

Non-pharmacological Approaches To Dementia In the Long Term Care Setting

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Alzheimer's disease (AD), the most common type of dementia, is estimated to affect 13% of persons over age 65 and almost 50% of those over age 85.¹ Since age is the major risk factor, the number of persons afflicted will increase exponentially over the next several years.²

As the disease advances, caregivers become increasingly involved with bathing, dressing, feeding, and toileting. Behavioral symptoms are common and often more distressing to caregivers than cognitive and functional decline.³ Caregivers experience high levels of stress and depression in caring for the person with AD at home.⁴ Nursing home placement typically occurs after families have exhausted their financial, physical and emotional resources.⁵

The major predictors of nursing home placement in persons with dementia include severity of cognitive impairment, diagnosis of AD, dependencies in basic activities of daily living, behavioral symptoms and depression.⁶ Without a clear etiology or effective medical treatment for AD, the goals are to maximize functional and cognitive abilities for as long as possible, and enhance the safety and comfort of persons with AD and their families. Non-pharmacological interventions that reduce behavioral symptoms, maximize the person's function, and improve quality of life are potentially cost-effective and safe alternatives to pharmacological treatments.^{7,8} The following is a review of the common behavioral symptoms observed in persons with dementia, a discussion of the assessment of these symptoms, and suggestions for non-pharmacological management.

BEHAVIORAL SYMPTOMS IN ALZHEIMER'S DEMENTIA

Behavioral symptoms or **neuropsychological symptoms (NPS)** are present in all stages of AD, especially apathy (72%), agitation (60%) anxiety (48%), irritability (42%), dysphoria (38%), ab-

errant motor behavior (38%), disinhibition (36%), delusions (22%), and hallucinations (10%).^{9,10} Within long term care facilities, 40-60% of patients with AD have aggression and agitation.¹¹ Some researchers suggest that the prevalence and severity of behavioral symptoms increase with the progression of the disease, while others suggest that the most disruptive behaviors occur during the moderate stage and diminish as the disease progresses.^{10,3}

Cohen-Mansfield, referring to NPS in AD as "inappropriate behaviors," delineates four subtypes: 1) physical aggressive behavior (kicking, biting, hitting), 2) physical non-aggressive behaviors (pacing, wandering, rummaging), 3) verbally non-aggressive behavior (repetitive questions and/or sentences), and 4) verbal aggression (swearing, yelling).^{1,2} Cohen-Mansfield's behavioral subtypes are helpful for staff's identification and reporting of problematic behavior. However, if the context in which the behavior occurs is not considered, staff may intervene inappropriately and cause the behavior to escalate.

The context of the behavioral symptoms occur should be considered in the assessment and management of the behavior.¹³ For example, physical aggression implies intention on the part of the resident and typically occurs during personal care. Perhaps the caregiver is communicating or intervening inappropriately with the resident. Volicer and Hurley label this behavior as "resistiveness to care."¹³ Being resistant to care is a "repertoire of behaviors with which persons with dementia withstand or oppose the efforts of a caregiver."¹³ Volicer and Hurley advise eliminating physical and environmental causes of aberrant behavior before labeling the resident aggressive or agitated.

Another poorly defined symptom is sundowning. While most clinicians identify sundowning as agitation occurring in

the late afternoon or evening, others question the existence of the phenomenon.^{14,15} Bliwise et al found disruptions in behavior throughout the day and theorized that this disruptive behavior may have a greater impact on the staff in the evening, thereby, was more often associated with evening.¹⁵ Several factors may spur sundowning, including environmental (changing of staff), biological (mismatch of biological rhythms of the body and environment), physiological (hormonal, afternoon fatigue) and/or psychological (diurnal mood variations).¹⁴ In research studies and clinical practice, the definitions and descriptions of the behaviors have varied.

The behavioral symptoms described above are common throughout the course of dementia although it is controversial whether the symptoms increase or diminish as the disease progresses. Nevertheless, the clinician should identify problematic behaviors early.

MANAGEMENT OF BEHAVIORAL SYMPTOMS IN ALZHEIMER'S DEMENTIA

Before an inappropriate behavior is attributed to dementia, a comprehensive evaluation should be conducted. The first step is to carefully describe the behavior, including the time, location and frequency of occurrence. There are a number of instruments to assess and document behavioral symptoms in dementia. In the long term care setting, the minimum data set is routinely used to assess behavioral problems.¹⁶ This assessment often leads to the identification of social, environmental factors, or acute medical problems (e.g., infections, hypoxia, angina, metabolic disturbances and depression) as potential causes. The most common physical cause of NPS is unrecognized, untreated pain, often resulting from urinary retention, fecal impaction, pressure ulcers, or osteoarthritis.¹³ Once the behavior has been identi-

fied and physical causes treated, the next step is to identify specific antecedents and consequences of the problematic behavior and suggest treatment strategies.

No one strategy can address all behaviors. Psychosocial interventions are considered first line-treatment and are often used in conjunction with pharmacological treatments. Medications have an important role, but need to be used judiciously with informed consent from the patient and/or surrogate as reviewed by Epstein-Lubow and Rosenzweig in this special edition.

NON-PHARMACOLOGIC TREATMENTS FOR BEHAVIORAL SYMPTOMS

Non-pharmacologic approaches to dementia care can enhance the quality of life and maximize the functional status of residents with AD in long term care. Non-pharmacologic strategies can be divided into four categories: behavior-oriented, stimulation-oriented, emotion-oriented and cognitive-oriented.⁷ These approaches reflect a person-center approach to care, emphasizing the individual. For many long term care residents several strategies may be used concurrently, and, when possible, delivered daily or weekly.⁷

Behavioral strategies are the most commonly used intervention in dementia care. The general principles include creating a structured environment with a daily routine, simplifying tasks, providing one-step instructions and using a non-confrontational approach. Correcting hearing and vision impairments can optimize the resident's participation in activities. Repetition, positive reinforcement, verbal and visual cueing assist the resident in achieving maximal function. In addition, residents do better in familiar activities, rather than activities that require new learning. Some evidence suggests modest benefits of behavioral strategies, but additional trials demonstrating efficacy are needed.^{12,7,17}

Special Care Units are generally situated within the long term care setting. The units include structured programming, a modified physical environment, and staff trained to use non-pharmacological approaches to care. However, the efficacy of these units in reducing NPS has not been demonstrated, compared to traditional nursing home care.^{7,8,21}

Stimulation-oriented approaches include aroma therapy, bright light, movement, multi-sensory, music and touch therapies. These activities are generally offered as part of the therapeutic environment in long term care. **Multisensory stimulation (MSS)** environments or Snoezelen stimulate the senses through providing therapeutic objects of un-patterned visual, auditory, olfactory and tactile stimuli in a specially designed room or environment. Evidence demonstrates that MSS might help to reduce apathy in latter stages of the disease, but many of the positive results were not statistically significant and the benefits were not sustained over time.^{8, 18, 19}

Hulme et al, reviewed ten studies examining the effects of music therapy in reducing problematic behaviors.¹⁸ These studies scrutinized a wide range of behavioral symptoms including agitation, aggression, wandering, restlessness, and nutritional intake. Music and music therapy were effective in reducing behavioral symptoms, but the impact did not persist over time.^{7,8,12,18}

Physical activity and exercise can also reduce behavioral symptoms and improve functional ability.^{12,16,18,20} Additional benefits of a sustained walking or exercise program are decreased wandering and improved sleep quality and mood.¹⁸

Emotion-oriented strategies include reminiscence therapy, validation therapy, supportive psychotherapy, simulated presence, and sensory integration. The efficacy of supportive psychotherapy has been demonstrated in the early stages of disease when patients are dealing with their prognosis, but has shown little benefit as the disease progresses.⁷ Simulated presence therapy utilizes video or audio recordings of family members' conversations, stories or shared memories to decrease agitated behaviors. This strategy is effective, easy to administer and well received by LTC residents. However, the effects are not sustained over time.^{8,12}

Hulme et al reviewed four studies examining the efficacy of reminiscence therapy on mood, behavioral and psychological symptoms.¹⁸ This therapeutic model has a modest evidence base, but the results are based on studies with limitations in designs and method. There is less evidence supporting the efficacy of validation therapy and sensory integration in reducing NPS.

Less evidence supports cognitive-oriented strategies, which include reality orientation and cognitive retraining. These strategies focus on decreasing confusion and problematic behavior by orientating patients to time, place and person. Although there may be short term improvements in selected domains of cognition, this is not sustained over time. Short term emotional consequences such as frustration, agitation and depression have been reported with these interventions. External memory aids may be more effective than learning mnemonics for enhancing cognitive function of long term care residents with AD.

Overall, non-pharmacological strategies have demonstrated modest efficacy in improving mood and reducing behavioral disturbances in long-term care residents with dementia. In many cases, these strategies alone may not be able to manage the problematic behavior of the resident. In these situations, a multimodal approach that includes psychoactive agents may be necessary. More rigorous studies need to be conducted to examine the efficacy of non-pharmacological compared to pharmacological approaches in reducing behavioral symptoms and improving quality of life for the long term care resident with dementia.^{7,8,12}

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