (MetLife Mature Market Institute, 2011). They are able to do so largely

due to the support, or "informal caregiving," they receive from family and friends. These informal caregivers provide intensive, hands-on personal care, complicated by behavioral and other cognitive challenges. Furthermore, they spend more hours a week providing that care, and do so for a longer period of time than other caregivers (National Alliance for Caregiving and AARP, 2004). To facilitate continued care at home, these caregivers need individualized information and a range of supportive services. Adult day services (ADS) can be a cost-effective approach to providing

respite, as well as providing emotional and health support for the individual with dementia. In 2011, the average cost for an adult day center was \$70 per day, compared with a nonmedical home health aide at \$21 per hour, assisted living at \$4,619 per month (for dementia care), and nursing home care at \$6,509 per month (Alzheimer's Association, 2012). Although it can be difficult to compare across care settings, it is clear that if ADS can delay the need for other types of care, it is by far the least costly alternative.

In addition to the economic benefits, Zarit, Stephens, Townsend, and Greene (1998) and Zarit, Stephens, Townsend, Greene, and Femia (2003) have demonstrated that the use of ADS for at least 2 days per week decreased caregiver stress and depression at 3 and 12 months, compared with a comparison group not receiving ADS, and caregiving respite (decreased caregiving hours) was associated with decreased role strain for caregivers (Gaugler et al., 2003). ADS use was associated with decreased behavior problems and improved sleep for individuals with dementia on the days they attended the program, compared with days they did not attend (Femia, Zarit, Stephens, & Greene, 2007; Zarit et al., 2011). Furthermore, using daily diary reports, a sample of 173 family caregivers reported fewer care-related stressors, decreased anger, and more positive experiences on days when their care recipients attended ADS than on non-ADS days (Zarit, Kim, Femia, Almeida, & Klein, 2013).

Despite their potential for improving dementia care, variations in programming and costs, regulatory variability across states, and mixed evidence for their efficacy have contributed to limitations in funding and availability of these programs (Silverstein, Wong, & Brueck, 2010). A national study of over 1,800 community-dwelling older veterans with dementia living in the United States found that only about 10% had ever used ADS or similar community services (Beeber, Thorpe, & Clipp, 2008). Higher financial status, having private insurance, a greater number of skilled nursing facilities and physicians in the county of residence, more care recipient behavioral disturbances and activity of daily living (ADL) limitations, and AD diagnosis were positively related to the use of ADS; residing in a smaller metropolitan area (instead of a large one), higher percent of county residents below the federal poverty level, and increased number of comorbid conditions were negatively associated with the use of ADS (Beeber et al., 2008). Thus, for many individuals in the United States, there remains a gap in the continuum of community-based care that ADS may help to fill. In addition, there remains a need for further examination of dementia-specific programming to enhance the benefits of ADS for both caregivers and care recipients.

To address these issues, the Memory Care and Wellness Services (MCWS) program developed and evaluated a model of dementia day services that can potentially be integrated into a statewide community-based system of care. The standards for MCWS were developed cooperatively

by the state Aging and Long-Term Support Administration, the university-based research team, the local Alzheimer's Association chapter, the state Alzheimer Society, the state Association of Area Agencies on Aging (AAA), the state Association of Adult Day Services, and individual ADS providers. Key elements of the standards included:

- A staffing ratio of 1:4
- Training for staff
- Enhanced professional staffing, including social services, nursing, and occupational/speech therapy
- A program operating at least 2 days a week, and at least 5 hr per day
- Assessment and care planning for both the participant and caregiver
- A program of specialized activities and exercise for participants
- Involvement of the caregiver in care planning for the participant
- Caregiver support, including information and referral services

MCWS was financed through U.S. Administration on Aging Alzheimer's Disease Demonstration Grants to States funds and state matching funds. Each participating MCWS provider served at least 25 client/caregiver dyads per year, providing each dyad with two 5-hr days of dementia day service per week. Providers received a higher level of daily funding for MCWS participants than for standard ADS program participants, which enabled the providers to provide a more intensive level of care and an additional hour per day of service. For this investigation, care recipient and caregiver outcomes were assessed at baseline (prior to enrollment in services), after 3 months, and after 6 months. The primary aims of this investigation were to evaluate whether:

1. Individuals with dementia who attended MCWS exhibited better health, mood, fewer behavior problems, and/or better quality of life (QOL) than those who did not attend such a program.
2. Caregivers whose care recipient attended MCWS exhibited better health, mood, less burden, and less distress than caregivers whose care recipient did not attend such a program.

Methods

All study procedures were approved by the State Institutional Review Board Human Subjects Review Committee. AAA case managers and service agency staff conducted assessments of new referrals in their usual manner and identified clients who were eligible for participation in the research study. Eligible participants for this study were dyads consisting of community-residing individuals with a documented diagnosis of AD or a related dementia and a family caregiver who provided at least 40 hr of direct care and/or

supervision per week. Dyads were eligible if they were not already enrolled in existing adult day programs, not using other formal support services (e.g., respite, in-home care) more than 6 hr per week, interested in participating in ADS, and English speaking.

MCWS participants: For clients who resided within the MCWS service areas, when agency staff discussed services that were available to the care recipient and caregiver, they included MCWS as an option for individuals who met the eligibility criteria, and determined whether the client was interested in participating in a research study to evaluate the benefits of MCWS.

Comparison participants: Comparison dyads were identified in the same way as treatment dyads. If the person with dementia met eligibility criteria for the MCWS program and would have been interested in participating in ADS, but did not reside in a MCWS service area, they were asked if they would be willing to participate in a research study evaluating the benefits of different types of services for individuals and their caregivers.

One hundred eighty-seven dyads were enrolled in the investigation (162 in MCWS and 25 in the comparison group). The imbalance in MCWS and comparison sample sizes was due to the need to embed recruitment within existing community-based case management services. Randomization was not possible due to agency requirements to provide needed services to their clients, and case managers were more attuned to the research recruitment efforts when they had an available service to offer potential participants. Table 1 shows the demographic characteristics of participants and caregivers. Comparison participants were more educated ($p = .02$) and caregivers more likely to be Caucasian ($p = .04$) than their counterparts in the MCWS group. The groups were not significantly different on any other demographic characteristics.

Eighty-six study participants dropped out prior to the 6-month assessment (84 from MCWS and two from the comparison group). The primary reason for dropping out of MCWS was residential placement ($n = 35$), followed by participant refusal to attend the program ($n = 20$) or caregiver deciding the participant would not attend ($n = 12$). Eight participants died, four moved away from the area, and five terminated for other reasons. From the comparison group, reasons for the two dropouts were residential placement and moving away from the area. Participants who remained in the study at 6 months had similar baseline levels of key outcomes when compared with those who dropped out, except that participants who dropped out had more impairment in baseline ADLs ($p = .04$) and more behavioral problems ($p = .03$). There were no significant differences in dropouts on other participant or caregiver outcomes.

Assessments

Research interviewer characteristics: All assessments were conducted by an experienced geriatric research interviewer

Table 1. Demographics

	MCW ($n = 162$)	Comparison ($n = 25$)
Participants		
Age in years (M, SD)	80.2 (8.3)	81.1 (8.2)
Range	53–97	65–94
Education (%)		
Less than HS	18	12
HS/Vo-Tech	57	36
College degree	20	28
Graduate degree	6	24
Gender (%)		
Female	47	44
Male	53	56
Ethnicity (%)		
Caucasian	75	100
African American	19	
Asian/Pacific Islander	4	
American Indian	1	
Mini-Mental State Exam (M, SD)	13.7 (6.7)	15.2 (8.5)
Range	0–29	0–26
Caregivers		
Age in years (M, SD)	64.9 (13.8)	68.7 (11.9)
Range	25–94	46–93
Education (%)		
Less than HS	8	0
HS/Voc Tech	53	44
College degree	26	40
Graduate degree	13	16
Gender (%)		
Female	74	76
Male	26	24
Ethnicity (%)		
Caucasian	72	100
African American	19	
Asian/Pacific Islander	6	
American Indian	1	
Hispanic/Latino	1	
Multiethnic	1	
Relationship (%)		
Spouse/partner	54	72
Adult child/child-in-law	40	24
Other relative	6	4

Notes: HS = High school; MCW = Memory Care and Wellness.

who was blinded to the purpose of the study and to treatment condition.

Consenting visit: State agency staff obtained verbal consent to be contacted for research. Once dyads agreed to hear more about the study, the research interviewer met with dyads in their homes and obtained written consent from the caregiver and assent from the care recipient to participate in the research evaluation. Prior to each subsequent assessment, the interviewer reviewed the consent/assent procedure, asked the caregiver and care recipient whether they were willing to continue answering questions

for the research study, and reminded them that they were free to skip any questions that they did not want to answer.

Baseline, 3-, and 6-month assessments: At each assessment visit, the interviewer introduced and explained instructions for the caregiver questionnaires (which were compiled into a booklet), and asked the caregiver to begin completing it while the care recipient was being interviewed privately in another room. The interview with the care recipient was conducted in person, and lasted approximately 30 min. Before leaving, the interviewer asked if the caregiver had any questions about the questionnaires, and if the caregiver had not finished them, left an addressed, postage-paid envelope to mail the packet to the research study office. Once the booklet was returned, the interviewer called the caregiver if needed, to clarify responses (i.e., questions with two responses or skipped questions).

Measures

Measures were selected based on their reliability and validity with individuals with dementia and family caregivers, their sensitivity to change (if known), and their practicality for use in the proposed settings.

Measures administered to the person with dementia in interview format:

1. Cognitive status: The Mini-Mental State Exam (MMSE; Folstein, Folstein, & McHugh, 1975) provides an overall level of cognitive impairment for the person with dementia. It was chosen for this study because it is brief, widely used, and can be repeated to assess change over time.

2. QOL: The QOL-AD (Logsdon, Gibbons, McCurry, & Teri, 2002) is a brief, 13-item measure designed specifically to obtain a rating of QOL from both the person with dementia and the caregiver. It was specifically designed for individuals with dementia and focuses on QOL domains identified as important for cognitively impaired older adults.

Measures about the person with dementia administered to the caregiver in questionnaire format:

3. Functional status: The Physical and Instrumental Self-Maintenance scales—ADL/instrumental activities of daily living (IADL) (Lawton & Brody, 1969) provides a caregiver rating of functional activities, such as bathing and dressing, and more complex activities such as shopping, transportation, and home management.

4. Mood and behavioral disturbance: The Revised Memory and Behavior Problem Checklist (RMBPC; Teri et al., 1992) provides an overall assessment of behavior problems, as well as an assessment of memory, depression, and disruption.

5. QOL: The QOL-AD (Logsdon et al., 2002), measure #2 above, is also available as a caregiver report questionnaire and was used to obtain the caregiver's rating of the care recipient's QOL.

Measures about the caregiver administered to the caregiver in questionnaire format:

6. Caregiver depression: Caregiver depression was assessed using the Center for Epidemiological Studies Depression scale (CES-D; Radloff, 1977). The CES-D is a widely used 20-item self-report measure that assesses frequency of depressive symptoms during the past 2 weeks. The CES-D is reliable and valid with older adults, sensitive to depression in caregivers, and sensitive to change over time.

7. Caregiver distress: The RMBPC (Teri et al., 1992), measure #4 above, was used to evaluate the caregivers' distress about care recipient mood and behavioral disturbances. The RMBPC provides an overall assessment of caregiver reaction to behavior problems, as well as an assessment of reaction to memory, depression, and disruption.

8. Caregiver burden: The Screen for Caregiver Burden (Vitaliano, Russo, Young, Becker, & Maiuro, 1991) is a 25-item checklist designed specifically for family caregivers of individuals with dementia and provides scores for both objective burden (number of potentially negative experiences) and subjective burden (caregivers' reported distress in response to these experiences).

9. Caregiver stress: The Perceived Stress scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) is a 14-item self-report measure of nonspecific, appraised stress during the past month. The PSS has been widely used to evaluate stress in caregivers of persons with dementia.

10. Caregiver overall QOL: The QOL-AD (Logsdon et al., 2002), is available as a caregiver self-report questionnaire and was used to obtain the caregiver's rating of his or her own overall QOL.

Statistical Methods

Fisher exact tests and independent samples *t*-tests were used to assess baseline equivalency among groups and to compare those participating at 6 months with dropouts. Change scores from baseline to 3 and 6 months for the MCWS group were compared with the comparison group using *t*-tests with Welch's approximation for degrees of freedom for unequal variances. Unequal variances were specified because of the imbalance in group sizes. Quantile plots were used to assess normality of change scores, and regression models were used to identify covariates associated with improved outcomes. The regression models accounted for dependencies between the patient and caregiver by clustering on patient-caregiver dyads and using robust standard errors (StataCorp, 2011).

Results

There were no significant differences in any participant or caregiver outcomes between MCWS versus comparison participants at 3 months. Differences did, however, emerge at the 6-month assessment.

Table 2 shows the mean baseline and 6-month values of the descriptive and outcome measures for MCWS and

comparison groups. Over 6 months, overall memory and functional abilities were maintained or declined slightly, as is consistent with the progression of dementia.

As shown in Table 3, RMBPC frequency of mood and behavioral disturbances decreased for the MCWS participants, whereas increasing for the comparison participants. The difference between MCWS and comparison participants on the Depression frequency subscale of the RMBPC was statistically significant ($p < .05$) and the total RMBPC frequency score change also showed a trend in favor of the MCWS group ($p < .10$). Caregiver reaction scores on the RMBPC (which provide an assessment of caregiver distress about participant mood and behavioral disturbances) decreased for the MCWS caregivers, whereas increasing in the comparison caregivers, with a statistically significant difference on total RMBPC reaction scores, memory reaction scores, and depression reaction scores (all $p < .05$). There was a similar trend for disruptive reaction scores ($p = .10$). Controlling for cognitive level (MMSE scores) at baseline and 6 months yielded a similar pattern of significant results.

Additional post hoc analyses were conducted to identify specific factors that were associated with better outcomes for MCWS participants and caregivers at 6 months, controlling for baseline levels. For participants, higher dose (more days attended) was associated with improved QOL and decreased frequency of problem behaviors (disruptive, depressive, memory), but these effects were not statistically significant. For caregivers, higher dose was associated with decreased depression ($p = .03$) and decreased reaction to disruptive behaviors ($p = .06$).

Of the dyads participating in MCWS, 55% of caregivers were spouses, 39% were adult children, and 6% were other relatives. Using regression models to assess the benefits of MCWS to caregivers at 6 months, controlling for baseline values and spouse versus adult child status, adult children experienced significantly greater improvement in caregiver burden ($p = .01$), decreased distress about participant mood

and behavioral disturbances ($p = .04$), and trends toward greater improvement in caregiver depression ($p = .10$) and caregiver perceived stress ($p = .09$) than spouses.

As shown in Table 1, 25% of participants and 28% of caregivers in MCWS were ethnic minorities. Post hoc comparisons revealed that outcomes were the same for minority as for Caucasian participants, except that minority dyads experienced a greater decrease in both frequency and reaction ratings on the RMBPC Disruptive Behaviors subscale ($p = .02$, and $p = .03$, respectively), and minority participants' self-reported QOL-AD scores improved significantly, while no change in these scores was found for Caucasian participants ($p = .03$).

Caregiver Satisfaction With MCWS

Caregivers completed anonymous satisfaction surveys that were returned to the university research team following

Table 3. Changes in Frequency and Reaction Scores on the RMBPC

Outcome	Change (6 months to baseline)		<i>p</i> value
	MCW (<i>n</i> = 88)	Comparison (<i>n</i> = 19)	
Participant frequency			
Memory	-0.06 (0.81)	0.10 (0.73)	.43
Depressive	-0.13 (0.60)	0.18 (0.45)	.02
Disruptive	-0.01 (0.55)	0.17 (0.53)	.21
Total	-0.36 (1.57)	0.28 (1.26)	.06
Caregiver reaction			
Memory	-0.20 (0.78)	0.19 (0.51)	.02
Depressive	-0.23 (0.86)	0.26 (0.57)	.01
Disruptive	-0.15 (0.70)	0.22 (0.96)	.10
Total	-0.58 (1.76)	0.58 (1.57)	.02

Notes: MCW = Memory Care and Wellness; RMBPC = Revised Memory and Behavior Problem Checklist.

Table 2. Participant and Caregiver Outcomes at Baseline and 6 Months

	MCW		Comparison	
	Baseline (<i>n</i> = 160)	6 months (<i>n</i> = 96)	Baseline (<i>n</i> = 24)	6 months (<i>n</i> = 20)
Participants				
ADLs	12.93 (4.97)	14.31 (5.46)	11.50 (5.14)	11.85 (5.82)
IADLs	25.36 (4.37)	26.55 (3.59)	24.50 (4.81)	25.50 (4.47)
QOL-AD	38.61 (6.45)	39.42 (6.30)	39.95 (5.08)	39.00 (3.12)
RMBPC frequency	4.53 (1.67)	3.94 (1.76)	3.91 (1.96)	4.10 (2.58)
Caregivers				
Depression	14.31 (10.4)	12.57 (9.50)	14.56 (10.4)	13.88 (9.34)
Stress	22.02 (8.96)	20.62 (8.49)	21.96 (9.52)	21.10 (10.5)
Burden	19.28 (12.3)	17.34 (11.3)	18.06 (13.1)	15.70 (12.3)
Service utilization	1.92 (1.55)	3.61 (1.68)	1.96 (1.30)	2.25 (1.77)
RMBPC reaction	3.06 (1.90)	2.26 (1.78)	2.46 (1.92)	2.54 (2.34)

Notes: IADL = Instrumental Activities of Daily Living; MCW = Memory Care and Wellness; QOL-AD = quality of life-AD; RMBPC = Revised Memory and Behavior Problem Checklist.

their 6-month assessments. On these surveys, all aspects of the program were rated as highly satisfactory. Means ranged from 3.5 to 3.8 across items on a scale of 1 = Poor to 4 = Excellent. The following comments from caregivers exemplify their high level of satisfaction:

- “The staff at Adult Day Health are true angels: sensitive, caring, giving. We feel so fortunate to be part of the service.”
- “My family member is now in an Adult Family Home (a small residential care program within a home-like setting). I believe very strongly that having her go to an Adult Day Center allowed me to keep her home at least a year longer than I would have been able to, if she had not gone. I also used that time in the Adult Day Center as a transition to the Adult Family Home. I told her that she would be going to a “New Adult Day Center” closer to home. I took her to the Adult Family Home just during the day for the first 6 days. This gave her time to transition into the Adult Family Home easier. The transition was great.”
- “He has enjoyed it so much we increased to 3 days. We are both 100% pleased. Wonder where we’d be today without this program.”
- “They have been great at taking care of my husband when I needed medical care.”

Discussion

Results of this investigation provide support for the efficacy of MCWS to improve important outcomes for both participants and caregivers. At 6 months, individuals with dementia in the MCWS group exhibited significantly fewer depressive behaviors and a trend toward fewer total behavior problems than those in the comparison group. MCWS caregivers exhibited significantly less distress over participant behavior problems (total behavior problems, memory problems, and depressive problems) and a trend toward less distress over disruptive problems than caregivers in the comparison group.

Although these outcomes were modest, they represent a reversal of the typical direction of change in both behavior problems and caregiver distress, despite the progression of cognitive and functional impairment. One limitation of the investigation is the small size of the comparison group, which may have limited the power of the statistical analysis to demonstrate differences between the two groups; with a larger comparison group, we may have found greater differences between groups. Differences in ethnicity and educational level between the MCWS and comparison group may have also affected the findings, because the comparison group was all Caucasian and better educated than the MCWS group. The case managers who recruited participants for the comparison group expressed appropriate reluctance to approach potential comparison caregivers who were already experiencing significant stress to volunteer for a research study. We attempted to alleviate some of these concerns by offering a \$25 gift card to comparison participants for completing the

assessments, but this incentive was not sufficient to improve recruitment. Thus, our comparison group was not as representative as it might have been. A more representative comparison group might have provided a greater contrast between changes in comparison dyads versus MCWS dyads. We did not collect data on duration of caregiving prior to study enrollment, thus could not evaluate the impact of ADS participation for caregivers at different points in their caregiving experience. Finally, the current investigation assessed outcomes up to 6 months. It is possible that benefits of MCWS attendance will continue to accrue the longer participants remain in the program. Future investigations of longer term outcomes of MCWS and other ADS programs are needed to fully appreciate the impact of these programs.

This study was carried out in community settings in collaboration with state agencies who authorize and provide ADS for state-funded and Medicaid participants, the requirements for specialized memory care services were developed by community stakeholders, and participants were identified and referred by community-based aging services case managers. Caregivers were highly satisfied with the services and appreciative of the staff in each of the participating sites. These results are promising and suggest that participation in MCWS may affect both the frequency of participant depressive behaviors and caregivers’ overall distress over behavioral disturbances in participants.

Results of this investigation are consistent with a growing literature on positive outcomes from ADS programs. Our caregiver outcomes are consistent with findings reported by [Zarit and colleagues \(1998\)](#) of positive outcomes (decreased stress and improved well-being) for caregivers of ADS participants compared with a control group that did not use ADS. Our participant outcomes support two prior studies that reported positive outcomes for participants attending ADS programs ([Zank & Schacke, 2002](#); [Femia et al., 2007](#)).

These data add to the scientific literature on ADS use in several ways. First, they contribute to the literature regarding differences in spouse versus adult child caregiver outcomes. [Cho, Zarit, and Chiriboga \(2009\)](#) report complex interactions between kinship, ADS use, and psychosocial distress. For example, wives who used ADS were more depressed than daughters using such services. Furthermore, wives using ADS placed their care recipients in nursing homes earlier than wives who did not use ADS and earlier than daughters who used the services. In the current study adult child caregivers reported better outcomes on measures of burden, distress, and depression than spouse caregivers. This suggests that there may be important differences in spouse versus adult child caregivers in terms of ADS use and benefits. Second, this investigation provides information about a “dose effect” indicating that higher levels of attendance were associated with better caregiver outcomes. This is consistent with recent findings that care-related stressors and anger are lowered and affect is improved for caregivers on days when the care recipient attended ADS, compared with non-ADS days ([Zarit et al., 2013](#)). Finally,

this investigation provides a model of a community-based demonstration project. MCWS staff, family caregivers, and participants were all enthusiastic and satisfied with the program, and empirical results provide support for continuing to formalize and expand the MCWS program.

Since the formal grant funding for this investigation ended in 2010, all of the participating ADS sites have continued to provide MCWS within their ongoing services, through a combination of sliding fees and the state and federally funded Family Caregiver Support Program. Discussions with stakeholders indicate that the original standards for the MCWS program are all essential to its success, but that flexibility is sometimes needed to meet individual needs of participants and caregivers. For example, not every caregiver has used information and referral services, but the stakeholders believe it is essential that it be available. In terms of specialized programming, the exercise program that was developed and taught as part of MCWS has been very successful, and is a major feature of the daily activities at the centers. Additional research is underway to evaluate it as a discrete program within MCWS. Four additional ADS sites have now implemented MCWS programs in other locations with ongoing support from Department of Social and Health Services (DSHS), regional AAA, and the university research and training team that conducted this investigation. The strong commitment and ongoing partnership among community stakeholders, coalition members, and the state agency is maintained with biannual telephone conferences (facilitated by DSHS staff) that feature research updates and ongoing planning for program sustainability and dissemination. Plans for the future include the development of a "toolkit" that will provide information and resources for distribution to other agencies that wish to establish MCWS programming.

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