

Get creative to manage dementia-related behaviors

Heed 'unspoken messages' before weighing antipsychotics

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Mrs. A, age 82, has advanced Alzheimer's disease and has resided in a nursing home for 2 years. She does not recognize that she lives in a nursing home and waits by the door for her son to take her home. She spends her days weeping, telling visitors and staff she has been abandoned and must go home to care for her children.

Recently she has been wandering from the facility. When staff attempt to direct her away from the door, she resists, becomes physically aggressive, and hollers loudly. Her behavior bothers visitors and other patients, who frequently complain.

Her primary care physician prescribes a trial of olanzapine, 10 mg/d, but she becomes confused and suffers a fall. Staff report that Mrs. A is sleeping poorly and losing weight.

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Box 1

Weighing antipsychotics' role in managing agitation in dementia

Left untreated, problem behaviors of patients such as Mrs. A can lead to caregiver burnout, frequent patient relocation, and aggression against nursing home staff or other patients. For many practitioners, atypical antipsychotics have been the treatment of choice.¹

Benefits vs. risks. Neuroleptics are effective for managing aggression, agitation, and psychotic symptoms, but recent evidence linking them with increased mortality in dementia patients—mostly from cardiac or infectious causes—raises concerns.² These drugs also can have worrisome side effects in older patients, such as oversedation and confusion that may increase the risk of falls, as in Mrs. A's case.

The FDA's black-box warning on all atypical antipsychotics estimates risk of death at 1.6 to 1.7 times baseline rates for similar patients not treated with neuroleptics.³ Whether other neurologically active agents pose similar risks of death is not known.

Recommendation. For dementia patients with behavior problems, systematically evaluating environmental, behavioral, medical, and psychiatric factors may suggest solutions that do not include antipsychotics. On the other hand, antipsychotics may be appropriate for patients with end-stage dementia and severe behavior problems.

Although a medication might shorten the patient's life, the patient and others may be at risk for harm if behaviors are left untreated and unmanaged. Consider both sides of this equation when dealing with behavior disturbances in dementia patients.

Deciding how to manage agitation, aggression, or psychotic symptoms of dementia is dicey at best. You can try an atypical antipsychotic despite the FDA's black-box warning (*Box 1*)¹⁻³ or drugs that target specific behaviors (though supporting evidence is limited). A third option—and often the most effective—is to reduce difficult behaviors by

increasing desired behaviors, using behavioral and pharmacologic interventions.

This article discusses alternatives to antipsychotics, recognizing that no single approach is likely to eliminate disruptive or dangerous behaviors. Our approach focuses on identifying and addressing the behaviors' causes, such as frustration of perceived goals, comorbid medical and psychiatric problems, pain, or polypharmacy.

BEHAVIORAL INTERVENTIONS

Behavioral approaches are more effective for managing patients such as Mrs. A when you accept that dementia's behavioral problems—like its cognitive and functional problems—are unavoidable. Eliminating them is unlikely, so a reasonable goal is to decrease their frequency and intensity.

Treatment axioms. Overt behavior is a form of communication. As dementia advances and verbal communication declines, a person communicates increasingly through overt behavior. Thus, behavior you see as random or inexplicable may be adaptive or goal-directed from the patient's perspective. Try to understand the message he or she is sending; success is more likely if you attend to the emotion—rather than the content—of the message.

All behaviors have antecedents and consequences. We can shape behavior by controlling consequences when a person's memory is intact. But when memory is impaired, as in dementia, we must try to manage antecedents. Managing antecedents works because behaviors compete in real time; we can reduce disruptive behavior by increasing acceptable behavior. To increase acceptable behavior, we must find activities that are meaningful and tailored to the patient's degree of impairment.

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Assessment. Assess disruptive behavior in the patient's living environment with input from caregivers. Have the staff—or family, if the patient lives at home—keep behavior logs that document the nature of the behavior, exacerbating and ameliorating factors, and other stimuli; these logs can provide clues to the message behind the disruptive behavior.

Environmental factors and how caregivers approach patients are often the antecedents of behavioral problems. By identifying these factors, you can shift from trying to change the patient to targeting the causes of problem behaviors.⁴

Modifying the environment and how care is provided are crucial to improving behavior.⁵ Dementia erodes a person's adaptability; thus, even though system change can be difficult, the environment can adapt more readily than the patient can.

Include the family. To increase acceptable and meaningful behaviors, we must know a patient's social history and understand his or her likes and dislikes. Patients' families are usually the best source of this information. For example, a homemaker might be soothed by housework-related activities (folding towels, helping with dishes). A former school teacher might be engaged by being made the "lunch room monitor."

Providing meaningful activity is being proactive instead of reactive, and being proactive implies schedules and structure. PRN interventions—pharmaceutical or behavioral—are anti-thetic to managing antecedents.

If Mrs. A's overt behavior suggests anxiety, for example, reassuring her frequently can be an antecedent to reduce her anxiety-based disruptive behavior. We often encourage nursing home staff to photocopy notes from the family that deliver brief reassuring messages, such as: "Hi Mom, I'm fine and I know you are doing well.

Box 2

Don't just say 'no'—3 steps to redirect patients with dementia

Taking shortcuts when trying to redirect undesired behavior usually requires the caregiver to say, "No, you can't." Using a 3-step approach is less likely to provoke an angry or agitated response:

Validate the patient's apparent emotional state ("You look worried"). This helps establish rapport.

Join the patient's behavior. In Mrs. A's case, for example, the caregiver might say, "You're looking for your children? Well, I'm trying to find something, too. Let's look together."

Distract. Patients are easier to distract after you establish a common goal ("Let's look over there where those people are having coffee"). Distraction works best with patients who have substantial memory or attention problems, as in most patients with dementia.

Redirection may now be possible ("That coffee smells good; do you want a cup?") without directly thwarting the patient's now-forgotten goal.

Source: Reference 5

See you as soon as I can. Love, your daughter." A patient with profound memory problems can receive calming messages dozens of times a day without recognizing the repetition.

Redirection. Despite our best efforts, redirection is sometimes required. We recommend a 3-step approach to reduce the risk of provoking anger or agitation (*Box 2*).⁵

Redirection is the most commonly misused behavioral management technique. When patients enter restricted areas, attempt to elope, or engage in problematic interpersonal exchanges, staff may tell them "you can't do that" and attempt to physically lead them away. Handled this way, redirection is often an antecedent to agitated or aggressive behavior.

continued



Table 1

Medical problems that contribute to behavioral disturbance in dementia

Cardiovascular	Myocardial infarction Congestive heart failure
Endocrine	Diabetes mellitus Hypothyroidism or hyperthyroidism Malnutrition with electrolyte imbalances
Infections	Urinary tract, respiratory
Neurologic	Stroke Subdural hematoma
Sleep disorders	Obstructive sleep apnea Restless legs syndrome
Pain	Arthritis

As mentioned, the behavior of persons with dementia is often goal-directed or purposeful. They might not be able to communicate the goal, but in their subjective reality the goal is very important. Thus, they may become frustrated and angry when caregivers use redirection to thwart their goals.

Caregivers who learn what to expect as a patient's dementia progresses can anticipate cognitive and functional limitations and the usual behavioral effects. Careful analysis to identify the behavior's message can suggest unexpected ways to manage problems. Effective interventions call for proactive, innovative, and creative solutions based on patient history, presentation, and environmental factors.

MEDICAL EVALUATION

Most elderly patients have coexisting medical conditions that may cause or exacerbate behavior

changes associated with dementia (Table 1). When you evaluate new-onset behavior problems, thoroughly review the patient's medical history. Progressing chronic disease or acute illness can drive behavior problems, so obtain a systems review from caregivers whenever possible.

Review vital signs, and do a brief physical and neurologic examination if overall health status seems to have changed. The medical review and physical findings will dictate laboratory studies, such as CBC, electrolytes, serum glucose, urinalysis, or studies of thyroid, liver, or renal function.

Medications. Because polypharmacy is common in older patients, review for any recent medication changes—particularly if temporally related to behavior changes. Examine potential drug interactions, and check serum levels of agents such as digoxin, anticonvulsants, or amiodarone. Medications intended for other systems—metoclopramide, for example—can have CNS effects, and many are sedating or disturb electrolyte balance.

Pain can drive behavior, and dementia often impairs a patient's ability to adequately communicate pain or discomfort.

Orthopedic procedures, arthritis, kyphosis, compression fractures, or mechanical low back pain may cause or worsen behavior problems. Dysuria, dyspepsia, constipation, rectal fissures, or hemorrhoids are also important causes of pain—among many others.

If you suspect pain is causing agitation, an analgesic may help. Avoid opioids, which increase the risk of falls and confusion in older patients.

Changes in oxygenation may trigger behavioral changes. Pneumonia, exacerbation of chronic obstructive pulmonary disease, or congestive heart failure can present with agitation, anxiety,

Review any recent medication changes, particularly if behavior changed at the same time

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Table 2

Non-antipsychotic options for target symptoms of patients with dementia

Symptoms	Suggested option	Daily dosage	Adverse effects
Anxiety	Lorazepam	0.5 to 2 mg	Sedation, delirium, gait instability
	Oxazepam	15 to 45 mg	Same as above
Depression, anxiety	SSRIs	Low therapeutic range	GI distress, sedation, akathisia
Sleep or appetite disturbance, depression, anxiety	Mirtazapine	15 to 30 mg	Sedation, weight gain
Agitation*	Cholinesterase inhibitors		
	Donepezil [†]	5 to 10 mg	GI distress, insomnia
	Memantine	10 to 20 mg	Dizziness, headache, constipation
	Anticonvulsants		
	Carbamazepine [‡]	200 to 800 mg	Sedation, GI distress, altered drug metabolism
	Valproic acid [‡]	250 to 1,000 mg	Same as above
	Other		
	Trazodone	25 to 75 mg	Sedation, gait instability

* Clinically meaningful efficacy of these agents in agitated patients not supported by double-blind trials.

[†]May be useful for visual hallucinations in Lewy body dementia.

[‡]May be first-line treatment for patients with history of bipolar disorder.

SSRIs: selective serotonin reuptake inhibitors

and altered mentation because of reduced oxygenation and increased work of breathing. A pulmonary exam and chest radiography may be indicated, such as in patients with dyspnea.

Poor sleep quality can make the sharpest individuals agitated or combative, especially in this population. Collateral information is often necessary, as patients' misperception of sleep state and limited memory often conceal or cause over-reporting of sleep concerns.

Heavy snoring with apneic episodes, daytime somnolence, and frequent awakenings may sug-

gest obstructive sleep apnea. Yelling out in sleep or acting out dreams may suggest REM sleep behavior disorder, commonly associated with Lewy body disease.⁶ A sense of crawling discomfort in the legs may indicate restless legs syndrome. Poor sleep, if accompanied by other symptoms, may also suggest depression, anxiety, or musculoskeletal pain

CASE CONTINUED: A FAMILY AFFAIR

Mrs. A's medical assessment rules out common conditions that might contribute to her symptoms, so we

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start behavioral interventions with the help of her family. These include:

- offering redirection to her room to watch videotaped reassuring messages from her family
- acquiring scrapbooks and family photo albums
- learning more about her family and previous interests, so that staff can engage her in conversation about events from her past whenever possible.

We also diagnose major depression and replace olanzapine with mirtazapine, 15 mg/d. One month later, Mrs. A is spending more time in her room and less time at the front door. Family and staff agree she is less troubled and requires less daily staff time.

CHOOSING PSYCHOTROPICS

We recommend choosing initial psychotropics based on patient diagnosis. If depression symptoms predominate, select antidepressants. If anxiety is present, consider an anxiolytic.

Selecting medication becomes more difficult when a diagnosis is not evident and the medical evaluation is unproductive. *Table 2, page 90*, suggests commonly used alternatives to antipsychotics. **Cholinesterase inhibitors** may improve neuropsychiatric symptoms, but whether the improvement is clinically meaningful has been debated.^{7,8} These agents may be particularly useful for visual hallucinations in patients with Lewy body disease.⁶ Memantine might also alleviate problematic

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behaviors in Alzheimer's dementia.⁹ Cholinesterase inhibitors' side effect risk is low, but they can be expensive.

Antidepressants such as selective serotonin reuptake inhibitors seem to be most effective for behaviors that suggest underlying depression or anxiety.⁸ Mirtazapine, 15 to 30 mg/d, can improve sleep and appetite, and we find it a useful adjunct or primary medication for depression and anxiety symptoms. Tricyclics are not recommended for elderly patients because of multiple drug interactions, narrow therapeutic window, and cardiac side effects.

Anticonvulsants have shown mixed results for agitation. Early studies showed efficacy and tolerability, but double-blind studies have not supported their efficacy in agitated dementia.^{10,11}

For patients with a history of bipolar illness, anticonvulsants such as valproic acid or carbamazepine may be first-line agents in agitation. Serum levels must be monitored, and these drugs increase the risk of drug reactions by altering cytochrome P-450 enzyme activity.

Benzodiazepines may be effective for agitation, particularly with comorbid anxiety. Avoid high dosages because these agents may cause sedation, gait instability, and delirium. After symptoms stabilize, attempt to taper or discontinue the medication. Short half-life benzodiazepines such as oxazepam or lorazepam are preferred to prevent accumulation of active, sedating metabolites.⁵

Eliminating dementia's behavioral problems is unlikely, so a reasonable goal is to reduce their frequency and intensity. Behavior logs can help identify the triggers and what may reduce an individual's agitation or aggression. Consider medical antecedents, such as pain or poor sleep. Try medications for anxiety or depression if those symptoms seem to underlie undesired behaviors.

Bottom Line

Related resources

- ▶ Kelly PA, Carney EA. Managing dementia: Risks of using vs. not using atypical antipsychotics. *Current Psychiatry* 2005;4(8):14-28.
- ▶ U.S. Food and Drug Administration. Center for Drug Evaluation and Research. Atypical antipsychotic drugs information. www.fda.gov/cder/drug/infopage/antipsychotics/default.htm

DRUG BRAND NAMES

Carbamazepine • Carbatrol	Olanzapine • Zyprexa
Donepezil • Aricept	Oxazepam • Serax
Lorazepam • Ativan	Trazodone • Desyrel
Memantine • Namenda	Valproic acid • Depakote
Mirtazapine • Remeron	

DISCLOSURES

The authors report no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

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