Management of Behavioral and Psychological Symptoms of Dementia

Behavioral and psychological symptoms of dementia (BPSD) refer to the disturbances in mood, behavior, thought content, and perception that are associated with dementia.

- Psychiatric symptoms include anxiety, depression, and psychosis (hallucinations and delusions).
- Behavioral symptoms include agitation, aggression, disinhibition, wandering, sleep disturbances, eating problems, and refusing care.

Some symptoms may predominate in an individual based on the type and stage of dementia, the primary types being vascular dementia, Alzheimer's disease, Lewy body dementia and frontotemporal dementia.

Unlike cognitive and functional status which decline with dementia, BPSD tends to fluctuate episodically and can precede onset of cognitive and functional deficits.

Symptoms are very distressing to patients and their caregivers. BPSD diminishes quality of life and function and can increase risk for abuse and neglect.

Summary Recommendations

- **Treatment plans must always address modifiable causes of BPSD.**
- **Psychosocial interventions and sensory therapies can help manage BPSD and should be utilized before medication.**
- **Severe cases of aggression or psychosis can be addressed with a temporary course of an antipsychotic medication using the smallest effective dose. Consider increased risk for mortality and morbidities with these medications, regularly reassess and develop a deprescribing plan.**

Evaluation of BPSD

Every patient with dementia should be offered regular follow-up regardless of BPSD.[1]

- Understand their underlying cause of dementia and their cognitive and functional baseline.

Behavioral symptoms often have underlying meaning, which can be elucidated through multidisciplinary assessments and care that address causal or associated needs.[2]

- A detailed assessment of the symptoms and environmental situation will guide the appropriate treatment plan.

Patients may be unable to provide information or express their needs. Input from caregivers, family and the primary care team are important to adequately diagnose and manage BPSD.

- Ask for details about onset and severity of symptoms, patterns and timing of symptoms, triggers, current social and physical environment, and degree of distress the symptoms cause the patient and caregivers.

Assess Possible Etiology

	Modifiable Causes of BPSD	
PATIENT		
Medical Problem	• Infection* • Pain • Stroke, TIA *Recommend judicious interpretation of urine cultures, high rate of colonization	• Metabolic or electrolyte changes • Delirium • Insomnia and parasomnias • Constipation
Unmet Need	• Untreated pain • Malnutrition • Toilet needs	• Fear • Sense of loss of control • Poor sleep hygiene

Sensory deficit	• Visual (not wearing glasses) • Hearing (hearing aids not functioning)
Medications	• Polypharmacy (work with other providers to deprescribe) • Side effects (anticholinergics, sedatives, fluoroquinolones) • Drug-drug interactions (may require dose adjustments)

CAREGIVER

Stress	• Limited self-care	• Insufficient breaks
Training/Education	• Limited understanding that behaviors are unintentional • Unrealistic expectations for patient • Limited coping skills; lack of safety plan for nocturnal confusion/wandering • Cultural differences between patient and caregiver	
Communication	• Asking open-ended questions • Offering too many choices • Dismissive or angry tone/volume of voice • Negative language or challenging the patient to remember	

ENVIRONMENT

Stimulation of surroundings	• Clutter in environment or change of environment (e.g., travel, rearranging furniture, new residence) • Noise (from too many people, T.V., radio, etc.)
Activity	• Lack of engagement with meaningful activities • Lack of access to outdoors • Rushing activities • Lack of daily routine and structure around day

Management of BPSD

Individualize treatment of BPSD based on probable causes, many of which can be managed once identified. Successful management of BPSD is dependent on baseline symptoms and cognition, but also controllable factors such as:

- A calm and organized environment with a daily routine that offers simple but engaging, interesting and pleasurable activities; and
- Clear and calm communication skills from caregivers who are rested and adequately trained to anticipate, recognize and manage BPSD.

Non-pharmacologic Management

The effectiveness of specific therapies is dependent on a positive interaction with a trained therapist.

Psychosocial interventions can reduce BPSD and promote quality of life in both the patient with dementia and their caregivers. These interventions aim to reduce social isolation and preserve self-esteem and personal identity.[2,3]

Psychotherapy interventions can be helpful for depression in patients with dementia and mild cognitive impairment.[4,5]

Sensory therapy may provide benefit in patients with agitation.[2,6]

Examples of Effective Non-Pharmacological Interventions and Therapies:

Psychosocial	Psychotherapy	Sensory
Reminiscence therapy	Cognitive behavioral therapy	Music therapy
Validation	Behavioral activation	Aromatherapy
Pet therapy	Problem-solving therapy	Massage
Recreational activities		Touch therapy
Exercise or movement as able		

Pharmacologic Management

Before considering pharmacological management of BPSD, review all medications, including over-the-counter medications and other substances, to rule out other causes of BPSD.

- Medications with anticholinergic properties, sedatives, opioids, fluoroquinolone antibiotics, and other medications may lead to or exacerbate BPSD.
- Consider drug-drug interactions when reviewing or changing medications.

Antipsychotic Medications

Antipsychotics should generally be avoided in older adults with BPSD, except for:[7]

- **Mental health disorder with indication*** (i.e., schizophrenia, bipolar disorder)

  *Obtain accurate past medical histories, including specific medications and doses used, duration of treatment, and clinical outcomes observed.

- **Severe psychosis** (delusions or hallucinations causing severe distress)
- **Severe aggression** (at risk for self-harm or harm to others)

Antipsychotic medications are unlikely to provide short-term improvement of agitation or aggression in most people (low quality evidence).[1]

Avoid prescribing an antipsychotic without first discussing possible risks and benefits with the patient and their surrogate decision maker. The likelihood of benefit versus risk with an antipsychotic in this specific population is modest: for every 9 to 25 persons helped with these medications, there would be one death.[8]

Key Point: *Judicious, short-term use* of a second-generation antipsychotic medication may be appropriate for severe or dangerous aggression (i.e., risk for self-harm or harm to others) after a detailed neuropsychiatric assessment and after non-pharmacological interventions have been tried.

Benefits Risks, and Considerations of Antipsychotics in Patients with BPSD:[1,9-15]

BENEFITS	RISKS & CONSIDERATIONS
• Risperidone, olanzapine, aripiprazole and brexpiprazole may have modest short-term efficacy for management of agitation or aggression in various types of dementia (low quality evidence). • Pimavanserin is indicated for patients with Parkinson's-related psychosis.	• Associated with 1.5-1.7-fold increased risk for mortality (high quality evidence) • Associated with increased risk for serious adverse events* • Use caution in people with preexisting cardiovascular disease, Parkinson's disease or who are at risk for seizures • Brexpiprazole and pimavanserin are limited by high cost and drug-drug interactions
*Expressed as number needed-to-harm (NNH) in first 180 days after initiation of antipsychotic: Increased risk of stroke (NNH=29), myocardial infarction (NNH=167), heart failure (NNH=63), venous thromboembolism (NNH=107), acute kidney injury (NNH=35), pneumonia (NNH=9), and bone fracture (NNH=40).[12] Antipsychotics also increase risk for movement disorders.	

If the decision is made to initiate an antipsychotic medication:

- Ensure that the patient continues psychosocial and sensory therapy, and environmental conditions are continually managed.
- Start with the lowest dose and titrate to the minimum effective and tolerable dose.
- Prescribe on a scheduled basis, not as needed.
- Use an oral antipsychotic such as risperidone, olanzapine or aripiprazole.
- If a significant adverse effect occurs, then discontinue or taper off.
- If a clinical response to the antipsychotic is not observed after 4 weeks of therapy, then taper off.
- Except in cases of severe baseline BPSD, antipsychotics can be safely tapered off after 3-4 months, even when benefit is initially observed (moderate quality evidence).[16-18]

Key Point: The need for ongoing use of *psychotropic medications* should be routinely reassessed in patients with dementia every 6 weeks.[7]

Key Point: behavioral features of dementia change over time as the disease progresses. No evidence suggests *ongoing* use of an antipsychotic is beneficial for BPSD.

Tapering Off Antipsychotic Medications in Patients with BPSD[16,19]

Slowing tapering off is unlikely to worsen BPSD in most patients (high quality evidence)
Reduce dose by 25-50% every 1-2 weeks
Regularly assess for recurrence of BPSD, working in collaboration with caregivers

In Oregon, long-term care facilities cannot request a psychotropic medication to treat a resident's behavioral symptoms without first attempting to manage them with non-pharmacological interventions. If a psychotropic medication is prescribed, the resident's primary care provider must be notified (OAR 411-054-0055).

Antidepressants

Agitation:

- Citalopram 30 mg daily may be effective for agitation in patients with dementia[20], but it can be associated with QT-prolongation in some people. Escitalopram may be preferred in older adults or those with heart disease.
- Treatment of BPSD in patients with *frontotemporal* dementia is often very challenging. Trazodone, titrated up to 150 mg or 300 mg daily, may help symptoms in these patients (low quality evidence).[21]

Depression:

- Depression is difficult to diagnose in people with dementia. Antidepressants are unlikely to have a significant effect on depressive symptoms in dementia, but they may be continued if indicated for a pre-existing severe mental health disorder (high quality evidence).[7,22,23]

Sleep disturbances:

- In patients with mild cognitive impairment, the antidepressant recommendations outlined in Treatment of Chronic Insomnia Disorder in Adults will be helpful.

Inappropriate Sexual behavior (ISB):

- Selective serotonin reuptake inhibitors (SSRIs) are a reasonable first-line pharmacological option for ISB if caregiver education and distraction techniques are unsuccessful (low quality evidence).[24]
- Hormonal therapies (cyproterone acetate, medroxyprogesterone, anti-androgens, and finasteride) may lead to complete or partial remission of ISB in males refractory to SSRIs (low quality evidence).[24] Specialty care is recommended.

Dementia Medications

Cholinesterase inhibitors (i.e., donepezil) or memantine can be prescribed for dementia concurrently with BPSD interventions, but these medications should not solely be relied upon to improve BPSD.[1]

Analgesics

Pain should be considered in older adults with dementia who are unable to express themselves clearly.[25]

- Effective pain management is part of a successful BPSD treatment.
- Avoid routine use of mild analgesics to treat BPSD unless pain is suspected.[1]
- A short trial of scheduled acetaminophen may modestly improve socialization, but not agitation, in patients with moderate-severe dementia who are unable to express their level of pain (low quality evidence).[26]

Sedatives

Avoid sedatives, including benzodiazepines, for their sedative effect to manage BPSD.

- Benzodiazepines increase the risk of cognitive impairment, delirium, falls, fractures, and motor vehicle crashes in older adults (moderate quality evidence).[27]
- Continued use of benzodiazepines may lead to clinically significant physical dependence, and exposes users to risks of abuse, misuse, and addiction.[27]

Example Strategy to Manage BPSD:

Assess and Manage Modifiable Causes in Patient, Caregiver and Environment

and Deprescribe Medications Without Identifiable Indication

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If BPSD persists:

Severe Psychosis or Aggression	Agitation	Depression	Sleep Disturbances
↓	↓	↓	↓
Risperidone 0.25-0.5 mg BID or Aripiprazole 5-10 mg/d (do not use PRN) Reassess in 4 weeks, taper off if inadequate response If response is observed, maintain dose for 3-4 months, then taper off (reduce dose 25-50% every 1-2 weeks) unless severe BPSD returns	Escitalopram 10 mg/d or Citalopram 20 mg/d Reassess in 4 weeks, titrate dose if needed Reassess need every 6 weeks	Psychotherapy (if MCI)	Doxepin 3-10 mg QHS or Trazodone 50-100 mg QHS or Suvorexant 10-20 mg QHS Reassess in 2-4 weeks, attempt to discontinue

Abbreviations: BID = twice daily; BPSD = behavioral and psychological symptoms of dementia; MCI = mild cognitive impairment; mg/d = milligrams per day; PRN = as needed; QHS = at bedtime.

Note: Patients with serious mental health disorders prior to dementia diagnosis should continue pharmacological treatment, including appropriate antipsychotic medication.

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