

Updated April 2010

Innovative Interventions for Persons with Alzheimer's Disease and Their Caregivers

Prepared for

Jane Tilly, DrPH

Office for Planning & Policy Development
Administration on Aging
U.S. Department of Health and Human Services
1 Massachusetts Avenue, NW
Washington, DC 20201

Prepared by

Marc P. Freiman, Ph.D.

David Brown, M.A.

Janet Maier, R.N., M.P.H.

Christine O'Keeffe

Joshua M. Wiener, Ph.D.

ADSSP National Resource Center

RTI International

701 13th Street, NW, Suite 750

Washington, DC 20005

RTI Project Number 0209351.004.008

Contents

Section	Page
Innovative Interventions for Persons with Alzheimer’s Disease and Their Caregivers	1
Contents	iii
1. Introduction	1
2. Search Process for Innovative Interventions	2
3. Overview of This Compendium	2
4. The Categories Used in this Compendium	2
Persons With Alzheimer’s Disease and Related Dementias (ADRD)	3
Caregiver/Care Receiver Dyads.....	3
Caregivers	3
Administrative Interventions, Care Coordination, Screening	4
5. Additional Resources to Explore for Innovative Interventions	4
General.....	4
Psychosocial	5
Reminiscence.....	5
Exercise/Recreation Interventions.....	5
Interventions to Improve Sleep	6
Protecting Movement of Persons With ADRD	6
Music Therapy.....	6
Creative Expression	7
Sensory Interventions	7
Pet Therapy	7
6. Innovations Included in This Compendium	8
Persons with ADRD	8
Persons with ADRD—Continued	9
Persons with ADRD—Continued	10

Persons with ADRD—Continued	11
Persons with ADRD—Continued	12
Persons with ADRD—Continued	14
Caregiver/Care Receiver Dyads.....	14
Caregivers.....	15
Caregivers—Continued	16
Caregivers—Continued	17
Administrative Interventions, Care Coordination, Screening	18
7. Summaries of Interventions	19

1. Introduction

To improve services to persons with Alzheimer’s disease, Congress established the Alzheimer’s Disease Supportive Services Program (ADSSP), which is administered by the U.S. Administration on Aging. The ADSSP supports the creation of responsive, integrated, and sustainable service delivery systems for individuals with Alzheimer’s disease and related dementias (ARD) and their family caregivers across the United States. These activities are performed under the Administration on Aging’s leadership, in collaboration with the Aging Network, the ADSSP National Resource Center, and a variety of state and community partners.

One method for achieving ADSSP objectives is through the Innovations Cooperative Agreements component of the program. These cooperative agreements provide states and their partners with the means to explore new approaches to improving the delivery of supportive services at the community level to people with ARD and their caregivers. These innovative programs seek to test interventions that enable individuals with ARD to remain living in the community longer and lessen the burden on family caregivers.

This compendium, prepared by the ADSSP National Resource Center for the U.S. Administration on Aging, presents structured summaries of a range of innovative Alzheimer’s disease interventions. Specifically, it includes interventions that we have designated as one of two types: “evidence informed” and “promising practices.” The Administration on Aging defines these types of interventions in the following way:

Evidence-informed interventions are those that:

have been tested in at least one quasi-experimental design with a comparison group. Articles published in peer-reviewed journals that used pre/post comparisons and approaches using statistical controls are included OR

have been adapted from interventions that have been tested using a randomized controlled trial, with results published in a peer-reviewed journal, and have been shown to have a positive impact on persons with ARD and/or their caregivers.

Information about evidence-based interventions that can be proposed is available at: <http://www.aoa.gov/AoARoot/AoAPrograms/HCLTC/AlzGrants/compendium.aspx>

A ***promising practice*** is a defined intervention, with a detailed description, that appears to have a positive impact on the majority of participants. An assessment or some evaluation must be available in some reasonably accessible source (online, in a book, or a peer-reviewed or non-peer-reviewed journal).

Regardless of type, the innovations must have evidence of being effective with a sample of at least 10 (either 10 persons with Alzheimer’s disease or 10 caregivers).

Some interventions summarized here were conducted in an institutional setting, but, in our judgment, could be translated to a community setting.

This compendium does not include drug trials or interventions exclusively involving medical care practice.

2. Search Process for Innovative Interventions

The process used to identify innovative interventions included a number of search categories and terms. By design, the categories were overlapping, and included types of therapies, types of providers, and health and supportive services settings. Terms used for searches combined "Alzheimer's," "intervention," and the category name (e.g., caregiver education, music therapy, adult day care). Using these terms, several avenues to identify interventions for possible inclusion in this compendium were searched. These included PubMed, the Alzheimer's Association's resources (<http://www.alz.org/library/index.asp?type=homepage>), Google, Google Scholar, **CINAHL**[®] (the **Cumulative Index to Nursing and Allied Health Literature**), and in some cases, suggestions of additional articles from authors. We also reviewed selected articles suggested by PubMed as being related to articles contained in the PubMed search results, and selected citations found in literature review articles. Finally, we largely restricted this review to articles published in 1999 or later. Only articles published in English were included.

Although this compendium reviews a large number of articles, it is intended as a representative sample of the available literature rather than a comprehensive listing of evidence-based interventions or promising practices. Our search was constrained by the time and resources available.

3. Overview of This Compendium

There are two primary components of this compendium:

- *A table of full citations for the articles reviewed.* This table is organized into categories, with articles listed in alphabetical order (by last name of first author) within a category.
- *Structured summaries of individual articles.* Each summary includes the following information: full citation; description of the intervention; Area Agency on Aging/State Unit on Aging involvement (if any); description of data, outcome measures, type of study (e.g., pre/post analysis), and comparison group; findings; summary of additional important information provided in the article; and available translation materials. Some of the summaries also contain additional comments.

4. The Categories Used in this Compendium

The summaries have been organized into mutually exclusive categories, to facilitate the investigation of specific approaches. However, in several cases the distinctions among categories are not sharp and the placement of summaries into categories is subjective.

We organized interventions into four primary categories:

- Persons with Alzheimer's disease and related dementias
- Caregiver/care receiver dyads

- Caregivers
- Administrative interventions, care coordination, and screening

Persons With Alzheimer’s Disease and Related Dementias (ADRD)

Interventions for individuals with Alzheimer’s disease and related dementias include a variety of approaches. Cognitive training and therapy focus on remembering information, assisting memory recall, and finding one’s way. Interventions that involve reminiscence use the person’s imagination and memories to involve them in activities that may provide a range of benefits. Exercise interventions and music therapy use specific therapies to maintain health, both physical and cognitive, and to address behaviors that caregivers find potentially difficult to deal with. Interventions involving technology represent another avenue, one that may be particularly helpful where direct human assistance and involvement may be more difficult, such as for persons living alone or in remote geographic areas. There are also interventions that focus on specific sensory dimensions such as aroma and touch. Finally, support groups provide a variety of potential benefits to persons with Alzheimer’s disease and related dementias. Many interventions combine several approaches.

This compendium groups these interventions into the following categories:

- Cognitive Training and Therapy
- Reminiscence/Life Review
- Exercise and Movement Interventions
- Music Therapy
- Interventions Involving Technology
- Sensory Interventions
- Multi-Dimensional Interventions
- Support Groups

Caregiver/Care Receiver Dyads

This compendium describes several interventions involving support groups designed for the caregiver and care receiver together. These interventions do not focus on either the person with ADRD or the caregiver alone, but rather work with the caregiver/care receiver dyad to more effectively improve the functioning of the care receiver in her or his environment, increase the ability of the caregiver to assist in this objective, and decrease the levels of distress and other negative reactions felt by the caregiver.

Caregivers

Many interventions included are directed at improving the life of caregivers. Many of these approaches use more than one technique and have more than one objective. As a result, in

most cases assigning an intervention to a category is an imprecise process. Nevertheless, some focus more on education, while others focus more on psychological counseling, and others are in the form of support groups. Some interventions use technology to provide these services, training, and therapies to caregivers. Finally, the primary purpose of some technologies is to monitor the care receiver. This compendium groups caregiver interventions into the following categories:

- Caregiver Education
- Caregiver Counseling
- Support Groups
- Caregiver Interventions Involving Technology
- Caregiver Monitoring of Care Receiver

Administrative Interventions, Care Coordination, Screening

This compendium presents a small number of interventions that focus on improving the administration of services to persons with Alzheimer's disease and related dementias and their caregivers, improving the coordination of care, or screening for these conditions. These areas are not the focus of most interventions. However, such a focus can result in obtaining needed services that would otherwise not be received, or more effective care across the social and medical spectrum, or earlier detection and diagnosis that can provide persons with valuable additional time to learn to deal with the disease.

5. Additional Resources to Explore for Innovative Interventions

This compendium is not a comprehensive and exhaustive set of summaries of all interventions that meet the criteria for inclusion in an innovative intervention grant application. Agencies may explore other interventions that were not included in this compendium.

This section provides additional resources for those who want to explore other potential innovative interventions. The review articles listed below may also discuss some interventions that do not meet the Administration on Aging criteria for an innovative practice. Also, the categories below cover some types of interventions for which summaries are not presented in this compendium.

General

Coon, D. W., Gallagher-Thompson, D., & Thompson, L. W. (2003). *Innovative interventions to reduce dementia caregiver distress: A clinical guide*. New York: Springer Publishing Company, Inc.

This book provides an overview of emerging themes in dementia research.

Hulme, C., Wright, J., Crocker, J., Oluboyede, Y., & House, A. (2009). Non-pharmacological approaches for dementia that informal carers might try or access: A systematic review. *International Journal of Geriatric Psychiatry*, published by John Wiley & Sons, Ltd. No page number available. <http://www.interscience.wiley.com>.

A review of a range of interventions from the perspective of how caregivers can incorporate methods into home and other settings.

Kverno, K. S., Black, B. S., Nolan, M. T., & Rabins, P. V. (2009). Research on treating neuropsychiatric symptoms of advanced dementia with non-pharmacological strategies, 1998–2008: A systematic literature review. *International Psychogeriatrics*, 21(5), 825–843.

An evaluation of the published literature on nonpharmacological interventions for treating neuropsychiatric symptoms in advanced dementia.

Tilly, J., & Reed, P. (2004). *Evidence on interventions to improve quality of care for residents with dementia in nursing and assisted living facilities*. Chicago: The Alzheimer's Association. <http://www.alz.org/national/documents/dementiacarelitreview.pdf>

This review focused on interventions related to two broad categories: (1) activities of daily living (ADLs) and (2) psychosocial and behavioral characteristics.

Psychosocial

O'Connor, D. W., Ames, D., Gardner, B., & King, M. (2009). Psychosocial treatments of behavior symptoms in dementia: A systematic review of reports meeting quality standards. *International Psychogeriatrics*, 21(2), 225–240.

A systematic review of selected experimental studies of psychosocial treatments of behavioral disturbances in dementia. Psychosocial treatments are defined as strategies derived from one of three psychologically oriented paradigms (learning theory, unmet needs, and altered stress thresholds).

Reminiscence

Haber, D. (2006). Life review: Implementation, theory, research, and therapy. *International Journal of Aging and Human Development*, 63(2), 153–171.

A selective literature review that differentiates life review from reminiscence, summarizes ways to conduct a life review, compares theoretical frameworks, and examines research and therapeutic topics.

Exercise/Recreation Interventions

Kolanowski, A., & Buettner, L. (2008). Prescribing activities that engage passive residents. An innovative method. *Journal of Gerontological Nursing*, 34(1), 13–18.

The theoretical development of a method for prescribing activities that are expected to have a high likelihood of engaging nursing home residents who are passive.

Kolanowski, A., Fick, D. M., & Buettner, L. (2009). Recreational activities to reduce behavioral symptoms in dementia. *Geriatric Aging, 12*(1), 37–42.

This article discusses recreational activities as a nonpharmacological intervention for reducing the behavioral symptoms of dementia.

Interventions to Improve Sleep

Deschenes, C. L., & McCurry, S. M. (2009). Current treatments for sleep disturbances in individuals with dementia. *Current Psychiatry Reports, 11*(1), 20–26.

This article discusses current pharmacologic and nonpharmacologic evidence-based treatment options and reviews the neurophysiology of sleep for normal aging and as affected by dementia.

Paniagua, M. A., & Paniagua, E. W. (2008). The demented elder with insomnia. *Clinical Geriatric Medicine, 24*, 69–81.

A detailed review of physiology of sleep and pharmacologic and nonpharmacologic interventions for people with dementia.

Shub, D., Darvishi, R., & Kunik, M. E. (2009). Non-pharmacologic treatment of insomnia in persons with dementia. *Geriatrics, 64*(2), 22–26.

This article reviews practical applications of modalities such as light therapy, exercise, and sleep-hygiene modification for people with dementia.

Protecting Movement of Persons With ADRD

Tilly, J., & Reed, P. (2006). *Falls, wandering, and physical restraints: Interventions for residents with dementia in assisted living and nursing homes*. Chicago: The Alzheimer's Association.

http://www.alz.org/national/documents/Fallsrestraints_litereview_11.pdf

A review in particular of experimental or quasi-experimental studies of interventions to reduce falls and their consequences, using a variety of approaches, including tailored exercise programs, medication reviews, and environmental modifications. Few studies addressed wandering.

Music Therapy

Lou, M. Witzke, J., Rohne, R. A., Backhaus, D., & Shaver, N. A. (2008). How sweet the sound, research evidence for the use of music in Alzheimer's dementia. *Journal of Gerontological Nursing, 34*(10), 45–52.

A qualitative review of the evidence-based literature on music intervention for agitated behavior in Alzheimer's dementia.

Sung, H., & Chang, A. M. (2005). Use of preferred music to decrease agitated behaviors in older people with dementia: A review of the literature. *Journal of Clinical Nursing, 14*, 1133–1140.

A review of study findings of preferred music on agitated behaviors for older people with dementia.

Creative Expression

Hannemann, B. T. (2006). Creativity with dementia patients: Can creativity and art stimulate dementia patients positively? *Gerontology, 52*, 59–65.

A review of practical forms of treating dementia patients with art therapeutic indications.

Sensory Interventions

Chung, J. C. C., & Lai, C. K. Y. (2002). Snoezelen for dementia. *Cochrane Database of Systematic Reviews*, Issue 4.

An examination of the clinical efficacy of Snoezelen (or multisensory stimulation) for older people with dementia and their caregivers.

Pet Therapy

Filan, S. L., & Llewellyn-Jones, R. H. (2006). Animal-assisted therapy for dementia: A review of the literature. *International Psychogeriatrics, 18*(4), 597–611.

A review of studies that have investigated whether animal-assisted therapy has a measurable effect for people with dementia and specifically on behavioral and psychological symptoms of dementia.

Perkins, J., Bartlett, H., Travers, C., & Rand, J. (2008). Dog-assisted therapy for older people with dementia: A review. *Australasian Journal on Ageing, 27*(4), 177–182.

This review summarises and critiques the published literature regarding dog therapy for older people with dementia living in residential aged care facilities.

6. Innovations Included in This Compendium

Persons with ADRD

Intervention Category	Intervention (Name or Brief Description)	Citation
Cognitive Training and Therapy	Spaced-Retrieval Memory Training	Cherry, K., Simmons-D'Gerolamo, S. (2005). Long-Term Effectiveness of Spaced Retrieval Memory Training for Older Adults with Probable Alzheimer's Disease. <i>Experimental Aging Research</i> . 31, 261-289.
Cognitive Training and Therapy	Cognitive intervention based on errorless learning	Clare, L. Wilson, B., Carter, G., Roth, I., Hodges, J. (2002). Relearning Face-Name Associations in Early Alzheimer's Disease. <i>Neuropsychology</i> . 16(4), 538-547.
Cognitive Training and Therapy	Three errorless learning trials	Haslam, C., Gilroy, D., Black, S., Beesley, T. (2006) How successful is errorless learning in supporting memory for high and low-level knowledge in dementia? <i>Neuropsychological Rehabilitation</i> . 16 (5), 505-536.
Cognitive Training and Therapy	Structured Practice	Hochhalter, A., Stevens, A., Okonkwo, O. (2006). Structured practice: a memory intervention for persons with dementia. <i>American Journal of Alzheimer's Disease and Other Dementias</i> . 21(6), 424-30.
Cognitive Training and Therapy	Cognitive rehabilitation program	Loewenstein, D., Acevedo, A. Czaja, S., Duara, R. (2004) Cognitive Rehabilitation of Mildly Impaired Alzheimer Disease Patients on Cholinesterase Inhibitors. <i>American Journal of Geriatric Psychiatry</i> . 12(4), 395-402.
Cognitive Training and Therapy	Cognitive stimulation therapy	Matsuda, O. (2007). Cognitive stimulation therapy for Alzheimer's disease: the effect of cognitive stimulation therapy on the progression of mild Alzheimer's disease in patients treated with donepezil. <i>International Psychogeriatrics</i> . 19(2), 241-252.

Intervention Category	Intervention (Name or Brief Description)	Citation
Reminiscence/Life review	Making Memories Together—a Game for those with Alzheimer’s Disease and Related Dementias (ADRD)	Cohen, G.D., Firth, K.M., Biddle, S., Lloyd Lewis, M.J., & Simmens, S. (2008). The first therapeutic game specifically designed and evaluated for Alzheimer’s disease. <i>American Journal of Alzheimer’s Disease and Other Dementias</i> . 23(6):540-51.

Continued

Innovations Included in This Compendium—Continued

Persons with ADRD—Continued

Intervention Category	Intervention (Name or Brief Description)	Citation
Reminiscence/Life review	TimeSlips	Fritsch , T., Kwak, J., Grant, S., Lang, J., Montgomery, R.R., & Basting, A.D. (2009). Impact of TimeSlips , a Creative Expression Intervention Program, on Nursing Home Residents With Dementia and their Caregivers. <i>The Gerontologist</i> . 49(1):117-127.
Reminiscence/Life review	Reminiscence therapy	Tadaka, E., & Kanagawa, K. (2007). Effects of reminiscence group in elderly people with Alzheimer disease and vascular dementia in a community setting. <i>Geriatrics and Gerontology International</i> ; 7(2):167–173
Exercise and Movement Interventions	Chair-based exercise program	Edwards, N., Gardiner, M., Ritchie, D.M., Baldwin, K., & Sands, L. (2008). Effect of exercise on negative affect in residents in special care units with moderate to severe dementia. <i>Alzheimer Disease and Associated Disorders</i> , 22(4):362-8.
Exercise and Movement Interventions	Moderate intensity exercise program	Landi, F., Russo, A., & Bernabei, R. (2008). Physical activity and behavior in the elderly: a pilot study. <i>Archives of Gerontology and Geriatrics</i> . Supplement (9):235-41.

Music Therapy	Music during evening mealtimes	Hicks-Moore, S. L. (2005). Relaxing music at mealtime in nursing homes: effects on agitated patients with dementia. <i>Journal of Gerontological Nursing</i> , 31(12), 26-32.
Music Therapy	Live versus pre-recorded music	Holmes, C., Knights, A., Dean, C., Hodkinson, S., & Hopkins, V. Keep music live: music and the alleviation of apathy in dementia subjects. <i>International Psychogeriatrics</i> , 18:A, 623-630.
Music Therapy	Music class	Jennings B, Vance D. The short-term effects of music therapy on different types of agitation in adults with Alzheimer's. <i>Activities, Adaptation & Aging</i> 2002. 26(4):27-32.

Continued

Innovations Included in This Compendium—Continued

Persons with ADRD—Continued

Intervention Category	Intervention (Name or Brief Description)	Citation
Music Therapy	Preferred music played prior to periods of agitation	Park, H., & Pringle Specht, J. K. (2009). Effect of individualized music on agitation in individuals with dementia who live at home. <i>Journal of Gerontological Nursing</i> , 35(8), 47-55
Music Therapy	Music therapy group	Raglio, A., Bellelli, G., Traficante, D., Gianotti, M, Ubezio, M. C., Villani, D., & Trabucchi, M. 2008. Efficacy of music therapy in the treatment of behavioral and psychiatric symptoms of dementia. <i>Alzheimer's Disease and Associated Disorders</i> , 22(2), April-June, 158-162.
Music Therapy	Songs and instrument playing in small groups led by music therapist	Svansdottir H. B., Snaedal J. (2006). Music therapy in moderate and severe dementia of Alzheimer's type: a case-control study. <i>International Psychogeriatrics</i> (2006), 18(4) 613-21.

Music Therapy	Background stimulative	Ziv, N., Granot, A., Hai, S., Dassa, A., Haimov, I. The effect of background stimulative music on behavior in Alzheimer's Patients. 2007. <i>Journal of Music Therapy</i> , XLIV (4), 329-343
Interventions Involving Technology	Computer-based cognitive training	Cipriani, G., Bianchetti, A., Trabucchi, M. (2006) Outcomes of a computer-based cognitive rehabilitation program on Alzheimer's disease patients compared with those on patients affected by mild cognitive impairment. <i>Archives of Gerontology and Geriatrics</i> . 43(3), 327-35.
Interventions Involving Technology	Interactive computer training for Alzheimer's disease	Hofmann, M.; Rösler A.; Schwarz, W.; Müller-Spahn, F.; Kräuchi, K.; Hock, C.; Seifritz, E. (2003). Interactive computer-training as a therapeutic tool in Alzheimer's disease. <i>Comprehensive Psychiatry</i> . 44(3), 213-9.

Continued

Innovations Included in This Compendium—Continued

Persons with ADRD—Continued

Intervention Category	Intervention (Name or Brief Description)	Citation
Interventions Involving Technology	Simulated presence using personalized video channels	Kajiyama, B.K., Luis R.C., Tymchuk, A.J., Boxer, A.L., Kixmiller, J.S., & Olinsky, C.J. (2007). Improving the Quality of Life for Caregivers and Care Recipients with Personalized Video Channels. <i>Clinical Gerontologist</i> , 31(1):95-100.
Sensory Interventions	Melissa aromatherapy	Ballard, C.G., O'Brien, J. T., Reichelt, K., & Perry, E. K. (2002). Aromatherapy as a safe and effective treatment for the management of agitation in severe dementia: the results of a double-blind, placebo-controlled trial with <i>Melissa</i> . <i>Journal of Clinical Psychiatry</i> , 63(7), 553-58.

Sensory Interventions	Lavender essential oil diffused (by inhalation) at night	Lin, P. W., Chan, W. Bacon F. N., and Lam, L C. Efficacy of aromatherapy (Lavandula angustifolia) as an intervention for agitated behaviors in Chinese older persons with dementia: a cross-over randomized trial. <i>International Journal of Geriatric Psychiatry</i> , 22, 405-410.
Sensory Interventions	Multisensory stimulation (MSS), or Snoezelen	Milev, R.V., Kellar, T., McLean, M., Mileva, V., Luthra, V., Thompson, S., & Peever, L.(2008). Multisensory Stimulation for Elderly With Dementia: A 24-Week Single-Blind Randomized Controlled Pilot Study. <i>American Journal of Alzheimer's Disease and Other Dementias</i> , 23(4):372-6.
Sensory Interventions	Namaste Care Program	Simard, J., & Volicer, L. (2010). Effects of Namaste Care on Residents Who Do Not Benefit From Usual Activities. <i>American Journal of Alzheimer's Disease & Other Dementias</i> ; 25(1):46-50.
Sensory Interventions	Therapeutic touch	Woods, D. L., Craven, R. F., Whitney, J. (2005) The effect of therapeutic tough on behavioral symptoms of persons with dementia. <i>Alternative Therapies</i> , Jan/Feb 11 (10), 66-74

Continued

Innovations Included in This Compendium—Continued

Persons with ADRD—Continued

Intervention Category	Intervention (Name or Brief Description)	Citation
Multi-Dimensional Interventions	Brief Psychosocial Therapy	Ballard, C., Brown, R., Fossey, J., Douglas, S., Bradley, P., Hancock, J., et al. (2009). Brief psychosocial therapy for the treatment of agitation in Alzheimer disease (The CALM-AD Trial). <i>American Journal of Geriatric Psychiatry</i> ; 17(9):726-733.

Multi-Dimensional Interventions	Simulated presence and preferred music	Garland, K., Beer, E., Eppingstall, B., & O'Connor, D.W. (2007). <i>American Journal of Geriatric Psychiatry</i> ; 15(6):514-521.
Multi-Dimensional Interventions	The Tajiri Project	Ishizaki, J., Meguro, K., Ohe, K., Kimura, E., Tsuchiya, E., Ishii, H., Sekita, Y., Yamadori, A. (2002). Therapeutic Psychosocial Intervention for Elderly Subjects With Very Mild Alzheimer Disease in a Community: The Tajiri Project. <i>Alzheimer Disease and Associated Disorders</i> . 16(4), 261–269.
Multi-Dimensional Interventions	Collective application of activities related to music, painting, and time–place–person orientation.	Ozdemir, L., & Akdemir, N. (2009). Effects of multisensory stimulation on cognition, depression and anxiety levels of mildly-affected Alzheimer’s patients. <i>Journal of the Neurological Sciences</i> . 283:211–213
Multi-Dimensional Interventions	Memories in the Making	Rentz, C.A. (2002). An outcomes-based evaluation of Memories in the Making®, an art program for individuals with dementing illnesses. <i>American Journal of Alzheimer’s Disease and Other Dementias</i> . 17 (3):175-181.
Multi-Dimensional Interventions	Multidimensional day care program	Weber, K., Meiler-Mititelu, C., Herrmann, F.R., Delaloye, C., Giannakopoulos, P., & Canuto, A. (2009). Longitudinal assessment of psychotherapeutic day hospital treatment for neuropsychiatric symptoms in dementia. <i>Aging & Mental Health</i> , 13(1):92-98.

Continued

Innovations Included in This Compendium—Continued

Persons with ADRD—Continued

Intervention Category	Intervention (Name or Brief Description)	Citation
Support Groups	Early stage dementia group	Goldsilver, P., Gruneir, M. (2001). Early stage dementia group: An innovative model of support for individuals in the early stages of dementia American Journal of Alzheimer's Disease and Other Dementias. 16; 109-114

Continued

Innovations Included in This Compendium—Continued

Caregiver/Care Receiver Dyads

Intervention Category	Intervention (Name or Brief Description)	Citation
Support Groups	Early Diagnosis Dyadic Intervention	Whitlatch, C., Judge, K., Zarit, S., Femia, E. (2006). Dyadic intervention for family caregivers and care receivers in early-stage dementia. Gerontologist. 46(5), 688-94.
Support Groups	Assisted Vacation	Wilz, G., Fink-Heitz, M. (2008). Assisted Vacations for Men With Dementia and Their Caregiving Spouses: Evaluation of Health-Related Effects. The Gerontologist. 48(1), 115-120.
Support Groups	Memory Club	Zarit, S., Femia, E., Watson, J., Rice-Oeschger, L., Kakos, B. (2004) Memory Club: A Group Intervention for People With Early-Stage Dementia and Their Care Partners. The Gerontologist 44(2), 262-269.

Continued

Innovations Included in This Compendium—Continued

Caregivers

Intervention Category	Intervention (Name or Brief Description)	Citation
Education	Psychosocial intervention for caregivers	Andren S., Elmstahl, S. (2008). Psychosocial intervention for family caregivers of people with dementia reduces caregiver's burden: development and effect after 6 and 12 months. <i>Scandinavian Journal of Caring Science</i> . 22, 98-109.
Education	REACH OUT	Burgio, L, Collins, I., Schmid, B., Wharton, T., McCallum, D., & DeCoster, J. (2009). Translating the REACH caregiver intervention for use by Area Agency on Aging personnel: the REACH OUT Program. <i>The Gerontologist</i> . Advance Access.
Education	Carer education program for carer quality of life, burden, and well-being	Coen, R., O'Boyle, C., Coakley, D., Lawlor, B. (1999). Dementia carer education and patient behaviour disturbance. <i>International Journal of Geriatric Psychiatry</i> . 14(4), 302-6.
Education	Educational intervention for caregivers of elders with dementia	Devor, M., Renvall, M. (2008). An Educational Intervention to Support Caregivers of Elders With Dementia <i>American Journal of Alzheimer's Disease and Other Dementias</i> . 23; 233-241.
Education	Comprehensive caregiver educational program for quality of life and emotional issues	Kuzu, N., Beser, N., Zencir, M., Sahiner, T., Nesrin, E., Ahmet, E., Binali, C., Cagdas, E. (2005). Effects of a Comprehensive Educational Program on Quality of Life and Emotional Issues of Dementia Patient Caregivers. <i>Geriatric Nursing</i> . 26,378-386.

Education	Stress-Busting Program for family caregivers	Lewis, S., Miner-Williams, D., Novian, A., Escamilla, M., Blackwell, P., Kretzschmar, J., Arevalo-Flechas, L., Bonner P. (2009). A Stress Busting Program for Family Caregivers. <i>Rehabilitation Nursing</i> . 34(4). 151-159.
Education	Training dementia caregivers in sensitivity to nonverbal emotion signals	Magai, C., Cohen, C., Gomberg, D. (2002). Impact of Training Dementia Caregivers in Sensitivity to Nonverbal Emotion Signals. <i>International Psychogeriatrics</i> . 14(1) 25-38.

Continued

Innovations Included in This Compendium—Continued

Caregivers—Continued

Intervention Category	Intervention (Name or Brief Description)	Citation
Education	Taking Control of Alzheimer's Disease: techniques for early-stage patients and the care-partners	Roberts, J., Silverio, E. (2009). Evaluation of an Education and Support Program for Early-Stage Alzheimer's Disease. <i>Journal of Applied Gerontology</i> . 28(4), 419-435.
Education	At the Crossroads	Stern, R., D'Ambrosio, L., Mohyde, M., Carruth, A., Tracton-Bishop, B., Hunter, J., Daneshvar, D., Coughlin, J. (2008). At the Crossroads: Development and evaluation of a dementia caregiver group intervention to assist in driving cessation. <i>Gerontology and Geriatric Education</i> . 29(4), 363-382.
Counseling	Spiritually-based support by telephone for caregivers of veterans	Bormann, J., Warren, K., Regalbutto, L., Glaser, D., Kelly, A., Schnack, J., Hinton, L. (2009) A spiritually based caregiver intervention with telephone delivery for family caregivers of veterans with dementia. <i>Family and Community Health</i> . 32(4), 345-53.

Support Groups	Educative support group for female family caregivers	Javadpour, A., Ahmadzadeh, L., Mohammad Jafar Bahredar, M. (2008). An educative support group for female family caregivers: impact on caregivers psychological distress and patient's neuropsychiatry symptoms. <i>International Journal of Geriatric Psychiatry</i> . 24, 469-471.
----------------	--	---

Continued

Innovations Included in This Compendium—Continued

Caregivers—Continued

Intervention Category	Intervention (Name or Brief Description)	Citation
Interventions Involving Technology	Internet-based computer support service	Chiu, T., Marziali, E., Colantonio, A., Carswell, A., Gruneir, M., Tang, M., Eysenbach, G. (2009). Internet-Based Caregiver Support for Chinese Canadians Taking Care of a Family Member with Alzheimer Disease and Related Dementia. <i>Canadian Journal on Aging</i> . 28(4), 323- 336.
Interventions Involving Technology	Caring for Others - internet video-conferencing for family caregivers	Marziali, E., Donahue, P. (2006). Caring for Others: Internet Video-Conferencing Group Intervention for Family Caregivers of Older Adults With Neurodegenerative Disease. <i>The Gerontologist</i> . 46(3), 398-403.
Monitoring of Care Receiver	The Safe House Project	Kinney, J., Kart, C., Murdoch, L., Conley, C. (2004). Striving to provide safety assistance for families of elders - The SAFE House project. <i>Dementia</i> . 3(3), 351-370.
Monitoring of Care Receiver	A monitoring system to reduce frequency of care-receiver nighttime activity.	Rowe, M., Kelly, A., Horne, C., Lane, S., Campbell, J., Lehman, B., Phipps, C., Keller, M., Benito, A. (2009). Reducing dangerous nighttime events in persons with dementia by using a nighttime monitoring system. <i>Alzheimer's and Dementia</i> . 5(5), 419-26.

Continued

Innovations Included in This Compendium—Continued

Administrative Interventions, Care Coordination, Screening

Intervention Category	Intervention (Name or Brief Description)	Citation
Administrative Interventions, Care Coordination, Screening	TYM (“test your memory”)	Brown, J., Pengas, G., Dawson, K., Brown, L.A., & Clatworthy, P. (2009). Self administered cognitive screening test (TYM) for detection of Alzheimer’s disease: cross sectional study. <i>British Medical Journal</i> ; 338:b2030
Administrative Interventions, Care Coordination, Screening	Memory and Aging Project Satellite (MAPS)	Edwards, D.F., Baum, C.M., Meisel, M., Depke, M., Williams, J., Braford, T., Morrow-Howell, N., & Morris, J.C. (1999). Home-based multidisciplinary diagnosis and treatment of inner-city elders with dementia. <i>The Gerontologist</i> . 39(4):483-488.
Administrative Interventions, Care Coordination, Screening	Dementia care consultation linking family caregivers with primary care physicians	Fortinsky, R., Kuildorff, M., Kleppinger, A., Kenyon-Peace, L. (2009). Dementia care consultation for family caregivers: Collaborative model linking an Alzheimer’s association chapter with primary care physicians. <i>Aging and Mental Health</i> . 13(2), 162-170

7. Summaries of Interventions

Persons with ADRD, Cognitive Training and Therapy: Cherry et al. 2005

Characteristics	Findings
Name of innovative practice	Spaced-Retrieval Memory Training Cherry, K., & Simmons-D'Gerolamo, S.
Category of innovation	Evidence-informed.
Description of innovative practice:	The intervention was provided in 9 one-hour sessions during a three-week period. During the first two sessions participants were measured on a battery of standard tests to establish their mental status. The next six sessions consisted of training and delayed recall testing. The training employed 11 stimulus items—small, colorful objects (8 distractors and 3 target objects). All items were exemplars of different taxonomic categories (e.g., jacket, type of clothing). On each trial, participants viewed an array of nine objects placed on a flat, wooden board (29 x 29 cm) that was scored with thick lines to represent a 3x3 matrix. Each item occupied its own square of the matrix. One object was designated as the “correct” item and this item served as the ‘to be remembered’ target item throughout the spaced-retrieval training session. For all participants, jacket was the target item in Sessions 1 and 4; bracelet was the target item in Sessions 2 and 5; and carrot was the target item in Sessions 3 and 6. The final session was for final delayed recall testing and the awarding of certificates of appreciation.
AAA/SUA involvement, if any	None.
Target population	Persons with dementia.
Is target population an underserved group?	None specified.
Where innovation implemented and when, if known	Not specified.

Continued

Persons with ADRD, Cognitive Training and Therapy: Cherry et al. 2005—Continued

Characteristics	Findings
Contact information	Katie E. Cherry, Department of Psychology, Louisiana State University, Baton Rouge, LA 70803-5501, USA. E-mail: pskatie@lsu.edu
Journal research citation	Cherry, K., & Simmons-D'Gerolamo, S. (2005). Long-Term Effectiveness of Spaced Retrieval Memory Training for Older Adults with Probable Alzheimer's Disease. <i>Experimental Aging Research</i> , 31, 261–289.
Journal research summary	—
Description of data, including size	The ten older adults with probable Alzheimer's disease who participated in this study were enrolled in a local adult day care center. All had a chart diagnosis of adult dementia provided by their physician, with cognitive impairment typical of the mild-moderate stage Alzheimer's disease based on the DSM-IV criteria and Stage 4–5 dementias on the Global Deterioration Scale. Five of the participants had received a similar intervention less than 12 months earlier.

Continued

Persons with ADRD, Cognitive Training and Therapy: Cherry et al. 2005—Continued

Characteristics	Findings
<p>Outcome measures</p>	<p>Participants were measured on the following instruments to establish mental status:</p> <ul style="list-style-type: none"> • Mini Mental Status Examination (MMSE) • Geriatric Depression Scale—Short Form • Wechsler Adult Intelligence Scale (WAIS) Vocabulary subtest and Digit span tests <p>Participants were measured for memory of the target object after 48 hours.</p> <p>Participant memory was also measured by two secondary memory tasks:</p> <ul style="list-style-type: none"> • The prospective name-tag task, in which at the beginning of each session the participant was given a name-tag to wear and told to return the name-tag at the end of the session in response to the verbal cue, “we are finished for the day.” • The shirt color naming task which measured 48-hour delayed recall of single-item information; at the end of each session, participants were told to remember the color of the shirt that the experimenter wore that day.
<p>Design/Comparison group</p>	<p>The five participants who did not receive a similar intervention less than 12 months earlier were matched with the five who did according to Mini Mental State Examination Score. Performance was compared between these five participants and the current study group to examine the long-term effect of the intervention.</p>

Continued

Persons with ADRD, Cognitive Training and Therapy: Cherry et al. 2005—Continued

Characteristics	Findings
Results	<p>The cognitive tests confirmed the presence of cognitive impairment in all the participants, with mild depression, deficiencies in verbal ability, memory, and general intellectual function.</p> <p>The primary and secondary memory tests showed that all participants experienced gradual improvement in space-retrieval performance across sessions.</p> <p>The 5 participants who had experienced a previous intervention experienced more improvement than those who had not in the early sessions, although these differences disappeared by the end of the intervention.</p> <p>After a further analysis of the data, the study concluded that most of the participants formed implicit representations of the objects, which may be a factor in improving their spaced retrieval responses.</p>
Other important information about innovation	<p>In addition to the analysis of the participants in this study, the authors compare their results to other smaller studies to examine the effectiveness of the training technique of using a target object. They conclude that this is a more effective approach than training not employing a target object.</p>
Translation and replication material available?	None provided
Relevant websites	None specified
Comments	<p>This intervention shows promise for improving recall by persons with mild to moderate Alzheimer's symptoms, but would require the services of trained facilitators to implement.</p>

Persons with ADRD, Cognitive Training and Therapy: Clare et al. 2002

Characteristics	Findings
Name of innovative practice	Cognitive intervention based on errorless learning Clare, L. Wilson, B., Carter, G., Roth, I., & Hodges, J.
Category of innovation	Evidence-informed
Description of innovative practice:	<p>The intervention, which is designed to improve face-name associations for persons with early stage Alzheimer’s disease, utilized a set of 12 photographs of people whom the participant had difficulty in naming. These were either photographs of people in the participant’s social network, or photographs of famous people. The photographs were divided into two sets of 6, matched for gender, nationality, length of name, and other relevant factors. Participants were trained on one set of photographs while their recall of the other set at the end of the intervention served as a control condition.</p> <p>The intervention was delivered in six weekly sessions, with one photograph trained in each session. The training involved selecting a mnemonic, learning the name from cues that were gradually removed, and rehearsing the name using spaced retrieval, with the participant demonstrating the ability to remember the name over increasing periods of time until successfully remembering the name after 10 minutes. At the end of each session, the participant was given a trial test of all six photographs. Participants were then given a copy of the photograph with the name and mnemonic to practice during the week.</p>
AAA/SUA involvement, if any	None
Target population	Persons with dementia
Is target population an underserved group?	Not reported

Continued

Persons with ADRD, Cognitive Training and Therapy: Clare et al. 2002—Continued

Characteristics	Findings
Where innovation implemented and when, if known	Not reported
Contact information	Linda Clare, Sub-Department of Clinical Health Psychology, University College London, Gower Street, London WC1E 6BT, England. E-mail: l.clare@ucl.ac.uk
Journal research citation	Clare, L. Wilson, B., Carter, G., Roth, I., & Hodges, J. (2002). Relearning Face–Name Associations in Early Alzheimer’s Disease. <i>Neuropsychology</i> , 16(4), 538–547.
Journal research summary	—
Description of data, including size	<p>12 persons attending a memory clinic and with a medical diagnosis of probable Alzheimer’s disease or minimal or mild Alzheimer’s disease with a Mini-Mental State Examination score of 18 or above; impairment predominantly in memory without widespread general intellectual impairment; no major psychiatric disorders; living with a relative who was willing to participate, speaking English fluently; and able to give informed consent.</p> <p>Five of the participants were taking either donepezil or rivastigmine, two had discontinued rivastigmine prior to entering the study, and five had never taken acetylcholinesterase-inhibiting medication.</p>

Continued

Persons with ADRD, Cognitive Training and Therapy: Clare et al. 2002—Continued

Characteristics	Findings
<p>Outcome measures</p>	<p>To determine participant recall, free-and cued recall trials for the trained and untrained faces were given immediately following the intervention. The assessment of the name-learning task was repeated at 1, 3, and 6 months after the end of the intervention. A further follow-up was completed 12 months after the end of the intervention, with five free-recall trials were followed by one cued-recall trial.</p> <p>Before and after the intervention</p> <p>Participants:</p> <ul style="list-style-type: none"> • Hospital Anxiety and Depression Scale for anxiety and depression. • Memory Performance Scale and Rivermead Behavioural Memory Test for awareness. <p>Caregivers:</p> <ul style="list-style-type: none"> • Memory Functioning Scale for caregiver assessment of participant awareness • Behaviour Problems Checklist of the Clifton Assessment Procedures for the Elderly for caregiver assessment of participants' behavior and dependency needs. • Caregiver Strain Index for subjective experience of caregiver strain.
<p>Design/Comparison group</p>	<p>Quasi experimental pre-test post-test design with no comparison group. Participants were tested on two sets of items—one on which they were trained and one on which they were not trained which was designed to serve as a control condition.</p>

Continued

Persons with ADRD, Cognitive Training and Therapy: Clare et al. 2002—Continued

Characteristics	Findings
Results	<p>There was a statistically significant improvement in free recall of the names for the trained photographs from baseline at 3 and 6 months. Free recall of the non-trained photographs increased by a non-significant amount. At 12 months, free recall of the trained photographs declined to a non-significant improvement over baseline.</p> <p>Cued recall of the trained photographs followed the same pattern, but with slightly better levels of recall.</p> <p>Higher levels of recall were associated with higher level of awareness, less severe dementia as measured by the Mini Mental State Examination, and lower levels of behavioral problems from the Behavior Problems Checklist.</p> <p>At post-intervention, there were non-significant reductions in participant anxiety and depression, and in caregiver depression.</p> <p>The analysis found no difference in recall among participants attributable to different medications.</p>
Other important information about innovation	The small sample size prevented deeper analysis of the data.
Translation and replication material available?	Photographs from the Photographs of Famous People test were among the photographs used. See Greene, J. D. W., & Hodges, J. R. (1996). Identification of famous names and famous faces in early Alzheimer’s disease: Relationship to anterograde episodic and general semantic memory. <i>Brain</i> , 119, 111–128
Relevant websites	None provided
Comments	—

Persons with ADRD, Cognitive Training and Therapy: Haslam et al. 2006

Characteristics	Findings
Name of innovative practice	Errorless learning, as examined in three trials by Haslam, C., Gilroy, D., Black, S., & Beesley, T.
Category of innovation	Evidence-informed
Description of innovative practice	<p>This analysis examined the effectiveness of errorless learning, in which participants are given the correct answer to a question and the ability to provide the correct answer is frequently reinforced.</p> <p>Three related studies are examined in this article.</p> <p>Study 1 employed a hierarchy of knowledge, with the kinds of knowledge presented to participants in the study classified by specificity (e.g. whether participants could recall that a person was a musician [higher level or general recall] or also recall that a person played the oboe [lower level or specific recall]). Participants were asked to learn face–name–occupation associations to examine knowledge across a range of levels, from very general to very specific. All participants viewed two sets of 12 faces and were taught the name and occupation associated with each—for one set participants were taught by errorless learning and for the other set participants were taught by errorful learning. In errorful learning participants were asked to guess the answer from clues before being given the correct answer.</p> <p>Study 2 was like Study 1 except that it manipulated the questions so that at higher knowledge levels the participants were asked to recall more specific knowledge.</p> <p>Study 3 replicated Study 1a with small group of dementia patients with mixed diagnoses.</p>
AAA/SUA involvement, if any	None

Continued

Persons with ADRD, Cognitive Training and Therapy: Haslam et al. 2006-Continued

Characteristics	Findings
Target population	Persons with dementia
Is target population an underserved group?	None specified.
Where innovation implemented and when, if known	Memory Clinic, School of Psychology, University of Exeter, Exeter, UK.
Contact information	Catherine Haslam, School of Psychology, University of Exeter, Exeter EX4 4QG, UK. Email: c.haslam@exeter.ac.uk
Journal research citation	Haslam, C., Gilroy, D., Black, S., & Beesley, T. (2006). How successful is errorless learning in supporting memory for high and low-level knowledge in dementia? <i>Neuropsychological Rehabilitation</i> , 16 (5), 505–536.
Journal research summary	—
Description of data, including size	<p>Study 1: 11 participants with a diagnosis of probably Alzheimer’s disease recruited through a memory clinic and 8 non-Alzheimer’s adults recruited from a pool maintained by the School of Psychology at the University of Exeter, UK.</p> <p>Study 2—2 participants with Alzheimer’s disease recruited through the same memory clinic.</p> <p>Study 3—7 participants with Alzheimer’s disease or vascular dementia recruited through the same memory clinic.</p>

Continued

Persons with ADRD, Cognitive Training and Therapy: Haslam et al. 2006-Continued

Characteristics	Findings
Outcome measures	<p>Study 1:</p> <p>The ability of participants to recall information or not was rated by the type of information recalled according to the following levels:</p> <p>Level I: "Is this person familiar?" (highest level knowledge)</p> <p>Level II: "Is this person a teacher or a musician?"</p> <p>Level III: "Is this person a primary or high/secondary school teacher?" (for educators) or "Is this person a pianist or violinist?" (for musicians)</p> <p>Level IV: "What is this person's name?" (lowest level knowledge)</p> <p>Study 2:</p> <p>Like Study 1, except that in Level II the specific type of musician (e.g. saxophonist) was substituted for musician.</p> <p>Study 3:</p> <p>As in Study 1.</p>
Design/Comparison group	<p>Pre-post design</p> <ul style="list-style-type: none"> • Study 1: a convenience comparison group of 8 non-Alzheimer's participants. • Study 2—none • Study 3—none <p>The study compared errorless and errorful learning by using both approaches with each participant and comparing the results of the approaches.</p>

Continued

Persons with ADRD, Cognitive Training and Therapy: Haslam et al. 2006-Continued

Characteristics	Findings
Results	<p>Study 1: Errorless learning was significantly more effective than errorful learning for recall of information at levels I and II for the participants with Alzheimer’s disease. Errorless learning was more effective for control participants at all levels, and control participants were significantly more able to recall information than participants with Alzheimer’s disease.</p> <p>Study 2—no significant difference was found between errorless learning and errorful learning for the revised intervention.</p> <p>Study 3—Errorless learning was significantly more effective than errorful learning for recall of information at Levels II and III.</p>
Other important information about innovation	—
Translation and replication material available?	None provided in the article.
Relevant websites	None specified in the article
Comments	These are very small trials of an individualized intervention to improve memory through errorless learning which showed some effectiveness in enhancing the ability of participants to retain more general memories.

Persons with ADRD, Cognitive Training and Therapy: Hochhalter et al. 2006

Characteristics	Findings
Name of innovative practice	Structured Practice Hochhalter, A., Stevens, A., & Okonkwo, O.
Category of innovation	Promising Practice
Description of innovative practice	<p>The Structured Practice intervention is designed to help persons with dementia improve memory retention for specific facts; this study examined its effect on remembering telephone numbers.</p> <p>The intervention used two of a series of Structured Practice workbooks—'Store' phone number and 'Office' phone number. These 38-page workbooks include practice pages, test pages, and social interaction pages. Practice pages prompt the person by providing the number and cues for remembering it and are distributed among social interaction pages in which the person interacts with a trainer for increasingly longer periods of time between practices. Test pages assess free and cued recall of the number.</p> <p>Participants meet one-on-one with a trainer. The participants hold the book and turn the pages, while the trainer ensures that the person follows the instructions on each page and provides social interaction at the points specified in the workbook.</p> <p>Sessions were held intermittently several times a week but not on a regular schedule, mimicking the need to recall numbers in real life. Sessions in this study generally lasted 12 to 20 minutes, and continued until the participant was about to recall the number without cues at the beginning of 2 consecutive sessions or until the study determined that no progress was being made.</p>
AAA/SUA involvement, if any	None
Target population	Persons with dementia

Continued

**Persons with ADRD, Cognitive Training and Therapy: Hochhalter et al. 2006-
Continued**

Characteristics	Findings
Is target population an underserved group?	Not specified
Where innovation implemented and when, if known	May-August, 2005
Contact information	Angela K. Hochhalter, PhD, Scott and White Memorial Hospital, 2401 South 31st Street, Temple, TX 76508; e-mail: ahochhalter@swmail.sw.org .
Journal research citation	Hochhalter, A., Stevens, A., & Okonkwo, O. (2006). Structured practice: a memory intervention for persons with dementia. <i>American Journal of Alzheimer's Disease and Other Dementias</i> , 21(6), 424-30.
Journal research summary	—
Description of data, including size	30 residents in Assisted Living were identified at two facilities, of which 14 were eligible and selected for the study. Eligible participants were able to consistently read printed words or digits and to fill in missing digits of a phone number when the complete number was provided. Participant level of dementia ranged from mild to severe.
Outcome measures	The test pages in the workbook, indicating whether the number was being retained.
Design/Comparison group	None

Continued

**Persons with ADRD, Cognitive Training and Therapy: Hochhalter et al. 2006-
Continued**

Characteristics	Findings
Results	<p>The study examined the longest delay after which a participant recalled the number with 0, 3, or 5 cues. Of the 14 participants, 4 showed no delayed retention, 3 showed retention after a 5-minute delay, and 7 recalled the phone number with some or no cues at least once after at least a day delay. Of these 7, only 3 recalled the phone number with 0 cues at the beginning of 2 consecutive sessions. All 3 showed retention with or without cues after a 1-week delay (2 with 5 cues, 1 with 0 cues).</p> <p>There were no differences in level of dementia between those with more retention and those with less or no retention.</p>
Other important information about innovation	This was a relatively small study, though comparable to similar cognitive therapy studies.
Translation and replication material available?	The article does not state where to acquire the workbooks
Relevant websites	None specified.
Comments	<p>While the study was conducted in an assisted living setting, it could be implemented by a caregiver in the home—the workbooks are pre-programmed and the main duty of the trainer is to see that the care-receiver responds to all pages and to interact socially with the care-receiver at the times specified. The sessions are short and can be held at the convenience of caregiver and care-receiver for any length of time.</p>

Persons with ADRD, Cognitive Training and Therapy: Loewenstein et al. 2004

Characteristics	Findings
Name of innovative practice	Cognitive rehabilitation program including spaced retrieval, dual cognitive support, and procedural memory training. Loewenstein, D., Acevedo, A. Czaja, S., & Duara, R.
Category of Innovation	Evidence-informed or promising practice
Description of innovative practice	<p>The cognitive rehabilitation innovation is based on three therapies:</p> <p>Spaced retrieval involves learning with a specific stimulus (e.g., a face) and a specific association (e.g., a name) on repeated occasions separated by progressively longer time intervals.</p> <p>Dual cognitive support involves cues for and organization of information for recall.</p> <p>Procedural memory training involves associating information with physical activity.</p> <p>The intervention provided 45-minute sessions, generally twice per week, for a total of 24 sessions. Training was administered individually with a computer and focused on</p> <ol style="list-style-type: none"> 1) learning face–name associations by using spaced retrieval and dual cognitive support (e.g., encouraging the subject to associate the target name with the name of a familiar person, to use first-letter cues, or facial cues); 2) practicing time-and-place orientation through in-session rehearsal and use of the calendar and personal information sections of the memory notebook in session and at home; 3) activating procedural and motor memory by asking patients to manipulate the objects as though they were using them; 4) sustaining attention and activating visual-motor processing by asking subjects to press the mouse button in response to yellow boxes that appeared at variable intervals across the computer screen or to selectively respond with right or left presses, depending on the specific letter contained within the box; 5) training to make change for a purchase from a \$20-bill, using different amounts; and 6) balancing a checkbook by hand and with a calculator after paying three actual utility bills (i.e., telephone, electric, and water bills).

Continued

**Persons with ADRD, Cognitive Training and Therapy: Loewenstein et al. 2004-
Continued**

Characteristics	Findings
AAA/SUA involvement, if any	None
Target population	Person with dementia
Is target population an underserved group?	14% of the participants were Spanish speakers
Where innovation implemented and when, if known	Not stated.
Contact information	David A. Loewenstein, Ph.D. University of Miami Department of Psychiatry 2nd Floor, MRI Building Mount Sinai Medical Center 4300 Alton Road Miami Beach, FL 33140. dloewenstein@worldnet.att.net
Journal research citation	Loewenstein, D., Acevedo, A. Czaja, S., & Duara, R. (2004). Cognitive Rehabilitation of Mildly Impaired Alzheimer Disease Patients on Cholinesterase Inhibitors. <i>American Journal of Geriatric Psychiatry</i> , 12(4), 395-402.
Journal research summary	—
Description of data, including size	<p>The 44 participating care receivers were diagnosed with probable or possible Alzheimer’s disease after a thorough neurocognitive evaluation, blood tests, and MRI of the brain. Participants with possible Alzheimer’s disease met DSM-IV criteria for dementia and had at least a significant progressive deficit in memory, but not sufficient impairment of social/occupational functioning for a dementia-syndrome diagnosis. All participants had been on a stable dose of a cholinesterase inhibitor for at least 8 weeks at baseline.</p> <p>25 participants received the cognitive rehabilitation intervention, while 19 were assigned to a comparison group that engaged in mental stimulation activities.</p>

Continued

**Persons with ADRD, Cognitive Training and Therapy: Loewenstein et al. 2004-
Continued**

Characteristics	Findings
<p>Outcome measures</p>	<p>Administered at baseline, 1-2 weeks post-intervention, and at 3-month follow-up:</p> <p>Cognitive rehabilitation measures:</p> <ul style="list-style-type: none"> • Face-Name Association Task • Orientation Task • Continuous Performance Test • Procedural Object-Memory Evaluation • Modified Making-Change-For-A-Purchase Task • Bill-Paying: Balancing-A-Checkbook Task <p>Other measures:</p> <ul style="list-style-type: none"> • List-Learning Task from the Consortium to Establish a Registry for Alzheimer's Disease • Logical Memory test from the Wechsler Memory Scale, 3rd Edition (WMS-III) • Digit Span from the Wechsler Adult Intelligence Scale, 3rd Edition, (WAIS-III) • Trailmaking Test • Category Fluency Test • Revised Memory and Behavior Problems Checklist (RMBPC) • Bayer Activities of Daily Living Scale (B-ADLS) • Center for Epidemiological Studies–Depression Scale (CES–D) • Informant Questionnaire of the Cognitive Decline in the Elderly scale (IQCODE)

Continued

**Persons with ADRD, Cognitive Training and Therapy: Loewenstein et al. 2004-
Continued**

Characteristics	Findings
Design/Comparison group	<p>The mental stimulation group received an equivalent amount of therapist time and engaged in 1) commercially available computer games that required the subject to match pairs of letters, numbers, or designs from memory; 2) exercises such as "hangman," where the patient selected specific letters and then attempted to identify specific words and proverbs; 3) tasks that required the subject to find words distributed in an array of letters or to re-arrange sets of letters to generate as many words as possible using only those letters; 4) "topic of the day," where patients had to remember information from the recent or remote past (e.g., what they did the day before, their neighborhood when growing up); and 5) review and discussion of mental stimulation homework activities for each session.</p>
Results	<p>Persons in the cognitive rehabilitation group achieved higher scores on the Face-Name Association Test, Orientation, Making Change For A Purchase Test, and Continuance Performance Test at post-intervention and at the 3-month follow-up.</p> <p>Performance in the mental stimulation group was higher on the Face-Name Association Task and lower for the Orientation Task at the 3-month follow-up.</p> <p>Participants in both groups reported significant improvements in memory on the Informant Questionnaire of the Cognitive Decline in the Elderly; cognitive rehabilitation participants reporting a significant improvement.</p> <p>Participants in both groups reported less depression after the intervention.</p>

Continued

**Persons with ADRD, Cognitive Training and Therapy: Loewenstein et al. 2004-
Continued**

Characteristics	Findings
Other important information about innovation	Because of the nature of the intervention, it is unclear which of the specific therapies in the cognitive rehabilitation intervention are responsible for the results in the intervention group.
Translation and replication material available?	None listed
Relevant websites	None provided
Comments	In comparison to the mental stimulation group, the results for the cognitive rehabilitation group were mixed. Both the treatment and the controls groups received equivalent amounts of attention time. To the degree that attention in itself can improve some outcome measures, the comparison group chosen represents a strict standard for finding significant intervention effects.

Persons with ADRD, Cognitive Training and Therapy: Matsuda 2007

Characteristics	Findings
Name of innovative practice	Cognitive stimulation therapy Matsuda, O.
Category of innovation	Evidence-informed
Description of innovative practice:	<p>The intervention provided donepezil at 5 mg/day combined with one hour sessions of cognitive stimulation therapy weekly for eight weeks and then bi-weekly for 44 weeks.</p> <p>The therapy, administered by a clinical psychologist, consisted of cognitive stimulation exercises customized for each participant after neuropsychological testing. Exercises included communication, story-learning, and word-fluency</p>
AAA/SUA involvement, if any	None
Target population	Persons with dementia
Is target population an underserved group?	None specified
Where innovation implemented and when, if known	Metropolitan Tokyo
Contact information	<p>Osamu Matsuda Department of Clinical Psychology Faculty of Educational Psychology Tokyo Gakugei University 4-1-1 Nukuikita Machi, Koganei-shi Tokyo 187-8501 Japan +81 42 329 7373 matsuda@u-gakugei.ac.jp</p>

Continued

Persons with ADRD, Cognitive Training and Therapy: Matsuda 2007-Continued

Characteristics	Findings
Journal research citation	Matsuda, O. (2007). Cognitive stimulation therapy for Alzheimer's disease: the effect of cognitive stimulation therapy on the progression of mild Alzheimer's disease in patients treated with donepezil. <i>International Psychogeriatrics</i> , 19(2), 241-252.
Journal research summary	—
Description of data, including size	30 persons being treated at an outpatient neuropsychiatric clinic and diagnosed with Alzheimer's disease. All participants had been on donepezil for at least one month at the beginning of the intervention.
Outcome measures	The Japanese Mini Mental Status Examination was administered at baseline and one year later.
Design/Comparison group	Pre-post with controls. The 13 participants in the comparison group were treated with donepezil at 5 mg/day.
Results	Mini Mental Status Examination scores for the intervention group, scores for the control group experienced a significant decline while scores for the intervention group showed no significant change.
Other important information about innovation	Because of the small sample size, the lack of a randomized control group, and the customized cognitive stimulation therapy regimen, the results are suggestive but not definitive.
Translation and replication material available?	None provided
Relevant websites	None provided
Comments	—

Persons with ADRD, Reminiscence/Life Review: Cohen et al. 2008

Characteristics	Findings
Name of innovative practice	Making Memories Together—a Game for those with Alzheimer’s Disease and Related Dementias (ADRD) Cohen, G.D., Firth, K.M., Biddle, S., Lloyd Lewis, M.J., & Simmens, S.
Category of innovation	Promising Practice
Description of innovative practice	<p><i>Making Memories Together</i> is a noncompetitive game designed to have a positive influence on factors influencing quality of life (e.g., mood, pleasure, interest in activities) and family comfort level in visiting. Everybody is on the same team, collaborating as necessary on moves. The person with ADRD is referred to as the host of the game, and the team decides on the number of moves to be made before a game is won, at which point the host gets a reward (e.g., being taken for a walk or a ride in the car, a special treat in the form of food or drink, or some other personally meaningful prize bringing a feeling of satisfaction).</p> <p>The game consists of a colorful playing board with four different categories of squares and related Memory Cards: people, animals, places and special events, and favorite objects. The Memory Cards have a personal picture on one side and text on the other side telling about the picture, and are previously made by family and friends, or often through the assistance of young volunteers (e.g., college students) using templates that are provided with the game.</p> <p>The Memory Cards function like flash cards, facilitating discussion. Hence, if a player lands on a blue “People” square, he/she picks up a Memory Card with a blue border—a Memory Card about some family member or friend of the host—who is then discussed with the host and any other players in the game. Even a volunteer who does not know the patient can be guided through the interaction because of the text on the cards discussing who or what is on it.</p>
AAA/SUA involvement, if any	None

Continued

Persons with ADRD, Reminiscence/Life Review: Cohen et al. 2008—Continued

Characteristics	Findings
Target population	Persons with ADRD and their families/significant others
Is target population an underserved group?	No
Where innovation implemented and when, if known	Nursing homes.
Contact information	Gene D. Cohen, Center on Aging, Health & Humanities, The George Washington University, 10225 Montgomery Avenue, Kensington, MD 20895; e-mail: GENCOWDC@aol.com
Journal research citation	Cohen, G.D., Firth, K.M., Biddle, S., Lloyd Lewis, M.J., & Simmens, S. (2008). The first therapeutic game specifically designed and evaluated for Alzheimer's disease. <i>American Journal of Alzheimer's Disease and Other Dementias</i> , 23(6):540-51.
Journal research summary	—

Continued

Persons with ADRD, Reminiscence/Life Review: Cohen et al. 2008—Continued

Characteristics	Findings
<p>Description of data, including size</p>	<p>Thirty-three ADRD participants with severe cognitive impairment were studied in nursing home settings; three-fourths were women. Family members were also evaluated for level of satisfaction with the intervention. Each participant received 2 control conditions followed by the intervention condition. Control condition 1 consisted of a visit as usual from the family, while control condition 2 involved the visiting family member or significant other engaging the ADRD patient in a discussion of an alternative, picture-oriented medium (TIME Magazine's 100 most influential leaders and revolutionaries of the 20th Century) to correspond to the use of the pictorial memory cards used in the AD game. The intervention condition consisted of the AD game.</p> <p>Each condition lasted for a period of 5 minutes and was videotaped for later assessment. Each overall assessment involving the evaluation of the 2 control conditions and the intervention, with family member assessments as well following each of the 3 conditions, took approximately 30 minutes. The goal was to have enough time for each condition to determine the effects of the independent variables, but not so much time as to confound the results with patient fatigue. Moreover, because Alzheimer patients have some days better than others, the researchers did not want this to be a confounding variable, resulting in differences because of which day assessment was conducted; hence they conducted the assessments of control conditions and the intervention the same day, right after one another.</p>

Continued

Persons with ADRD, Reminiscence/Life Review: Cohen et al. 2008—Continued

Characteristics	Findings
Outcome measures	<ul style="list-style-type: none"> • Five patient measures (pleasure, depression/sadness, anger, anxiety/agitation, and interest) and family member interest were evaluated by two graduate research students using the Observed Emotion Rating Scale for assessing individuals with Alzheimer’s disease. • A questionnaire measuring patient level of agitation, interest, and satisfaction, as well as family member satisfaction, was given to the family to provide their own evaluation, using the Likert Scale.
Design/Comparison group	Single group, within participants, design, and 2 control conditions; analysis of data using a 1-way analysis of variance, repeated measures design. No comparison group.

Continued

Persons with ADRD, Reminiscence/Life Review: Cohen et al. 2008—Continued

Characteristics	Findings
<p>Results</p>	<ul style="list-style-type: none"> • Based on the trained rater assessments of the video-taped visits, the following results were observed: In the areas of pleasure, depression/sadness, interest, and family member interest, results for the intervention were statistically significant; the remaining patient domains of anger and anxiety/agitation showed no significant effects for the intervention. • Based on the family self-assessment, the following results were obtained: In the areas of patient interest, patient satisfaction, and family satisfaction, the results were highly significant. Results for agitation showed a significant effect, but in the opposite direction expected. Potential explanations for this finding are found below in the Other Important Information section. <p>The hypothesis that the intervention would enhance quality of life for the patient and the quality of the patient’s interaction with visitors was robustly supported by both the formal assessment and the assessment by family members. All seem to enjoy playing the game or watching it being played because of the “normalizing” feeling that it promotes. In terms of the general goals of the game, it structures time in a positive sense for patients, creates an incentive for visits by significant others and volunteers, involves the family in its production such that it appears to have a positive influence on family morale, increases staff interest and understanding of the patient, mobilizes intergenerational participation, and enables a budget neutral intervention.</p>

Continued

Persons with ADRD, Reminiscence/Life Review: Cohen et al. 2008—Continued

Characteristics	Findings
<p>Other important information about innovation</p>	<p>The order of the control and intervention conditions was an issue. If anything, the authors felt the order was biased against the game in that it came last in the order of the experimental conditions, being more vulnerable to fatigue with the duration of the process. That the game was so superior in comparison to the control conditions, despite its order in the sequence, suggests that the impact of the game was even greater than the numbers indicate.</p> <p>There was one area—"Agitation"—where participants did less well playing the game, though only as scored by the family member and not via the Observed Emotion Scale evaluation where patient mood was assessed superior in playing the game. In this case, the patient fatigue factor may have been at work influencing perception of agitation by family member, or eagerness may have been misinterpreted as restlessness, and restlessness was the first example of agitation on the Likert Scale used by family members to assess the patient.</p> <p>Possible, too, was a combination of fatigue from being in the third of 3 assessment conditions, along with eager interest in the game, resulting in restlessness identified by family members as agitation. Further study could clarify this issue, perhaps by reversing the order of the 3 conditions during assessment.</p> <p>Note: The AD game does not purport to improve memory functioning following the playing of the game—only during the game when pockets of memories are tapped using memory cards as cues. Also, the ideal control condition would have been another game, but there is no one game that everyone knows how to play.</p>

Continued

Persons with ADRD, Reminiscence/Life Review: Cohen et al. 2008—Continued

Characteristics	Findings
Translation and replication material available?	This study was supported by an NIH grant from The National Institute on Aging, #1 R43 AG17417-01. The game evaluated in this study has been produced by lead author Gene D. Cohen, MD, PhD, and will be sold by GENCO games; the president of the company is the lead author, contact details as above.
Relevant websites	http://www.genco-games.com/making-memories.html
Comments	The AD game could be used in a variety of community settings, including the home, notably for helping to overcome reluctance of friends and relatives for visiting the person with ADRD. It is worth repeating the author(s) that one-on-one activities apart from feeding and personal hygiene services are scarce and typically very expensive in long-term care settings. Also, preliminary investigation has demonstrated that the provision of their biographies can make a profound difference in how late-stage AD patients are perceived and understood.

Persons with ADRD, Reminiscence/Life Review: Fritsch et al. 2009

Characteristics	Findings
Name of innovative practice	TimeSlips, developed by Anne Davis Basting, Fritsch , T., Kwak, J., Grant, S., Lang, J., Montgomery, R.R., & Basting, A.D.
Category of Innovation	Evidence-informed
Description of innovative practice	<p>TimeSlips is intended for persons with middle- to late-stage dementia, who have at least a minimal capacity for communication. TimeSlips uses creative storytelling to engage participants and help them communicate with each other and their caregivers. The storytelling groups involve 10 to 12 participants meeting once a week for 1 hr for 10 weeks.</p> <p>To encourage participation, facilitators—nurse’s aides, social workers, and/or activity directors—hand out a playful theatrical picture to serve as the basis for the story. The facilitators ask open-ended questions about the picture and record responses, making it clear that there are no incorrect answers. Facilitators then weave the responses into a story, periodically reading it back to the participants to maintain the group’s focus and enthusiasm. The story is later transcribed and, together with the picture, displayed in the participants’ facility. Stories are often included in a facility’s newsletter or collated into books for families.</p> <p>Because TimeSlips relies on creative/generative processes rather than demanding active use of long- and short term memory, participants feel more comfortable contributing to activity sessions. Further, the process of implementing TimeSlips in a facility occurs over the course of at least 10 weeks, with an implicit expectation that observational learning by staff occurs, thereby introducing the possibility for grassroots culture change.</p>
AAA/SUA involvement	None

Continued

Persons with ADRD, Reminiscence/Life Review: Fritsch et al. 2009—Continued

Characteristics	Findings
Target population	Caregivers and people with Alzheimer's disease and related dementias.
Is target population an underserved group?	No
Where innovation implemented and when, if known	The facilities in this study consisted of a convenience sample of 20 not-for-profit, freestanding nursing homes that volunteered to participate in the research. Only facilities that had dementia special care units were included: 10 in Milwaukee County, Wisconsin, and 10 in Forsyth and Guilford counties, North Carolina.
Contact information	Thomas Fritsch, PhD, Associate Director, Center on Age & Community, University of Wisconsin, Milwaukee, P.O. Box 413, Milwaukee, WI 53201. E- mail: fritscht@uwm.edu
Journal research citation	Fritsch , T., Kwak, J., Grant, S., Lang, J., Montgomery, R.R., & Basting, A.D. (2009). Impact of TimeSlips , a Creative Expression Intervention Program, on Nursing Home Residents With Dementia and their Caregivers. <i>The Gerontologist</i> , 49(1):117-127.
Journal research summary	—

Continued

Persons with ADRD, Reminiscence/Life Review: Fritsch et al. 2009—Continued

Characteristics	Findings
<p>Description of data, including size</p>	<p>Nursing homes were assigned to 10 pairs by matching each facility with a second facility based on the number of beds, the percentage of Medicaid-funded residents, and the location. One home from each pair was randomly assigned to the experimental group. The researchers found the experimental and control group facilities showed no significant differences in their basic characteristics. Researchers assessed the impact of the intervention (TimeSlips) on resident and staff outcomes using two methodologies: (a) time-sampling observation and coding of resident engagement and staff–resident interactions, and (b) survey of daytime staff who were asked about their attitudes and job satisfaction.</p> <p>To implement the intervention program, instruction in TimeSlips was provided through a 10-week onsite training with volunteer nursing staff. In addition, four research assistants in each state underwent 5 days of training, which included multiple techniques to ensure the reliability of the observations and compliance with the protocol. Two weeks after the implementation of TimeSlips at the intervention sites, the eight trained research assistants conducted observations of staff–resident interactions at the 20 nursing homes. A time-sampling design was used to generate a total of 2,088 10-minute observations of staff–resident interactions and resident engagement and affect.</p> <p>Also, staff questionnaires about attitudes about persons with dementia and job satisfaction were distributed by research assistants to daytime certified nursing assistants and activity staff members who had daily contact with residents in the special care units in the 20 facilities. The response rate was nearly 60% in the intervention facilities and 54% in control facilities. One hundred ninety-two staff members completed the surveys.</p>

Continued

Persons with ADRD, Reminiscence/Life Review: Fritsch et al. 2009—Continued

Characteristics	Findings
<p>Outcome measures</p>	<p>Resident engagement was measured with four codes: <i>social engagement</i> (i.e., engagement in some form of communication with others where there was reciprocity with at least one other person), <i>nonsocial engagement</i> (i.e., engagement in purposeful activities that do not involve social interaction with others), <i>disengaged</i> (i.e., inactive, sitting passively or sleeping, or involved in unpurposeful activity), and <i>challenging behavior</i> (i.e., solitary, repetitive, nonfunctional motor activity or aggression toward others).</p> <p>Resident affect was measured in terms of <i>pleasure</i> (e.g., laughing, singing, smiling, gently touching another person), <i>anger</i> (e.g., physical aggression, yelling, cursing, berating), <i>anxiety or fear</i> (e.g., shrieking, repetitive calling out, restlessness, wincing or grimacing), <i>sadness</i> (e.g., crying, frowning, eyes dropping, moaning, sighing), and <i>general alertness</i> (e.g., participating in a task, maintaining eye contact, eyes following object or person). An <i>other</i> (neutral) category was added for null behavior that did not fit into the existing categories, such as sleeping and being fed.</p> <p>Observers recorded the number of staff-initiated interactions and quality of these interactions using five staff codes, which included subcategories for more detailed analyses: <i>social</i>, <i>care</i>, <i>neutral</i>, <i>protective</i>, and <i>oppressive</i>. The social codes refer to interactions primarily involving “good, constructive, and beneficial” conversations and companionship, whereas the care codes pertain to task-limited interactions such as direct care tasks and activities of daily living. Neutral interactions were defined as brief indifferent interactions. Protective codes refer to task-oriented “negative care” for a good purpose but in a restrictive manner without explanation. The oppressive codes were applied to interactions that oppose or resist a resident’s freedom of action without good reason or that ignore the resident as a person.</p> <p>To measure staff attitudes toward persons with dementia, the researchers used an 11-item inventory that assessed two domains of attitudes, <i>devalue</i> and <i>positive views</i>, with a 4-point response set. To assess job satisfaction, staff were asked to respond to 37 statements using a 5-point response scale. To measure burnout, the researchers used a 14-item inventory with a 5-point response scale.</p>

Continued

Persons with ADRD, Reminiscence/Life Review: Fritsch et al. 2009—Continued

Characteristics	Findings
Design/Comparison group	Randomly assigned matched pairs of nursing homes to intervention or control groups.
Results	<p>The researchers predicted that, compared with residents in the control facilities, <i>residents</i> in the intervention facilities would be more frequently engaged in activities and experience higher levels of positive mood and affect. They also predicted that <i>staff</i> in the intervention facilities would exhibit more frequent interactions with residents, experience more positive attitudes toward persons with dementia, and experience higher job satisfaction and lower burnout than staff in the control facilities.</p> <p>The authors found that there were higher levels of engagement in the intervention facilities and higher levels of disengagement in the control facilities. However, residents in the intervention facilities also exhibited more frequent challenging behaviors. Additionally, residents in the intervention group exhibited more general alertness, fear or anxiety, and sadness, whereas those in the control group exhibited more other or neutral affect, contrary to expectations.</p> <p>As predicted, staff in the intervention facilities engaged in a greater total number of interactions than did staff in control facilities, and a larger proportion of these interactions were social interactions. They exhibited greater social eye contact and verbal communication, whereas staff in the control facilities used more care-related touch and care-verbal interactions. Also, although there were substantially more social interactions between staff and residents in the intervention facilities, there were minimal differences in the number of care activities. Staff in both groups exhibited very few neutral, protective, and oppressive behaviors.</p> <p>The regression analyses showed that staff who participated in the TimeSlips training were less likely to devalue residents with dementia, and they also held more positive views of these persons. Staff at the intervention facilities who did not participate in TimeSlips training did not differ in either of these two outcomes. No significant differences were observed between the TimeSlips facilities and the control facilities for any of the job satisfaction and burnout measures.</p>

Continued

Persons with ADRD, Reminiscence/Life Review: Fritsch et al. 2009—Continued

Characteristics	Findings
Other important information about innovation	<p>Faced with limited resources, the researchers used a time-sampling method as an efficient mechanism for collecting data to compare staff–resident interactions across intervention and control facilities. Unfortunately, the method allowed them to neither identify in advance which special care unit residents would provide data nor did it allow them to limit their observations to residents who were only exposed to only the TimeSlips intervention. With greater resources, future studies would benefit from the use of a randomized control trial design with residents as the unit of analysis.</p> <p>Because outcome variables were assessed 2 weeks after the intervention, but not prior to the intervention, it was not possible to examine patterns of change over time.</p>
Translation and replication material available?	<p>For more information on TimeSlips©, contact Anne Davis Basting, PhD Director, Center on Age and Community University of Wisconsin-Milwaukee Phone: 414.229.2740 E-mail: Basting@UWM.edu</p>
Relevant websites	<p>http://www.timeslips.org/</p>
Comments	<p>—</p>

Persons with ADRD, Reminiscence/Life Review: Tadaka et al. 2007

Characteristics	Findings
Name of innovative practice	<p>Reminiscence Therapy (RT) developed from Butler’s “theory of life review”</p> <p>Tadaka, E., & Kanagawa, K.</p>
Category of innovation	Evidence-informed
Description of innovative practice	<p>Reminiscence therapy (RT) is a group program for elderly people with Alzheimer’s disease or vascular dementia intended to be an active means of enhancing their remaining capacity. It is formulated on the idea that life review is a universal mental process among elderly people and an adaptive means by which they can adjust their past experiences to their current perspectives. RT involves the sharing of memories often evoked through the use of stimulating prompts such as old photographs, songs, and objects, and it can be applied in geriatrics in various ways.</p> <p>In this study, the intervention group subjects followed an RT group program in addition to a routine day-care service that included mild exercises, meals, and bathing (weekdays 10 AM to 4 PM). There was no specific group activity for elderly people with dementia in the routine daycare. The RT program included a welcome meeting, health check, and RT session and was conducted in an independent room in the geriatric health services facility, at 60–90 minutes per session, once a week for 8 consecutive weeks.</p> <p>The intervention group subjects were divided into groups; each included six subjects and a team of one care worker (facility staff) and two specialists. Specialists were trained public health nurses or clinical psychologists who had several years’ experience in the care of elderly people with dementia and trained in the RT group program techniques. Specialists performed roles of group leader or co-leader.</p> <p>Reminiscence therapy sessions were executed using themes and prompts suitable to the subjects’ characteristics and life histories. For example, when the theme was “favorite sweets in childhood,” the group leader and co-leader showed subjects steamed sweet potato as a prompt and suggested that subjects taste, smell and touch them. The group leader and co-leader would then deliver a talk of a few minutes about the theme and encourage discussion with questions to stimulate the subjects’ memories (e.g., “Did you ever have any favorite old sweets?” “What were they like?” “Who made them for you?”). The group leader and co-leader would attempt to keep the theme alive and to help subjects share memories with other subjects in the group by posing more questions related to the theme when necessary.</p>

Continued

Persons with ADRD, Reminiscence/Life Review: Tadaka et al. 2007—Continued

Characteristics	Findings
AAA/SUA involvement, if any	None
Target population	Persons with Alzheimer’s disease or vascular dementia
Is target population an underserved group?	No
Where innovation implemented and when, if known	Day care setting in a geriatric health services facility for the aged in Tokyo metropolis, Japan.
Contact information	Dr Etsuko Tadaka Graduate School of Medicine, Yokohama City University 3–9 Fukuura, Kanagawa-ku Yokohama, Japan E-mail: tadaka-ky@umin.ac.jp
Journal research citation	Tadaka, E., & Kanagawa, K. (2007). Effects of reminiscence group in elderly people with Alzheimer disease and vascular dementia in a community setting. <i>Geriatrics and Gerontology International</i> , 7(2):167–173.
Journal research summary	—
Description of data, including size	The subjects were 24 participants with Alzheimer’s disease and 36 with vascular dementia; they were randomly assigned to an intervention group ($N=30$) and a control group ($N=30$). Criteria included a Clinical Dementia Rating score of 1 or 2, and no speech or vision disorders. Of the 60 subjects, 4 in the intervention group and 6 in the control group dropped out, leaving 50 subjects for final inclusion.

Continued

Persons with ADRD, Reminiscence/Life Review: Tadaka et al. 2007—Continued

Characteristics	Findings
Outcome measures	<p>The primary outcomes were level of self-care, disorientation, depression, irritability, and withdrawal measured by the Multidimensional Observation Scale for Elderly Subjects. The subjects' family caregivers took the measurements by observing their daily life activities at home.</p> <p>The secondary outcome was level of cognitive function measured by the Mini-Mental State Examination. Measurement was taken by a psychiatrist blinded to the assignment of subjects to the intervention group or control group.</p> <p>Measurement of outcome variables occurred prior to the intervention, immediately after the intervention to evaluate the short-term effect, and at 6 months after the intervention to evaluate the long-term effect.</p>
Design/Comparison group	<p>Randomized controlled clinical trial with a 6-month follow up. Comparison group received usual day care program.</p>
Results	<p>For participants with Alzheimer's disease, the intervention group exhibited significant improvement with regard to withdrawal compared with the control group immediately after intervention, but the RT program had no effect on cognition.</p> <p>For the participants with vascular dementia, the intervention group exhibited significant improvement with regard to withdrawal <i>and</i> cognitive function compared with the control group, both immediately after the intervention and at 6-month follow up.</p>

Continued

Persons with ADRD, Reminiscence/Life Review: Tadaka et al. 2007—Continued

Characteristics	Findings
Other important information about innovation	<p>These results are not consistent with previous studies, which found RT effective in the cognitive function of elderly people with Alzheimer's disease (Namazi & Hayes, 1994; Tabourne, 1995).</p> <p>One explanation for the difference of response between the intervention subjects with Alzheimer's disease and those with vascular dementia is that there may be more remaining capacity for activities of daily life in the latter. However, it should be noted that this explanation is mitigated by the vascular dementia subjects in this study having a milder severity of dementia than the Alzheimer's disease subjects at baseline.</p> <p>In spite of the limitations, this study suggests a structure for developing care programs for elderly people with dementia whereby group members can make new relationships and acquire confidants, to convey positive emotions and to promote self-awareness. However, it is also suggested that sustained intervention may be necessary to maintain the effect over time, especially in elderly people with Alzheimer's disease.</p>
Translation and replication material available?	None stated
Relevant websites	None
Comments	No results were provided for the outcome measures of self-care, disorientation, depression, and irritability.

Persons with ADRD, Exercise and Movement Interventions: Edwards et al. 2008

Characteristics	Findings
Name of innovative practice	Chair-based exercise program Edwards, N., & Foster, D.
Category of innovation	Promising Practice
Description of innovative practice	<p>A pilot study was conducted to determine whether moderate-intensity chair-based exercise was associated with changes in negative affect in residents in secured dementia-specific units in nursing homes. For a 12-week period, the 30-minute exercise protocol was conducted as a large group activity 3 times a week by an exercise physiologist with two research assistants. All participants were encouraged to participate in every session, but were not forced to go if they refused.</p> <p>The exercises consisted of lateral neck stretch, head rotation, anterior-posterior neck stretch, shoulder shrug, shoulder stretch, wrist reach, ballerina stretch, overhead stretch with weights, arm curl, shoulder press, lateral shoulder press, toe taps, leg thrusts, hamstring stretch, and walking if possible. The exercises were compiled by an exercise physiologist and reviewed by a nurse practitioner for safety concerns related to the physical conditions of the individuals. To enhance safety, standard weights were replaced with a 1-lb bag of dried beans enclosed in a white sports sock.</p>
AAA/SUA involvement, if any	None
Target population	Persons with moderate to severe dementia
Is target population an underserved group?	No
Where innovation implemented and when, if known	Two long-term care settings in central Indiana

Continued

**Persons with ADRD, Exercise and Movement Interventions: Edwards et al. 2008—
Continued**

Characteristics	Findings
Contact information	Nancy Edwards, PhD, ANP School of Nursing, Purdue University 502 N University Street West Lafayette, IN 47907 E-mail: nedwards@nursing.purdue.edu
Journal research citation	Edwards, N., Gardiner, M., Ritchie, D.M., Baldwin, K., & Sands, L. (2008). Effect of exercise on negative affect in residents in special care units with moderate to severe dementia. <i>Alzheimer Disease and Associated Disorders</i> , 22(4):362-8.
Journal research summary	—
Description of data, including size	<p>The subjects of the study were 36 nursing home residents, with a medical diagnosis of dementia or Alzheimer’s disease and able to follow verbal commands and/or respond to verbal or visual cueing. The majority of the subjects were moderate/severe to severe in dependency of Activities of Daily Living (ADLs). During the 12-week span of the study, two-thirds of the subjects participated in the intervention more than 75% of the time.</p> <p>The subjects were observed by two trained research assistants on the same day at the same time, and rated for anger, anxiety, and depression. The two ratings were averaged to create a single score. On each measurement occasion, the subjects were rated twice: 10 minutes before and 10 minutes after each exercise session. Observations of affect began at week 3 to allow the participants to acclimate to the exercise protocol and change in routine.</p>

Continued

**Persons with ADRD, Exercise and Movement Interventions: Edwards et al. 2008—
Continued**

Characteristics	Findings
Outcome measures	Affect (anger, anxiety, and depression), measured by the Philadelphia Geriatric Center Apparent Affect Rating Scale, was assessed at weeks 3 and 12. Paired <i>t</i> tests assessed the immediate effect of exercise (before/after a session) and the long-term effect of exercise (study initiation/12 weeks) on patients' affect ratings.
Design/Comparison group	Pre-post
Results	At week 3, anxiety was significantly lower after the exercise session compared with before the session. At week 12, anxiety and depression were significantly reduced when compared with week 3. No long-term effects were seen for anger.
Other important information about innovation	<p>There were limitations to the study. First, the study used a nonprobability convenience sample. However, the subjects in this study sample were representative of residents in other special care units (i.e., they were comparable in cognitive status, age, and marital status). In addition, compared to special care unit residents reported in another study, a higher percentage of this study's subjects were noted to have total dependence in ADLs, demonstrating that even with high levels of ADL dependence, the subjects were still able to successfully participate in this exercise program.</p> <p>Second, although it is important to note that the long-term effects were determined by assessing affect before the start of each exercise session—suggesting that the exercise intervention, rather than the specific environment in which the program was conducted, was associated with reductions in negative affect—an alternate intervention was not included, which may have provided insight into whether the exercise or the increased attention related to the delivery of the intervention influenced the results.</p>

Continued

**Persons with ADRD, Exercise and Movement Interventions: Edwards et al. 2008—
Continued**

Characteristics	Findings
Translation and replication material available?	An appendix containing verbal descriptions and illustrations of each exercise is included in the article.
Relevant websites	None
Comments	—

Persons with ADRD, Exercise and Movement Interventions: Landi et al. 2004

Characteristics	Findings
Name of innovative practice	Moderate intensity exercise program Landi, F., Russo, A., & Bernabei, R.
Category of innovation	Promising Practice
Description of innovative practice	An exercise program consisting of a combination of aerobic/endurance activities, strength training, balance, and flexibility training to address the behavioral problems of frail, elderly, demented patients living in a nursing home. The program was offered as part of an integrated treatment program that incorporated physical activity, behavior management training, and psychosocial treatment.
AAA/SUA involvement, if any	None
Target population	Persons with Alzheimer's Disease
Is target population an underserved group?	No
Where innovation implemented and when, if known	The Alzheimer's Unit of the Teaching Nursing Home of Catholic University (Rome) between September 1st, 2001 and February 28th, 2002.
Contact information	Francesco Landi Department of Gerontology-Geriatrics and Physiatry Catholic University of Sacred Heart Largo Agostino Gemelli, 8 I-00168 Rome Phone: +(39-06)-338 8-546; Fax: +(39-06)-3051-911; E-mail: francesco_landi@rm.unicatt.it
Journal research citation	Landi, F., Russo, A., & Bernabei, R. (2008). Physical activity and behavior in the elderly: a pilot study. <i>Archives of Gerontology and Geriatrics. Supplement</i> , (9):235-41.

Continued

**Persons with ADRD, Exercise and Movement Interventions: Landi et al. 2004—
Continued**

Characteristics	Findings
Journal research summary	—
Description of data, including size	Patients were screened when they were admitted to the Alzheimer's Unit of a nursing home in Rome and were eligible for enrolment in the study if they had a mild cognitive impairment. A total of 30 patients were enrolled: 15 for the intervention group and 15 for the control group. Overall, the subjects had moderate-to-severe impairment in basic and instrumental activities of daily living. Baseline assessments were done before randomization during the first two weeks after the nursing home admission, with a follow-up assessment 4 weeks after the intervention.
Outcome measures	Patients were evaluated using the minimum data set instrument for nursing home. The outcome measures were wandering, physical abuse, verbal abuse, sleep disorders, and use of antipsychotic and hypnotic medications. Quantitative outcomes were tested using the Student's t-test after a pre-test for homogeneity of variance. The Mann-Whitney test was used for cases where the assumption of normal distribution was not reasonable.
Design/Comparison group	Longitudinal case control study. Comparison group subjects received the same type of medical and health assistance, but were not directly involved in the exercise treatment protocol.
Results	Overall, patients in the treatment group showed a statistically significant reduction in behavioral problems, such as wandering and physical and verbal abuse, and in sleep disorders. As a consequence, a significant reduction in the use of antipsychotic and hypnotic medications was observed in subjects of the treatment group.

Continued

**Persons with ADRD, Exercise and Movement Interventions: Landi et al. 2004—
Continued**

Characteristics	Findings
Other important information about innovation	None
Translation and replication material available?	None given
Relevant websites	No
Comments	—

Persons with ADRD, Music Therapy: Hicks-Moore 2005

Characteristics	Findings
Name of innovative practice	Relaxing music at mealtimes Hicks-Moore, S. L.
Category of Innovation	Promising Practice
Description of innovative practice	Relaxing music was played in the background at evening mealtime in a nursing home setting in order to reduce agitation during mealtime. "Relaxing music" was defined as music composed to promote relaxation by being quiet, melodic, and peaceful, without sudden changes in tempo or volume, yet with sufficient variation to avoid boredom. The selections had a tempo of 55 to 70 beats per minute. The length of time the music was actually played was not reported.
AAA/SUA involvement, if any	None.
Target population	Elderly people with severe dementia (Alzheimer's or other types) or cognitive impairment.
Is target population an underserved group?	Not known.
Where innovation implemented and when, if known	Residents of a Specialized Care Unit for people with significant dementia; the unit was in an urban 120-bed nursing home in southeastern Canada.
Contact information	Santee Lynn Hicks-Moore, NM, RN Assistant Professor, Department of Nursing University of New Brunswick Saint John P.O. Box 5050 Saint John, New Brunswick Canada E2L 4L5 or e-mail shicks@unbsj.ca

Continued

Persons with ADRD, Music Therapy: Hicks-Moore 2005—Continued

Characteristics	Findings
Journal research citation	Hicks-Moore, S. L. (2005). Relaxing music at mealtime in nursing homes: effects on agitated patients with dementia. <i>Journal of Gerontological Nursing</i> , 31(12), 26-32.
Journal research summary	—
Description of data, including size	A convenience sample of 33 patients diagnosed with irreversible dementia, Alzheimer’s disease, or severe cognitive impairment. Three participants were eventually excluded (2 died, one did not eat in dining room). Mean age was 82.4 (range from 70 to 101); 70 percent were women.
Outcome measures	<p>Agitation was measured using a modified version of the Cohen-Mansfield Agitation Inventory (CMAI), measuring 4 subgroups of behaviors: aggressive, physically non-aggressive, verbally agitated, and hiding and hoarding behaviors; and 7 other behaviors of agitation: strange noises, throwing things, intentional falling, hurting self or others, verbal sexual advances, physical sexual advances, and eating inappropriate substances. The presence or absence of a behavior (in any subgroup or in the 7 individually listed) was scored (0 or 1), rather than the number of times a behavior occurred or the individual involved. The CMAI version and scoring method were the same as the version developed by Goddaer and Abraham in 1994.</p> <p>Observed behaviors were recorded during mealtime by a nursing staff. The observer also kept notes of general observations, such as signs of enjoyment like smiling.</p>
Design/Comparison group	Pre-post. Baseline data collected in week 1; music intervention in weeks 2 and 4; music removed in week 3.

Continued

Persons with ADRD, Music Therapy: Hicks-Moore 2005—Continued

Characteristics	Findings
Results	<p>Total weekly agitated behaviors were reduced during weeks with music intervention. The mean of the incidence of agitated behaviors for week 1 (no music) was 9.85, week 2 (music) was 4.57; week 3 (no music) was 7.29, and week 4 (music) was 3.43. The range of behavior incidents per week were from 0 to 7. Day of week appeared to have no effect on the graphed total incidences. General notes reported increased smiling and less restlessness observed during music intervention mealtimes.</p> <p>No statistical analysis was conducted, but detailed comparisons of the incidences of behaviors by type and individual behaviors are provided in the article results.</p>
Other important information about innovation	<p>No adverse responses were reported. No observations were recorded of the number of behaviors by specific individuals, but there were clear reductions in agitation.</p>
Translation and replication material available?	<p>The music used in this study was Relax with the Classics: Volume 1, Largo and Volume 2, Adagio (Lind Institute, 1987).</p>
Relevant websites	<p>None.</p>
Comments	<p>The duration of the evening mealtime was not reported, but likely to have been relatively consistent throughout the study period. See the summary for Park (2009) for the effects of using preferred individualized music in home settings. Home use of background use during meal time has the advantage of the caregiver being able to choose music preferred by the individual, and the use of music could apply to more than one meal time as appropriate.</p>

Persons with ADRD, Music Therapy: Holmes et al. 2006

Characteristics	Findings
Name of innovative practice	Live interactive music versus pre-recorded music played in a common area Holmes, C., & Knights, A.
Category of innovation	Evidence-informed
Description of innovative practice	Musicians played live interactive music in a nursing home common area in order to reduce apathy. Session (professional) musicians were hired to play their instruments for 30 minutes interactively (not further defined by authors) with the residents in the common room of nursing and residential homes. The music selections were a mixture of favorite songs appropriate to the age group, including popular and swing music, and Scottish dances. A second intervention was conducted in which pre-recorded music of the same types was played as background music (passive as opposed to interactive) while the musician was still seated with the instrument in the common room, but not playing.
AAA/SUA involvement, if any	None.
Target population	Persons with dementia.
Is target population an underserved group?	Not known.
Where innovation implemented and when, if known	Several nursing and residential homes in the south of England.

Continued

Persons with ADRD, Music Therapy: Holmes et al. 2006—Continued

Characteristics	Findings
Contact information	<p>Professor Clive Holmes University of South Hampton School of Medicine Clinical Neurosciences Division Memory Assessment and Research Centre Moorgreen Hospital Botley Road West End Southampton SO30, 3JB UK Phone: +44 023 8046 Fax: +44 023 3022 E-mail: ch4@soton.ae.uk.</p>
Journal research citation	<p>Holmes, C., Knights, A., Dean, C., Hodkinson, S., & Hopkins, V. Keep music live: music and the alleviation of apathy in dementia subjects. <i>International Psychogeriatrics</i>, 18:A, 623-630.</p>
Journal research summary	—
Description of data, including size	<p>32 subjects with moderate to severe dementia (meeting ICD-10 diagnostic criteria). Fourteen (44 percent) of the subjects had moderate dementia and 18 (56 percent) had severe dementia. The second inclusion criterion was fulfillment of the diagnostic criteria for apathy. Subjects with severe hearing impairment were excluded. Each subject was exposed to three consecutive 30-minute periods in randomized order: live music, pre-recorded music, and no music, for a total of 1.5 hours. The musicians were instructed to play at roughly the same volume as the ambient sound in the room, and to display a similar amount of movement and to have their musical instruments visible in all three periods.</p>

Continued

Persons with ADRD, Music Therapy: Holmes et al. 2006—Continued

Characteristics	Findings
Outcome measures	Engagement behavior was measured according to the Dementia Care Mapping (DCM) scale (Kitwood, 1997). The DCM examines 26 activities with each individual's interaction with that activity being rated on a 6-point Likert Scale. The study examined the Category E scale for engagement of the subject in expressive activity ranging from being highly engaged with the activity (exceptional well-being) to the extremes of apathy, withdrawal, rage, grief, or despair (exceptional ill-being). The study reported on the percent of subjects with positive engagement and the median Category E scores for each 30-minute period of observation.
Design/Comparison group	Randomized placebo controlled trial with two intervention arms. The placebo control arm was exposure to 30 minutes of no music while the musician was seated in the room with the instrument. The order of the three recorded periods was randomized. Each subject was videotaped with sound muted in 30-minute segments, and the musician was not visible on the tapes. The 30-minute videotaped segments were given an ID number independent of the subject and were randomized before being rated with the Dementia Care Mapping scale by trained observers. Ratings were conducted every three minutes for a total of 10 ratings per segment. Median Category E scores were calculated per subject per segment.

Continued

Persons with ADRD, Music Therapy: Holmes et al. 2006—Continued

Characteristics	Findings
<p>Results</p>	<p>Live music was associated with a significantly greater number of subjects showing positive engagement compared with silence in all cases, including subgroups by severity of dementia. However, in all cases, including the dementia severity subgroups, the numbers of subjects showing positive engagement to pre-recorded music was not significantly greater than when exposed to silence. In all cases and for severe dementia, live music was also associated with a significantly greater number of subjects showing positive engagement compared with the pre-recorded music. For the moderate dementia subgroup the number of subjects with positive engagement was also greater in the lived compared with pre-recorded music, but it was not statistically significant. The findings for Category E (median engagement scores) were similar, with more engagement observed in the live music session and zero ratings for the pre-recorded and silent periods. No subjects showed evidence of experiencing a state of ill-being during the live or pre-recorded sessions. Further statistical analysis indicated that the pre-recorded music had no more benefit in the level of engagement than the silent session, and the authors caution that pre-recorded music may be of particularly limited value for people with severe dementia.</p>
<p>Other important information about innovation</p>	<p>Several limitations are noted by the authors: 1) none of the patients' verbal responses were recorded on the muted tape, hence that particular evidence of engagement was not measurable, 2) no measurement was made of the duration of the effects, and 3) the visual imagery of seeing someone play an instrument is different from that of seeing someone not playing their instrument. This visual difference may be one of the reasons for the stronger effect of live music.</p>

Continued

Persons with ADRD, Music Therapy: Holmes et al. 2006—Continued

Characteristics	Findings
Translation and replication material available?	No.
Relevant websites	None listed.
Comments	The number of musicians being observed in a session was not clear, but it was likely to have been one person at a time. Although every effort was made to control attention bias, other potential sources of bias were not discussed, such as variation in musicians establishing eye contact with subjects and in expressiveness during sessions, presence of distracting events during the 1.5 hours of sessions, possible presence of other people in the room, or interaction with the other people (subject or musician) during the sessions.

Persons with ADRD, Music Therapy: Jennings et al. 2002

Characteristics	Findings
Domain	Music therapy
Name of innovative practice	Music therapy group singing to reduce agitation Jennings B., & Vance, D.
Category of innovation	Promising Practice
Description of innovative practice	Group sing-alongs led by therapist in adult day care program.
AAA/SUA involvement, if any	None known.
Target population	People with Alzheimer's dementia.
Is target population an underserved group?	Not reported in article.
Where innovation implemented and when, if known	The Greenwalt Center for Alzheimer's Day Care and Research, Kenner, LA, a 54-patient adult day care program.
Contact information	Barbara Jennings, GSW, MW Clinical Instructor of Psychiatry Louisiana State University Health Sciences Center New Orleans, LA
Non-peer-reviewed research citation:	Jennings, B., & Vance D. (2002). The short-term effects of music therapy on different types of agitation in adults with <i>Alzheimer's. Activities, Adaptation & Aging</i> , 26(4), 27-32.
Non-peer-reviewed research summary	—
Description of data, including size	16 participants participated in 30-minute music classes (mostly singing with some instrument use), once weekly for four weeks. The baseline measure was taken the week prior to the music session weeks. Post-music session measures were taken within an hour of each session.

Continued

Persons with ADRD, Music Therapy: Jennings et al. 2002—Continued

Characteristics	Findings
Outcome measures	Agitation was measured using the Cohen-Mansfield Agitation Inventory-Community Form. The researcher administered the form to nurse aides (blinded) at each data collection time point. The form was modified for the post-intervention administration to describe behavior in the past 45-60 minutes, with the wording slightly changed for the 7 frequencies: 1 = never (remained the same), 2 = a little, 3 = sometimes, 4 = frequently, 5 = often, 6 = most of the time, and 7 = always.
Design/Comparison group	Pre-post analysis
Results	Agitation was significantly reduced for the following behaviors: pacing, aimless wandering, cursing or verbal aggression, constant unwarranted request for attention or help, repetitive sentences of questions, trying to get to a different place, complaining, negativism, performing repetitious mannerisms, and general restlessness.
Other important information about innovation	The baseline and post-intervention scales measured agitation from unequal periods of time (longer in the baseline), but the authors state that the baseline measure provides a more comprehensive measure of overall agitation that can then be compared to the immediate treatment effects of the intervention.
Translation and replication material available?	No. The authors stated that the music session used simple songs from several genres including familiar music, religious, patriotic, country, and big band. In other settings the music can be adapted to the participants, and the authors encourage familial caregivers to individualize the music.
Relevant websites	None.
Comments	The center was for people with Alzheimer's disease, but it is not known if all patients had this diagnosis or a related dementia.

Persons with ADRD, Music Therapy: Park et al. 2009

Characteristics	Findings
<p>Name of innovative practice (including principal intervention designers)</p>	<p>Music Therapy: Individualized Music, method from Gerdner L. Park H., & Pringle Specht, J. K.</p>
<p>Category of Innovation: Evidence-informed or promising practice</p>	<p>Promising Practice</p>
<p>Description of innovative practice</p>	<p>People with dementia listened to CDs of their preferred music genre in their homes for 30 minutes twice weekly prior to peak agitation times in order to reduce agitation. Each caregiver completed the Assessment of Personal Music Preference to identify which type of music their person with dementia preferred. To ascertain the peak agitation time, caregivers completed a modified version of the Cohen-Mansfield Agitation Inventory for one week. Music was played for 30 minutes prior to the person's peak agitation time (time of day varied widely with the majority between 8:30 a.m. to 8:00 p.m., and was chosen by caregivers). Agitation was measured for the 30 minute period before, during, and after each music interval.</p> <p>CD players were provided and used with caregiver assistance when needed, but personally-owned CD players were allowed if preferred by participants. The person with dementia could vary the selections, repeat them, and add new ones at liberty, as long as the choices were the person's, not the caregivers. If a day was missed, the caregiver was encouraged to play the music on another day that week at the appropriate time.</p> <p>The intervention was given for 2 weeks and repeated after a 2-week period with no intervention. If individuals with dementia wanted to hear the music at other times during the intervention weeks, it was allowed, but this was discouraged during non-intervention weeks.</p>

Continued

Persons with ADRD, Music Therapy: Park et al. 2009—Continued

Characteristics	Findings
AAA/SUA involvement, if any	Persons with dementia were referred to the investigator by caregiver support group facilitators in an Administration of Aging demonstration project involving support from the local Alzheimer’s Association.
Is target population: Person with dementia, informal caregivers, dyad (person with dementia and informal caregivers), or formal caregivers?	Persons with dementia.
Is target population an underserved group, such as rural population or ethnic/racial minority?	No.
Where (setting, geographic location and organization) innovation implemented and when, if known	The study took place in a city in Iowa.
Contact information for individual/organization that implemented innovative practice	Heeok Park, PhD, RN, Assistant Professor Florida State University College of Nursing Vivian M. Duxbury Hall 449 98 Varsity Way, MC4310 Tallahassee, FL 32306-4310 E-mail: hpark@nursing.fsu.edu
Journal research citation	Park, H., & Pringle Specht, J. K. (2009). Effect of individualized music on agitation in individuals with dementia who live at home. <i>Journal of Gerontological Nursing</i> , 35(8), 47-55.
Journal research summary	—

Continued

Persons with ADRD, Music Therapy: Park et al. 2009—Continued

Characteristics	Findings
<p>Description of data, including size</p>	<p>15 people with dementia participated in the study. Participants were recruited from people recommended by the caregiver support group facilitators mentioned above and by local directors of assisted living facilities, and met the following criteria:</p> <ul style="list-style-type: none"> • Diagnosed with dementia. • Living at home or in assisted living facilities. • Age 60 and older. • Scoring less than 25 on the Mini-Mental State Examination (MMSE) • Exhibiting agitation as defined by Cohen-Mansfield, Werner, and Marx (1989). • Able to hear a normal speaking voice at a distance of 1.5 feet. • Able to express personal music preference or a family member was able to express the individual's opinion. • An available family member who can play music CDs for the individual with dementia. • Consent from the person or his or her family member. <p>Those with psychiatric disorders or severe pain were excluded from the study.</p> <p>Seventy-four percent of the participants scored below 10 on the MMSE, indicating severe cognitive impairment. The age ranged from 60 to 98 years, with a mean age of 83.4 years.</p> <p>All participants completed the study.</p>

Continued

Persons with ADRD, Music Therapy: Park et al. 2009—Continued

Characteristics	Findings
Outcome measures	<p>Agitation levels were measured before, during, and after music sessions with the Modified Cohen-Mansfield Agitation Inventory II (CMAI-II). Agitation levels were also measured during the non-intervention weeks at the same times.</p> <p>The Assessment of Personal Music Preference (APMP) by Gerdner, 1998, was used to determine individual preferences of music genre, performers, etc., and music activities.</p>
Comparison group	Serial pre-post measurement.
Results	<p>Mean agitation levels were significantly lower while and after listening to preferred music than before listening to the music. Mean agitation levels in weeks of intervention were not lower than those during non-intervention weeks.</p> <p>The music preference questionnaire included a rating of how important music was to the participant, and nearly half (47 percent) reported that music was only slightly important to them.</p>
Other important information about innovation	<p>Because there was no control over the use of music during intervention and non-intervention weeks, music use during non-measured times may have confounded the results for the mean agitation levels when comparing intervention to non-intervention weeks.</p> <p>For home use, some caregivers (average age over 70 years) had difficulty understanding how to use the CD players. It is important to have CD players that are easy to use for home caregivers and to stress the use of preferred music for the person with dementia, not the caregiver.</p>

Continued

Persons with ADRD, Music Therapy: Park et al. 2009—Continued

Characteristics	Findings
<p>Translation and replication material available? If yes, title and contact information</p>	<p>The intervention was based upon the evidence-based protocol by Gerdner, L A., Individualized music for elders with dementia. In M.G. Titler (Series Ed.), <i>Series on Evidence-based Practice for Older Adults</i>. Iowa City: The University of Iowa Gerontological Nursing Intervention Research Center, Research Translation and Dissemination Core. The Assessment of Personal Music Preference is available from the author.</p>
<p>Relevant websites</p>	<p>None.</p>
<p>Comments</p>	<p>Even if the intervention does not have lasting effects afterward, there is benefit to being able to decrease the level of agitation that occurs at an individual's peak agitation time. It is reasonable to expect that if a caregiver noticed positive effects from the use of the music CD, it would be difficult to avoid using it or other preferred music during non-intervention weeks as well. This may have blurred some of the effect between intervention and non-intervention weeks. Since nearly half the participants rated music importance as only slightly important, one might anticipate that the intervention effect might be larger among those who reported music with higher importance. The author states that home-dwelling individuals may have reduced opportunity for music interventions in that they are less likely to have structured activity times; however, having fewer structured activities may also increase the opportunities to listen to music, and home caregivers may have more flexibility in being able to assist the person with the CD player when the person chooses to listen.</p>

Persons with ADRD, Music Therapy: Raglio et al. 2008

Characteristics	Findings
Category of innovation	Evidence-informed
Description of innovative practice	Led by a music therapist, small groups of 3-4 patients played rhythmic and melodic instruments over a 16-week period in order to reduce behavioral and psychological symptoms of dementia. Music sessions lasted 30 minutes and were presented in three cycles of 10 sessions each, approximately twice weekly. Through non-verbal and sound-music interaction, the patient conveys his/her emotions with the therapist and the group, and was stimulated to modify emotional and affective status. The goal of the therapy is to achieve a positive patient adaptation to the social environment through the establishment of a harmonious inner condition. The music therapists each had 5 years of professional training and were familiar with the care of patients with dementia.
AAA/SUA involvement, if any	None.
Target population	Persons with dementia.
Is target population an underserved group?	Not known.
Where innovation implemented and when, if known	Residents of three nursing homes that offered instrumental music therapy in Brescia and Bergamo in Northern Italy.
Contact information	Alfredo Raglio, MT Fondazione Sospiro Piazza Liberta, 226048 Sospiro, Cremona, Italy E-mail: raglio@tin.it ; musicoterapia@fondazionosospiro.it

Continued

Persons with ADRD, Music Therapy: Raglio et al. 2008—Continued

Characteristics	Findings
Journal research citation	Raglio, A., Bellelli, G., Traficante, D., Gianotti, M, Ubezio, M. C., Villani, D., & Trabucchi, M. (2008). Efficacy of music therapy in the treatment of behavioral and psychiatric symptoms of dementia. <i>Alzheimer's Disease and Associated Disorders</i> , 22(2), 158-162.
Journal research summary	—
Description of data, including size	<p>59 patients with dementia, 48 of whom had Alzheimer's disease. Subjects were assigned by nonstandardized randomization (alphabetized by last name) that placed odd-numbered names into the control group (30 patients) and even numbered names into the experimental group (29 patients).</p> <p>Eligibility criteria were:</p> <ul style="list-style-type: none"> • a diagnosis of Alzheimer's or vascular dementia • nursing home admission lasting at least 6 months. <p>Exclusion criteria were:</p> <ul style="list-style-type: none"> • previous music therapy treatment. • any new psychotropic medications (i.e., neuroleptics or sedatives) or any psychotropic medication not taken at a stable dosage during the previous month. • a current diagnosis of severe cardiovascular, pulmonary, or gastrointestinal disease. • a current diagnosis of malignancy in the last year. <p>65 patients were met these criteria, but after 2 music therapy sessions to determine which patients would accept the music therapy setting, 6 patients were eliminated (they refused the approach). During the study one patient refused to continue in the group after the first session, and another was hospitalized.</p> <p>Overall, patients were significantly impaired cognitively, and had moderate behavioral disturbance and functional status levels.</p>

Continued

Persons with ADRD, Music Therapy: Raglio et al. 2008—Continued

Characteristics	Findings
<p>Outcome measures</p>	<p>Data for the following measures were collected at baseline, after 8 weeks (mid-way through treatment), 16 weeks, and 20 weeks:</p> <ul style="list-style-type: none"> • Mini Mental State Examination (MMSE) for cognitive status. • NeuroPsychiatric Inventory (NPI) for psychological and behavioral assessment. • Barthel Index for functional status. <p>Each music therapy session was videotaped from a fixed camcorder in a corner to minimize possible attention to the camera. Two observers, not otherwise involved in the study, rated individual patient behaviors in the videotapes using some items from the Music Therapy Coding Scheme (Raglio, A., Traficante, D., & Oasi, O., 2006). The first part of the coding scheme assessed empathetic and non-empathetic behavior (based on active participation and presence or not of empathetic relationship with the music therapist). The second part of the coding scheme assessed the level of acceptance of the music therapy approach measured by the presence of smiles, body movements in relation to the music, and singing during the sessions.</p>
<p>Design/Comparison group</p>	<p>Randomized control trial. The control group had 30 patients. In place of music groups, the control group participated in educational activities (cognitive stimulation, personal care) and entertainment activities (playing cards, occupational activities).</p>

Continued

Persons with ADRD, Music Therapy: Raglio et al. 2008—Continued

Characteristics	Findings
Results	Global NPI scores in the experimental group were significantly better than the control group after 8 weeks, 16 weeks, and after 4 weeks post-treatment (20 weeks). Specific NPI scores for delusions, agitation, anxiety, apathy, irritability, aberrant motor activity, and nighttime behavior disturbances all improved significantly. The MMSE did not vary significantly between groups, as the authors expected. Both groups experienced a significant improvement in the Barthel Index scores. The experimental group experienced significant improvement in empathetic behaviors and reductions in non-empathetic behaviors. Smiles, body movements, and singing behaviors significantly increased in the experimental group.
Other important information about innovation	The fact that the treatment effects persisted for 4 weeks post-intervention is of interest. Study results are consistent with a psychiatric framework by Volicer and Hurley, (2003), and suggest that music therapy might raise the patient's threshold in tolerating environmental stimuli that usually trigger disruptive behaviors. Music therapy might be perceived by people with dementia as a meaningful activity, thus reducing anxiety and aberrant motor behaviors. More meaningful participation in daytime activities may also reduce apathy (significantly reduced in the NPI subscore). The authors list two study limitations: the criteria for randomization were not standardized, and the assessment for increased communication was not done for the control group.
Translation and replication material available?	Not listed.
Relevant websites	None listed.

Continued

Persons with ADRD, Music Therapy: Raglio et al. 2008—Continued

Characteristics	Findings
Comments	The duration of effects of the music therapy intervention at a significant level is particularly notable. The fact that the intervention was effective in a group setting with patients with high levels of cognitive impairment underscores the efficacy of the intervention. The authors provide no description of the activities conducted by the music therapist, so replication would necessitate implementation by a qualified music therapist.

Persons with ADRD, Music Therapy: Svansdottir et al. 2006

Characteristics	Findings
Category of Innovation	Evidence-informed
Description of innovative practice	<p>Music sessions (small groups of 3-4 patients singing and playing instruments) were conducted by a music therapist in order to reduce patient behavioral and psychological symptoms of dementia. The intervention group received 18 sessions of music therapy, each 30 minutes long, three times per week for 6 weeks..</p> <p>Members of the group chose songs from a collection familiar to elderly Icelanders, and each song was sung twice. Passive and active participation allowed people with severe and moderate dementia to be in the same groups. Passive participants held the song books and listened while active participants sang or played instruments of their choice. Some would move or dance to the music. The therapist played a guitar. Some improvisation with and without a theme was conducted. Casual conversation occurred between songs.</p>
AAA/SUA involvement, if any	None.
Target population	People with moderate to severe Alzheimer’s disease.
Is target population an underserved group?	No.
Where innovation implemented and when, if known	Patients were selected from two nursing homes and two psychogeriatric wards in Iceland.
Contact information	<p>Jon Snaedal Geriatric Department Landspítali University Hospital, IS 101 Reykjavik, Iceland Phone: +354 864 0478 Fax: +351 543 9818 jsnaedal@landspitali.is</p>

Continued

Persons with ADRD, Music Therapy: Svansdottir et al. 2006—Continued

Characteristics	Findings
Journal research citation	Svansdottir H. B., & Snaedal J. (2006). Music therapy in moderate and severe dementia of Alzheimer's type: a case-control study. <i>International Psychogeriatrics</i> , 18(4), 613-21.
Journal research summary	—
Description of data, including size	46 patients diagnosed with moderate to severe Alzheimer's disease (stages 5-7 on the Global Deterioration Scale) participated in the study, ranging in age from 71-87. They were randomized to either a music therapy or control group, each with 23 members. Deterioration (2), death (1) and transfer (5) reduced the completion rate by 17.4 percent; 20 patients completed the music therapy group and 18 the control group.
Outcome measures	Behavioral and psychological symptoms of dementia for each participant were the only study outcome, measured by the Behavior Pathology in Alzheimer's Disease Rating Scale (BEHAVE-AD). Two nurses blinded to the study completed the BEHAVE-AD at baseline, at the end of the intervention (6 weeks), and after 4 more weeks without the intervention (10 weeks).
Design/Comparison group	Case-control study of 46 patients, with 23 randomized to the control group (no music therapy groups) and 23 to the intervention group.

Continued

Persons with ADRD, Music Therapy: Svansdottir et al. 2006—Continued

Characteristics	Findings
Results	<p>Most of the patients had been stable regarding their dementia for the 3 weeks previous to the study. The most prevalent symptoms according to the BEHAVE-AD were activity disturbances and paranoid and delusional ideation. Some other symptoms were infrequent such as hallucinations and diurnal rhythm disturbances.</p> <p>After 6 weeks, there was a significant decrease in symptoms rated as activity disturbances in the therapy group but not in the control group. This effect diminished during the next 4 weeks without therapy and was not significantly lower than at the start.</p> <p>There was a non-significant improvement in the overall BEHAVE-AD measure in the therapy group after 6 weeks of music therapy and a smaller and non-significant improvement in the control group. There was no improvement in symptoms in other subscales of the BEHAVE-AD, neither in the therapy nor in the control group.</p> <p>As the study progressed more and more patients were interested in playing instruments of their choice.</p>
Other important information about innovation	<p>Intervention and control groups were reported to be comparable at baseline, and the study was single-blinded. A floor effect for some symptoms was noted in that only a few of the patients had substantial symptoms as rated by the BEHAVE-AD.</p>
Translation and replication material available?	No.
Relevant websites	None listed.
Comments	<p>The small study size prevented meaningful analysis of outcome differences between moderate and severe stages of Alzheimer’s disease, and between passive versus active participation in the group. The first author died after the data was collected, hence all correspondence is to the 2nd author.</p>

Persons with ADRD, Music Therapy: Ziv et al. 2007

Characteristics	Findings
Name of innovative practice	Familiar background music Ziv, N., and Grannot, A.
Category of innovation	Promising practice.
Description of innovative practice	Familiar upbeat background music was played within the hour following lunch in a long term care residential center lobby in order to increase cognition and positive social behaviors and to decrease agitation. The center's music therapist chose a disc with six very well-known, upbeat, popular songs from 1964, with a total duration of 16:48 minutes. The disc was played once during the unstructured hour following lunch on Wednesdays for three consecutive weeks. This time period was chosen because nursing staff reported it was characterized by unrest.
AAA/SUA involvement, if any	None.
Target population	Persons with dementia.
Is target population an underserved group?	No.
Where innovation implemented and when, if known	The Sophie & Abram Stuchynski Alzheimer Research & Treatment Center, Ramat-Gan, Israel.
Contact information	Naomi Ziv, PhD. Max Stern Academic College of Emek Yizre'el, Israel. Amit Granot, B.A., The Sophie & Abram Stuchynski Alzheimer Research & Treatment Center, Ramat-Gan, Israel.
Journal research citation	Ziv, N., Granot, A., Hai, S., Dassa, A., Haimov, I. The effect of background stimulative music on behavior in Alzheimer's Patients. 2007. <i>Journal of Music Therapy</i> , XLIV (4), 329-343.

Continued

Persons with ADRD, Music Therapy: Ziv et al. 2007—Continued

Characteristics	Findings
Journal research summary	—
Description of data, including size	<p>28 residents of the center with a “medium-advanced” state of Alzheimer’s participated. Participants were selected at random during each session; a total of 26 individuals were observed. Two observers each observed 2 different participants during each session. Using momentary time sampling technique, the observers wore headphones for timed cues to observe each patient, alternating between one minute to observe and 30 seconds to write down and categorize the behaviors. The disc played for 17 minutes, allowing for a total of 11 minutes of observable behavior and 6 minutes of time for writing down the behavior observed for each patient.</p>
Outcome measures	<p>Frequency of types of behaviors observed was the outcome measure. Each observer recorded behaviors for a single patient on a scoring sheet with 11 rows (one row for each minute of observation in a 17-minutes period) and three columns for the types of behaviors: positive (e.g., smiling, moving to the music, humming, conversation, reaching out to someone), negative (e.g., vocal repetitions, pushing, shouting, aggression towards others), and neutral (non-positive and non-negative behaviors such as dozing, or staring into space). Only one observed behavior was recorded for each minute of observation. In most cases the behavior observed was repeated throughout the minute.</p> <p>For analysis purposes positive behaviors were subdivided into music-related movements and social positive behaviors. Music-related behaviors were eliminated from the analysis, since they only occurred during the music periods. Negative behaviors were divided into repetitive (vocalization, movements unrelated to the music) and socially negative behaviors (aggressive, screaming attacking).</p>

Continued

Persons with ADRD, Music Therapy: Ziv et al. 2007—Continued

Characteristics	Findings
Design/Comparison group	One-factor, within-subject design. 16 patients were observed for the 17 minutes of music and then for 17 minutes immediately following the music. 16 patients from another ward were observed in the reverse (no music followed by music) in the lobby.
Results	Significantly more positive and significantly fewer negative behaviors were found during music sessions. No change was observed in neutral behaviors. None of the patients showed aggressive or socially inadequate behavior only when music was played, and none of the participants showed more positive behavior in the absence of music than in its presence. Within-participant analysis showed that music's most pronounced effect was in reinforcing positive social behavior. Sixteen of the 26 participants showed more positive social behavior in the presence of music than in its absence. Over one-third of the participants showed positive behavior only in the presence of music and none in its absence. Over half the participants showed less repetitive behavior with background music than without, and in nine of these the repetitive behavior disappeared during the music. Negative behaviors were less prevalent than positive behaviors overall, and the effect of the music upon these was weaker. Repetitive behaviors were more prevalent than aggressive ones in negative behaviors. In two participants repetitive behavior appeared only during music. Two participants exhibited only neutral behavior regardless of music presence, and their data were eliminated from the analysis. Whether music was played first or second had no significant effect on the results.

Continued

Persons with ADRD, Music Therapy: Ziv et al. 2007—Continued

Characteristics	Findings
Other important information about innovation	<p>The choice of the upbeat music may have been the cause of two participants repetitive behavior appearing only during music, as it may have stimulated this agitation. The authors state that this was the exception. The choice of upbeat music was to stimulate participants into healthy behavior, not to soothe or calm. The intervention was focused on improving participant well-being during unstructured time rather than making a task easier for a caregiver or improving performance of the participant on a test.</p>
Translation and replication material available?	<p>The disc played in the study included very well-known and popular songs from 1964, assumed to be familiar to all participants.</p>
Relevant websites	<p>None listed.</p>
Comments	<p>This is the first study to measure positive, negative, and neutral behaviors simultaneously in response to music and no music conditions during unstructured time. Results were highly significant, but the observers were not blind to the presence or absence of music. Individual preference cannot always be known or honored in group settings, and this factor may have played a role in some of the negative responses. It is not clear whether the positive effects persist outside of the specific time the intervention is occurring.</p>

Persons with ADRD, Interventions Involving Technology: Cipriani et al. 2006

Characteristics	Findings
Category of innovation	Evidence-informed
Description of innovative practice:	<p>This innovation seeks to improve cognitive and functional performance in persons with Alzheimer’s disease through a computer-based intervention using software for neuropsychological training originally developed in Italy in 1998. The software provides exercises to stimulate cognitive functions, including attention, memory, perception, visuospatial cognition, language, and non-verbal intelligence, through a daily program which can be individualized for vocal or tactile input and output and for level of difficulty.</p> <p>Each participant attended two training sessions of 13-45 minutes, four days a week for four weeks, with a break of 6 weeks between the 4-week treatments.</p>
AAA/SUA involvement, if any	None
Target population	Persons with dementia
Is target population an underserved group?	Not specified
Where innovation implemented and when, if known	Not given
Contact information	<p>Giovanna Cipriani Department of Medicine, S. Anna Hospital, Via del Franzone, 31, I-25127 Brescia, Italy Tel.: +39 030 3197409; fax: +39 030 48508. giovannacipriani@libero.it</p>

Continued

**Persons with ADRD, Interventions Involving Technology: Cipriani et al. 2006—
Continued**

Characteristics	Findings
Journal research citation	Cipriani, G., Blanchetti, A., & Trabucchi, M. (2006). Outcomes of a computer-based cognitive rehabilitation program on Alzheimer's disease patients compared with those on patients affected by mild cognitive impairment. <i>Archives of Gerontology and Geriatrics</i> , 43(3), 327-35.
Journal research summary	—
Description of data, including size	<p>10 persons with Alzheimer's disease, 10 persons with mild cognitive impairment, and 3 persons with multiple system atrophy were selected from participants attending a neurorehabilitation day hospital.</p> <p>Participants with Alzheimer's disease had a diagnosis of probable Alzheimer's disease, acetylcholinesterase-inhibitor treatment at a stable dose, a Mini-Mental State Examination score less than or equal to 22, neurosensorial integrity, and a lack of severe psycho-behavioral disorders.</p>
Outcome measures	<p>At baseline and at 3 months, at the end of the second training program, participants received:</p> <ul style="list-style-type: none"> • Mini Mental State Examination • Phonemic (pronunciation) and semantic verbal fluency for cued verbal production • Visual search for sustained attention • Trail making test part A and B for visual search, attention and executive functions • Digit symbol test for psychomotor learning • Rivermead behavioral memory test for behavioral memory • Geriatric depression scale for affective status, functional autonomy, and quality of life • Advanced activity of daily living for state anxiety and trait anxiety • Short form health survey for health (SF-12)

Continued

**Persons with ADRD, Interventions Involving Technology: Cipriani et al. 2006—
Continued**

Characteristics	Findings
Design/Comparison group	Pre-post evaluation with no comparison group
Results	<p>At three months, the Alzheimer’s disease and mild cognitive impairment groups showed better performances than at baseline. Cognitive areas showing the most significant improvements in the Alzheimer’s group were memory (short-term, long-term, verbal, and visual/), perception (perceptual recognition and identification) and attention (both spread and divided?). The mild cognitive impairment group significantly improved also in working memory and psychomotor learning, but not in perception. The multiple system atrophy group showed no significant improvement. The Alzheimer’s group experienced a significant improvement in Mini Mental State Exam scores and in executive functions as measured by the trail making test. The mild cognitive impairment group showed a significant improvement in behavioral memory. Neither the Alzheimer’s disease nor the mild cognitive impairment groups showed significant improvement in affective and functional areas.</p>
Other important information about innovation	—
Translation and replication material available?	None reported.
Relevant websites	None specified
Comments	The study demonstrates the effectiveness of computer-based cognitive training which addresses a broad range of domains.

Persons with ADRD, Interventions Involving Technology: Hofmann et al. 2003

Characteristics	Findings
Category of innovation	Promising practice
Description of innovative practice	<p>The innovation is designed to improve the ability of persons with Alzheimer’s disease or depression to recognize and follow a route from one place to another, enhancing their independence.</p> <p>The intervention employed a computer-based program simulating a shopping route and involving tasks of social competence, orientation, and memory. Digital photographs, illustrating successive steps of scenes and tasks, were integrated into a presentation-software program displaying the pictures on a 21-inch color monitor with interactive operation of the program by touch-screen functions. Participants were instructed to “move through” the simulated scenes step-by-step, by selecting the only correct red arrow (out of usually three) that indicated the right direction. The program consisted of 40 successive steps, with a total of 120 direction-decisions. At the beginning of the training a three-item shopping list had to be learned. Later in the training, when “shops” were encountered, the correct item had to be recalled freely and/or chosen from a multiple-choice list. Throughout the training, 10 more multiple-choice questions that related to the environment or an everyday task in the simulated situation had to be answered.</p> <p>Participants received a practice session of the training and then received the training 3 times a week for four weeks.</p>
AAA/SUA involvement, if any	None
Target population	Persons with dementia
Is target population an underserved group?	None specified

Continued

**Persons with ADRD, Interventions Involving Technology: Hoffman et al. 2003—
Continued**

Characteristics	Findings
Where innovation implemented and when, if known	Department of Psychiatry of the Ludwig Maximilian University, Munich, Germany.
Contact information	Marc Hofmann, M.D., Division of Psychiatry Research, University of Zurich, Lenggstrasse 31, CH-8029 Zurich 8, Switzerland.
Journal research citation	Hofmann, M.; Rösler A.; Schwarz, W.; Müller-Spahn, F.; Kräuchi, K.; Hock, C.; & Seifritz, E. (2003). Interactive computer-training as a therapeutic tool in Alzheimer's disease. <i>Comprehensive Psychiatry</i> , 44(3), 213-9.
Journal research summary	—
Description of data, including size	28 participants were recruited for the study: nine persons with a diagnosis of probably Alzheimer's disease and nine persons with a major depressive episode were inpatients; ten healthy persons matched for age to the other two groups resided in the community. The Alzheimer's disease and depressed participants continued their usual medications; not all were receiving medication for their conditions..

Continued

**Persons with ADRD, Interventions Involving Technology: Hoffman et al. 2003—
Continued**

Characteristics	Findings
<p>Outcome measures</p>	<p>Care-receiver participants were evaluated at baseline, 4 weeks, and 7 weeks with:</p> <ul style="list-style-type: none"> • Clinical Dementia Rating and Mini-Mental State Examination for cognitive level • Trail-Making-Test (Version A) for psychomotor functions • Montgomery and Asberg Depression Rating Scale for depressive symptoms. • A custom subjective questionnaire of four questions (responses from -3 _ “not at all” to +3 _ “very much” regarding <ul style="list-style-type: none"> • the effect of the training on cognition and memory • the possibility of transferring trained skills into real-life situations • whether training was too difficult (-3) or too simple (+3) • how well the training was liked. <p>During the training, the number of correct multiple-choice answers, how often irrelevant monitor screen fields were touched (“mistakes”), the time (“latency”) required for the training, and the number of times test instruction had to be repeated were recorded. Participants repeated the training at seven weeks for comparison with their earlier performance.</p>
<p>Design/Comparison group</p>	<p>Pre-post, with control group of 10 healthy age-matched non-care-receivers from the community who received the same intervention as the other two groups.</p>

Continued

**Persons with ADRD, Interventions Involving Technology: Hoffman et al. 2003—
Continued**

Characteristics	Findings
Results	<p>While the Alzheimer’s group performed significantly worse than the other two groups in all aspects of the training, the Alzheimer’s group committed significantly fewer mistakes at 4 weeks, declining further by 7 weeks. The Alzheimer’s group also completed the training somewhat more quickly at 4 and 7 weeks.</p> <p>There was a significant correlation between group performance and group scores on the psychometric scales.</p> <p>On the custom questionnaire, all groups agreed that the training could be transferred into real-life situations. The Alzheimer’s group was neutral about the difficulty of the test while the other groups felt it was slightly too simple.</p>
Other important information about innovation	<p>The authors felt that the significant decline in mistakes by the Alzheimer’s group reflected at least in part an improvement in implicit learning, involving increased ability to operate a touch screen.</p>
Translation and replication material available?	None provided
Relevant websites	None provided
Comments	<p>While the participants in this demonstration were inpatients, the innovation could be staged in an outpatient setting, such as an Adult Day Care program, or in the home if equipment were available.</p>

Persons with ADRD, Interventions Involving Technology: Kajiyama et al. 2007

Characteristics	Findings
Category of innovation	Promising Practice
Description of innovative practice	The author has developed a type of “reminiscence therapy” that uses both visual and auditory stimuli as an intervention for improving quality of life and reducing distress in dementia patients. It combines the presentation of old photographs and favorite music pieces of individuals with dementia, presented in personalized video channels via a television monitor.
AAA/SUA involvement, if any	None
Target population	Persons with Alzheimer’s Disease (AD) and their informal caregivers
Is target population an underserved group?	No
Where innovation implemented and when, if known	Not stated in the article
Contact information	Bruno K. Kajiyama, MS Photozig, Inc. NASA Research Park P.O. Box 128 Moffett Field, CA 94035 650-694-7496 ext.3 E-mail: info@photozig.com
Journal research citation	Kajiyama, B.K., Luis R.C., Tymchuk, A.J., Boxer, A.L., Kixmiller, J.S., & Olinsky, C.J. (2007). Improving the Quality of Life for Caregivers and Care Recipients with Personalized Video Channels. <i>Clinical Gerontologist</i> , 31(1):95-100.
Journal research summary	—

Continued

**Persons with ADRD, Interventions Involving Technology: Kajiyama et al. 2007—
Continued**

Characteristics	Findings
Description of data, including size	A pilot study with 23 Alzheimer Disease patients and 23 family-member caregivers (i.e., 23 dyads).
Outcome measures	Observations by research assistants, using the Observed Emotion Rating Scale (OERS; Lawton & Rubenstein, 2000).
Design/Comparison group	A feasibility study with no comparison group.
Results	Observations showed that care recipients displayed a high level of positive emotion and a low level of negative emotion during and after presentation of the music and pictures. Ninety-one percent of the caregivers considered the intervention to be a positive experience for the AD patients and themselves; 83% reported that AD patients were more engaged than usual; and in situations where the AD patients were agitated, 100% said that AD patients were less agitated following the presentation, which persisted for some time. There were no adverse events during this pilot study and none of the dementia patients became more agitated during or immediately following the presentation.

Continued

**Persons with ADRD, Interventions Involving Technology: Kajiyama et al. 2007—
Continued**

Characteristics	Findings
Other important information about innovation	<p>Concerns about the intervention have been raised in other research. For example, Garland et al. (2007) noted that agitation increased in a few patients, often accompanied by the patient forcefully removing the ear phones upon hearing the familiar voice. Furthermore, the authors noted that many relatives were unable to recall past pleasurable events in the patient’s life, or produce “upbeat” narrations of such events, once identified.</p> <p>Miller and colleagues (Miller, Vermeersch, Bohan, Renbarger, Kruep et al., 2001) found less impressive improvements using a slightly modified procedure, and noted a large number of variable responses. They recommended further study of the value of auditory simulated presence therapy for control of agitation in older individuals with dementia.</p> <p>Evidence of variable responses on the part of dementia patients seen in several of the above studies indicates that the role of individual differences should also be explored. At present, few studies have emphasized this factor, although Peak and Cheston (2002) found that differing attachment styles to the relative narrator could account for some of the response variability.</p>
Translation and replication material available?	<p>Specific details of the equipment and procedure, referred to as “LifeZig,” are available from Bruno K. Kajiyama, contact details as given above. The LifeZig team is looking for caregivers of individuals with Alzheimer’s, or other dementia related diseases, for this program. The individual will need to be participating in some sort of older adult facility (such as an adult day care or assisted living) and be willing to participate in the program for six months. Details available from the website or 650-694-7496 ext.3.</p>

Continued

**Persons with ADRD, Interventions Involving Technology: Kajiyama et al. 2007—
Continued**

Characteristics	Findings
Relevant websites	http://www.lifezig.com/
Comments	<p>It is not clear the degree to which the positive effects last significantly beyond the immediate period of administration, or that repeated administration will continue to provide the same level of effects. It is worth repeating the author(s) comments that the primary focus in this research area has been the control of disruptive behaviors in residential settings, with only minimal emphasis on other factors associated with quality of life, or the possible effectiveness in individuals with dementia living at home. Although there are limitations to exploratory studies such as this one, the results nevertheless demonstrate the feasibility of this procedure, and indicate that further evaluation of this and other interventions focusing on positive reminiscence and simulated presence are clearly warranted, even with AD patients who are not suffering from agitation or distress, whose quality of life may indeed be improved through the introduction of such pleasurable activities.</p>

Persons with ADRD, Sensory Interventions: Ballard et al. 2002

Characteristics	Findings
Category of innovation	Evidence-informed
Description of innovative practice:	Melissa essential oil mixed with a base lotion was applied to patients' faces and arms twice daily (6 doses per day) by a care assistant over a four-week period. Each session took about 1-2 minutes to complete.
AAA/SUA involvement, if any	No.
Target population	Persons with dementia.
Is target population an underserved group?	No.
Where innovation implemented and when, if known	8 National Health Service nursing homes for people with severe dementia in Newcastle upon Tyne, United Kingdom.
Contact information	Clive Ballard, M.D. Wolfson Research Centre, Newcastle General Hospital Westgate Road, Newcastle upon Tyne United Kingdom NE4 6BE e-mail: cgballard@ncl.ac.uk
Journal research citation	Ballard, C.G., O'Brien, J. T., Reichelt, K., & Perry, E. K. (2002). Aromatherapy as a safe and effective treatment for the management of agitation in severe dementia: the results of a double-blind, placebo-controlled trial with <i>Melissa</i> . <i>Journal of Clinical Psychiatry</i> , 63(7), 553-58.
Journal research summary (repeat for each article)	—

Continued

Persons with ADRD, Sensory Interventions: Ballard et al. 2002—Continued

Characteristics	Findings
Description of data, including size	The study was a double-blind, placebo-controlled trial in which 72 patients with severe dementia who have clinically significant agitation were randomly assigned to aromatherapy or placebo groups in 8 nursing homes for people with severe dementia. 92 percent of the participants in both groups were taking at least one psychotropic medication. Nursing homes were matched in pairs by number of subjects, then randomly assigned to treatment or placebo so that all staff in one home would be using the same lotion. Treatment was conducted over a period of 4 weeks. Data were collected at baseline and after each of the intervention weeks.
Outcome measures	Agitation was the primary outcome, measured by the total score of the Cohen-Mansfield Agitation Inventory (CMAI). Secondary outcome measures were sub-scores of the CMAI, the Neuropsychiatric Inventory scores for irritability and aberrant motor behavior, and quality of life indices from the Dementia Care Mapping instrument for percent of time spent socially withdrawn and percent of time engaged in constructive activities.
Design/Comparison group	Double blind RCT. Placebo group received sunflower oil.

Continued

Persons with ADRD, Sensory Interventions: Ballard et al. 2002—Continued

Characteristics	Findings
Results	<p>Agitation, particularly restlessness and shouting, was significantly reduced in the aromatherapy group. Sixty percent of the aromatherapy group compared to 14 percent of the placebo group experienced a 30 percent reduction in the overall CMAI score. The irritability and aberrant motor behavior scores of the NPI were also significantly reduced in the intervention group. Quality of life scores of percentage of time spent socially withdrawn and percentage of time engaged in constructive activities were significantly improved in the intervention group. A large effect size was found for the significant variables. No significant side effects were found.</p>
Other important information about innovation	<p>This was the first double-blind placebo-controlled study of aromatherapy efficacy. Most people with advanced dementia have lost their sense of smell, so emotional associations and/or like/dislike of the fragrance is very unlikely to be a confounding variable. Any effect on the direct care staff was likely to be small. Because the application of the oil was done in a short time, extended massage or other sensory stimuli are unlikely to have caused the treatment effect.</p>
Translation and replication material available?	<p>Lotions used in study are described in detail.</p>
Relevant websites	<p>None.</p>
Comments	<p>Aromatherapy is considered adjunctive therapy in this study, since 92 percent of the participants in both groups were taking at least one psychotropic medication. The biological effect from the lotion is through skin absorption and olfactory (smell).</p>

Persons with ADRD, Sensory Interventions: Lin et al. 2007

Characteristics	Findings
Category of innovation	Evidence-informed
Description of innovative practice	Participants inhaled lavender (<i>Lavandula angustifolia</i>) essential oil aroma to reduce agitation. Staff were provided with aromatherapy kit boxes containing the lavender and sunflower (placebo) essential oils, a dropper, cosmetic cotton, diffusers, a list of the names of the participants in both treatment groups, and instruction and precaution sheets. Staff applied two drops of oil to the cotton, placed it in the diffuser, and put a diffuser on each side of the patients' pillows for at least one hour while the patients slept. The essential oil was imported from France, labeled 100 percent pure <i>Lavandula angustifolia</i> as certified by the Aromatherapy Organization Council. The main constituents are linalool and linalyl acetate, and contain cineol, camphor and catophyllene epoxide.
AAA/SUA involvement, if any	None.
Target population	Persons with dementia.
Is target population an underserved group?	Not known.
Where innovation implemented and when, if known	Care and attention homes in Hong Kong.
Contact information	Dr. L. C. Lam, Department of Psychiatry, Chinese University of Hong Kong, G/F, Multi-centre, Tai Po Hospital, tai Po, Hong Kong, China. E-mail: cwlam@cuhk.edu.hk.

Continued

Persons with ADRD, Sensory Interventions: Lin et al. 2007—Continued

Characteristics	Findings
Journal research citation	Lin, P. W., Chan, W. Bacon F. N., & Lam, L C. (2007). Efficacy of aromatherapy (Lavandula angustifolia) as an intervention for agitated behaviors in Chinese older persons with dementia: a cross-over randomized trial. <i>International Journal of Geriatric Psychiatry</i> , 22, 405-410.
Journal research summary	—
Description of data, including size	<p>70 participants with dementia, 44 of whom were diagnosed with Alzheimer’s disease, 21 with vascular dementia, and 5 with other dementias. Inclusion criteria were diagnosis of dementia with clinically significant agitation.</p> <p>Thirty-six of the patients were taking psychotropic medication and there were no changes in their medication orders during the study.</p> <p>All subjects were randomly assigned to group A or B. Each subject received one treatment for 3 weeks followed by a 2-week washout period, then the other treatment for 3 weeks. Lavender inhalation was the active group, or treatment A. Treatment B, sunflower oil inhalation, was the placebo arm. Sunflower essential oil was chosen because it is odorless and possesses no known therapeutic effect.</p> <p>Data were collected at baseline, after 3 weeks of the first treatment, after the 2-week washout period, and again 3 weeks later at the end of the 2nd treatment period.</p>
Outcome measures	<p>Agitation was measured by</p> <ul style="list-style-type: none"> • the Chinese version of the Cohen-Mansfield Agitation Inventory (CMAI) and • the Chinese version of the Neuropsychiatric Inventory (CNPI).

Continued

Persons with ADRD, Sensory Interventions: Lin et al. 2007—Continued

Characteristics	Findings
Design/Comparison group	Randomized control trial with single-blind, cross-over design. The 35 subjects in the placebo control arm, group B, received sunflower oil inhalation.
Results	There was a significant improvement in the mean agitation and Neuropsychiatric Inventory scores after receiving the lavender treatment. No significant change in these scores occurred with the placebo treatment. Mean scores of the physically aggressive, physically non-aggressive, and verbally agitated subscales of the CCMAI were significantly improved. The mean scores of the CNPI subscales for agitation, night-time behavior, irritability, aberrant motor behavior, and dysphoria were also significantly improved. Subgroup analysis of mean scores between Alzheimer's disease and vascular dementia patients did not vary significantly. No adverse effects among patients or staff were reported.

Continued

Persons with ADRD, Sensory Interventions: Lin et al. 2007—Continued

Characteristics	Findings
<p>Other important information about innovation</p>	<p>This was the first study to apply the aromatherapy at night, and the nocturnal timing enabled several advantages in assuring greater consistency in the intervention: 1) reduced variability in the concentration of the treatment due to room sizes and ventilation systems of different day-use communal areas, 2) challenge of keeping people in one room for at least one hour during the day, and c) the sedative effects could be enhanced at night. The sample size was small and it was a convenience sample. Lewy-body dementia patients were not in the sample, and a previous study showed some adverse effects of aromatherapy for this type of dementia (Holmes, et al., 2002). Staff bias could be present since in each home the staff person who recorded patient behavior also prepared the treatments. Possible confounding variables such as contact with staff, rehabilitation programs or medication were not measured.</p> <p>The authors note that anosmia, or limited ability to smell, may also be a factor for people with dementia. The oil molecules are reported to remain in the body for 24 hours, so a 2-week washout period was deemed adequate to eliminate the effect of the treatment.</p>
<p>Translation and replication material available?</p>	<p>No.</p>
<p>Relevant websites</p>	<p>None.</p>
<p>Comments</p>	<p>The 2009 Cochrane review of aromatherapy stated that a cross-over design is not usually considered suitable for a progressive disease, as it assumes that the patient's baseline is the same at the start of each treatment period. Whether or not the awareness of the fragrance (anosmia) is important in the therapeutic effect of the oil inhalation is not clear.</p>

Persons with ADRD, Sensory Interventions: Milev et al. 2008

Characteristics	Findings
Category of innovation	Evidence-informed
Description of innovative practice	<p>Multisensory stimulation (MSS) was used in this pilot study to address sensory stimulation imbalance in elderly persons with dementia living in nursing residences or long-term care facilities. This was the first randomized trial (12 weeks treatment and 12 weeks follow-up) comparing <i>different frequencies of treatment</i> (1 session per week versus 3 sessions per week) with a control group receiving care as usual.</p> <p>The MSS room is typically dimly lit and includes many objects pertaining to the 5 senses. Items in the pilot study Snoezelen room included objects such as textured balls, a wall projector, different musical selections, fiber-optic cables, and a color-changing water column. There were 2 reclining chairs, books, and blankets.</p> <p>Aromatherapy was not used in this experiment because of allergy concerns.</p> <p>Participants in the treatment groups were brought to the Snoezelen room and were exposed to MSS. Each session lasted for 30 minutes on a one-to-one basis with a qualified Snoezelen facilitator. If at any point participants became unhappy while interacting with something in the room, they were promptly shown something else. If they were disquieted for a prolonged period of time, the session was terminated.</p>
AAA/SUA involvement, if any	None
Target population	Elderly patients with dementia living in long-term care facilities
Is target population an underserved group?	No

Continued

Persons with ADRD, Sensory Interventions: Milev et al. 2008—Continued

Characteristics	Findings
Where innovation implemented and when, if known	Long-term care facility
Contact information	Roumen V. Milev, MD, PhD, FRCPsych (UK), FRCP(C), FCPA, FAPA, Department of Psychiatry, Queen's University 752 King Street W Kingston, Ontario K7L 4X3 Canada E-mail: milevr@providencecare.ca .
Journal research citation	Milev, R.V., Kellar, T., McLean, M., Mileva, V., Luthra, V., Thompson, S., & Peever, L. (2008). Multisensory Stimulation for Elderly With Dementia: A 24-Week Single-Blind Randomized Controlled Pilot Study. <i>American Journal of Alzheimer's Disease and Other Dementias</i> , 23(4): 372-6.
Journal research summary	—
Description of data, including size	Eighteen participants were randomly assigned to one of three groups. The control group (N=6) received no experimental treatment for the entire duration of the study and had only care as usual. The second group (N=5) had 1 Snoezelen session per week, and the third group (N=7) had 3 Snoezelen sessions per week for 12 weeks. At the end of the 12-week period, all participants received no Snoezelen treatment for another 12 weeks.

Continued

Persons with ADRD, Sensory Interventions: Milev et al. 2008—Continued

Characteristics	Findings
<p>Outcome measures</p>	<p>Each participant was scored on a daily observation scale (DOS) at weeks 0 (baseline), 4, 8, 12, and 24. A score was given for each hour from 8:00 AM to 8 PM. Three categories of scores were developed: (a) score of 1, denoting active or engaged with others; (b) score of 2, denoting calm and awake; and score of 3, representing asleep or agitated. A score of 1 was considered to be the most favorable outcome, whereas a score of 3 was the least favorable outcome.</p> <p>DOS score analysis between the 3 groups was performed using 1-way analysis of variance. The 2 treatment groups were also pooled (N=12) and analyzed versus the control group to raise power due to the low sample size, and a Student's <i>t</i> test was used.</p> <p>Clinical Global Impression–Improvement (CGI-I) measures were also completed at weeks 4, 8, 12, and 24 by blinded family members. These were mailed to the family members, who were then asked to rate improvement at their most recent visit compared with the previous visit. CGI-I data were analyzed using a Wilcoxon rank-sums test for non-normally distributed data, and the same pooling procedure as for DOS score analysis was used.</p>
<p>Design/Comparison group</p>	<p>Single-blinded, randomized controlled study. Comparison group received care as usual.</p>

Continued

Persons with ADRD, Sensory Interventions: Milev et al. 2008—Continued

Characteristics	Findings
Results	<p>Patients who received 1 and 3 Snoezelen treatments per week had a consistently lower DOS mean score (i.e., they improved), without much fluctuation when compared with the control group. Even 12 weeks after the cessation of MSS this effect still held. This may be indicative of a protective effect, which MSS can confer for patients with dementia, and needs to be investigated more rigorously.</p> <p>Additionally, this study provides evidence from blinded family members that following MSS there was a trend of lower CGI-I scores (i.e., patients are improving) for those patients having received treatment than for controls.</p> <p>There was also a trend for better outcomes as measured by DOS or CGI-I with the <i>increase of sessions of</i> treatment per week. This became statistically significant at weeks 8 (DOS) and 12 (CGI-I). This difference continued for 12 additional weeks after treatment ended.</p>
Other important information about innovation	As data were difficult to interpret because of the small sample size and heterogeneity of participants (some starting at 0 on the Mini-Mental State Examination, others at 16), pooling of treatment groups was required.
Translation and replication material available?	Not stated
Relevant websites	http://en.wikipedia.org/wiki/Snoezelen
Comments	None

Persons with ADRD, Sensory Interventions: Simard et al. 2009

Characteristics	Findings
Category of innovation	Promising practice
Description of innovative practice	<p>The Namaste Care Program has been specifically designed to meet the special needs of residents of long-term care facilities who are not able to participate in traditional activity programs. Most of these residents are in the advanced stage of a dementing illness or are in the earlier stages of dementia but become agitated with too much stimulation. The program takes place in a room with lowered lighting, soft music playing, and the scent of lavender.</p> <p>The program was offered 7 days a week for approximately 5 hours a day and was staffed by specially trained nursing assistants who provided activities of daily living in an unhurried manner, with a “loving touch” approach to care. For instance, before clipping fingernails residents’ hands were placed in a basin of warm lavender-scented water with the Namaste carer talking to the residents as their hands were soaked. Afterwards, the nails were cleaned and clipped, thus making the task of nail care a meaningful activity. Each resident had their face washed and their skin moisturized. The women seemed to react favorably to the scent of Ponds Cold Cream, a product many of them used when they were younger. The men responded in the same manner to the scent of Old Spice.</p> <p>Other activities that took place during the day included watching DVDs of nature such as a rain forest, or scenes of the sea shore. Some residents were also comforted by holding a “life like” stuffed animal. Women liked puppies, kittens, and rabbits while men preferred holding large dogs. Carers reported that residents stroked their animal friends and even residents who had stopped speaking “talked” to their pets. Seasonal items were introduced like lilacs in the spring, a variety of flowers in the summer, colorful leaves in the fall, and clippings from fir trees in the winter. One Namaste carer went out in a snow storm to bring a basin of snow for the residents to touch. False teeth that chatter brought smiles and one Namaste carer had a clown nose and blew bubbles that usually produced chuckles.</p>

Continued

Persons with ADRD, Sensory Interventions: Simard et al. 2009—Continued

Characteristics	Findings
<p>Description of innovative practice Continued</p>	<p>Residents who were in wheelchairs were transferred to comfortable lounge chairs and soft quilts were tucked around them. If they had uncomfortable shoes on, their shoes were removed and soft slipper socks were placed on their feet. Residents might also have small pillows placed around them to ensure comfort. The Namaste carer constantly monitored residents to make sure they were comfortable and notified nursing if a resident showed any indication of pain. Beverages were offered to help eliminate dehydration, a risk for people with advanced dementia. The program also used lollipops for residents who were not at risk of choking, which helped keep the residents' mouth moist. A variety of juices, orange slices, puddings, and ice cream were also offered, which were helpful for increasing calories and providing pleasure. Thirty minutes before the residents began to leave the room lunch or dinner, the lights were turned up, music became livelier, and the mood shifted to help wake up residents and stimulate their appetites.</p> <p>All Namaste carers in the study were specially trained certified nursing assistants who were knowledgeable about each resident's history through reading the social history and activity interest assessment as well as by talking to the care staff and the residents' families. The number of residents in the program ranged from 6 to 11 with 1 Namaste carer or another staff person always present in the room. The Namaste rooms were never left unattended. If the Namaste carer needed a break or needed additional assistance, some type of call system was used: a call light, walkie talkie, or telephone. The program was supervised usually by a Director of Nursing or Assistant Director of Nursing. After implementation the consultant visited once every 6 months to assure fidelity of the intervention.</p>
<p>AAA/SUA involvement, if any</p>	<p>None</p>
<p>Target population</p>	<p>Persons with advanced dementia</p>
<p>Is target population an underserved group?</p>	<p>No</p>

Continued

Persons with ADRD, Sensory Interventions: Simard et al. 2009—Continued

Characteristics	Findings
Where innovation implemented and when, if known	Six EPOCH Senior Living Healthcare Centers in Massachusetts
Contact information	Joyce Simard 2337 Dekan Lane Land O'Lakes, FL 34639 E-mail: joycesimard@earthlink.net.
Journal research citation	Simard, J., & Volicer, L. (2010). Effects of Namaste Care on Residents Who Do Not Benefit From Usual Activities. <i>American Journal of Alzheimer's Disease & Other Dementias</i> ; 25(1):46-50.
Journal research summary	—
Description of data, including size	Participants were 86 residents of six EPOCH Senior Living Healthcare Centers.
Outcome measures	<p>The authors analyzed the participants' last Minimum Data Set (MDS) forms completed before enrollment and their first MDS forms completed more than 30 days after enrollment. The forms were completed by charge nurses and other staff involved in residents' care.</p> <p>Information obtained from the forms included age, memory, decision-making skills, understanding, indicators of delirium, indicators of depression, anxiety, sad mood, mood persistence, behavioral symptoms, eating ability, pain symptoms, accidents, stability of conditions, weight change, days receiving psychotropic medications, and restraints.</p>
Design/Comparison group	Pre-post evaluation. No comparison group.

Continued

Persons with ADRD, Sensory Interventions: Simard et al. 2009—Continued

Characteristics	Findings
Results	<p>There was no difference in depression scores before and after enrollment. However, only 8 residents were considered depressed.</p> <p>There were no significant differences between behavioral symptoms before and after enrollment in the study population. However, when only residents who had withdrawal or reduced social interaction were included in the analysis, their improved interest in the environment indicated less impairment in social interaction.</p> <p>There was a trend for improvement in the overall indicator of delirium. When individual items were compared, ratings for “periods of restlessness” and “periods of lethargy” were unchanged. There was also a trend for the lessening of agitation in less severely demented residents.</p> <p>Comparison of administration days for psychoactive medications did not find any differences for antipsychotics, antidepressants, or hypnotics, but there was a significant decrease in the number of days when antianxiety medications were administered.</p>
Other important information about innovation	<p>There are several limitations of this study. The authors compared MDS data only of residents enrolled in Namaste Care and did not include any control group. It was not possible to include a comparable control group in these facilities because all residents who were deemed suitable for the Namaste program were enrolled in it.</p> <p>The baseline data were collected from the last MDS completed before initiation of the program. Because this period was between 10 and 80 days, it was possible that the condition of the resident changed between the MDS completion and program initiation.</p>
Translation and replication material available?	<p>Joyce Simard published a book <i>The End-of-Life Namaste Care Program for People with Dementia</i> describing the program which is evaluated in this paper. She is also available as a speaker or consultant. (Contact details above.)</p>
Relevant websites	<p>http://www.namastecare.com/</p>
Comments	<p>—</p>

Persons with ADRD, Sensory Interventions: Woods et al. 2005

Characteristics	Findings
Category of innovation	Evidence-informed
Description of innovative practice	<p>Therapeutic touch (TT) was provided in order to reduce the frequency and intensity of behavioral symptoms of dementia. Therapeutic touch was administered twice daily for 5-7 minutes for three days between 10:00 AM and 11:30 PM, and between 3:00 PM and 4:30 PM in patient's rooms. Rooted in several ancient healing practices, TT is founded on the premise that the human body, mind, emotions and intuition form a complex and dynamic field which is balanced in health and unbalanced in disease. TT may encourage the relaxation response and lead to reduction of physiological stress. TT was delivered according to a strict protocol. Prior to the intervention the person was asked if they would like "a little shoulder rub." If their behavior indicated acceptance, TT was begun; if not, the practitioner returned a few minutes later and asked a second time. The intervention was conducted in the participant's room. TT began with the practitioner's mental intention to assist the person, then centering (quieting), followed by focusing attention on the participant, and concentration on the wholeness of the person. Standing behind the person with the practitioner's hands on the person's shoulder, the practitioner began a process of contact therapeutic touch consisting of gentle movements on the back, neck, behind the ears, and resting one hand on the forehead while making contact with the back with the other hand. The practitioner ended the session by placing hands on the participant's shoulders and directed thoughts of balance toward the person. At the completion the practitioner thanked the participant and either returned them to the day room or let them stay in their room. The research assistants and the principal investigator performed TT, and each of these had received between five and eight years of training from the originators of TT (Dora Kunz and Dolores Kreiger).</p>
AAA/SUA involvement, if any	None.
Target population	Persons with dementia.

Continued

Persons with ADRD, Sensory Interventions: Woods et al. 2005—Continued

Characteristics	Findings
Is target population an underserved group?	No.
Where innovation implemented and when, if known	Three Special Care Units within three Long Term Care Facilities ranging in size from 150-250 beds in a western Canadian province.
Contact information	Diana Lynn Woods, PHD, RN, Assistant Professor College of Nursing University of Arkansas for Medical Sciences.
Journal research citation	Woods, D. L., Craven, R. F., & Whitney, J. (2005). The effect of therapeutic touch on behavioral symptoms of persons with dementia. <i>Alternative Therapies</i> , Jan/Feb 11 (10), 66-74.
Journal research summary	—
Description of data, including size	<p>57 subjects with moderate to severe Alzheimer's disease. Criteria for participation included:</p> <ul style="list-style-type: none"> • a diagnosis of Alzheimer's Disease confirmed by a medical practitioner and a university Alzheimer's clinic • behavioral symptoms of dementia within the two past weeks (determined by nursing staff) • a Mini Mental State Exam below 20 • stabilized on their medication at least one month • anticipation that participant would remain on the unit for the duration of the study • ability to be mobile (not further defined by authors) • residence on the unit for at least 2 months <p>Exclusion criteria included:</p> <ul style="list-style-type: none"> • had acute psychiatric or physical illness • were newly diagnosed (within 3 months) • were in the end stages of Alzheimer's disease and related dementias <p>The staff of the facilities remained blind to patient group assignment throughout the study.</p>

Continued

Persons with ADRD, Sensory Interventions: Woods et al. 2005—Continued

Characteristics	Findings
Outcome measures	<p>Frequency and intensity of behavioral symptoms of dementia were measured using a modified Agitated Behavior Rating Scale (ABRS). The original tool measures manual manipulation (restlessness), escape restraints, searching/wandering, tapping/banging, and vocalization. Pacing/walking was added as a 6th category. A 4-point Likert-type scale was used to rate each category from not present (0) to high intensity (3). The total score for each observation period is the product of the frequency of behaviors observed multiplied by the intensity rating.</p> <p>Baseline measures included the Mini Mental State Examination and the Revised Memory and Behavior Checklist.</p> <p>Trained research assistants observed and recorded behavior every 20 minutes for 10 hours per day from 8:00 AM until 6:00 PM.</p>
Design/Comparison group	<p>Randomized, double-blind, three-group pre-test/post-test experimental design. Subjects were assigned to three groups of 19 each. The treatment group received TT. A second group received "placebo TT," in which the practitioners mimicked the TT protocol (including physical touch) with the exception of entering a meditative state, concentrating on the participant as a whole, or directing a sense of balance to the participant. Instead, the practitioner concentrated on a mental math exercise of subtracting increments of 7 from 100. Two registered nurses and a nurse aide provided the placebo intervention. Three practitioners provided the intervention, one per site. The control group received usual care.</p>

Continued

Persons with ADRD, Sensory Interventions: Woods et al. 2005—Continued

Characteristics	Findings
Results	<p>The experimental group showed statistically significant improvement in the overall score of behavioral symptoms of dementia (frequency and intensity) from pre- to post-intervention when compared to the control group. While the experimental group showed also show improvement in behavioral symptoms compared to the placebo group, this difference was not statistically significant. All three groups experienced an increasing trend in restlessness and vocalization. One participant did not want her head touched; all others were very receptive to the intervention. Staff noted a clinical decrease in the behavioral symptoms of dementia.</p>
Other important information about innovation	<p>Two other studies detected significant reductions in restlessness and vocalizations as a result of TT in dementia populations (Snyder et al., 1995, and Woods, 2002). These behaviors are major contributors to resident and caregiver stress in nursing homes, and restless, referred to as non-aggressive physical agitation, is correlated with mortality in nursing home residents (Beck et al., 2002). Vocalization and restlessness may be manifestations of stress that TT can modify. These two behaviors may be qualitatively different from the other four behaviors observed in this study; they may be related to a physiological stress response or increased neurological demand stemming from an inability to integrate a variety of stimuli. The lack of statistical significance between the TT group and the placebo may have been influenced by several factors. The placebo interventionists were nurses and a nursing aide, all of whom had skilled nonverbal behavior and used a calm approach Their touch may have been interpreted as compassionate touch, one-to-one social interaction, or nursing presence, all of which are known to have a positive effect. Staffing at the facilities is beyond the control of the researchers and may have had an impact on the outcome. Generalizability is limited due to a small sample and the fact that all but one of the subjects were Caucasian.</p>
Translation and replication material available?	Not listed.
Relevant websites	None.
Comments	—

Persons with ADRD, Multi-Dimensional Interventions: Ballard et al. 2009

Characteristics	Findings
Category of innovation	Promising Practice
Description of innovative practice	<p>Brief treatment for agitation in Alzheimer’s disease (AD), involving social interaction, personalized music, or removal of environmental triggers. The study was the first stage of a randomized blinded placebo-controlled trial and aimed to determine the safety and feasibility of a simple, short psychological intervention delivered over 4 weeks <i>before</i> the instigation of pharmacological treatment.</p> <p>A manual was developed to deliver the therapy. Therapists, who were either post-graduate researchers or research nurses, received a 2-day training. The therapy was provided directly to the patient by a professional care assistant (not a trained nurse) who played a regular part in the care of that patient. The role of the therapists was to train and support each caregiver through weekly supervision sessions.</p> <p>According to the protocol, only one intervention was to be chosen for each participant. This was to ensure that it was possible to implement the intervention reliably. Caregivers and therapists worked together to select the treatment best tailored to each caregiver/patient dyad, and agreed on specific strategies and work tasks. Caregivers kept a record of each time the therapy was delivered, including comments regarding any positive outcomes.</p>
AAA/SUA involvement, if any	None
Target population	Dyads of patients with AD and their formal caregivers.
Is target population an underserved group?	No

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Ballard et al. 2009—
Continued**

Characteristics	Findings
Where innovation implemented and when, if known	Eight clinical centers in England
Contact information	Clive Ballard, M.R.C., Psych., M.D. Wolfsen Centre for Age-Related Diseases King's College London, Guy's Campus London SE1 1UL, UK E-mail: clive.ballard@kcl.ac.uk
Journal research citation	Ballard, C., Brown, R., Fossey, J., Douglas, S., Bradley, P., Hancock, J., et al. (2009). Brief psychosocial therapy for the treatment of agitation in Alzheimer disease (The CALM-AD Trial). <i>American Journal of Geriatric Psychiatry</i> ; 17(9): 726-733.
Journal research summary	—
Description of data, including size	In total, 318 patients, most with moderately severe AD, received the psychosocial treatment. Criteria included (a) clinically significant agitated behavior; (b) no severe, unstable, or uncontrolled medical conditions; (c) no evidence of delirium; and (d) no treatment with a neuroleptic or cholinesterase inhibitor in the previous 4 weeks.
Outcome measures	<p>The primary outcome measure was agitation, which was assessed before and after 4 weeks of the Brief Psychosocial Therapy intervention using the Cohen-Mansfield Agitation Inventory (CMAI). Assessments were completed by trained researchers at each center, independent of the researchers delivering the intervention.</p> <p>Secondary evaluations were undertaken to examine the individual therapies (social interaction, personalized music, and removal of environmental triggers) and to determine the improvements on the different key CMAI subscales.</p>

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Ballard et al. 2009—
Continued**

Characteristics	Findings
Design/Comparison group	Pre-post design. No comparison group.
Results	<p>The 318 patients that completed the intervention experienced improvement in agitation. In addition, full work plans were completed in six of the eight centers for a total of 198 patients, providing a more detailed evaluation of outcomes. These 198 patients also showed an improvement in agitation.</p> <p>The authors state that in clinical trials evaluating therapeutic impact on neuropsychiatric symptoms, 30% improvement is the conventional threshold of significant improvement. In this study, 43% of participants achieved a 30% improvement in their level of agitation.</p> <p>On examining the individual therapies, significant benefits were evident for social interaction. However, removing environmental triggers and personalized music did not confer significant benefit.</p>
Other important information about innovation	The inclusion and exclusion criteria were designed for the pharmacological phase of the trial and are quite restrictive. Therefore, the results may not be generalizable to a broader population. Also, in the absence of placebo treatment, it is impossible to determine the magnitude of benefit specially conferred by the therapy. However, the study does show that the therapy is feasible and can be delivered according to an operationalized manual.
Translation and replication material available?	Not stated.
Relevant websites	None found
Comments	—

Persons with ADRD, Multi-Dimensional Interventions: Garland et al. 2007

Characteristics	Findings
Category of innovation	Promising practice
Description of innovative practice	<p>The study compared two psychosocial treatments for their effectiveness in reducing the frequency of physically and verbally agitated behaviors in nursing home residents with dementia. Fifteen-minute audiotapes of (1) simulated family presence (a conversation prepared by a family member about positive experiences from the past), and (2) music preferred by the resident in earlier life were compared with a placebo tape of a reading from a horticultural text. Researchers were blinded to the tape contents.</p> <p>Observations of “usual care” were recorded for 45 minutes on each of 3 days in week 1 of the study at the times of peak agitation nominated by nursing staff. Treatments were applied once a day for 3 days each during weeks 2, 3, and 4.</p>
AAA/SUA involvement, if any	None
Target population	Persons with dementia
Is target population an underserved group?	Seventeen percent of the participants were from non-English-speaking backgrounds.
Where innovation implemented and when, if known	The 30 participants lived in nine nursing homes.
Contact information	<p>Prof Daniel O’Connor, M.D., FRANZCP Kingston Centre, Warrigal Road Cheltenham, Victoria 6192 Australia E-mail: Daniel.Oconnor@med.monash.edu.au</p>
Journal research citation	<p>Garland, K., Beer, E., Eppingstall, B., & O’Connor, D.W. (2007). <i>American Journal of Geriatric Psychiatry</i>; 15(6):514-521.</p>

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Garland et al. 2007—
Continued**

Characteristics	Findings
Journal research summary	—
Description of data, including size	<p>Thirty nursing home residents whose dementia was complicated by marked behavioral disturbance took part in the study. All were prescribed some type of psychotropic medication, often in combination. Participants were allocated randomly to one of three groups and rotated through treatments with a 2-day washout period between each treatment. Nurses helped to ensure that participants were not given as-needed sedative medications before interventions.</p> <p>The participants' actual behavior was observed by research staff before, during, and after exposure to the two psychosocial treatments, the placebo treatment, and usual care. Selected behaviors were counted as present or absent at 2-minute intervals. Total observation periods lasted for 45 minutes each. No observations were made during personal care routines for privacy reasons.</p>
Outcome measures	Presence or absence of physically agitated and verbally agitated behaviors.
Design/Comparison group	Pre-post using multiple, randomized single-blind exposures to treatment. No comparison group.

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Garland et al. 2007—
Continued**

Characteristics	Findings
Results	<p>A total of 2,880 target behaviors were observed in the pre-intervention timeframe. Behavior counts fell by one-half or more in many cases. Simulated presence and preferred music both proved effective in reducing counts of <i>physically</i> agitated behaviors. Simulated presence—but not music—resulted in significantly reduced counts of <i>verbally</i> agitated behaviors. The placebo tape worked almost as well as both the personalized treatments.</p> <p>Participants' responses to the treatments varied widely. For example, some participants were so engrossed in animated dialogue with the audio-taped family member that observers had no doubt which treatment condition was in play. Others became more agitated and threw the headphones away. This suggests that psychosocial treatments, even when fine-tuned to reflect individual relationships and interest, can worsen agitation for an important minority of people.</p>
Other important information about innovation	<p>Participants' better than expected responses to the placebo tape suggest that even the simplest technology can improve the lives of confused, disturbed nursing home residents. Of the two psychosocial treatments, preferred music tapes were easier to make and were clearly helpful in many instances. By contrast, family members often struggled to recall enough happy memories to compile a simulated presence tape. Simulated presence might prove just as effective if relatives speak on topics of their own choosing. Although not all residents were helped by these treatments, adverse effects were mild and shortlived.</p>
Translation and replication material available?	None stated
Relevant websites	None found
Comments	—

Persons with ADRD, Multi-Dimensional Interventions: Ishizaki et al. 2002

Characteristics	Findings
Category of innovation	Evidence-informed
Description of innovative practice:	<p>The intervention was designed to assist participants with early stage Alzheimer’s disease in coping with their cognitive impairment and lack of social activity. Group sessions of 150 minutes were held weekly for six months, facilitated by a clinical psychologist and three trained public health nurses in a classroom type setting. The sessions employed simple exercises, games, listening to music and singing, and making articles such as collages to create an atmosphere to encourage communication and enhance the interaction process among the participants.</p> <p>Facilitators employed structural cognitive stimulation, brief systemic therapy, and reminiscence therapy, using past events and related objects to stimulate the patients’ personal and public memory through recollection in a group therapy setting. Participants completed a diary between sessions..</p>
AAA/SUA involvement, if any	None
Target population	Persons with dementia
Is target population an underserved group?	Not reported.
Where innovation implemented and when, if known	Tajiri, Japan, in 1998.
Contact information	<p>Kenichi Meguro, M.D., Ph.D. Division of Neuropsychology Department of Disability Medicine Tohoku University Graduate School of Medicine, 2-1 Seiry-machi, Aoba-ku, Sendai 980-8575, Japan e-mail: meg@mail.cc.tohoku.ac.jp</p>

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Ishizaki et al. 2002—
Continued**

Characteristics	Findings
Journal research citation	Ishizaki, J., Meguro, K., Ohe, K., Kimura, E., Tsuchiya, E., Ishii, H., Sekita, Y., & Yamadori, A. (2002). Therapeutic Psychosocial Intervention for Elderly Subjects With Very Mild Alzheimer Disease in a Community: The Tajiri Project. <i>Alzheimer Disease and Associated Disorders</i> , 16(4), 261–269.
Journal research summary	—
Description of data, including size	<p>34 persons with early stage Alzheimer’s disease were identified during an epidemiologic survey of the prevalence of dementia in the population of Tajiri, Japan. (Clinical Dementia Rating 0.5—very mild). 9 with infarctions identified by axial magnetic resonance imaging were excluded from this study. 14 were assigned to an experimental group and 11 to a control group.</p> <p>Attendance at the group sessions averaged 85.3%.</p>
Outcome measures	<p>At baseline and after nine months:</p> <ul style="list-style-type: none"> • Digit span (Forward and Backward) subtest of the Wechsler Adult Intelligence Scale-Revised for attentional abilities. • Word Fluency—Category fluency • Trail Making Test-A. to evaluate psychomotor speed. • Rey-Osterrieth Complex Figure (Reproduction)—ability to copy a complex geometric figure design and reproduce it • Mini Mental Status Exam to assess global cognitive level. • Geriatric Depression Scale for subjective depressive state. • State-Trait Anxiety Inventory for subjective anxiety state • Sum of Boxes in CDR (CDR-SB) for global severity of dementia • Interpersonal relationships subscale in the Behavior • Rating Scale for the Elderly for social interaction • Tree-drawing test for qualitative mental activity

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Ishizaki et al. 2002—
Continued**

Characteristics	Findings
Design/Comparison group	Quasi-experimental, with a non-randomized control group
Results	<p>The experimental group showed a significant improvement in word fluency, in social interaction on the Behavior Rating Scale for the Elderly, and global severity of dementia on the Sum of Boxes test. The experimental group also showed an improvement in qualitative mental activity on the Tree-drawing test.</p> <p>Mental status declined for the control group but not for the experimental group, as measured by the Mini Mental Status Exam. The control group showed a significant decline in the digit span and the Trail Making-A tests while experimental group scores remained constant.</p>
Other important information about innovation	Some experimental group members improved their Mini Mental Status Exam scores after the intervention, but the analysis appeared to show a limit to the possible improvement which the authors could not investigate further because of the small size of the study.
Translation and replication material available?	None given
Relevant websites	None identified
Comments	<p>The article provides little detail about how the cognitive therapies were used, although there are numerous references to articles describing the methodologies. Employing this intervention would likely involve a consultant with training in the therapies.</p>

Persons with ADRD, Multi-Dimensional Interventions: Ozdemir et al. 2009

Characteristics	Findings
Name of innovative practice	Collective application of activities related to music, painting, and time–place–person orientation. Ozdemir, L., & Akdemir, N.
Category of innovation	Evidence-informed
Description of innovative practice	<p>The overall aim of the study was to create and test a new technique which might contribute to the relief of certain cognitive and psychological symptoms of mildly-affected Alzheimer's patients.</p> <p>Musical therapy, using instrumental music with a light tempo that took into consideration the preferences of the participants, was combined with inanimate and animate object picture painting, involving both coloring and hand-drawing. This activity included 12 picture categories with each category containing 4 pictures. One category was assigned to each session, and the participants were asked to choose only 1 picture from this subcategory. The categories consisted of fruits, foods, clothing, household goods, electronic goods, people, animals, vehicles, professions, nature, seasons, and freehand drawings of the individual's choice.</p> <p>Groups of 4 to 5 participants were formed according to the individuals' musical tastes, and a total of 12 activity sessions were arranged in a 3-week period, with 4 weekly sessions per group. During the organized activities, mental stimulation was ensured with orientation to time–place–person, object definition, and the use of colors and music.</p> <p>Before starting the activity, the participants were asked to write their first and last names, the date, and the name of their current location at the bottom of the drawing paper. After completion of the painting activity, they were asked to write down the name of the object they had just painted.</p>

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Ozdemir et al. 2009—
Continued**

Characteristics	Findings
AAA/SUA involvement, if any	None
Target population	Institutionalized mildly-affected Alzheimer's patients
Is target population an underserved group?	No
Where innovation implemented and when, if known	The 75 th Year Rest and Care Home
Contact information	L. Ozdemir Hacettepe Universitesi Hemsirelik Yuksekokulu Samanpazari, Ankara 06 100 Turkey Tel.: +90 312 305 15 80 Fax: +90 312 312 70 85 E-mail address: leylaceyran@yahoo.com
Journal research citation	Ozdemir, L., & Akdemir, N. (2009). Effects of multisensory stimulation on cognition, depression and anxiety levels of mildly-affected Alzheimer's patients. <i>Journal of the Neurological Sciences</i> , 283:211–213
Journal research summary	—
Description of data, including size	Study data were collected on 27 mildly-affected Alzheimer's patients using the "Individual Information Form" and the "Participation in the Inanimate–Animate Object Painting Table" developed by the researchers.
Outcome measures	Mini Mental State Examination (MMSE), the Geriatric Depression Scale, and the Beck Anxiety Scale. Data were collected 1 day prior to beginning the study, immediately after its completion, and 3 weeks afterwards.
Design/Comparison group	Quasi-experimental design. No comparison group.

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Ozdemir et al. 2009—
Continued**

Characteristics	Findings
Results	Compared to 1 day prior to the intervention, the increases in the MMSE score immediately after the intervention and three weeks later were significant. The depression score declined significantly immediately and three weeks after the intervention, only to revert to a worsening trend three weeks following the intervention. Similarly, the anxiety score dropped meaningfully immediately after the intervention and at three weeks following the intervention, but resumed a worsening trend after the third week.
Other important information about innovation	None
Translation and replication material available?	None stated.
Relevant websites	None given.
Comments	None

Persons with ADRD, Multi-Dimensional Interventions: Rentz et al. 2002

Characteristics	Findings
<p>Name of innovative practice NOTE: The author uses the copyright symbol, whereas the AA uses the registered trademark symbol. May be due to the age of the article.</p>	<p>Memories in the Making© Rentz, C.A.</p>
<p>Category of innovation</p>	<p>Promising Practice</p>
<p>Description of innovative practice</p>	<p><i>Memories in the Making</i>© is an art program, originating in California's Orange County Alzheimer's Association program model, for individuals in the early and middle stages of a dementing illness. Despite diminished verbal and organizational skills, affected individuals, guided by skilled artist facilitators, use watercolors and acrylics to express themselves by creating colorful visual images on paper or canvas. Through this process, participants are able to recreate a memory, tell a story, and enjoy being involved in creating something of value to self and others. It is not required that the participants have any previous art experience or particular artistic abilities. The Greater Cincinnati Chapter of the Alzheimer's Association received permission from the Orange County Alzheimer's Association to legally use the name <i>Memories in the Making</i>, but modified the program to meet the expressed needs of the chapter constituency.</p>
<p>AAA/SUA involvement, if any</p>	<p>None</p>
<p>Target population</p>	<p>Persons with a diagnosis of dementia</p>
<p>Is target population an underserved group?</p>	<p>No</p>
<p>Where innovation implemented and when, if known</p>	<p>Four adult day programs, one assisted living site, and one dementia-specific nursing home site in the Greater Cincinnati Chapter of the Alzheimer's Association 27-county territory.</p>

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Rentz et al. 2002—
Continued**

Characteristics	Findings
Contact information	Clarissa A. Rentz, MSN, RN, CS, Program Director, Alzheimer’s Association, Greater Cincinnati Chapter, Cincinnati, Ohio.
Journal research citation	Rentz, C.A. (2002). An outcomes-based evaluation of <i>Memories in the Making®</i> , an art program for individuals with dementing illnesses. <i>American Journal of Alzheimer’s Disease and Other Dementias</i> , 17 (3):175-181.
Journal research summary	—
Description of data, including size	<p>Six well-established sites with consistent staff and participants were chosen to participate in the evaluation project. At each identified site, during a single <i>Memories in the Making®</i> session, one staff member of that particular site observed and evaluated one participant for one 60-minute session. Observations were completed when six staff persons observed and evaluated 41 artist participants at the six sites.</p> <p>Utilizing Lawton’s conceptualization of psychological well-being as a framework, staff selected two domains of well-being—<i>affect state</i> and <i>self-esteem</i>—and developed an outcomes measurement tool that operationally defined both domains in terms of specific, observable indicators. Indicators such as engagement, expression of pleasure, enhanced self-esteem, and expression of emotions and feelings through the use of paints and imagery were characterized by verbal and nonverbal behaviors and all established positive or negative outcomes of the intervention.</p>

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Rentz et al. 2002—
Continued**

Characteristics	Findings
Outcome measures	<p>The goals of the <i>Memories in the Making</i>® program were for the artist participant to experience</p> <ul style="list-style-type: none"> • An opportunity for sensory stimulation. • The pleasure of being involved in the creative process. • A sense of well-being, only if momentarily. <p>An increased self-esteem with having created something of value to self and others.</p>
Design/Comparison group	Outcomes-based evaluation with no comparison group.
Results	<p>The indicators suggested that individuals always, or some of the time, worked with sustained attention, had a pleasurable sensory experience, experienced pleasure as evidenced by laughter and relaxed body language, and verbalized feeling good about themselves and their accomplishments.</p>
Other important information about innovation	<p>Even though the evaluations suggested that this first attempt at outcomes-based evaluation was positive, several concerns arose as to survey design, collection method, and unclear operational definitions of the indicators. It is important to note that this was a pilot project to determine appropriate evaluative methods for a particular program and was not designed as a research project.</p>
Translation and replication material available?	<p>Memories in the Making® is a registered trademark and service mark of the Alzheimer's Association. For additional information regarding the Memories in the Making Program, call Marilyn Lorey at 949.757.3719.</p>
Relevant websites	<p>http://www.alz.org/oc/in_my_community_10849.asp</p>
Comments	<p>The value of this intervention appears to be related to its operation in a group setting. Therefore, it would not be applicable in a person's home, but would be useful in adult day care facilities or other community settings.</p>

Persons with ADRD, Multi-Dimensional Interventions: Weber et al. 2009

Characteristics	Findings
Name of innovative practice	Multidimensional day care program inspired by the semi-residential therapeutic community model of Jones, M. (1968). <i>Beyond the therapeutic community</i> . London: Yale University Press. Weber, K., Meiler-Mititelu, C., Herrmann, F.R., Delaloye, C., Giannakopoulos, P., & Canuto, A.
Category of innovation	Promising Practice
Description of innovative practice	A psychotherapeutic day care program designed for older people with dementia and neuropsychiatric symptoms to allow for a significant reduction of anxiety and apathy, better adherence to therapeutic community treatment, and clinical progress in group therapy. The program combines music, movement, psychodynamic group therapies, and sociotherapy, as well as individual interviews and family interventions. All participants attend the therapeutic community two to three times per week for a 6-hour day, including lunch. During each attended week, each patient participates in the four therapies in mixed-gender groups of a maximum of 10 participants.
AAA/SUA involvement, if any	None
Target population	Elderly people living at home with dementia
Is target population an underserved group?	No
Where innovation implemented and when, if known	Psychiatric day hospital of Geneva, Switzerland, from February 1, 2004 to February 1, 2007.
Contact information	Allesandro Canuto at alessandra.canuto@hcuge.ch

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Weber et al. 2009—
Continued**

Characteristics	Findings
Journal research citation	Weber, K., Meiler-Mititelu, C., Herrmann, F.R., Delaloye, C., Giannakopoulos, P., & Canuto, A. (2009). Longitudinal assessment of psychotherapeutic day hospital treatment for neuropsychiatric symptoms in dementia. <i>Aging & Mental Health</i> , 13(1):92-98.
Journal research summary	—
Description of data, including size	<p>All investigations were part of routine clinical assessments in the day hospital. Data were collected by members of the hospital's care team. A series of 76 individuals, aged 54–98 years, with mild to moderate dementia (55 % diagnosed with Alzheimer's Disease) were assessed. Treatment lasted a median time of 8 months.</p> <p>The majority of participants (84%) were treated with psychotropic drugs and cholinesterase inhibitors. All cases included in the study had no changes in their psychotropic treatments during the month preceding their admission to the day hospital. Admission versus discharge comparisons revealed no significant changes in drug treatment, pointing to the fact that the participants were referred mainly for psychotherapeutic care in the absence of sufficient response to psychotropic drugs.</p>

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Weber et al. 2009—
Continued**

Characteristics	Findings
Outcome measures	<p>Outcome measures were obtained at five time points (admission, 3, 6, and 12 months, and discharge) and included the following:</p> <ul style="list-style-type: none"> • Neuropsychiatric Inventory (NPI) assesses 12 symptoms commonly observed in dementia: delusions, hallucinations, agitation, depression, anxiety, euphoria, apathy, disinhibition, irritability, aberrant motor behavior, night-time behavior disturbances, as well as appetite and eating disorders. • Therapeutic Community Assessment scale including client self-report and staff evaluation of the clinical progress in therapeutic community treatment, exploring 14 domains of behavior, attitude, and cognitive change, grouped into four dimensions (developmental, socialization, psychological, and community member). • Group Evaluation Scale consists of 17 items, rated on a five-point scale, that evaluate satisfaction, perception of the group’s purpose, relevance, affective climate, cohesion, quality of interaction, as well as personal involvement and adherence to group treatment. <p>When needed, participants were followed up by outpatient psychiatric services, primary care physician, or by the consultant psychiatrist when moved to residential nursing.</p>
Design/Comparison group	<p>Longitudinal assessment of an episode-related study. No comparison group.</p>
Results	<p>Linear regression analysis showed that Therapeutic Community Assessment staff scores (but not client self-report scores) and Group Evaluation Scale scores significantly improved while the NPI <i>total</i> scores showed a significant improvement in neuropsychiatric symptoms across the different time points. In particular, improvement was significant for anxiety and apathy.</p> <p>These changes remained significant when demographic variables, drug treatment changes, and occurrence of life events were also considered. The improvement in neuropsychiatric symptoms was present not only at discharge, but at intermediate assessments, supporting the progressive impact of the psychotherapeutic process in this particular setting.</p>

Continued

**Persons with ADRD, Multi-Dimensional Interventions: Weber et al. 2009—
Continued**

Characteristics	Findings
<p>Other important information about innovation</p>	<p>The authors suggest that the discrepancies between the Therapeutic Community Assessment staff scores and client self-report scores could be explained as staff being able to perceive participants' improvement and adherence to the <i>therapeutic community</i> process; whereas the client with substantial cognitive impairment may not be able to grasp the entire scope of a complex structure such as the therapeutic community.</p> <p>Several limitations should be taken into account when interpreting the data. First, as is frequently the case for nonpharmacological care strategies in dementia, there are no standardized protocols for the proposed psychotherapeutic interventions. Second, the present naturalistic assessment is based on a therapeutic program corresponding to up to 18 hours of weekly presence in the day hospital that may not easily be transferred to other care systems for dementia. Most importantly, in the absence of an appropriate control group, the authors cannot exclude the possibility that a placebo effect may contribute to the clinical improvement.</p>
<p>Translation and replication material available?</p>	<p>None stated.</p>
<p>Relevant websites</p>	<p>None</p>
<p>Comments</p>	<p>It is not clear the degree to which the positive effects last after the program ends.</p>

Persons with ADRD, Support Groups: Goldsilver et al. 2001

Characteristics	Findings
Name of innovative practice	Early stage dementia group at Circle of Care Goldsilver, P., & Gruneir, M.
Category of innovation	Promising Practice
Description of innovative practice:	<p>The intervention provided eight weekly meetings, each lasting for one and one quarter hours. Groups were limited to 12 people and were held in a community facility which was easily accessible by public transportation. A nominal fee was charged with subsidies available as needed. Meetings were facilitated by a social worker and an occupational therapist. Each session began with a review of the purpose and norms of the group, including confidentiality, the use of first names, available refreshments, and orientation to the date and session number. Topics for discussion were suggested by the facilitators and included the brain and behavior, energy conservation, reminiscence, coping with loss, and strategies to improve memory. The group also participated in fun activities such as warm-up exercises and mental aerobics. Group members were given printed handouts after each session and were encouraged to share them with their caregivers.</p> <p>While caregivers did not attend the group, they were encouraged to contact group facilitators with questions and concerns. Facilitators notified caregivers about significant changes in mood, behavior, or physical status, but not about specific details of group discussions.</p>
AAA/SUA involvement, if any	None
Target population	Persons with dementia
Is target population an underserved group?	57 percent of the participants were Jewish
Where innovation implemented and when, if known	Circle of Care in partnership with Comprehensive Rehabilitation and Mental Health Services, Toronto, Canada

Continued

Persons with ADRD, Support Groups: Goldsilver et al. 2001—Continued

Characteristics	Findings
Contact information	Pamela M. Goldsilver, BSc, OT, Comprehensive Rehabilitation and Mental Health Services (COTA), Toronto, Ontario, Canada.
Journal research citation	Goldsilver, P., & Gruneir, M. (2001). Early stage dementia group: An innovative model of support for individuals in the early stages of dementia <i>American Journal of Alzheimer's Disease and Other Dementias</i> , 16; 109-114.
Journal research summary	—
Description of data, including size	<p>Persons with early stage Alzheimer's disease were recruited from the community and screened by a personal interview and the Mini Mental State Examination; participant scores ranged from 18 to 30, with most scores from 21-24. All the participants were aware of their memory deficits.</p> <p>Of 42 referrals, 31 were assessed as suitable for the group.</p>
Outcome measures	<p>Self-report questionnaire completed by group participants at the last meeting, evaluating the effectiveness of the group in providing them with personal support, assisting them in dealing with their personal situation, and increasing their understanding of their condition. Participants were also able to make suggestions about the size, frequency, and length of group sessions.</p> <p>Caregivers were also asked to comment on the impact of the group on their care-receiver.</p>
Design/Comparison group	None

Continued

Persons with ADRD, Support Groups: Goldsilver et al. 2001—Continued

Characteristics	Findings
Results	<p>96 percent of the participants reported that the group provided them with personal support.</p> <p>74 percent of the participants reported that the group helped them deal with their personal situation.</p> <p>81 percent of the group found the educational component useful.</p> <p>55 percent of caregivers reported that the group had a positive effect on their care-receiver. Comments from caregivers indicated that for some care-receivers the group meetings resulted in short term improvement to care-receiver mood and memory function.</p>
Other important information about innovation	<p>Recruitment for the group was labor intensive and it was necessary to enlist community professionals to identify potential participants. Recruitment announcements in the media and through organizations were largely ineffective.</p>
Translation and replication material available?	<p>None referenced.</p>
Relevant websites	<p>None provided.</p>
Comments	<p>Although this study suggests that persons with early stage Alzheimer’s disease can derive personal support from a support group, the lack of standardized tests limits the reliability of that finding.</p>

Caregiver/Care Receiver Dyads, Support Groups: Whitlatch et al. 2006

Characteristics	Findings
Name of innovative practice	Early Diagnosis Dyadic Intervention Whitlatch, C., Judge, K., Zarit, S., & Femia, E.
Category of innovation	Promising Practice
Description of innovative practice	<p>The intervention consists of nine sessions designed to: increase the understanding of care preferences and values of each dyad member, practice effective communication between the dyad members, discuss the differences in care preferences and expectations between the dyad members, increase dyad knowledge of available services, and explore emotional and relationship issues.</p> <p>The nine sessions are led by trained counselors and held in the dyad home. Structured materials are provided, and the sessions lasted an average of 72 minutes in this trial. The subjects of the sessions are: 1, introduction and planning; 2 and 3, care values; 4 and 5, care preferences; 6, 7 and 8, challenges; and 9, final review. Sessions are provided weekly or bi-weekly over a period averaging three months.</p>
AAA/SUA involvement, if any	None
Target population	Dyads (persons with dementia and informal caregivers),
Is target population an underserved group?	Participants were 64 percent white and 36 percent non-white
Where innovation implemented and when, if known	Cleveland, Ohio, and vicinity
Contact information	Carol J. Whitlatch, Ph.D., The Margaret Blenkner Research Institute, Benjamin Rose, 11900 Fairhill Road, Suite 300, Cleveland, Ohio 44120 cwhitlat@benrose.org

Continued

Caregiver/Care Receiver Dyads, Support Groups: Whitlatch et al. 2006—Continued

Characteristics	Findings
Journal research citation	Whitlatch, C., Judge, K., Zarit, S., & Femia, E. (2006). Dyadic intervention for family caregivers and care receivers in early-stage dementia. <i>Gerontologist</i> , 46(5), 688-94.
Journal research summary	—
Description of data, including size	<p>The selected dyads lived in the community with a close kinship relationship. Care receivers without a formal diagnosis of dementia had symptoms consistent with early state dementia or memory impairment and scored above 16 on the Mini-Mental State Exam. Care receivers scoring above 25 had a confirmed diagnosis consistent with dementia or memory impairment. Participants judged not healthy enough to participate were excluded.</p> <p>Thirty-four dyads were selected, of which 31 agreed to participate and 20 completed all nine sessions.</p>
Outcome measures	An eight-item evaluation was developed for caregiver and counselor evaluation of the intervention, based on a 7-point scale, and a four item evaluation was developed for care-receivers, using a 3-point scale. Items included usefulness of the session material, quality of the session discussion, and whether goals were met for each session.
Design/Comparison group	Ex-post evaluation with no comparison group
Results	Caregiver ratings of the intervention ranged from 6.01 to 6.45 on the seven-point scale; counselor ratings ranged from 4.67 to 5.71, indicating that both caregivers and care-receivers reported that the sessions had significantly increased the shared understanding of the values and preferences between the members of the dyads.

Continued

Caregiver/Care Receiver Dyads, Support Groups: Whitlatch et al. 2006—Continued

Characteristics	Findings
Other important information about innovation	Based on recommendations from the facilitators, for future implementations a pre-session has been added to the intervention to explain the intervention to the dyad, determine if the dyad is appropriate for the intervention, and gather information about specific dyad concerns. The intervention has also been shortened to 7 sessions to remove redundant material.
Translation and replication material available?	Caregiver and care-receiver specific notebooks with the content and goals of each session, session-specific carbonless copy tools, worksheets, diagrams, magnetic manipulation boards for visual memory aids, treatment protocols, and dyad review sheets are available from Dr. Whitlatch.
Relevant websites	None provided
Comments	The intervention appears to be useful. However, because of the lack of a comparison group experiencing alternate interventions in a controlled setting it is unclear whether it is more useful than other dyad interventions in promoting communication between dyad members.

Caregiver/Care Receiver Dyads, Support Groups: Wilz et al. 2008

Characteristics	Findings
Name of innovative practice	Assisted Vacation Wilz, G., & Fink-Heitz, M.
Category of innovation	Evidence-informed
Description of innovative practice	<p>The intervention is designed to improve caregivers' physical and mental health through 1) participation in positive and healthy activities by caregivers and care-receivers, 2) improving caregiver utilization of formal and informal support and acceptance of relief through professional support, and 3) psychoeducation and support for caregivers to improve their skills for coping with patients' problem behaviors.</p> <p>Groups of caregivers and care-receivers traveled together on one week vacations trips to a hotel or rehabilitation clinic suitable for handicapped people with a program led by a team of health professionals. Caregivers had separate activities for 2 to 3 hours each morning and afternoon while care-receivers received professional support. All other activities were for caregivers and care-receivers together. Activities for caregivers included group sessions and lectures as well as recreational activities, while joint activities were recreational events such as concerts, zoo visits, meals out, boat trips, and playing soccer. The program was customized, based on activity preferences expressed by the participating caregivers and care-receivers.</p>
AAA/SUA involvement, if any	None
Target population	Dyads (persons with dementia and informal caregivers)
Is target population an underserved group?	None specified.

Continued

Caregiver/Care Receiver Dyads, Support Groups: Wilz et al. 2008—Continued

Characteristics	Findings
Where innovation implemented and when, if known	In 2004 and 2005, by The Workers Welfare Munich counseling center and the Alzheimer Society Brandenburg, Germany
Contact information	Gabriele Wilz, PhD, Department of Clinical and Health Psychology Technical University of Berlin Franklinstr. 28/29, D-10587 Berlin, Germany. E-mail: gabriele.wilz@gptu-berlin.de
Journal research citation	Wilz, G., & Fink-Heitz, M. (2008). Assisted Vacations for Men With Dementia and Their Caregiving Spouses: Evaluation of Health-Related Effects. <i>The Gerontologist</i> , 48(1), 115-120.
Journal research summary	—
Description of data, including size	Wives who are principal caregivers of and reside with spouses who have a diagnosis of dementia which is moderate to severe. The first 18 eligible dyads to apply for the program were accepted. Four dyads were unable to complete the evaluation phase of the intervention.
Outcome measures	<p>Caregivers in the intervention group were assessed at baseline, 2-5 days after the vacation and three months after baseline. Control group caregivers were assessed at baseline and at three months.</p> <ul style="list-style-type: none"> • Giessen Subjective Complaints List for the subjective physical health of participants • Beck Depression Inventory for symptoms of depression.
Design/Comparison group	Non-randomized control group of 11 eligible dyads who applied for the program after it was full.

Continued

Caregiver/Care Receiver Dyads, Support Groups: Wilz et al. 2008—Continued

Characteristics	Findings
Results	<p>Immediately after the vacation, caregivers experienced a significant decline in physical complaints and a decrease in depressive symptoms.</p> <p>At three months there were significantly fewer reports of physical complaints among the intervention group caregivers than among control group caregivers; complaints among intervention group caregivers declined while those for control group caregivers increased. Depressive symptoms decreased among intervention group caregivers while they increased among control group caregivers, although not to a significant degree.</p> <p>In qualitative interviews, the caregivers reported that the interchange with other caregivers was calming and rejuvenating.</p>
Other important information about innovation	<p>A small sample size limited to one type of caregiver limits the study's generalizability.</p>
Translation and replication material available?	<p>None provided</p>
Relevant websites	<p>None provided</p>
Comments	<p>This study provides some evidence that a single one-week extended group experience involving both caregivers and care-receivers can have positive effects for caregivers.</p>

Caregiver/Care Receiver Dyads, Support Groups: Zarit et al. 2004

Characteristics	Findings
Name of innovative practice	Memory Club Zarit, S., Femia, E., Watson, J., Rice-Oeschger, L., & Kakos, B.
Category of innovation	Evidence-informed
Description of innovative practice:	The intervention offers ten biweekly group sessions providing information to caregiver and care receiver dyads about memory loss and resources for coping with it in an emotionally supportive atmosphere. The sessions are facilitated by a social worker and neuropsychologist; each session has a time for dyads to meet as a group, followed by separate group meetings of caregivers and care receivers, and concluding with the entire group together again. The first two sessions provide basic information about Alzheimer's disease and build group cohesion, sessions 3 through 7 explore topics in depth, and sessions 8-10 focus on information about community support, future planning, and group closure.
AAA/SUA involvement, if any	None
Target population	Caregivers and care receivers with early stage dementia.
Is target population an underserved group?	No.
Where innovation implemented and when, if known	The study was conducted by the Center for Aging, Research, and Evaluation of Granada Hills Community Hospital and the Alzheimer's Association at California State University—Northridge in Los Angeles.
Contact information	Steven H. Zarit, Penn State University, Henderson Bldg. S-211, University Park, PA 16802. z67@psu.edu

Continued

Caregiver/Care Receiver Dyads, Support Groups: Zarit et al. 2004—Continued

Characteristics	Findings
Journal research citation	Zarit, S., Femia, E., Watson, J., Rice-Oeschger, L., & Kakos, B. (2004). Memory Club: A Group Intervention for People With Early-Stage Dementia and Their Care Partners. <i>The Gerontologist</i> , 44(2), 262–269.
Journal research summary	—
Description of data, including size	Participant dyads were recruited through geriatric assessment clinics, gerontological service agencies, the Alzheimer’s Association, and local media advertisements. Of fifty potential dyads, 24 were selected for participation after screening to identify those in which the care receiver had early stage dementia, generally having a Mini-Mental State Examination score of 25 or higher with awareness of their memory loss; those without excessive restlessness; and those without hearing problems.
Outcome measures	A structured interview was developed for the evaluation of the intervention by caregivers and care receivers, with a four point scale.
Design/Comparison group	Ex-post evaluation with no control group
Results	Caregiver and care receiver rated the intervention in the domains of the structured survey, including the skill of the group leaders, the quality of the information, the amount learned about memory problems, the amount learned about the feelings of the care partner, and how well each participant felt understood by the leaders and the group. Group members rated the intervention from good to excellent in all these areas.
Other important information about innovation	There was no control group, and no analysis of how consistently the group leaders implemented the features of the intervention.

Continued

Caregiver/Care Receiver Dyads, Support Groups: Zarit et al. 2004—Continued

Characteristics	Findings
Translation and replication material available?	None provided.
Relevant websites	None provided
Comments	Only one dyad dropped out of this study and nearly all of the rest attended every session, which is an unusually low attrition rate for studies in this population and supports the high participant rating of the intervention.

Caregivers, Education: Andren et al. 2008

Characteristics	Findings
Name of innovative practice	Structured psychosocial intervention for caregivers Andren S., & Elmstahl, S.
Category of Innovation	Evidence-informed
Description of innovative practice	<p>This psychosocial intervention employed ego therapy, which is designed to support and develop resources the individual has had since birth, such as language, memory, intelligence, defense mechanisms, and capacity [to deal, to be?] with other people.</p> <p>The intervention provided caregivers with a program of general education including strategies to mobilize assistance to help the caregivers reduce social isolation and improve their coping skills.</p> <p>The intervention provided caregivers with weekly 2-hour sessions of structured psychosocial intervention for five weeks followed by a conversation group for three months.</p> <p>The weekly sessions provided advice about dealing with problem behaviors and feelings of loss concerning changes in the care-receiver and in the caregiver's quality of life. Subjects covered included how to communicate with the care-receiver, care-receiver functional abilities, and care planning including when to consider institutional placement.</p> <p>The conversation group was voluntary and met bi-weekly for 90 minutes. The group, which was facilitated by a group leader, provided caregivers with emotional support, and the group leader also assisted the participants in finding community support services,</p>
AAA/SUA involvement, if any	None
Target population	Informal caregivers

Continued

Caregivers, Education: Andren et al. 2008—Continued

Characteristics	Findings
Is target population an underserved group?	No
Where innovation implemented and when, if known	Municipality in northern Sweden, beginning in 1999.
Contact information	Signe Andren, PhD, Department of Health Sciences, Division of Geriatric Medicine, Lund University, Malmo University Hospital, SE- 205 02 Malmo, Sweden. signe.andren@med.lu.se
Journal research citation	Andren S., & Elmstahl, S. (2008). Psychosocial intervention for family caregivers of people with dementia reduces caregiver's burden: development and effect after 6 and 12 months. <i>Scandinavian Journal of Caring Science</i> , 22, 98-109.
Journal research summary	—
Description of data, including size	308 family caregiver/care-receiver dyads were recruited from two districts of a municipality in northern Sweden. 153 dyads from one district were assigned to the intervention group and 155 dyads from the other district were assigned to the control group. All dyads lived in the community and received social services. Care-receivers had symptoms of cognitive decline, with a Mini-Mental State Examination score less than 24 and a diagnosis of dementia based on a clinical examination.

Continued

Caregivers, Education: Andren et al. 2008—Continued

Characteristics	Findings
<p>Outcome measures</p>	<p>Participants received the following evaluation before the-intervention and at 6 and 12 months:</p> <p>Caregivers:</p> <ul style="list-style-type: none"> • Caregiver Burden Scale for subjective burden • Carers' Assessment of Satisfaction Index for caregiver satisfaction. • Nottingham Health Profile for caregiver subjective health. <p>Care-Recipients:</p> <ul style="list-style-type: none"> • Katz Index of ADL • Berger Scale for dementia severity.
<p>Design/Comparison group</p>	<p>Quasi-experimental design with a non-randomized comparison group</p>
<p>Results</p>	<p>As compared with the control group, the intervention group experienced significantly lower subjective burden in the areas of strain and disappointment after 6 months, with the trend remaining after 12 months.</p> <p>Spouse caregivers in the intervention group experienced a significant reduction of strain one year after the intervention while spouse caregivers in the control group experienced an increase in strain.</p> <p>The level of isolation among spouse caregivers in the intervention group remained essentially constant while the level for the control group rose significantly.</p> <p>Caregivers of parents in the intervention group experienced a significantly higher level of satisfaction than their counterparts in the control group.</p> <p>Caregivers in the intervention group caring for care-recipients with high levels of physical illness had decreased levels of total burden six months after the intervention. Levels of total burden increased for this sub-group in the control group.</p> <p>Caregivers in the intervention group caring for care-recipients with lower levels of dementia (Berger score 0-2) experienced lower levels of burden six months after the intervention, with burden decreasing further after 12 months. Overall burden increased for this sub-group in the control group. No significant effect was shown for caregivers of care-recipients with severe dementia.</p>

Continued

Caregivers, Education: Andren et al. 2008—Continued

Characteristics	Findings
Other important information about innovation	The experiences of the groups could have differed because the groups were recruited in different time periods. However, no changes in the care system are known to have occurred between the time the control group started in April 1999 and when the intervention group began in January 2000.
Translation and replication material available?	None referenced in the article.
Relevant websites	None given in the article.
Comments	This group intervention demonstrated a benefit only for caregivers of family members with early-stage dementia.

Caregivers, Education: Burgio et al. 2009

Characteristics	Findings
Name of innovative practice	REACH OUT Burgio, Louis
Category of Innovation	Evidence-informed
Description of innovative practice	<p>This translational study modified the Resources for Enhancing Alzheimer’s Caregivers Health II (REACH II) study interventions for use by trained case managers in Area Agencies on Aging centers. The modification was targeted to decrease caregiver burden and depression, improve caregiver health, and decrease care-recipient risk and behavior problems.</p> <p>The Alabama Department of Senior Services and the University of Alabama, acting in partnership, established an Advisory Committee (including state, Area Agency on Aging directors and case managers, and University of Alabama project staff) that (a) selected Resources for Enhancing Alzheimer’s Caregivers Health treatment components for the caregiver population, and (b) determined the available resources for intervention. The University of Alabama’s Center for Mental Health and Aging tailored the Resources for Enhancing Alzheimer’s Caregivers Health intervention protocol and materials for use by case managers.</p> <p>A REACH OUT risk appraisal of caregiver stress and burden was used to help interventionist prioritize problem areas. The intervention protocol had five components:</p> <ul style="list-style-type: none"> • education about Alzheimer’s disease, caregiving and stress; • caregiver health: teaching caregivers to use a “health passport”; • home safety: safety risks in the home environment were assessed and suggestions made to reduce these risks; and • behavior management: “behavioral prescriptions” based on problem-solving target behaviors were

	<p>tailored to individual needs.</p> <ul style="list-style-type: none"> • stress management, including breathing exercises, listening to music, and stretching exercises. <p>Thirteen case managers and their supervisors were trained as interventionists in a 2-day, 12-hour workshop by the Center for Mental Health and Aging. The intervention package was introduced to caregivers over a 3- to 4-month period through four hour-long home visits, supplemented by three therapeutic telephone calls interspersed between the visits.</p> <p>During the intervention period, monthly phone calls from the Advisory Committee plus a phone “hotline” provided support to the interventionists, and adherence to protocols was measured in the count of home visits and telephone calls plus a checklist of techniques used in each contact.</p>
AAA/SUA involvement, if any	The Alabama Department of Senior Services participated in the study through a 2004 Alzheimer’s Disease Demonstration Grant to states grant award project. Four Alabama AAAs participated in the project.
Target population	Informal caregivers
Is target population an underserved group?	39 percent of the dyads served in the intervention were African-American.
Where innovation implemented and when, if known	Alabama
Contact information	Louis D. Burgio, PhD, University of Michigan, School of Social Work, 1080 S. University, Ann Arbor, MI. 48109. E-mail: lburgio@umich.edu
Journal research citation	Burgio, L, Collins, I., Schmid, B., Wharton, T., McCallum, D., & DeCoster, J. (2009). Translating the REACH caregiver intervention for use by Area Agency on Aging personnel: the REACH OUT Program. <i>The Gerontologist</i> . Advance Access.
Journal research summary	—

<p>Description of data, including size</p>	<p>Four Area Agencies on Aging in Alabama were selected based on highest death rates from Alzheimer’s disease; two in rural and two in urban areas. Case managers volunteered to become trained as interventionists, and caregiver-recipient dyads were recommended for the study by these case managers. Caregivers providing primary care for an individual with cognitive deficits were eligible, and care recipients were not restricted to dementia-related diagnoses.</p> <p>Of the 272 dyads enrolled, 55 percent were rural, 45 percent were urban, and 77 percent of the caregivers were female. Sixty percent of the sample was Caucasian, and 39 percent African American. Caregivers were spouses in 48 percent, and children in 46 percent of the 150 households that reported this information. Although 265 dyads received all four home visits, data are only available for 236 dyads because of data transmission problems between agencies. The discontinuation rate was 17 percent, with 19 care-receivers placed in nursing home or dying, and the other 17 discontinued for reasons unknown.</p> <p>A total of 95.2 percent of the caregivers received all of the treatment components, ranging from 88.6 percent for the caregiver passport to 98.5 percent for the safety walk-through.</p>
<p>Outcome measures</p>	<p>During the first and last home visits:</p> <p>Zarit Burden Scale (Short Version) measured treatment effects on caregiver burden in emotional and physical strain.</p> <p>Changes in caregiver perceived health, care recipient behavioral disturbances, and mood were measured by the Alabama Resources for Enhancing Alzheimer’s Caregivers Health Caregiver Questionnaire (derived from REACH II).</p> <p>Change in care recipient risk-taking behavior was measured by the Alabama Risk Assessment, a 21-item measure of risks such as smoking, wandering, lack of</p>

	<p>supervision, Activities of Daily Living burden, driving, etc.</p> <p>The outcome measure for the extent of treatment implementation was the Treatment Fidelity Form, a checklist of treatment components used at each contact and number of visits and calls made.</p>
Design/Comparison group	<p>Quasi-experimental pre-post design with no comparison group</p>
Results	<p>Caregivers participating in the intervention reported decreased depression and increased social support and positive aspects of caregiving. Caregivers did not report any change in the stress they experienced from assisting the care receiver with Activities of Daily Living or the bother of care receiver behavior.</p> <p>Caregivers reported engaging in significantly fewer risky behaviors, such as leaving the care recipient unsupervised. Caregivers reported positive change regarding their own health for all items measured. On a satisfaction survey administered in the last session, more than 93 percent reported positive responses to every aspect of the intervention.</p> <p>Significant race effects were found in two outcomes. First, more African American caregivers than Caucasians experienced increased positive aspects of caregiving. Second, the intervention had a significantly stronger influence in decreasing the overall burden for Caucasian caregivers than for African Americans. The authors posit that the latter is because of the low Activities of Daily Living burden levels at baseline among the African American caregivers. No significant differences were found between races in any of the risk variables, influence of the intervention on risk behaviors, or in satisfaction with the intervention.</p> <p>Case managers were able to learn and effectively implement the intervention. Focus group participants were generally positive in their assessment of the intervention experience, and felt that all components of</p>

	the intervention were useful.
--	-------------------------------

Caregivers, Education: Coen et al. 1999

Characteristics	Findings
Name of innovative practice	Carer Education Programme on carer quality of life, burden, and well-being Coen, R., O'Boyle, C., Coakley, D., & Lawlor, B.
Category of Innovation	Evidence-informed
Description of innovative practice	The Carer Education Programme is designed to improve caregiver quality of life and well-being and reduce burden. The intervention provides eight weekly two-hour sessions covering general information on dementia and services available, management of everyday problems, communication techniques, coping with loss, management of stress, hospitalization, and legal issues. The intervention employs Reality Orientation therapy, which uses continual and repeated reminders to encourage in an increase in interaction with others and improved orientation.
AAA/SUA involvement, if any	None
Target population	Informal caregivers
Is target population an underserved group?	Not specified
Where innovation implemented and when, if known	Ireland
Contact information	Robert Coen, Mercer's Institute for Research on Ageing, St. James's Hospital, Dublin 8, Ireland. Tel: 00-353-1-4537941 ext. 2640/2641. Fax: 00-353-1-4541796.

Journal research citation	Coen, R., O'Boyle, C., Coakley, D., & Lawlor, B. (1999). Dementia carer education and patient behaviour disturbance. <i>International Journal of Geriatric Psychiatry</i> , 14(4), 302-6.
----------------------------------	---

Continued

Caregivers, Education: Coen et al. 1999—Continued

Characteristics	Findings
Journal research summary	—
Description of data, including size	<p>A convenience sample of 32 caregivers of persons with dementia attending a hospital memory clinic received the intervention and 28 completed the 6-7 month follow-up interview.</p> <p>17 of the participants were diagnosed with Alzheimer's disease, three with vascular dementia, and three with both diagnoses.</p>

<p>Outcome measures</p>	<p>Data were collected from participants before the intervention and six-seven months after the intervention for:</p> <p>Care-receivers:</p> <ul style="list-style-type: none"> • Mini Mental State Examination for cognitive issues • Baumgarten Dementia Behaviour Disturbance Scale for behavioral issues • Blessed-Roth Dementia Scale for functional status <p>Caregivers:</p> <ul style="list-style-type: none"> • Schedule for the Evaluation of Individual Quality of Life-Direct Weighting for quality of life • Zarit Burden Interview for burden • General Health Questionnaire for well-being • Behaviors identified on the Baumgarten Dementia Behaviour Disturbance Scale for tolerability of patient problems • Vaux Social Support Appraisal Scale for appraisal of informal social support and knowledge of dementia <p>While responding to the Zarit Burden interview at follow-up, caregivers also rated whether they felt that any changes were partially, mainly, or had nothing to do with the program.</p>
<p>Design/Comparison group</p>	<p>Pre-post intervention with no control group</p>

Continued

Caregivers, Education: Coen et al. 1999—Continued

Characteristics	Findings
Results	<p>All caregivers reported a significant increase in caregiver knowledge about dementia. However, caregivers experienced increased caregiver burden and significant worsening in caregiver appraisal of social support. Patient functioning declined, and behavior disturbances increased during the period.</p> <p>Caregivers reporting a worse situation after the intervention experienced increased caregiver burden, poorer quality of life, poorer appraisal of social support, and significantly greater difficulty tolerating patient behaviors. Caregivers reporting a better or the same situation reported no change in these domains.</p>
Other important information about innovation	<p>The study sample is small, with 16 participants reporting a better or the same situation at follow-up while 12 reported a worse situation.</p>
Translation and replication material available?	<p>None referenced in the article</p>
Relevant websites	<p>None given in the article</p>
Comments	<p>The article does not specify what specific techniques were employed in the sessions, nor the qualifications of the group leader.</p>

Caregivers, Education: Devor et al. 2008

Characteristics	Findings
Name of innovative practice	Educational Intervention for Caregivers of Elders with Dementia Devor , M., & Renvall, M.
Category of innovation	Evidence-informed
Description of innovative practice:	<p>This educational intervention is designed to help caregivers cope with burden and stress, increase feelings of competence, and learn about community resources. Six hours of seminar instruction are offered as six 1-hour sessions or four 1 ½ hour sessions, covering six subjects: understanding the pathology of Alzheimer disease and how the caregiver and care-receiver can remain close; preparing for the future for the caregiver and care-receiver; communication techniques for positive interaction between the caregiver and care-receiver with effective management of behaviors and reactions; how to protect the caregiver and care-receiver using good body mechanics and infection control and make the home environment safe; accomplishing activities of daily living with decreased caregiver stress while maintaining care-receiver independence; and ideas for keeping the care-receiver functioning well including activities you can enjoy together.</p> <p>The sessions were facilitated by social workers or nurses with training in working with dementia family dyads, and employed lectures, role-playing, videos, and group discussions.</p>
AAA/SUA involvement, if any	None reported
Target population	Informal Caregivers
Is target population an underserved group?	A Spanish syllabus has been prepared and the course presented to Spanish-speaking as well as English-speaking caregivers. Some participants were recruited from rural areas.

Continued

Caregivers, Education: Devor et al. 2008—Continued

Characteristics	Findings
Where innovation implemented and when, if known	San Diego County, California
Contact information	Michelle Devor, MD, FACP Department of Medicine Section of General Internal Medicine/Geriatrics Veterans Affairs San Diego Healthcare System La Jolla, CA 92161 e-mail: mjdevor@san.rr.com
Journal research citation	Devor , M., & Renvall, M. (2008). An Educational Intervention to Support Caregivers of Elders With Dementia <i>American Journal of Alzheimer’s Disease and Other Dementias</i> , 23; 233-241.
Journal research summary	—
Description of data, including size	Participants were recruited from urban, suburban, and rural regions of San Diego County through nonprofit and governmental agencies working with the elderly, community health fairs, the Alzheimer’s Association, and media advertisements. 300 participants attended sessions over three years; 64% attended all sessions and an additional 14% only missed one session.
Outcome measures	At baseline and six months a written questionnaire was given (mailed at 6 months) with the following tests to measure caregiver burden: <ul style="list-style-type: none"> • Pearlin Caregiver Overload • Pearlin Caregiver Competence • Zarit Burden Interview 67% of participants returned baseline questionnaire 29% of participants returned the six-month questionnaire
Design/Comparison group	Pre-post

Continued

Caregivers, Education: Devor et al. 2008—Continued

Characteristics	Findings
Results	There was a significant improvement in self-perceived caregiver competence and a non-significant improvement in caregiver overload at six months, but no change in Zarit Burden Interview scores.
Other important information about innovation	Participants with lower self-perceived caregiver competence at baseline did have a statistically significant improvement in caregiver stress, overload, and burden scores.
Translation and replication material available?	The course manual is published as Glenner JA, Stehman JM, Davagnino J, Galante MJ, Green ML. <i>When Your Loved One Has Dementia</i> . Baltimore, MD: John Hopkins University Press; 2005
Relevant websites	None reported
Comments	The response rate for the six month questionnaire is quite low, although the authors report that there is no significant difference in baseline characteristics between responders and non-responders.

Caregivers, Education: Kuzu et al. 2005

Characteristics	Findings
Name of innovative practice	Comprehensive Caregiver Educational Program for Quality of Life and Emotional Issues Kuzu, N., Beser, N., Zencir, M., Sahiner, T., Nesrin, E., Ahmet, E., Binali, C., & Cagdas, E.
Category of innovation	Evidence-informed
Description of innovative practice:	<p>The intervention was developed to improve caregiver quality of life and assist caregivers in dealing with emotional issues.</p> <p>The intervention, administered to each caregiver individually, lasts 50 minutes and comprises 3 sections: a general information session on Alzheimer’s disease, an individualized educational component to address problem areas identified by caregivers, and an educational booklet.</p> <p>The general information session includes a presentation of the disease and discussions of how to deal with associated behavioral disorders, arrange the home, and organize daily life. For the individualized educational component. The intervention provides a standardized nursing assessment of patient and caregiver problems and suggested solution strategies. At the end of the intervention, caregivers received a colorful and large-font educational booklet developed for the intervention and containing solution methodologies for problems identified by caregivers at the baseline testing interview held two weeks before the intervention.</p>
AAA/SUA involvement, if any	None
Target population	Informal Caregivers
Is target population an underserved group?	Not specified.

Continued

Caregivers, Education: Kuzu et al. 2005—Continued

Characteristics	Findings
Where innovation implemented and when, if known	Turkey
Contact information	Not given.
Journal research citation	Kuzu, N., Beser, N., Zencir, M., Sahiner, T., Nesrin, E., Ahmet, E., Binali, C., & Cagdas, E. (2005). Effects of a Comprehensive Educational Program on Quality of Life and Emotional Issues of Dementia Patient Caregivers. <i>Geriatric Nursing, 26</i> , 378-386.
Journal research summary	—
Description of data, including size	Out of 80 potential caregivers of care-receivers with dementia diagnoses attending outpatient Alzheimer’s clinics in 3 hospitals, 32 caregivers were eligible and agreed to participate. The mean Mini Mental State Examination for the care-receivers was 11.6, and 19 of the care-receivers had an additional chronic disease such as cardiovascular disease or diabetes. Caregivers were either children or spouses.
Outcome measures	<p>At baseline (two weeks prior to the informational meeting)</p> <p>To caregivers: a 100 item questionnaire for socio-demographic information and caregiver/care-receiver problem areas.</p> <p>To care-receivers: Mini-Mental Status Examination for cognitive status.</p> <p>At baseline and at four weeks to caregivers:</p> <p>Duke Scale for health related quality of life</p> <p>Beck Anxiety Inventory</p> <p>Beck Depression Scale</p>

Continued

Caregivers, Education: Kuzu et al. 2005—Continued

Characteristics	Findings
Design/Comparison group	Pre-post
Results	<p>At four weeks, caregiver health-related quality of life and functional health-related scores improved, with a significant decrease in depression and anxiety scores.</p> <p>A significant number of caregivers also reported improvements in care-receiver sleep and eating patterns, trauma risk, self-care deficit, powerlessness, altered sensory-perceptual processes and anxiety.</p>
Other important information about innovation	The relatively small sample size and the lack of a control group are the main limitations of this study.
Translation and replication material available?	None provided
Relevant websites	None provided
Comments	—

Caregivers, Education: Lewis et al. 2009

Characteristics	Findings
Name of innovative practice	Stress-Busting Program for Family Caregivers Lewis, S., Miner-Williams, D., Novian, A., Escamilla, M., Blackwell, P., Kretzschmar, J., Arevalo-Flechas, L., & Bonner P.
Category of innovation	Evidence-informed
Description of innovative practice	<p>This intervention is designed to help family caregivers of persons with dementia with stress management.</p> <p>The intervention is delivered in a psychoeducational support group of 1 and ½ hours weekly for 9 consecutive weeks and covering the following subjects:</p> <ul style="list-style-type: none"> • Week 1—group introduction and guidelines • Week 2 and 3—stress and relaxation training • Week 4—reactions to grief and loss • Week 5—coping skills • Week 6—challenging behaviors • Week 7—positive thinking • Week 8—healthy living • Week 9—review of previous sessions. <p>Caregivers receive a handbook, a relaxation/meditation CD to use daily, and a book of caregiver resources.</p>
AAA/SUA involvement, if any	None
Target population	Informal Caregivers
Is target population an underserved group?	Participants included 53 Hispanic/Latin American caregivers, primarily of Mexican/American descent
Where innovation implemented and when, if known	South Texas

Continued

Caregivers, Education: Lewis et al. 2009—Continued

Characteristics	Findings
Contact information	Sharon Lewis, PhD RN FAAN School of Nursing and Medicine, University of Texas Health Science Center at San Antonio. San Antonio, TX lesissl@uthscsa.edu
Journal research citation	Lewis, S., Miner-Williams, D., Novian, A., Escamilla, M., Blackwell, P., Kretzschmar, J., Arevalo-Flechas, L., & Bonner P. (2009). A Stress Busting Program for Family Caregivers. <i>Rehabilitation Nursing</i> , 34(4). 151-159.
Journal research summary	—
Description of data, including size	Convenience sample of 209 caregivers recruited from a metropolitan area. Care-receivers had a mean score of 4 on the Reisberg classification scale, which scores from 1 (little cognitive decline) to 7 (severe dementia).
Outcome measures	Participant caregivers were evaluated at baseline, during the intervention at 4 weeks, after the intervention at 9 weeks, and at a follow-up session 2 months following the completion of the intervention: <ul style="list-style-type: none"> • Screen for Caregiver Burden for distressing caregiver experiences • Perceived Stress Scale for self-reported stress • SF-36 Health Survey for self-reported health • Symptom Questionnaire for caregiver health symptoms • Center for Epidemiologic Depression Scale for depression
Design/Comparison group	Pre-post

Continued

Caregivers, Education: Lewis et al. 2009—Continued

Characteristics	Findings
Results	Caregivers showed significant improvement in levels of perceived stress, subjective caregiver burden, depression, anxiety, and anger/hostility, and improvement in general health, vitality, social function and mental health at 9 weeks with continued improvement 2 months later.
Other important information about innovation	The intervention was delivered to multiple groups, and the actual content of the sessions varied with the expressed needs of each group
Translation and replication material available?	None provided
Relevant websites	None provided
Comments	—

Caregivers, Education: Magai et al. 2002

Characteristics	Findings
Name of innovative practice	<p>Training Dementia Caregivers in Sensitivity to Nonverbal Emotion Signals.</p> <p>Magai, C., Cohen, C., & Gomberg, D.</p>
Category of innovation	Promising Practice
Description of innovative practice	<p>The intervention trains caregivers in sensitivity to nonverbal care-receiver communication in order to enhance mood and reduce symptoms in care-receivers and improve psychological well-being among caregivers.</p> <p>The intervention provides 10 one-hour lecture/experiential sessions over two weeks, training caregivers in nonverbal communication and emotion expression. The sessions covered universal and culture-specific aspects of basic emotions; selective perception of emotion, personal emotional triggers; facial, vocal, and bodily indicators of emotion; and cues for emotions. The instruction employed practice with various media to improve caregiver ability to recognize emotional cues, discussions of deleterious effects of certain kinds of emotion communication, and training in emotion validation skills.</p> <p>Sessions were led by a clinical psychologist.</p>
AAA/SUA involvement, if any	None
Target population	Formal caregivers
Is target population an underserved group?	<p>93 percent of care-receivers were white.</p> <p>82 percent of the formal caregivers were African-American.</p>

Continued

Caregivers, Education: Magai et al. 2002—Continued

Characteristics	Findings
Where innovation implemented and when, if known	Not stated.
Contact information	Carol Magai, Ph.D. Department of Psychology Long Island University 1 University Plaza Brooklyn, NY 11201 emagai@liu.edu
Journal research citation	Magai, C., Cohen, C., & Gomberg, D. (2002). Impact of Training Dementia Caregivers in Sensitivity to Nonverbal Emotion Signals. <i>International Psychogeriatrics</i> , 14(1) 25-38.
Journal research summary	—
Description of data, including size	99 care-receivers with dementia in an inpatient setting; Mini Mental Status Examination mean score of 3.4. 91 completed the study (6 died and 2 were relocated). All 21 participating formal caregivers caring for these care-receivers were female and 82 percent of them were African-American. Caregivers were randomly assigned to three conditions: the intervention training group, a behavioral training group, and a no-training control group

Continued

Caregivers, Education: Magai et al. 2002—Continued

Characteristics	Findings
Outcome measures	<p>At baseline, and at 3, 6, 9, and 12 weeks after training:</p> <p>1) Caregivers provided data about care-receivers in interviews using the following:</p> <ul style="list-style-type: none"> • Behavioral Pathology in Alzheimer’s Disease Rating Scale for care-receiver delusions and hallucinations • Cohen Mansfield Agitation Inventory for care-receiver behaviors • Cornell Scale for Depression in Dementia for care-receivers <p>2) Care-receivers were rated by trained observers using a system of coding of care-receiver facial expressions of emotion developed for the Adult Developmental Interview.</p> <p>3) Caregivers were rated with the Brief Symptom Inventory for depression, anxiety, and somatic symptoms.</p>
Design/Comparison group	<p>Randomized controlled trial. A behavioral training group received the same number of sessions as the intervention training group with instruction in cognitive and behavioral aspects of dementia. A no-training control group received no training during the study. This group received training in the intervention after the study was completed.</p>
Results	<p>The intervention had a significant effect on caregiver Brief Symptom Inventory scores, indicating a decline in depression, anxiety, and somatic symptoms. Negative symptoms for the behavioral training group also declined somewhat, while those of the control group remained constant.</p> <p>The intervention had only limited effects on care-receivers, with a short-term increase in positive affect (expressions of joy) for those cared for by caregivers in the intervention training.</p>

Continued

Caregivers, Education: Magai et al. 2002—Continued

Characteristics	Findings
Other important information about innovation	The long-term impact on the caregivers is not known.
Translation and replication material available?	A copy of the training manual is available from the authors on request.
Relevant websites	None provided.
Comments	Although the intervention was provided in an institutional setting, this group training requires no prerequisite knowledge of nonverbal communication and was effectively implemented with certified nursing assistants. As a group intervention it could be structured in classes for formal or informal caregivers in the community setting.

Caregivers, Education: Roberts et al. 2009

Characteristics	Findings
Name of innovative practice	Taking Control of Alzheimer’s Disease: Techniques for Early-Stage Patients and the Care-Partners Roberts, J., & Silverio, E.
Category of innovation	Promising Practice
Description of innovative practice	<p>This intervention is designed to empower caregivers and care-receivers to take an active role in coping with the disease and seeking out support and education resources.</p> <p>This group intervention meets weekly for four weeks, led by a trained facilitator with experience in dementia care and occasional guest speakers (e.g., elder law attorneys and caregivers from previous Taking Control series). Sessions last about 2 hours and take place at community sites convenient for area participants. The series includes a combination of didactic and interactive activities designed both to educate about Alzheimer’s disease and provide support in coping with its stresses, with both large-group instruction and breakout sessions where caregivers and care-receivers meet in separate groups. Groups typically have 6 to 10 dyads.</p> <p>Participants are provided extensive written educational materials including a copy of Helen Davies’ [1998] <i>Alzheimer’s: The Answers You Need</i>).</p>
AAA/SUA involvement, if any	None
Target population	Dyads (persons with dementia and informal caregivers)
Is target population an underserved group?	No
Where innovation implemented and when, if known	Massachusetts
Contact information	Not given

Continued

Caregivers, Education: Roberts et al. 2009—Continued

Characteristics	Findings
Journal research citation	Roberts, J., & Silverio, E. (2009). Evaluation of an Education and Support Program for Early-Stage Alzheimer's Disease. <i>Journal of Applied Gerontology</i> , 28(4), 419-435.
Journal research summary	—
Description of data, including size	37 dyads of caregiver and care-receiver with an early stage dementia diagnosis were recruited through the Early State Program of the Massachusetts Chapter of the Alzheimer's Association.
Outcome measures	<p>At baseline, 4 weeks, and 3 months:</p> <ul style="list-style-type: none"> • Modified Mini-Mental State Examination for orientation, memory, naming, verbal fluency, summary reasoning, the ability to follow commands, and constructional ability. • An 11-item self-report questionnaire created for the intervention for participant satisfaction • A 22-item true/false measure based on existing measures for knowledge about Alzheimer's disease, including a scale developed in a telephone survey of more than 1,200 randomly selected adults in Michigan and (b) the Family Knowledge of Alzheimer's Test • An adaptation of Merluzzi's measure of illness coping for self-efficacy • Adapted portions of the Psychosocial Adjustment to Illness Scale for psychosocial adjustment to illness <p>Margaret Blenkner Research Center Caregiver Strain Instrument for caregiver strain</p> <p>Alzheimer's disease-related behaviors and attitudes were assessed by joint interview of the person with dementia and his/her care-partner at baseline and at 3 months.</p>
Design/Comparison group	None

Continued

Caregivers, Education: Roberts et al. 2009—Continued

Characteristics	Findings
Results	<p>The major findings of the study were in regard to behavior and attitude change. At three months for care-receivers, there were significant increases in regular physical exercise, decreases in driving, improved diet, and increased enrollment in the Alzheimer’s Association Safe Return program.</p> <p>Dyads reported significant increases in financial or legal planning and advanced medical planning, and a significant number of the dyads felt more in control and more accepting of the diagnosis. A significantly larger number of the dyads had also enrolled in an ongoing Alzheimer’s support group.</p> <p>The study found no increase in Alzheimer’s knowledge, which was already high for this sample. There was a non-significant increase in coping self-efficacy for care-receivers as rated by caregivers.</p>
Other important information about innovation	<p>This relatively small sample had no racial/ethnic diversity and was predominately of high socioeconomic status, and the study lacked a comparison group.</p>
Translation and replication material available?	<p>Helen Davies’ [1998] <i>Alzheimer’s: The Answers You Need</i> is cited a prime reference for participants in the intervention. No other materials given.</p>
Relevant websites	<p>None given</p>
Comments	<p>Most of the measures used are unique to this study, making it difficult to evaluate its effectiveness in comparison with other interventions.</p>

Caregivers, Education: Stern et al. 2008

Characteristics	Findings
<p>Name of innovative practice</p>	<p>At the Crossroads</p> <p>Stern, R., D’Ambrosio, L., Mohyde, M., Carruth, A., Tracton-Bishop, B., Hunter, J., Daneshvar, D., & Coughlin, J.</p>
<p>Category of innovation</p>	<p>Evidence-informed</p>
<p>Description of innovative practice:</p>	<p>This psycho-educational group intervention is designed to help caregivers of persons with dementia cope with issues related to reducing or stopping driving by the care-receiver.</p> <p>The intervention provided four two-hour group educational sessions in groups of 4 to 10 caregivers. Supervision at the site was available for care-receivers if requested. The meetings were led by a research associate using interactive teaching methods, and motivational interviewing practices</p> <p><i>Session one</i> provided an orientation to the course, and background information on the driving and dementia issue.</p> <p><i>Session two</i> included a “tool kit” for the driving transition with information about the warning signs of impaired driving for two scenarios and discussion of the caregivers’ circles of support, individuals to help with the driving transition.</p> <p><i>Session three</i> employed a video case study of driving cessation for dementia.</p> <p><i>Session four</i> included information on last resort techniques, including contacting the department of motor vehicles, and removing the car.</p> <p>Between sessions, caregivers documented changes in care-receiver driving and initiated conversations with the care-receiver on various subjects.</p>
<p>AAA/SUA involvement, if any</p>	<p>None</p>

Continued

Caregivers, Education: Stern et al. 2008—Continued

Characteristics	Findings
Target population	Informal caregivers
Is target population an underserved group?	None specified
Where innovation implemented and when, if known	2005 and 2006
Contact information	Robert A. Stern, PhD, Alzheimer’s Disease Clinical and Research Program, Boston University School of Medicine, 715 Albany Street, B7800, Boston, MA 02118-2526, bobstern@bu.edu
Journal research citation	Stern, R., D’Ambrosio, L., Mohyde, M., Carruth, A., Tracton-Bishop, B., Hunter, J., Daneshvar, D., & Coughlin, J. (2008). At the Crossroads: Development and evaluation of a dementia caregiver group intervention to assist in driving cessation. <i>Gerontology and Geriatric Education</i> , 29(4), 363–382.
Journal research summary	—
Description of data, including size	<p>The participants were recruited through senior centers, councils on aging, caregiver support groups, continuing care retirement centers, and the media, and were caregivers of family members who were diagnosed with mild cognitive impairment, Alzheimer’s disease, or a related dementia according to the caregiver. Caregivers had a minimum of four hours face-to-face contact in the previous month with the care receiver, anticipated playing a role in the driving decision, had English as primary language, were willing to be considered for all three arms of the study; and were available for the scheduled sessions. Care-receivers had driven an automobile an average of two driving trips per week over the previous month.</p> <p>The caregivers were randomly divided into three groups: the intervention group (31); a group that received written materials only (23), and a control group (12).</p>

Continued

Caregivers, Education: Stern et al. 2008—Continued

Characteristics	Findings
<p>Outcome measures</p>	<p>At baseline and approximately 8 weeks:</p> <ul style="list-style-type: none"> • A 7-item questionnaire about self-efficacy regarding the ability to handle problems about the loved one’s driving cessation was created, modeled after the Self-Efficacy Questionnaire • The Brief COPE scale for caregiver self-reported coping ability • A two-item scale—(1) “I have been talking with family members/friends about how to address the issue of limiting/stopping driving with my loved one;” and (2) “I have made a plan about how to talk with my loved one about limiting/stopping driving.” • A yes-no question asking: “Are you ever concerned that your relationship with your loved one will be hurt if you talk about driving?” <p>Participants were asked at posttest whether or not they had spoken to their loved one about his or her current driving skills or limiting driving.</p> <p>Participants were asked whether they were aware of the “Agreement with My Family about Driving,” a key component to the <i>At the Crossroads</i> materials, and, if they had used the Agreement.</p>
<p>Design/Comparison group</p>	<p>The written materials group received written materials including the “Agreement” after the baseline measurement, and invited to a one-time educational meeting. The control group received written materials after the 8 week post-test.</p>

Continued

Caregivers, Education: Stern et al. 2008—Continued

Characteristics	Findings
Results	<p>At post-test, the intervention group had significantly higher certainty of their ability to handle driving-related issues than the written materials and control groups.</p> <p>The intervention group also had significantly higher coping abilities than the written materials and control groups in the areas of expressing negative feelings and of being accepting of their situation.</p> <p>Intervention group also reported a significantly higher level of preparedness to discuss the driving issue with the care-receiver, and were significantly less concerned about the care-receiver's possible reaction.</p> <p>At post-test, 90% of the intervention caregivers had spoken to the care-receiver about driving, compared to 52 percent for the written material group and 58 percent for the control group. Over 97 percent of the intervention caregivers were aware of the Agreement, compared to 10 percent of the written materials group and none of the control group. 23 percent of the intervention caregivers used the Agreement.</p>
Other important information about innovation	<p>The study was small, and likely attracted a particularly motivated type of caregiver as all participants agreed to be placed in a control group if selected for that group. One group facilitator conducted all the groups, so there was no basis for comparison of facilitator styles. The study did not follow up to see if care-receivers actually stopped driving at an appropriate time as a result of the intervention.</p>
Translation and replication material available?	<p>The intervention is based on the booklet <i>At the Crossroads: A Guide to Alzheimer's Disease, Dementia and Driving</i>, produced and distributed by The Hartford Financial Services Group in 2000.</p> <p>A Support Group Leaders Kit has been developed, but the source for acquiring it is not specified in the article.</p>
Relevant websites	None specified
Comments	—

Caregivers, Counseling: Bormann et al. 2009

Characteristics	Findings
Name of innovative practice	Spiritually-based support by telephone for caregivers of veterans. Bormann, J., Warren, K., Regalbutto, L., Glaser, D., Kelly, A., Schnack, J., & Hinton, L.
Category of innovation	Promising Practice
Description of innovative practice	<p>The intervention is designed to reduce caregiver stress through mantram repetition, in which a word or phrase is silently repeated to promote calmness. The intervention also included teaching of the cognitive behavioral skills of assertive listening skills, identifying and replacing dysfunctional thoughts, and planning pleasurable activities.</p> <p>The intervention was conducted through weekly one hour sessions for 8 weeks to groups of 3 to 5 caregivers, with follow-up contacts at weeks 10, 12, 14, and 16.</p> <p>Face-to-face meetings were held in weeks 1 and 8, teleconference calls in weeks 2 through 7. The facilitators conducted individual phone calls in weeks 10, 12, and 14 to assess adherence to, and encourage practice of, mantram repetition and cognitive-behavioral skills.</p> <p>Participants who wanted them were supplied with headsets.</p>
AAA/SUA involvement, if any	None
Target population	Informal Caregivers
Is target population an underserved group?	One Asian caregiver participated.
Where innovation implemented and when, if known	Veterans Affairs hospital outpatient geriatric psychiatry unit in southern California

Continued

Caregivers, Counseling: Bormann et al. 2009—Continued

Characteristics	Findings
Contact information	Jill Bormann, PhD, RN, Veterans Affairs San Diego Healthcare System, 3350 LaJolla Village Dr 111N-1, San Diego, CA 92161 jill.bormann@va.gov
Journal research citation	Bormann, J., Warren, K., Regalbutto, L., Glaser, D., Kelly, A., Schnack, J., & Hinton, L. (2009). A spiritually based caregiver intervention with telephone delivery for family caregivers of veterans with dementia. <i>Family and Community Health</i> , 32(4), 345-53.
Journal research summary	—
Description of data, including size	21 caregivers of veterans with dementia, Alzheimer’s disease, Parkinson disease, brain injury, or other cognitive impairment were recruited from provider referrals and flyers through a Veterans Affairs hospital outpatient geriatric psychiatry clinic. All participants were able to speak, read, and comprehend English, without hearing difficulty, and able to maintain confidentiality. Sixteen of the caregivers completed the study.
Outcome measures	At week 1, week 8, and week 16, caregivers completed: <ul style="list-style-type: none"> • Zarit Caregiver Burden Scale • Perceived Stress Scale • Clinical Epidemiology Study for Depression (CESD)—Short Form, • Rumination scale developed by Nolen-Hoeksema, 2000 • Spielberger Trait- Anger subscale • Quality of Life Enjoyment and Satisfaction Questionnaire Short Form • Mindfulness Attention Awareness Scale • Client Satisfaction Questionnaire At weeks 10, 12, 14, and 36, the facilitators conducted structured telephone interviews using “yes” or “no” questions regarding mantram and cognitive–behavioral skills.

Continued

Caregivers, Counseling: Bormann et al. 2009—Continued

Characteristics	Findings
Design/Comparison group	Pre-post evaluation with no comparison group
Results	<p>Caregiver burden, rumination, depression, and perceived stress decreased significantly during the intervention, while perceived caregiver quality of life increased.</p> <p>Adherence to the mantram technique remained high at week 36, with all but one participant continuing to use the technique.</p> <p>Participants were still employing the cognitive-behavioral skills they learned at week 36, with 9 using assertive listening skills, 11 identifying and replacing dysfunctional thoughts, and 14 planning pleasurable activities..</p>
Other important information about innovation	The small size of the study and the lack of a comparison group limit the generalizability of the findings. A telephone group consumes less caregiver time and energy and can make the intervention accessible to more caregivers.
Translation and replication material available?	None provided
Relevant websites	None provided
Comments	It is not possible to know from these findings how much the improvement in caregiver condition is due to the mantram and how much is due to the behavioral skill training.

Caregivers, Support Groups: Javadpour et al. 2008

Characteristics	Findings
Name of innovative practice	Educative support group for female family caregivers Javadpour, A., Ahmadzadeh, L., & Jafar Bahredar, M.
Category of innovation	Evidence-informed
Description of innovative practice:	The intervention provided 8 weekly sessions conducted by a trained senior psychiatry resident covering the Alzheimer Association's Guideline for Carers. Each session began with 30 minutes of information on dementia, including challenging behaviors and problems that caregivers may encounter, followed by 90 minutes of interactive group activities during which each participant discussed her personal problems and shared her opinion and experience of caregiving.
AAA/SUA involvement, if any	None
Target population	Informal Caregivers
Is target population an underserved group?	Female caregivers
Where innovation implemented and when, if known	Not stated, probably Iran
Contact information	A. Javadpour, Department of Psychiatry, Shiraz University of Medical Sciences, Hafez Hospital, Shiraz, Iran. javadpoura@sums.ac.ir
Journal research citation	Javadpour, A., Ahmadzadeh, L., & Jafar Bahredar, M. (2008). An educative support group for female family caregivers: impact on caregivers psychological distress and patient's neuropsychiatry symptoms. <i>International Journal of Geriatric Psychiatry</i> , 24, 469–471.
Journal research summary	—

Continued

Caregivers, Support Groups: Javadpour et al. 2008—Continued

Characteristics	Findings
Description of data, including size	29 of 84 caregivers identified and selected for the study agreed to participate and were divided into groups of 15 and 14. Both groups received the intervention.
Outcome measures	At baseline and outcome: <ul style="list-style-type: none"> • Perceived Stress Scale-10 (SPSS-10) • Farsi version of the General Health Questionnaire (GHQ) • Classic Neuropsychiatry Inventory • Clinical Dementia Rating (CDR) before and after intervention.
Design/Comparison group	None
Results	The intervention had significant positive effects on the level of perceived stress, general health and neuropsychiatry symptoms in caregivers and their family demented patients, with a significant decrease in scores on the Perceived Stress Scale, General Health Questionnaire, and Classic Neuropsychiatry Inventory.
Other important information about innovation	The findings are compatible with other studies in this population.
Translation and replication material available?	None identified.
Relevant websites	None provided.
Comments	This small and relatively unstructured intervention suggests that even a very basic opportunity to learn and share provides caregivers with measurable benefits.

Caregivers, Interventions Involving Technology: Chiu et al. 2009

Characteristics	Findings
Name of innovative practice	<p>Internet-based Computer Support Service</p> <p>Chiu, T., Marziali, E., Colantonio, A., Carswell, A., Gruneir, M., Tang, M., & Eysenbach, G.</p>
Category of innovation	<p>Promising Practice</p>
Description of innovative practice	<p>The intervention was conducted to evaluate Chinese Canadian dementia caregiver response to using an online support service and to observe whether the intervention could reduce caregiver burden.</p> <p>The intervention provided caregivers with two internet-based communication tools for six months: a caregiver information handbook and personalized e-mail communication between the caregiver and a clinician in social work and/or occupational therapy.</p> <p>The web-based caregiving information handbook provided more than 400 pages of information on disease diagnosis and progression, caregiving strategies, and a listing of community resources. The content was developed by a team of occupational therapists and social workers with extensive experience with family caregiving information needs, translated into Chinese, then reviewed and edited by bilingual clinical staff to ensure that the translation was clinically appropriate and culturally relevant.</p> <p>A password-protected web site allowed text-based communication between the caregivers and clinicians. In these communications, the clinicians employed standard therapeutic strategies such as empathic understanding, validation of emotions, and reactions to difficult caregiving situations, to provide informational and emotional support. The website was reviewed in a usability test by three Chinese Canadian caregivers before the study intervention.</p>

Continued

Caregivers, Interventions Involving Technology: Chiu et al. 2009—Continued

Characteristics	Findings
AAA/SUA involvement, if any	None
Target population	Informal Caregivers
Is target population an underserved group?	The intervention served exclusively ethnic Chinese Canadians caregivers
Where innovation implemented and when, if known	Toronto, Canada
Contact information	Teresa Chiu, Ph.D., Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong, China teresa.ml.chiu@inet.polyu.edu.hk
Journal research citation	Chiu, T., Marziali, E., Colantonio, A., Carswell, A., Gruneir, M., Tang, M., & Eysenbach, G. (2009). Internet-Based Caregiver Support for Chinese Canadians Taking Care of a Family Member with Alzheimer Disease and Related Dementia. <i>Canadian Journal on Aging</i> , 28(4), 323–336.
Journal research summary	—
Description of data, including size	A convenience sample of 28 participants was selected and agreed to participate in the intervention out of 132 caregivers recruited through Yee Hong, a non-profit organization for Chinese seniors and caregivers in Toronto. Caregivers were 18 years old or older, caring for a family member attending or waiting for one of Yee Hong’s Adult Day Care Programs for dementia; spoke, read, and wrote Chinese; living in the community; and with access to the Internet.

Continued

Caregivers, Interventions Involving Technology: Chiu et al. 2009—Continued

Characteristics	Findings
<p>Outcome measures</p>	<p>At baseline and six months:</p> <ul style="list-style-type: none"> • Burden Scale for Family Caregivers for the level of subjective caregiver burden. • Revised Memory and Behavior Problems Checklist for caregiver reaction to care receiver behavior.. • Center for Epidemiological Studies-Depression for caregiver depression • The Self Rated Health index for perceived caregiver health • Multidimensional Scale of Perceived Social Support for caregiver perceptions of support availability from • family, and friends • Positive Aspects of Caregiving to identify positive aspects of caregiving. • Older Americans Resources and Services Multidimensional Functional Assessment Questionnaire to assess care receiver functioning level. • Caregiver Competence Scale to measure caregiver perceived competence. <p>A 10-caregiver sub-sample received a qualitative interview at the end of the intervention to provide more data on the effect of age, gender, caregiving experience and frequency of use of the online system.</p>
<p>Design/Comparison group</p>	<p>Pre-post with no comparison group</p>

Continued

Caregivers, Interventions Involving Technology: Chiu et al. 2009—Continued

Characteristics	Findings
Results	<p>11 caregivers used the system three or more times; 8 used it 1 or 2 times, and 9 did not use the system at all. Users tended to be younger and less confident of their caregiving competence than non-users.</p> <p>Non-users experienced an increase in caregiver burden as measured by the Burden Scale for Family Caregivers, occasional users experienced minimal change in their burden level, and those caregivers using the system three or more times experienced a decline in caregiver burden. The differences between the three groups were not statistically significant.</p> <p>The qualitative interviews focused on cultural norms and issues with the technology employed in the intervention. Responses indicated that participants experienced some difficulty using the website as well as some reluctance to use it based on a preference for preferring information from human contact.</p>
Other important information about innovation	<p>This convenience sample consisted completely of children caring for parents. It did not address the cost-effectiveness of an internet based intervention as compared to direct communication with therapists and information sources.</p>
Translation and replication material available?	<p>None provided</p>
Relevant websites	<p>http://www.familycaregiving.ca</p>
Comments	<p>This small demonstration has identified some issues in the use of internet-based information and support interventions and demonstrated the feasibility of this kind of intervention in an ethnic community. No significant improvements in caregiver burden were measured, although the intervention appears to be useful for caregivers who participate actively.</p>

Caregivers, Interventions Involving Technology: Marziali et al. 2006

Characteristics	Findings
Name of innovative practice	Caring for Others—Internet Video-Conferencing Groups for Family Dementia Caregivers Marziali, E., & Donahue, P.
Category of innovation	Evidence-informed
Description of innovative practice:	<p>The purpose of the intervention is to provide caregivers with education, psychosocial support and problem-solving skills through a videoconference group experience facilitated by a password-protected Web site with links to (a) disease-specific information, (b) private e-mail, (c) a question-and-answer forum, and (d) a videoconferencing link for the support-group intervention. Technicians installed equipment in each caregiver’s home to provide access to the website.</p> <p>Each group has up to six caregivers and meets weekly for 10 weeks under the leadership of a therapist, then for 12 more weeks under the leadership of group members.</p>
AAA/SUA involvement, if any	None
Target population	Informal Caregivers
Is target population an underserved group?	Rural population
Where innovation implemented and when, if known	Rural areas of Canada
Contact information	<p>Elsa Marziali, PhD University of Toronto and Baycrest Centre for Geriatric Care 3560 Bathurst Street Toronto, Ontario M6A 2E1 Canada. elsa.marziali@utoronto.ca</p>

Continued

Caregivers, Interventions Involving Technology: Marziali et al. 2006—Continued

Characteristics	Findings
Journal research citation	Marziali, E., & Donahue, P. (2006). Caring for Others: Internet Video-Conferencing Group Intervention for Family Caregivers of Older Adults With Neurodegenerative Disease. <i>The Gerontologist</i> , 46(3), 398–403.
Journal research summary	—
Description of data, including size	66 family caregivers of relatives diagnosed with a moderate level of disability distributed across three forms of neurodegenerative disease: Alzheimer’s, stroke-related dementia, and Parkinson’s (22 caregivers per disease group). Each cohort of 22 caregivers was randomly assigned to intervention and control conditions.
Outcome measures	<p>For caregivers at baseline and six months:</p> <ul style="list-style-type: none"> • Health Status Questionnaire 12 for health status • Center for Epidemiologic Studies–Depression scale for depressive affect and behavior • A measure that required the caregiver to report performing activities of daily living and instrumental activities of daily living for the care recipient and to rate the degree of stress experienced on a 3-point severity scale • Revised Memory and Behavior Problems Checklist for levels of distress resulting from the patient’s difficult and/or disruptive behaviors • Multidimensional Scale of Perceived Social Support for perceptions of the availability of social support. <p>Video of group sessions was archived to measure adherence to the treatment strategies, and qualitative analysis of group-discussion themes.</p>
Design/Comparison group	Randomized control trial, with controls in three groups of 11, one for each disease group

Continued

Caregivers, Interventions Involving Technology: Marziali et al. 2006—Continued

Characteristics	Findings
Results	<p>A review of the sessions showed 90% adherence by the facilitators to the treatment strategies.</p> <p>A qualitative analysis identified four major discussion themes emerging from the groups: empathetic communication, personal barriers to managing emotions and cognitive processes, meanings of changing relationships with the care receiver, and recognition of the caregiver’s emotional reactions.</p> <p>The quantitative analysis found that the intervention group experienced a significant decrease in stress relative to the control group.</p>
Other important information about innovation	<p>The study was not able to control for degree of dementia as closely as originally planned—having to rely on the judgment of care-receiver physicians for that determination rather than standardized testing—and the groups may have been more heterogeneous than originally intended. Also, 18 caregivers dropped out of the study before follow-up, primarily from the control group which received no services.</p>
Translation and replication material available?	<p>A Web site, computer training manual, and intervention training manual have been developed. For information contact the first author.</p>
Relevant websites	<p>Although the intervention used a website its address was not provided in the article.</p>
Comments	<p>The authors do not discuss technical problems, if any, in implementing the intervention. Computer based interventions generally require a significant investment in technical assistance to participants.</p>

Caregivers, Monitoring of Care Receiver: Kinney et al. 2004

Characteristics	Findings
Name of innovative practice	The Safe House Project Kinney, J., Kart, C., Murdoch, L., & Conley, C.
Category of innovation	Promising Practice
Description of innovative practice	The intervention provided a web-based monitoring system in the homes of 19 families who were caring for a relative with dementia, the Xanboo Smart Home Management System, which was available to the public at the time of the intervention. The monitoring system included sensors (e.g. door opening/closing, water use, power use) and cameras in every room used by the care-receiver, and provided information to caregivers through cell text messages and a dedicated secure website.
AAA/SUA involvement, if any	Participants were recruited through the Area Agency on Aging of Northwest Ohio, Inc. (PSA 4) and the Ohio District 5 Area Agency on Aging Inc., (PSA 5).
Target population	Dyads (persons with dementia and informal caregivers)
Is target population an underserved group?	Of 19 dyads, 13 were European American, four were African American, one was Hispanic, and one was Asian.
Where innovation implemented and when, if known	Ohio
Contact information	Not provided
Journal research citation	Kinney, J., Kart, C., Murdoch, L., & Conley, C. (2004). Striving to provide safety assistance for families of elders—The SAFE House project. <i>Dementia</i> , 3(3), 351-370.
Journal research summary	—

Continued

Caregivers, Monitoring of Care Receiver: Kinney et al. 2004—Continued

Characteristics	Findings
<p>Description of data, including size</p>	<p>43 families with a care-receiver with dementia were recruited. 15 families were ineligible for reasons including dangerous behaviors or adult day care use by the care-receiver. 9 other families declined to participate. The remaining 19 families commenced the study, and six were lost to attrition before 24 weeks primarily due to changes in the condition of the care-receiver.</p>
<p>Outcome measures</p>	<p>At baseline by home visit:</p> <ul style="list-style-type: none"> • Dementia Rating Scale for care-receiver • Assessment of rooms • Assessment of potential care-receiver behavior issues • Identification of potential camera locations • Assessment of family's familiarity with computers • Documentation of caregiver burden, competence, role captivity, loss of self, overload, competence and expressive support in caregiving through caregiver completion of quantitative scales by Pearlin, Mullan, Semple, and Skaff • Completion of a report of caregiver activities and care-receiver experiences for the previous 24 hours. <p>Biweekly telephone contacts for 24 weeks:</p> <ul style="list-style-type: none"> • Caregiver self report of use of the monitoring system • Weeks 4, 14, and 14 biweekly calls: • Caregiver report of activities and care-receiver experiences for the previous 24 hours. <p>At 24 weeks:</p> <ul style="list-style-type: none"> • Repeat of the Pearlin, Mullan, Semple, and Skaff measures for caregivers • Caregiver report of activities and care-receiver experiences for the previous 24 hours. • Tape recorded structured interview with the caregiver about the circumstances surrounding the onset of the care-receiver's dementia, perceptions of what it means to be a family, impact of the technology on various aspects of family life, and any changes that would improve the technology

Continued

Caregivers, Monitoring of Care Receiver: Kinney et al. 2004—Continued

Characteristics	Findings
Design/Comparison group	Pre-post
Results	<p>Cell phone alerts averaged 14.22 weekly.</p> <p>The article reports the responses of the 16 caregivers completing the tape recorded structured interview. Significant numbers of the caregivers reported that the system had made life easier or had a positive effect on their use of time:</p> <ul style="list-style-type: none"> • 14 of the caregivers reported that there were ways in which the system made life easier. • 11 caregivers reported that the system had a positive effect on how the caregiver spent his/her time.
Other important information about innovation	<p>The intervention encountered technical problems, including one computer monitor and one cell phone that ceased working and were replaced, cell reception problems, and several outages on the Xanboo web site. A significant investment in technical support was required to train caregivers to use the system.</p>
Translation and replication material available?	Written consent document included with the article
Relevant websites	None provided
Comments	<p>This study showed a generally positive effect of in-home monitoring on caregivers, although this article does not report the quantitative data which was gathered.</p>

Caregivers, Monitoring of Care Receiver: Rowe et al. 2009

Characteristics	Findings
Name of innovative practice	<p>A monitoring system to reduce frequency of care-receiver nighttime activity.</p> <p>Rowe, M., Kelly, A., Horne, C., Lane, S., Campbell, J., Lehman, B., Phipps, C., Keller, M., & Benito, A.</p>
Category of innovation	Evidence-informed
Description of innovative practice	<p>The intervention seeks to assist caregivers in monitoring dementia care-receiver nighttime activity, including wandering.</p> <p>The intervention uses a home security system platform with speech, text, and alarm functions along with a bed occupancy sensor to report the location of the care-receiver. A text message is displayed and voice and alarm notifications are played for the caregiver when the care-receiver leaves the bed. Location announcements are made as the care-receiver moves through the home. An emergency alarm sounds if an outside door is opened. An announcement is made when the care-receiver returns to bed.</p>
AAA/SUA involvement, if any	None
Target population	Dyads (persons with dementia and informal caregivers)
Is target population an underserved group?	African-American dyads were 19 percent of the participants and Hispanic dyads were 8 percent of the participants..
Where innovation implemented and when, if known	Not given
Contact information	<p>Meredeth A. Rowe Tel.: 352-273-6396 Fax: 352-273-6536. mrowe@ufl.edu</p>

Continued

Caregivers, Monitoring of Care Receiver: Rowe et al. 2009—Continued

Characteristics	Findings
Journal research citation	Rowe, M., Kelly, A., Horne, C., Lane, S., Campbell, J., Lehman, B., Phipps, C., Keller, M., & Benito, A. (2009). Reducing dangerous nighttime events in persons with dementia by using a nighttime monitoring system. <i>Alzheimer's and Dementia</i> , 5(5), 419-26.
Journal research summary	—
Description of data, including size	<p>53 dyads were recruited through newspaper and newsletter advertisements, group meetings, and care providers. Dyads were randomized (with some exceptions), 26 to the experimental group and 27 to the control group. 16 of the experimental group and 17 of the control group completed the study.</p> <p>Caregiver inclusion criteria were that the primary caregiver lived in the home without professional care at night, was 21 years or older, able to provide rapid assistance to the care-receiver when an alarm sounded, was not undergoing treatment for sleep disorders, was able to speak and read English, and had no cognitive impairments.</p> <p>Care-receivers had a diagnosis of dementia, Mini Mental State Examination score <23, and a history of regular nighttime awakening.</p>

Continued

Caregivers, Monitoring of Care Receiver: Rowe et al. 2009—Continued

Characteristics	Findings
Outcome measures	<p>At baseline, caregivers reported current measures to ensure a safe environment in the home, including locks, monitoring equipment, and respite care. Caregivers also reported care-receiver injuries for the previous 6 months, the average numbers of nights per week they arose to supervise the care-receiver, and completed the Zarit Burden Interview and the Neuropsychiatric Inventory-Questionnaire.</p> <p>Data was collected from caregivers at six and twelve months for the Quebec User Evaluation of Satisfaction with Assistive Technology questionnaire.</p> <p>The system retained data on all alerts.</p>
Design/Comparison group	<p>Pretest-post-test control group repeated-measures design. The control group was paid \$15.00 at each data collection, assisted with registration in the SafeReturn program, and given educational materials not related to the intervention</p>
Results	<p>The systems operated without a failure, and experimental group caregivers reported a high degree of satisfaction with the system on the Quebec User Evaluation of Satisfaction with Assistive Technology questionnaire.</p> <p>Nine untoward events occurred at night during the study, of which 2 were in homes employing the intervention. Statistical survival analysis showed that care-receivers in the experimental group were significantly less likely to experience an injury or exit, and a secondary analysis indicated that night events were likely to be associated with nursing home placement.</p>
Other important information about innovation	<p>Systems were installed and operated for a two-to-three week period to ensure reliability prior to the beginning of data collection.</p>

Continued

Caregivers, Monitoring of Care Receiver: Rowe et al. 2009—Continued

Characteristics	Findings
Translation and replication material available?	None provided.
Relevant websites	None provided
Comments	Although small and not completely random, this study does demonstrate the feasibility of a nighttime monitoring system and demonstrate its potential to alert caregivers to care-receiver activity.

Administrative Interventions, Care Coordination, Screening: Brown et al. 2009

Characteristics	Findings
Name of innovative practice	TYM ("test your memory") Brown, J., Pengas, G., Dawson, K., Brown, L.A., & Clatworthy, P.
Category of innovation	Evidence-informed
Description of innovative practice	Cognitive test for routine screening for mild AD designed to use minimal operator time and to be suitable for non-specialist use. The TYM is a series of 10 tasks on a double-sided sheet of card with spaces for the patient to fill in. The tasks are orientation, ability to copy a sentence, semantic knowledge, calculation, verbal fluency, similarities, naming, visuospatial abilities (2 tasks), and recall of a copied sentence. The patient's ability to complete the test is an 11th task, giving a possible total of 50 points.
AAA/SUA involvement, if any	None
Target population	Persons with early stage Alzheimer's disease and other dementias
Is target population an underserved group?	No
Where innovation implemented and when, if known	A dedicated memory clinic at Addenbrooke's Hospital, UK between March and December 2007.
Contact information	Jeremy Brown, Consultant Neurologist E-mail: jmb75@medschl.cam.ac.uk
Journal research citation	Brown, J., Pengas, G., Dawson, K., Brown, L.A., & Clatworthy, P. (2009). Self administered cognitive screening test (TYM) for detection of Alzheimer's disease: cross sectional study. <i>British Medical Journal</i> ; 338:b2030.
Journal research summary	—

Continued

**Administrative Interventions, Care Coordination, Screening: Brown et al. 2009—
Continued**

Characteristics	Findings
Description of data, including size	The TYM was administered to 540 normal controls (aged 18-95), 108 patients with Alzheimer’s disease/mild cognitive impairment, and 31 patients with non-Alzheimer’s degenerative dementias. Controls were recruited from relatives accompanying patients to the memory clinic and from relatives of patients attending neurology and medical outpatients departments at two other hospitals.
Outcome measures	<ul style="list-style-type: none"> • Scores of normal controls on the TYM. • Scores of patients with Alzheimer’s disease on the TYM compared with age-matched controls. • Validation of the TYM with two standard tests (the mini-mental state examination (MMSE) and the Addenbrooke’s cognitive examination-revised.) • Sensitivity and specificity of the TYM in the detection of Alzheimer’s disease.
Design/Comparison group	Cross sectional controlled study.
Results	<p>The TYM was filled in quickly and efficiently by controls and patients with minimal supervision from a receptionist or nurse. The average time for a control to complete the test was five minutes; completion times for the patients were not reported. Results of the outcome measures are as follows:</p> <ul style="list-style-type: none"> • Control participants completed the TYM with an average score of 47/50. • AD patients scored an average of 33/50; patients with non-Alzheimer dementias scored an average of 39/50. • The TYM score shows excellent correlation with the two standard tests. • The TYM was more sensitive in detection of Alzheimer’s disease than the MMSE, detecting 93% of patients compared with 52%.

Continued

**Administrative Interventions, Care Coordination, Screening: Brown et al. 2009—
Continued**

Characteristics	Findings
Other important information about innovation	<p>The 11 TYM tasks examine more cognitive domains than the MMSE, with less bias towards dominant hemisphere language functions. The language and memory tests are more difficult. The inclusion of two visuospatial tasks, contributing 7/50 points, is important in distinguishing Alzheimer’s disease from pure loss of memory syndromes.</p> <p>A disadvantage of the memory test is the need for the specially printed sheets, though the Addenbrooke’s cognitive examination-revised has a similar requirement, and the MMSE is under copyright. A website is being developed to help to solve this problem.</p>
Translation and replication material available?	<p>Material supplied by the author available at http://www.bmj.com/cgi/data/bmj.b2030/DC1/1 and http://www.bmj.com/cgi/data/bmj.b2030/DC1/2</p>
Relevant websites	<p>http://www.bmj.com/cgi/search?fulltext=TYM&sortspec=date</p>
Comments	<p>It is worth repeating the author(s) comment that many cognitive tests are available but none meets the three critical requirements for widespread use by a non-specialist: (a) takes minimal operator time to administer, (b) tests a reasonable range of cognitive functions, and (c) is sensitive to mild Alzheimer’s disease. The authors designed the TYM to fulfil these requirements. They attempt to solve the paradox of thorough testing in minimal time by allowing patients to fill in the test themselves.</p>

Administrative Interventions, Care Coordination, Screening: Edwards et al. 1999

Characteristics	Findings
Name of innovative practice	Memory and Aging Project Satellite (MAPS) Edwards, D.F., Baum, C.M., Meisel, M., Depke, M., Williams, J., Braford, T., Morrow-Howell, N., & Morris, J.C.
Category of innovation	Promising Practice
Description of innovative practice:	<p>In 1990, the National Institute on Aging began a program to link satellite diagnostic and treatment clinics to Alzheimer’s Disease Centers. The MAPS program is a satellite of the Washington University Alzheimer’s Disease Research Center (ADRC) in Missouri. It provides outreach as well as home-based diagnosis, treatment, and case management, and differs from most other satellite programs in that it seeks to provide services to individuals who do not voluntarily seek help for dementia.</p> <p>ADRC funding supports staff salaries, community outreach expenses, educational materials, and client transportation. Contractual agreements were created to place staff at the St Louis Department of Health and the Area Agency on Aging (AAA). Clients are not billed directly for any of the costs associated with the diagnostic procedures.</p> <p>The research goals of the program are met in two ways: (a) use of standard assessment protocols to gather important data on the needs and characteristics of African American elders with dementia, and (b) participation of individuals who meet the ADRC inclusion criteria in the longitudinal clinical assessments and psychometric testing offered by the Center.</p>
AAA/SUA involvement, if any	St Louis AAA.
Target population	Inner-city elders with dementia

Continued

**Administrative Interventions, Care Coordination, Screening: Edwards et al. 1999—
Continued**

Characteristics	Findings
Is target population an underserved group?	Socially and economically disadvantaged elders, in particular, African-American.
Where innovation implemented and when, if known	MAPS was created in 1991 in the St Louis metropolitan area.
Contact information	Dorothy F. Edwards Program in Occupational Therapy Box 8505, 4444 Forest Park Blvd. Washington University School of Medicine St Louis, MO 63110 dorothe@ot-link.wustl.edu
Journal research citation	Edwards, D.F., Baum, C.M., Meisel, M., Depke, M., Williams, J., Braford, T., Morrow-Howell, N., & Morris, J.C. (1999). Home-based multidisciplinary diagnosis and treatment of inner-city elders with dementia. <i>The Gerontologist</i> , 39(4): 483-488.
Journal research summary	—

Continued

**Administrative Interventions, Care Coordination, Screening: Edwards et al. 1999—
Continued**

Characteristics	Findings
Description of data, including size	<p>Criteria for inclusion in the MAPS program are (a) resident of the St. Louis metropolitan area, (b) aged 55 years or older, (c) a 6-month history of confusion or memory loss, (d) no current alcohol or drug abuse, (e) no terminal illness, and (f) agreement to allow home visits by project staff. Most referrals come from health and social service agencies.</p> <p>Assessments were completed on 367 accepted referrals in the first 4 years.</p> <p>Clients had comorbid medical conditions and while many were known to the medical and social service systems, their cognitive problems were not being addressed at the time of referral. Only 10% had a formal diagnosis of dementia, whereas the assessment found that 24% were moderately or severely demented. Eighty percent were eligible for Medicaid, but only 30% were certified. Nearly half the clients needed home repairs, required help with insect or rodent infestations, or had problems associated with high crime areas. Formal service use was low.</p>
Outcome measures	<p>Improve access to medical and social services for people with cognitive loss due to Alzheimer’s disease and other related dementias through the provision of home-based cognitive, family, and functional assessment, followed by clinical case management, education, and support.</p> <p>Increase the participation of African American older adults in the research activities of the ADRC.</p>
Design/Comparison group	Not applicable

Continued

**Administrative Interventions, Care Coordination, Screening: Edwards et al. 1999—
Continued**

Characteristics	Findings
Results	<p>All Medicaid-eligible clients have been certified and are receiving the associated medical and social benefits. Clients have been relocated into more appropriate housing situations and nursing homes, and enrolled in day care centers. MAPS has organized an active caregiver support group as well as a weekly activity group program for people with mild cognitive impairment.</p> <p>More than 99% of clients consented to the use of program information for research purposes. Approximately 20 African Americans per year have been recruited to participate in the longitudinal research study.</p>
Other important information about innovation	<p>Although MAPS has been successful in meeting programmatic and research goals, certain limitations and problems persist. Community physicians have not responded to offers of in-service education about Alzheimer’s disease and neighborhood clinics have no standard screening protocol to identify patients with cognitive impairment. Together with the local Alzheimer’s Association and the Education Core of the ADRC the authors have made physician and community “gatekeeper” education a priority.</p> <p>Another significant limitation involves issues of access. Despite extensive community education and outreach, most clients are significantly impaired at the time of entry to the program and become known only through a crisis. A current goal of the MAPS program is to identify people at risk at earlier stages of impairment in order to have the time to develop the appropriate social, financial, and environmental support necessary for continued community residence. The researchers are trying to gain a better understanding of the factors that influence African American elders and their families to seek help.</p>

Continued

**Administrative Interventions, Care Coordination, Screening: Edwards et al. 1999—
Continued**

Characteristics	Findings
Translation and replication material available?	Not known
Relevant websites	http://alzheimer.wustl.edu/ http://alzheimer.wustl.edu/About_Us/MAPS/index.html
Comments	It is notable that one part of this approach is to actively determine eligibility and seek enrollment in other programs that may provide services needed by persons with Alzheimer’s disease. The program may have been modified/improved since publication.

Administrative Interventions, Care Coordination, Screening: Fortinsky et al. 2009

Characteristics	Findings
Name of innovative practice	Dementia care consultation linking family caregivers with primary care physicians. Fortinsky, R., Kuildorff, M., Kleppinger, A., & Kenyon-Peace, L.
Category of innovation	Evidence-informed
Description of innovative practice:	<p>The intervention is designed to assist caregivers with care planning for the care-receiver, increase caregiver self-efficacy in symptom management and service access, and prevent institutional placement.</p> <p>A dementia care consultant from the local chapter of the Alzheimer’s Association met monthly with each caregiver in the home to help the caregiver identify concerns with the care-receiver and prepare a written care plan to address those issues. The care consultant sent the plan to the family’s primary physician and answered any questions from the physician about the plan.</p> <p>The intervention group also received educational materials about dementia symptom management and community resources.</p>
AAA/SUA involvement, if any	None
Target population	informal caregivers
Is target population an underserved group?	Not specified
Where innovation implemented and when, if known	Hartford, Connecticut, and the northern counties of the state.
Contact information	Richard Fortinsky, Fortinsky@uchc.edu

Continued

**Administrative Interventions, Care Coordination, Screening: Fortinsky et al. 2009—
Continued**

Characteristics	Findings
Journal research citation	Fortinsky, R., Kuldorff, M., Kleppinger, A., & Kenyon-Peace, L. (2009). Dementia care consultation for family caregivers: Collaborative model linking an Alzheimer’s association chapter with primary care physicians. <i>Aging and Mental Health</i> , 13(2), 162-170.
Journal research summary	—
Description of data, including size	<p>The participants were caregivers of care-receivers with a diagnosis of any irreversible dementia and self-ambulating, residing in the community, and regularly using a physician that was partnering in the study for care. Partnering physicians reviewed patient records and referred caregivers for participation.</p> <p>178 caregivers were invited to participate, of which 84 agreed. 54 were assigned to the intervention group and 30 to the control group randomized by the physician practice they attended.</p>

Continued

**Administrative Interventions, Care Coordination, Screening: Fortinsky et al. 2009—
Continued**

Characteristics	Findings
<p>Outcome measures</p>	<p>Caregivers were interviewed at baseline and at 12 months:</p> <ul style="list-style-type: none"> • To determine where the care-receiver was residing. (Care consultants also reported when a care-receiver was institutionalized.) • To determine if caregivers had discussed care plans with the physician • A five-item symptom management self-efficacy measure • A four item community support service use self-efficacy measure • Zarit Revised Caregiver Burden Scale • Center for Epidemiological Studies-Depression inventory • Hopkins Symptoms Checklist for caregiver physical health • A satisfaction survey <p>Care-receivers were administered at baseline and 12 months:</p> <ul style="list-style-type: none"> • Cognitive Status Scale • Problematic Behavior Scale <p>Care-receiver medical records were reviewed to determine if care plans were being filed in the records.</p>
<p>Design/Comparison group</p>	<p>Randomized control trial. Control group received the same educational materials about dementia symptom management and community resources as the intervention group.</p>

Continued

**Administrative Interventions, Care Coordination, Screening: Fortinsky et al. 2009—
Continued**

Characteristics	Findings
Results	<p>The nursing home admission rate was twice as high in the control group (33 percent) as in the intervention group (16 percent), a difference approaching statistical significance.</p> <p>The analysis showed no significant effect by the intervention on self-efficacy, depressive symptoms, caregiver burden, or physical symptoms.</p> <p>82 percent of the caregivers reported that they were either very or mostly satisfied with the intervention.</p> <p>The chart review found at least one care plan in 32 of the 37 charts available for review, and 27 percent of caregivers reported discussing the plan with their physician.</p>
Other important information about innovation	<p>While the intervention did not produce a group effect for self-efficacy, depression, burden, or physical symptoms, individual members of the group who did experience some benefit were also those most satisfied with the intervention.</p> <p>The study experienced turnover in care consultants that lessened caregiver satisfaction.</p>
Translation and replication material available?	None provided
Relevant websites	None provided
Comments	—