Use of Antipsychotics in Behavioural and Psychological Symptoms of Dementia (BPSD) Discussion Guide

Long-Term Care (LTC) Edition

This tool is designed to help providers understand, assess, and manage residents in LTC homes with behavioural and psychological symptoms of dementia (responsive behaviours), with a focus on antipsychotic medications. It was developed as part of Centre for Effective Practice’s Academic Detailing Service for LTC homes. This tool integrates best-practice evidence, clinical experience, and makes reference to relevant existing tools and services wherever possible. Important principles include being resident-centered, being mindful of benefits, risks and safety concerns, using an interprofessional team approach and validated tools, prescribing conservatively, and reassessing regularly for opportunities to deprescribe medications that are no longer needed. As always, efforts must be made to individualize any treatment decisions for the resident, with consideration for caregivers, family as well as LTC staff.

Identify BPSD Symptom Clusters¹,²

Psychosis
- Delusions
- Hallucinations
- Misidentification
- Suspicious

Aggression
- Defensive Resistance to care
- Verbal Physical

Agitation
- Dressing/undressing
- Pacing
- Repetitive actions
- Restless/anxious

Depression
- Anxious
- Guilty
- Hopeless
- Irritable/screaming
- Sad, tearful
- Suicidal

Apathy
- Amotivation
- Lacking interest
- Withdrawn

Mania
- Euphoria
- Irritable
- Pressured speech
Evaluate BPSD in LTC

Remember: Engage the family at every step. Discuss with family any history that may help the care team understand and manage the behaviour (e.g. resident preferences, activities, routine).

1. **Assess & Document**
   - Document behaviour or symptom clusters, including frequency, severity, triggers and consequences
   - Designate specific members of the interprofessional care team who will be responsible for coordinating day-to-day assessment and management
   - **Examples** of standardized clinical assessment tools/documentation:
     - Antecedents, Behaviour, Consequences (ABC) Charting
     - Dementia Observation System (DOS)
     - Cohen Mansfield Agitation Inventory (CMAI)
     - Kingston Standardized Behavioural Assessment (KSBA)
     - Confusion Assessment Method (CAM)
     - Pain Assessment in Advanced Dementia Scale (PAINAD)

2. **Identify Risks**
   - Use the P.I.E.C.E.S.™ RISKS mnemonic to assess risks to the resident and others:
     - **Roaming**: Is risk greater due to resident roaming?
     - **Imminent**: Is significant risk imminent?
     - **Suicide**: Does the resident display any suicidal tendencies?
     - **Kin**: Is the health or safety of other residents/caregivers affected?
     - **Self-neglect**: Is resident’s self-neglect a risk to themself or others?

3. **Identify BPSD Causes**
   - Obtain information from caregivers, family, and staff
   - Consider environmental factors and triggers, including possible role of team members
   - Consider using P.I.E.C.E.S.™ to identify causes (see tool on right)

4. **Clinical Evaluation**
   - **Check vitals**: Temperature, pulse, blood pressure (sitting & standing), respiration, oxygen saturation
   - **Physical assessment**: Signs of constipation, urinary retention, pain, changes in breath sounds, peripheral edema, fluid status (orthostatic blood pressure, mucus membranes)
   - **Common sources of pain**: Skin ulcers, eyes, musculoskeletal, feet, oral and dental
   - **Sensory**: Optimize hearing (check hearing aids, ear wax) and vision (check glasses, routine optometrist check up if available)
   - **Mental health/status evaluation**
     - **Blood**: Glucose, calcium, complete blood count (CBC), creatinine, electrolytes, ferritin, magnesium, TSH, if appropriate
     - **Urine**: Any urinary symptoms? (Note: Caution not to send urine for culture if no urinary symptoms or sudden change in status as “asymptomatic bacteriuria” in LTC is over treated.)
     - **Recent changes**: Drugs, environmental, routine, family, medical
     - **Imaging**: e.g. brain, joint, chest, etc. if appropriate

P.I.E.C.E.S. 3-Question Template™

Use the P.I.E.C.E.S. 3-Question Template™ to ask:
1. What has changed?
2. What are the RISKS and possible causes?
3. What is the action?

Consider...

**Physical**
- **think “the 5Ds”**
  - Delirium
  - Disease (cardiovascular, infectious, insomnia, metabolic, nocturia, renal, respiratory, sleep apnea, urinary retention, etc)
  - Drugs (e.g. acetylcholinesterase inhibitors, anticholinergics, anticonvulsants, anti-parkinson, benzodiazepines, digoxin, fluoroquinolones, lithium, opioids, systemic corticosteroid)
  - See Reference List of Drugs with Anticholinergic Effects
  - **Discomfort** (e.g. pain, constipation, fecal impaction, urinary retention, hunger, thirst)
  - **Disability** (e.g. sensory loss)

**Intellectual**
- **think “the 7 As”**
  - Amnesia (memory)
  - Aphasia (speech)
  - Apathy (initiative)
  - Agnosia (recognition of people or things)
  - Apraxia (purposeful movement)
  - Anosognosia (insight/self-awareness)
  - Altered Perception (sensory information)

**Emotional**
- **think “the 4 Ds”**
  - Disorder Adjustment (e.g. related to losses)
  - Disorders of Mood (e.g. depressive symptoms, anxiety)
  - Delusional (e.g. suspiciousness, psychosis)
  - Disorders of Personality

**Capabilities**
- Capability too low to meet demands of environment (catastrophic reactions) or not utilized enough (boredom)
- Maximize remaining strengths; avoid unnecessary disability

**Environment**
- Consider over-/under-stimulation, relocation, change in routine, noise, lighting, colours, social interactions with caregivers/others

**Social**
- Consider social network, life story, cultural heritage
Initiate Non-Drug Therapy for BPSD in LTC

Remember: As a general principle, individualize your approach as much as possible. Behavioural triggers and effective ways to treat them will vary from one resident to the next.

Safety

Ensure your safety, the resident’s safety and other residents’ safety by securing the environment
Make sure you are safe (exit near, chair between you and resident)
Remove potentially dangerous objects
Move other individuals away
Remove ongoing triggers

Environmental Considerations

Eliminate misleading stimuli
- Clutter, TV, radio, noise, people, reflections in mirrors/dark windows, pictures/décor
Reduce environmental stress
- Caffeine, extra people, holiday decorations, public TV
Adjust stimulation
- If over-stimulated, reduce noise, activity, confusion
- If under-stimulated, increase activity/involvement
Enhance function
- Increase lighting, to reduce misinterpretation
- Add signs, cues, or pictures to promote way-finding
Adapt the physical setting according to individual preference
- Secure outdoor areas
- Home-like features
- Smaller, segmented recreational and dining areas
- Spa-like bathing facilities

Caregiver Approach Considerations

Personal approach
- Be calm and compassionate (use/avoid touch as indicated)
- Distract by engaging in individualized activities
- Focus on resident’s wishes, interests, concerns
- Approach slowly; look for signs of increase agitation
- Approach resident’s private space slowly and ask permission before entering
Daily routines
- Keep to the same routine to reduce uncertainty
- Use long-standing history and preferences to guide
- Individualize social and leisure activities to reduce boredom
Communication style
- Most communication is non-verbal, use positive non-verbal cues
- Make eye contact unless perceived as aggressive
- Use short simple words & phrases (residents with dementia have trouble processing multiple words)
- Speak clearly & use a positive tone
- Wait for answers (be patient)

Behaviour | Possible Solutions
---|---
Noisy (Yellow) | • Distract, engage
- Individualized music, nature sounds, presence therapy (tapes of family)

Restless (Orange) | • Distract, engage
- “Rest stations” in pacing path, adapt environment to reduce exit-seeking, physical exercise, outdoor activities

Exit-seeking (Brown) | • Distract, engage
- Adapt environment to reduce exit-seeking, physical exercise, outdoor activities
- Register the individual with MedicAlert and Alzheimer’s Society Safety Home program (contact information will be on bracelet or necklace)
- Hide exits with curtains, or paint a black circle on the floor (the individual will think it is a hole and will not exit)

Verbal aggression (Pink) | • Distract, engage
- Individualized music, nature sounds, presence therapy (tapes of family)

Physical aggression (Red) | • Distract, keep calm, remain warm and supportive
- If possible, give the person some space and try to approach later

Delusion/hallucination | • Understand this is their reality and do not confront the false belief
- Focus efforts on how the resident feels, not the content; offer distraction, avoid clutter, TV, radio

Agitated/irritated | • Calm, soothe, distract
- Individualized music, aromatherapy, pet therapy, physical exercise, outdoor activities

Resistant to care | • Identify source of threat (e.g. pain); change routines and approaches

Repetitive questions/mannerisms | • Reassure, address underlying issue, distract
- Put the answer to the same repetitive question on a piece of paper or card and ask the resident to read the card instead

Hoarding | • Remove items gradually, reorganize and clear paths in the case of emergency; be compassionate

Inappropriate behaviour | • Distract, re-direct
- Keep an active and regular schedule to avoid boredom
- Try increasing the level of appropriate physical attention
- Provide personal space if possible and come back when the resident is calmer
- Allow the individual to masturbate in a private area

*DOS = Dementia Observation System (Colours used in table are taken from the DOS system, though you may use different colours in your practice)

Remember: Take advantage of any available system supports, such as Behavioural Supports Ontario (BSO) and psychogeriatric resource consultants.[14]
Manage BPSD in LTC

1. **Initiate Individualized Non-Drug Therapy**[^11^, ^12^, ^13^]
   - Manage BPSD symptom with individualized non-drug therapy unless imminent risk of harm to resident, staff, or others
   - See [Initiate Non-Drug Therapy for BPSD in LTC](#) on page 3 for additional information
   - Treat any underlying causes with non-drug/drug therapy (e.g. pain, constipation, delirium)

2. **Consider Targeted Drug Therapy**
   - If non-drug approaches fail, consider targeted drug therapy (see chart to right)
   - Consider antipsychotic therapy in patients with:
     a. Psychosis
     b. An imminent risk of harm to other residents or staff
     c. Severe and disruptive agitation or aggression
   
   **Note:** In acute BPSD, where there is a safety risk to resident or others, there may not be time to try non-drug approaches before trying pharmacological management.

3. **Monitor and Document**
   - Determine therapeutic goal for target BPSD symptom(s)
   - After choosing non-drug and/or drug therapy, document target BPSD behaviour (e.g. see DOS Tool)
   - Monitor and document drug and non-drug therapy for effectiveness and adverse effects
   - Consider dose reduction or discontinuation if the drug:
     a. Is not effective
     b. Has intolerable side effects, or;
     c. Behaviours have been manageable

4. **Follow-up**
   - Follow-up is important for any drug regimen (with adequate preparation, may be addressed as part of quarterly medication review)
   - If antipsychotics used, reassess need every 3 months[^16^]
   - Consider deprescribing when appropriate (see page 5)

5. **Continue Non-Drug Approaches**
   - Continue using non-drug approaches to prevent further BPSD symptoms

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### Behaviour | Drug Therapy
--- | ---
Psychosis, Agitation, Agitation (severe) | Atypical antipsychotics (such as risperidone, aripiprazole, olanzapine, quetiapine as discussed in detail on page 6[^10^, ^14^])
Agitation (severe) | SSRIs or trazodone but evidence is lacking[^11^, ^13^]
Agitation (severe) in Lewy Body Dementia or Parkinson’s | Possible cholinesterase inhibitors
| Very low dose quetiapine[^25^, ^26^]
Anxiety (short term/intermittent) | A short acting benzodiazepine such as lorazepam prior to anxiety provoking events such as bathing[^13^]
Anxiety (chronic) | Antidepressants (such as SSRIs, SNRIs)
| Buspirone[^12^]
Depression (severe) | Antidepressants such as SSRIs (e.g. citalopram, sertaline), SNRIs (e.g. venlafaxine, duloxetine), other antidepressants (bupropion, mirtazapine, moclobemide)
| Secondary TCAs (nortriptyline or desipramine) may be suitable if coexisting indication such as neuropathic pain, etc., but caution regarding anticholinergic load, etc.
[^10^, ^18^]
Apathy | Limited role for drug therapy but occasionally cholinesterase inhibitors may be helpful
| Methylphenidate also sometimes used, but limited by concerns such as stimulant effect on behaviour and risk of diversion[^15^, ^14^]
Mania | Addressing any possible drug causes is of primary importance
| Evidence for specific recommendations lacking
| Mood stabilizers are an option, but take caution regarding tolerability and drug interactions
Considerations for an Antipsychotic Trial for BPSD in LTC

1. Is an Antipsychotic Trial Needed?
   - Is there imminent risk of harm to self and/or others?
   - Are symptoms particularly disturbing, distressing or dangerous?
   - Are symptoms likely to respond to antipsychotics?
   ➔ If yes to any of the above questions, then consider an antipsychotic trial (see page 6 for a comparison of antipsychotics)

2. Initiation and Ongoing Review
   - Weigh potential benefits and harms
   - Obtain and document informed consent (see Psychotropic Medication Consent Discussion Tool)[28]
   - Select an antipsychotic; start with a low dose, and gradually titrate as necessary/tolerated
   - Monitor both change in targeted behaviour as well as any side effects (see DOS Tool)
   - Assess over 1-3 weeks, documenting any benefits and harms realized. If lack of response and/or tolerability adjust therapy. Increase dose (if not yet maximized) or taper/discontinue[28]
   - Continue to monitor and reassess on an ongoing basis for effectiveness & tolerability
   - Review for possible deprescribing after 3-6 months of behavioural stability[27]
   - Consider referral to a specialist if trial is unsuccessful

3. Consider referral to a specialist if trial is unsuccessful

Symptoms Likely or Unlikely to Respond to Antipsychotic Therapy

<table>
<thead>
<tr>
<th>Likely</th>
<th>Unlikely</th>
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<tbody>
<tr>
<td>Psychosis (hallucinations, delusions)</td>
<td>Disinhibition, including sexual</td>
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<tr>
<td>Aggression</td>
<td>Inappropriate (un-)dressing</td>
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<tr>
<td>Agitation (Severe)</td>
<td>Hiding or hoarding</td>
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<td></td>
<td>Repetitive behaviours, vocalizations</td>
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<td></td>
<td>Resistance to specific care/caregiver</td>
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<td></td>
<td>Unsocial behaviour/indifference</td>
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<td>Wandering without aggression</td>
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Antipsychotic Therapy: Potential Harms and Benefits

Potential Benefits
- Limited benefit: modest improvement sometimes observed
  - effect size: 0.12-0.2
  - NNT variable: ~5-14
  (ie. at best, compared to placebo, antipsychotic therapy results in targeted behaviour benefit in 1 out of 5 people treated)[20, 21]

Potential Harms
- Side effects: sedation, falls, postural hypotension, QT prolongation, confusion, EPS (rigidity, stiffness, akinesia), tardive dyskinesia, diabetes, weight gain[21, 22]
- Stroke: increased risk
- Death: possible increase
  ➔ Health Canada Advisory noted a 1.6 fold increase in mortality (mostly related to heart failure, sudden death, pneumonia). Some data suggests for every ~100 people treated for ~12 weeks, there will be 1 extra stroke or death (NNH=100).[24, 25, 26]

Potential benefits tend to be over-appreciated, while harms are underappreciated. Nevertheless, when harmful behaviours are severe and distressing, an antipsychotic trial may be reasonable.

KEY: EPS: extrapyramidal symptoms (Parkinson’s-like), NNT: number needed to treat to see one extra benefit, NNH: number needed to treat to see one extra harm.

Reassessing Antipsychotics for Possible Deprescribing

- Stopping or tapering antipsychotics may decrease “all cause mortality”[22]
- Deprescribing may not be indicated for those whose symptoms are due to psychosis, or whose behaviour is especially dangerous or disruptive
- Evaluate reason for use and any recent changes in targeted behaviour
- Ensure suitable non-pharmacological measures for BPSD are optimized
- Due to the nature of responsive behaviours and the usual course of dementia, antipsychotics can often be successfully tapered and/or discontinued. As some may worsen, approach cautiously, and monitor behaviour[28]
- Taper gradually, often by 25-50% every 2-4+ weeks and look for any resulting behaviour changes. Once on lowest dose, may discontinue in 2-4+ weeks
- Continue to reassess for emergence of responsive behaviours

September 2015. Version 1. effectivepractice.org/academicdetailing
Comparison of Antipsychotics[20, 21, 30, 31, 32, 33, 34]

Remember: Many effects are dose dependent and direct comparisons are limited. Thus, the following table is intended only as a general guide.

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</thead>
<tbody>
<tr>
<td><strong>Atypicals</strong></td>
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<tr>
<td>Risperidone* (Risperdal)[25, 33, 34]</td>
<td>✔ Indicated for severe dementia of the Alzheimer type[33] (Health Canada) • Evidence for efficacy in agitation, aggression &amp; psychosis</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td>+</td>
<td>↑↑↑ (0.7lb/ month)</td>
<td>$10-27</td>
</tr>
<tr>
<td>Olanzapine* (Zyprexa)[25, 34]</td>
<td>Off-label use in BPSD • Evidence for efficacy in agitation &amp; aggression</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
<td>+</td>
<td>+++</td>
<td>↑↑↑ (1.0lb/ month)</td>
<td>$17-38</td>
</tr>
<tr>
<td>Aripiprazole* (Abilify)[34]</td>
<td>• Off-label use in agitation or aggression • Evidence for efficacy in agitation &amp; aggression • Not eligible for dementia or BPSD in the elderly[25] criteria, therapeutic note • Not for psychosis[34] (same as placebo)</td>
<td>+</td>
<td>+</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>–</td>
<td>↑</td>
<td>$112-260</td>
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<tr>
<td>Quetiapine (Seroquel)</td>
<td>Off-label use in BPSD • Lacks evidence for efficacy in BPSD agitation, aggression, or psychosis • Consider in Lewy Body dementia, Parkinson’s (low EPS) • Note: although used, not indicated and lacking evidence for insomnia</td>
<td>++</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td>↑↑↑ (0.4lb/ month)</td>
<td>$10-59</td>
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<tr>
<td><strong>Typicals</strong></td>
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<tr>
<td>Haloperidol (Haldol)</td>
<td>Useful short term in acute BPSD or delirium</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>↑↑</td>
<td>0.25mg – 2mg/d</td>
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<tr>
<td>Loxapine (Loxapac, Xylocac)[2]</td>
<td>Consider if other agents have failed and severe persistent dangerous behaviour continues • Severe, acute BPSD • Not to be used long-term due to adverse effects</td>
<td>++</td>
<td>++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>–</td>
<td>5mg – 10mg BID</td>
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</tbody>
</table>

*Aripiprazole, olanzapine and risperidone were superior to placebo as treatment of behavioural symptoms as measured by total scores on BEHAVE-AD, Brief Psychiatric Rating Scale (BPRS), and Neuropsychiatric Inventory (NPI)[20]


**Frequency (%) of Adverse Reactions of Antipsychotics at Therapeutic Doses**

- : Negligible or absent (<2%)
+ : Infrequent (>2%)
++ : Moderate (>10%)
+++ : Frequent (>30%)
↑: Increase
Supporting Materials

These supporting materials are an inventory for long-term care providers to help identify useful clinical aids and resident/family material. It provides a list, including direct links where available, of tools or materials that have been directly referenced in the detailing guide and/or have been reviewed by CEP and identified as important material in supporting the uptake/adoption of the detailing guide. It includes a brief description of the tool, with full references available as indicated on page 8. The following is a comprehensive but not exhaustive list based on an environmental scan, appraisal by Clinical Leads, and focus groups with long-term care providers. CEP has also compiled a list of additional resources beyond those listed below available at effectivepractice.org/academicdetailing.

Antecedent, Behaviour, Consequence (ABC) Chart Form
Chart form to help providers determine and document the events/stimuli that impact behavior.

Antipsychotic Medicines for People with Dementia
Patient handout to help individuals make decisions on antipsychotic use, and monitor their loved one’s behaviours and symptoms over time.
URL: www.healthcare.uiowa.edu/igec

Atypical Antipsychotic Drugs and Dementia – Advisories, Warnings and Recalls for Health Professionals
Advisory concerning atypical antipsychotic treatment of behavioral disorders in elderly patients, which is associated with an increased risk for all-cause mortality. [June 2005]
URL: healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2005/14307a-eng.php

BEHAVE-AD
Clinical rating scale to measure behavioural and psychological symptoms of dementia based upon information obtained from caregivers/informants.

Behavioural Supports Ontario (BSO)
Integrated network designed to provide services and supports to individuals with behaviours associated with complex mental health, dementia, and other neurological conditions living in long-term care.

Brief Psychiatric Rating Scale
Rating scale of 24 symptom constructs used to assess the positive, negative, and affective symptoms of individuals.

Cohen-Mansfield Agitation Inventory (CMAI)
Inventory questionnaire of grouped agitated behaviors to assess the frequency and severity of these behaviours in elderly persons.

Confusion Assessment Method (CAM)
Diagnostic algorithm/questionnaire for identification of delirium through formal cognitive testing.

Cornell Scale for Depression in Dementia
Scale for assessing signs and symptoms of major depression in people with cognitive impairment.

Dementia Observation System (DOS)
Behaviour assessment tool which captures the frequency and duration of behaviours of concern over 24 hour periods.
URL: piecescanada.com

Kingston Standardized Behavioural Assessment (KSBA)
Behaviour analysis tool designed to indicate the number of behavioural symptoms associated with dementia affecting an individual patient.
URL: kingstonscales.org/behaviour-assessment.html

Meaning and Solutions for Behaviours in Dementia Inventory
Dementia-related behaviors, including possible causes and solutions for management as a starting point for discussion with caregiver(s).
URL: www.mountsinai.on.ca/care/psych/patient-programs/geriatric-psychiatry

Neuropsychiatric Inventory – Nursing Home Version (NPI – NH)
Tool to characterize the neuropsychiatric symptoms and psychopathology of patients with Alzheimer’s disease and other dementias to measure the impact of antidepressant and psychotropic drugs.
URL: npitest.net

Pain Assessment in Advanced Dementia Scale (PAINAD)
Pain assessment tool for individuals with advanced dementia including behaviour observation scores.

PIECES™ Framework
Interdisciplinary approach to understanding and enhancing care for individuals with complex physical/cognitive/mental health need and behaviour changes.
URL: piecescanada.com

Psychotropic Medication Consent Discussion Tool
Aid for initiating antipsychotic medications and key discussion items for informed consent from patients or substitute decision makers.

Reference List of Drugs with Anticholinergic Effects
Reference list of drugs with low, moderate, and high anticholinergic effects, including side effects and preferred alternatives.
URL: rxfiles.ca/rxfiles

Risperidone - Restriction of the Dementia Indication
Alert for the restriction of risperidone and related antipsychotic use to patients with severe dementia of the Alzheimer type unresponsive to non-pharmacological approaches and when there is a risk of harm to self or others. [February, 2015]
Note: Although recent alert is specific for risperidone, other antipsychotics have similar concerns; however, unlike risperidone, others lack an official indication in BPSD.
URL: healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2015/43797a-eng.php

Treating Disruptive Behaviour in People with Dementia (Patient Material)
Statements on how to treat disruptive behaviours without antipsychotic drug use.
URL: choosingwisely.org
References


