

**A Synthesis of the Evidence:
Non-Pharmacological Interventions
for Behavioral Symptoms of Dementia**

It is estimated that more than half a million Veterans suffer from dementia. The associated behavioral symptoms (e.g., aggression, wandering) can result in decreased quality of life, increased caregiver burden, and greater healthcare costs. Behavioral symptoms occur in as many as 90% of people with Alzheimer's disease, and are most often cited by caregivers as the reason for placing individuals with dementia into residential care. Psychotropic medications are commonly used to reduce the frequency and severity of behavioral symptoms of dementia. However, there is little evidence that such interventions are effective, and the potential side effects are frequent and often hazardous. Therefore, non-pharmacological interventions (e.g., cognitive/emotion-oriented therapy, sensory simulation, behavior management) may be a good alternative.

Upon request from the VHA Dementia Steering Committee, investigators at the VA Evidence-based Synthesis Program in Portland, OR conducted an evidence review of articles that were published from the inception of the literature database through July 2009. Investigators identified 28 systematic reviews and 25 primary articles in order to answer three key questions regarding non-pharmacological interventions for behavioral symptoms of dementia.

Question #1: How do non-pharmacological treatments of behavioral symptoms compare in effectiveness with each other, with pharmacological approaches, and with no treatment?

Answer: A limited body of evidence suggests that the following non-pharmacological treatments have the potential to reduce some behavioral symptoms among patients with dementia:

- Animal-assisted (pet) therapy,
- Behavior management techniques,
- Exercise,
- Massage and touch therapy, and
- Music therapy.

Overall, there is insufficient evidence to suggest that the following non-pharmacological treatments have beneficial effects for reducing behavioral symptoms associated with dementia:

- Acupuncture,
- Aromatherapy,
- Light therapy,
- Reminiscence therapy,
- Transcutaneous electrical nerve stimulation, and

- Validation therapy (e.g., validating expression of feelings).

None of the reviews identified any head-to-head trials that directly compared effectiveness among different non-pharmacological interventions – or between non-pharmacological and pharmacological treatments.

Question #2: How do non-pharmacological treatments of behavioral symptoms compare in safety with each other, with pharmacological approaches, and with no treatment?

Answer:

- Reality orientation has been observed by caregivers to increase distress, fear, and agitation in some individuals with later stages of dementia.
- For some individuals, the increased stimulation from sensory stimulation therapies (e.g., music therapy, massage therapy) may cause increased agitation and aggression.
- There was no evidence of harm or safety concerns regarding behavioral management techniques, though this was not well studied.
- The potential harms of pet therapy have not been studied.
- The potential harms of exercise have not been well studied.

None of the reviews identified any head-to-head trials that directly compared safety among different non-pharmacological interventions – or between non-pharmacological and pharmacological treatments.

Question #3: How do non-pharmacological treatments of behavioral symptoms compare in cost with each other, with pharmacological approaches, and with no treatment?

Answer: None of the studies examined reported direct evidence on the cost-effectiveness of specific interventions. Therefore, further studies are needed to determine the cost-benefits, harms, and feasibility of these and other non-pharmacological interventions.

Overall, the findings from this review suggest that certain non-pharmacological interventions offer promise for some Veterans with behavioral symptoms associated with dementia and appear to be safe treatment options. The implementation of these interventions typically requires significant inter-disciplinary support and staff training. Dr. Bradley Karlin and others in VA's Office of Mental Health Services, and in the field, have developed and are implementing a pilot initiative to disseminate a psychosocial intervention adapted for Veterans with dementia in VA Community Living Centers, based on an established intervention in the literature. Program evaluation results from this pilot initiative may help guide broader dissemination efforts in this area.

This report is a product of the HSR&D Evidence-Based Synthesis Program (ESP), which was established to provide timely and accurate syntheses of targeted healthcare topics of particular importance to VA managers and policymakers—and to disseminate these reports throughout VA.

Reference:

Reference: O'Neil M, Freeman M, Christensen V. et al. Non-Pharmacological Interventions for Behavioral Symptoms of Dementia: A Systematic Review of the Evidence. VA-ESP Project #05-225; 2011.

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