

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

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 with clinical experience, and makes reference to relevant existing tools and services wherever possible.

Important principles include:

- Being resident-centred,
- 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 given to caregivers, family members, as well as LTC staff.

## Identify BPSD Symptom Clusters<sup>1, 2</sup>

### 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

### Mania



Euphoria  
Irritable  
Pressured speech

### Apathy



Amotivation  
Lacking interest  
Withdrawn

# Overview of BPSD in LTC Management

Treatment for dementia is an ongoing process. Since dementia is a progressive disease, regular follow-ups are necessary to ensure that the resident is receiving the best possible treatment for his or her symptoms. The sections in this tool should each be **considered** at each follow-up (even if some treatments discussed, such as drug therapy, will not be necessary for every resident at every stage of treatment).

## Section A: Evaluate BPSD in LTC

**Before beginning any sort of treatment (e.g. drug or non-drug therapy), it is important to evaluate the resident's symptoms.**

This section discusses:

- Tools for discussing and documenting BPSD
- How to use the P.I.E.C.E.S.<sup>™</sup> tools to assess risks to the resident and others
- Clinical evaluations that should take place in order to identify any underlying physiological causes of BPSD



## Section B: Initiate Non-Drug Therapy for BPSD in LTC

**Non-drug therapy is an important part of managing BPSD, regardless of whether drug therapy is initiated. It is an ongoing process that involves the care team, family, and caregivers.**

This section discusses:

- Safety, environmental, and caregiver approach considerations that are core components of non-drug therapy
- Possible solutions to behavioural symptoms, including those identified within the Dementia Observation System (DOS)



## Section C: Consider Drug Trial(s)

**In some cases, when non-drug therapy approaches alone are not sufficient to manage BPSD, it may be necessary to initiate drug therapy to manage symptoms.**

This section discusses:

- Determining the best drug therapy to treat the resident's symptoms
- What symptoms are and are not likely to respond to antipsychotic therapy
- General principles for monitoring, documenting, and following-up on residents receiving medications



## Section D: Additional Information on Antipsychotic Therapy

**When BPSD are particularly distressing or disturbing, pose an imminent risk of harm to the patient or others, and are likely to respond to antipsychotics (see section C), it is sometimes beneficial to initiate antipsychotic therapy.**

This section expands on the information about antipsychotics introduced in Section C, and includes:

- The benefits and harms of antipsychotic therapy
- A table comparing the efficacy of different antipsychotics for treating BPSD, some common side effects, and the cost of treatment
- General guidelines for assessing antipsychotics for possible deprescribing

# Section A: Evaluate BPSD in LTC

**Remember:** Engage the family/caregiver at every step. Discuss any history that may help the care team understand and manage the behaviour (e.g., 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
- Standardized clinical assessment tools, such as the Dementia Observation System (DOS)<sup>4</sup> can be helpful for monitoring and documenting symptoms
- Examples of standardized clinical assessment tools can be found on **Page 7**

## 2 Identify Risks

- Use the **P.I.E.C.E.S.<sup>TM</sup> RISKS** mnemonic to assess risks to the resident and others:<sup>9</sup>
  - 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 residents/caregivers affected?
  - Self-neglect:** Is resident's self-neglect a risk to themselves or others?

## 3 Identify BPSD Causes

- Obtain **history** from caregivers, family, and staff<sup>10</sup>
- Consider environmental factors and triggers, including possible role of team members
- Consider using **P.I.E.C.E.S.<sup>TM</sup>** to identify causes (see box on right)

## 4 Clinical Evaluation<sup>10</sup>

The differential diagnosis of the syndrome of behaviour change in dementia is broad. Careful examination of history, physical examination and appropriate investigations may help identify contributing factors. A full, rather than targeted, physical examination is indicated, **within the bounds of patient cooperation.**

### History (include family/caregivers):

- Recent changes to environment, routine, sleep pattern, family/social situation
- Medication Review:** Adherence, prescription and OTC medications, anticholinergic load, drugs that may increase agitation (e.g. cholinesterase inhibitors), medication induced hypotension or orthostatic hypotension, medication that may contribute to constipation and urinary retention, drugs and/or alcohol

### Physical Examination:

- Be mindful of sources of:**
- Pain (e.g. dental, skin, joint, feet)
  - Hydration (e.g. dehydration)
  - Sensory loss (hearing, vision)
  - CNS change (e.g. new stroke)
  - Infection (e.g. pneumonia, urosepsis)
  - Hypo-perfusion (e.g. new atrial fibrillation, heart failure)
  - Constipation and urinary retention

### Laboratory and Imaging (as guided by physical exam/history):

- Blood:** Glucose, calcium, complete blood count (CBC), creatinine, electrolytes, TSH, others as 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" without lower urinary tract symptoms or symptoms of urosepsis/bacteremia are rarely the cause of increased behavioural symptoms)
- Imaging:** If appropriate (e.g. chest x-ray if suspected pneumonia based on physical exam; CT head if new concerning neurologic findings)

## Use P.I.E.C.E.S.<sup>TM</sup> to Identify Causes<sup>9</sup>

Use the **P.I.E.C.E.S. 3-Question Template<sup>TM</sup>** to ask:

1. What has changed?
2. What are the **RISKS** and possible causes?
3. What is the action?

Consider...

### **P**hysical think "the 5 Ds"

#### **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<sup>41</sup>

**Discomfort** (e.g. pain, constipation, fecal impaction, urinary retention, hunger, thirst)

**Disability** (e.g. sensory loss)

### **I**ntellectual 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)

### **E**motion 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**

### **C**apabilities

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

### **E**nvironment

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

### **S**ocial

Consider social network, life story, cultural/spiritual heritage

# Section B: Initiate Non-Drug Therapy for BPSD in LTC<sup>11, 12, 13</sup>

## Tips for Successful Non-Drug Therapy

- 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.
- Take advantage of any available system supports, such as Behavioural Supports Ontario (BSO) and Psychogeriatric Resource Consultants (PRCs).<sup>14</sup>
- Even if non-drug therapy is successful at managing symptoms (i.e. drug therapy is unnecessary), monitor targeted behaviours for changes and follow-up regularly based on the needs of the resident/caregiver and severity of symptoms.



### Safety

- Ensure 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 prior to 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 and phrases (residents with dementia have trouble processing multiple words)
- Speak clearly and use a positive tone
- Wait for answers (be patient)

		Behaviour	Possible Solutions
DOS Colours*4	Noisy (Yellow)		<ul style="list-style-type: none"> <li>• Distract, engage</li> <li>• Individualized music, nature sounds, presence therapy (tapes of family)</li> </ul>
	Restless (Orange)		<ul style="list-style-type: none"> <li>• Distract, engage</li> <li>• "Rest stations" in pacing path, adapt environment to reduce exit-seeking, physical exercise, outdoor activities</li> </ul>
	Exit-seeking (Brown)		<ul style="list-style-type: none"> <li>• Distract, engage</li> <li>• Adapt environment to reduce exit-seeking, physical exercise, outdoor activities</li> <li>• Register the individual with MedicAlert and Alzheimer's Society Safety Home program (contact information will be on bracelet or necklace)</li> <li>• Hide exits with curtains, or paint a black circle on the floor (the individual will think it is a hole and will not exit)</li> </ul>
	Verbal aggression (Pink)		<ul style="list-style-type: none"> <li>• Distract, engage</li> <li>• Individualized music, nature sounds, presence therapy (tapes of family)</li> </ul>
	Physical aggression (Red)		<ul style="list-style-type: none"> <li>• Distract, keep calm, remain warm and supportive</li> <li>• If possible, give the person some space and try to approach later</li> </ul>
Other	Delusion/hallucination		<ul style="list-style-type: none"> <li>• Understand this is their reality and do not confront the false belief</li> <li>• Focus efforts on how the resident feels, not the content; offer distraction, avoid clutter, TV, radio</li> </ul>
	Agitated/irritated		<ul style="list-style-type: none"> <li>• Calm, soothe, distract</li> <li>• Individualized music, aromatherapy, pet therapy, physical exercise, outdoor activities</li> </ul>
	Resistant to care		<ul style="list-style-type: none"> <li>• Identify source of threat (e.g. pain); change routines and approaches</li> </ul>
	Repetitive questions/mannerisms		<ul style="list-style-type: none"> <li>• Reassure, address underlying issue, distract</li> <li>• Put the answer to the same repetitive question on a piece of paper or card and ask the resident to read the card instead</li> </ul>
	Hoarding		<ul style="list-style-type: none"> <li>• Remove items gradually, re-organize and clear paths in the case of emergency; be compassionate</li> </ul>
	Inappropriate behaviour <small>(e.g. disrobing, masturbation, verbally inappropriate,)</small>		<ul style="list-style-type: none"> <li>• Distract, re-direct</li> <li>• Keep an active and regular schedule to avoid boredom</li> <li>• Try increasing the level of appropriate physical attention</li> <li>• Provide personal space if possible and come back when the resident is calmer</li> <li>• Allow the individual privacy for intimate/personal activities</li> </ul>

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

## Section C: Consider Drug Trial(s)

### 1 Ensure Drug Trial is Necessary

- Treat underlying causes (e.g. pain, constipation, delirium)
- Ensure that non-drug therapy options have been attempted, and have been unsuccessful

**Note: In acute BPSD, if there is a safety risk to patient or others, there may not be time to try non-drug approaches before trying pharmacological management.**

### 2 Select Appropriate Drug Trial

- Select an appropriate drug based on symptoms (see chart at right)
- Identify which behaviour(s) you wish to target (e.g. see symptom clusters on cover page and to right)

- **If you are considering initiating antipsychotic therapy, first ask:**
  - a. Are symptoms likely to respond to antipsychotics? (see below right)
  - b. Is there imminent risk of harm to self and/or others?
  - c. Are symptoms particularly disturbing, distressing or dangerous?
  - d. Have you weighed the potential benefits and harms? (see page 6)
- See page 6 for a detailed comparison of antipsychotics

- Obtain and document informed consent (see Psychotropic Medication Consent Discussion Tool)<sup>19</sup>
- Start with a low dose, and gradually titrate as necessary/tolerated

### 3 Maintain and Review

- Monitor change in targeted behaviour as well as side effects (see DOS Tool)<sup>4</sup>
- 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<sup>15</sup>
- Continue to reassess on an ongoing basis for effectiveness and tolerability
- Consider dose reduction or discontinuation if the drug:
  - a. Is not effective,
  - b. Has intolerable side effects, or;
  - c. Behaviours have been manageable and stable for 3-6+ months<sup>17</sup>
- **If considering dose reduction/discontinuation for an antipsychotic, see "Reassessing Antipsychotics for Possible Deprescribing" on page 6**

### 4 Follow-Up

- Follow-up is important for any drug regimen
- **If antipsychotics used, reassess need at least every 3 months<sup>16</sup>**

### 5 Consider Referral to a Specialist if Drug Trial is Unsuccessful

- If symptoms persist or worsen, consider referral to a specialist

### 6 Continue Non-Drug Approaches

- Continue using non-drug approaches to prevent further BPSD symptoms








#### Tips for Drug Trials and Deprescribing

- In all drug trials, unless clinically indicated, start at a low dose and increase or decrease slowly.
- For more tools and resources, visit [effectivepractice.org/dementia](http://effectivepractice.org/dementia).
- For more information about antipsychotic deprescribing, including a deprescribing algorithm, visit [deprescribing.org](http://deprescribing.org).

#### Selecting an Appropriate Drug Therapy for the Resident's Symptom(s)

Behaviour	Drug Therapy
<b>Psychosis, Aggression, Agitation (severe)</b>	• Atypical antipsychotics (such as risperidone, aripiprazole, olanzapine, quetiapine as discussed in detail on page 6) <sup>10,14</sup>
<b>Agitation (severe), unlikely to respond to antipsychotics</b>	• SSRIs such as citalopram or trazodone (however, evidence is lacking for trazodone) <sup>15,16,44</sup>
<b>Agitation (severe) in Lewy Body Dementia or Parkinson's</b>	• Possible cholinesterase inhibitors • Very low dose quetiapine <sup>15,16</sup>
<b>Anxiety (short term/intermittent)</b>	• A short-acting benzodiazepine such as lorazepam prior to anxiety provoking events such as bathing <sup>17</sup>
<b>Anxiety (chronic)</b>	• Antidepressants (such as SSRIs, SNRIs) • Buspirone <sup>10</sup>
<b>Depression (severe)</b>	• Antidepressants such as SSRIs (e.g., citalopram, sertraline), SNRIs (e.g., venlafaxine, duloxetine), other antidepressants (bupropion, mirtazapine, moclobemide) • Secondary TCAs (nortriptyline or desipramine) may be suitable if coexisting indication like neuropathic pain, etc., but caution regarding anticholinergic load, etc. <sup>10,16,18</sup>
<b>Mania</b>	• 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
<b>Apathy</b>	• Limited role for drug therapy but sometimes cholinesterase inhibitors may be helpful • Methylphenidate also sometimes used, but limited by concerns such as stimulant effect on behaviour and risk of diversion <sup>15,18</sup>

#### Symptom Likelihood to Respond to Antipsychotic Therapy

Cluster	Likely	Unlikely
 <b>Psychosis</b>	• Delusions • Hallucinations • Misidentification • Suspicious	
 <b>Aggression</b>	• Defensive • Physical	• Verbal • Resistance to care
 <b>Agitation</b>	• Restless/anxious	• Dressing/undressing • Pacing • Exit seeking <sup>17</sup> • Repetitive actions <sup>45-47</sup>
 <b>Depression</b>	• see below <sup>*,**</sup>	• see below <sup>*,**</sup>
 <b>Mania</b>	• see below <sup>*</sup>	• Euphoria <sup>46-48</sup> • Irritable <sup>46-48</sup> • Pressured speech
 <b>Apathy</b> <sup>46,48,49</sup>		• Amotivation • Lack of interest • Withdrawn
 <b>Other</b>		• Hiding or hoarding <sup>45</sup> • Wandering without aggression <sup>17,45</sup> • Disinhibition (e.g., sexual) <sup>45-47</sup>

\* The role of antipsychotics in those with dementia and depression is beyond the scope of this evidence review.

\*\*In cases where depression treatment may be indicated, consider psychiatric consultation to determine appropriate pharmacotherapy options.

# Section D: Additional Information on Antipsychotic Therapy

## Potential Benefits and Harms of Antipsychotic Therapy

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.

Antipsychotics: Potential Benefits	Antipsychotics: Potential Harms
<p><b>Limited benefit:</b> modest improvement seldom observed</p> <ul style="list-style-type: none"> <li>• <b>effect size:</b> 0.12-0.2</li> <li>• <b>NNT variable:</b> ~5-14</li> </ul> <p>(ie. at best, compared to placebo, antipsychotic therapy results in targeted behaviour benefit in 1 out of 5 people treated)<sup>20,21</sup></p>	<p><b>Side effects:</b> sedation, falls, postural hypotension, QT prolongation, confusion, EPS (rigidity, stiffness, akinesia), tardive dyskinesia, diabetes, weight gain<sup>22,23</sup></p> <p><b>Stroke:</b> increased risk</p> <p><b>Death:</b> possible increase</p> <p>Health Canada Advisory noted a 1.6 fold increase in mortality (mostly related to heart failure, sudden death, pneumonia). Some data suggests that there will be 1 extra stroke or death for every ~100 people treated (NNH=100).<sup>24, 25, 26</sup></p>

**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

## Comparison of Antipsychotics<sup>20, 21, 30, 31, 32, 33, 34</sup>

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

Drug Generic (Brand)	Efficacy or evidence in BPSD therapy	↑BP <sup>32</sup>	Ach	Sedation	EPS	TD <sup>33</sup>	Diabetes	Weight Gain <sup>27</sup>	Usual Dose	\$/Month	
Atypicals	<b>Risperidone*</b> (Risperdal) <sup>25, 26, 34</sup>	• Indicated for severe dementia of the Alzheimer type (Health Canada) • Evidence for efficacy in agitation, aggression & psychosis	++	++	++	++	+	++	↑↑↑ (0.7lb/month)	0.125mg – 2.0mg/d QHS (or divided BID)	\$10-27
	<b>Olanzapine*</b> (Zyprexa) <sup>25, 26, 34</sup>	• Off-label use in BPSD • Evidence for efficacy in agitation & aggression	+	+++	+++	++	+	+++	↑↑↑ (1.0lb/month)	1.25mg – 7.5mg/d	\$17-38
	<b>Aripiprazole*</b> (Abilify) <sup>34</sup>	• Off-label use in agitation or aggression <sup>18</sup> • Evidence for efficacy in agitation & aggression • Not eligible for dementia or BPSD in the elderly <sup>(ODB criteria, Therapeutic Note)</sup> • Not for psychosis <sup>(same as placebo)</sup>	+	+	++	+	+	–	↑	2.0mg – 12.5mg QHS	\$112-260
	<b>Quetiapine</b> (Seroquel) <sup>25, 26, 34</sup>	• Off-label use in BPSD • Lacks evidence for efficacy in BPSD agitation, aggression & psychosis • Consider in Lewy Body dementia, Parkinson's (low EPS) • Note: although used, not indicated, and lacking evidence for insomnia	++	+++	+++	+	+	+++	↑↑ (0.4lb/month)	12.5mg – 200mg/d (divided QHS-TID)	\$10-59
Typicals	<b>Haloperidol</b> (Haldol)	• Useful short term in acute BPSD or delirium	+	+	+	+++	+++	++	↑↑	0.25mg – 2.0mg/d	\$14-25
	<b>Loxapine</b> (Loxapac, Xylac) <sup>2</sup>	• 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	++	++	+++	+++	+++	+	–	5.0mg – 10mg BID	\$18-27

\*Aripiprazole, olanzapine and risperidone were superior to placebo as treatment of behavioural symptoms as measured by total scores on BEHAVE-AD<sup>36</sup>, Brief Psychiatric Rating Scale (BPRS)<sup>37</sup>, and Neuropsychiatric Inventory (NPI)<sup>20</sup>

### KEY: Terminology

Ach: anticholinergic  
 BID: twice daily  
 BP: blood pressure  
 ODB: Ontario Drug Benefit  
 EPS: extrapyramidal symptoms  
 lb: pound  
 TD: tardive dyskinesia  
 TID: three times daily  
 QHS: bedtime

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

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

## Tips for Reassessing Antipsychotics for Possible Deprescribing

- Stopping or tapering antipsychotics may decrease “all cause mortality”<sup>27</sup>
- Deprescribing may not be indicated where symptoms are due to psychosis, or where 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.<sup>28</sup> As some may worsen, approach cautiously, and monitor behaviour<sup>29</sup>
- 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

# Supporting Materials

These supporting materials are an inventory for long-term care providers to help identify useful clinical aids and resident/family material. This list includes direct links (where available) to 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/dementia](http://effectivepractice.org/dementia)

## Assessment and Practice Tools

### Antecedent, Behaviour, Consequence (ABC) Chart Form<sup>3</sup>

Chart form to help providers determine and document the events/stimuli that impact behaviour.

### BEHAVE-AD<sup>36</sup>

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

**URL:** [dementia-assessment.com.au/behavioural](http://dementia-assessment.com.au/behavioural)

### Brief Psychiatric Rating Scale<sup>37</sup>

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

### Cohen-Mansfield Agitation Inventory (CMAI)<sup>5</sup>

Inventory questionnaire of grouped agitated behaviours to assess the frequency and severity of these behaviours in elderly persons.

### Confusion Assessment Method (CAM)<sup>7</sup>

Diagnostic algorithm/questionnaire for identification of delirium through formal cognitive testing.

### Cornell Scale for Depression in Dementia<sup>38</sup>

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

### Kingston Standardized Behavioural Assessment (KSBA)<sup>6</sup>

Behaviour analysis tool designed to indicate the number of behavioural symptoms associated with dementia affecting an individual patient.

**URL:** [kingstonscales.org/behaviour-assessment.html](http://kingstonscales.org/behaviour-assessment.html)

### Neuropsychiatric Inventory – Nursing Home Version (NPI – NH)<sup>40</sup>

Tool to characterize the neuropsychiatric symptoms and psychopathology of patients with Alzheimer's disease and other dementias to measure the impact of antimentia and psychotropic drugs.

**URL:** [npitest.net](http://npitest.net)

### Pain Assessment in Advanced Dementia Scale (PAINAD)<sup>8</sup>

Pain assessment tool for individuals with advanced dementia including behaviour observation scores.

### Dementia Observation System (DOS)<sup>4</sup>

Behaviour assessment tool which captures the frequency and duration of behaviours of concern over 24 hour periods.

**URL:** [piecescanada.com](http://piecescanada.com)

### PIECES™ Framework<sup>9</sup>

Interdisciplinary approach to understanding and enhancing care for individuals with complex physical/cognitive/mental health need and behaviour changes.

**URL:** [piecescanada.com](http://piecescanada.com)

### Psychotropic Medication Consent Discussion Tool<sup>19</sup>

Aid for initiating antipsychotic medications and key discussion items for informed consent from patients or substitute decision makers.

## Reference and Support Information

### Atypical Antipsychotic Drugs and Dementia – Advisories, Warnings and Recalls for Health Professionals<sup>24</sup>

Advisory concerning atypical antipsychotic treatment of behavioural 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](http://healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2005/14307a-eng.php)

### Behavioural Supports Ontario (BSO)<sup>14</sup>

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.

**URL:** [brainxchange.ca/Public/Resource-Centre-Topics-A-to-Z/Behavioural-Supports-Ontario.aspx](http://brainxchange.ca/Public/Resource-Centre-Topics-A-to-Z/Behavioural-Supports-Ontario.aspx)

### Meaning and Solutions for Behaviours in Dementia Inventory<sup>39</sup>

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](http://www.mountsinai.on.ca/care/psych/patient-programs/geriatric-psychiatry)

### Reference List of Drugs with Anticholinergic Effects<sup>41</sup>

Reference list of drugs with low, moderate, and high anticholinergic effects, including side effects and preferred alternatives.

**URL:** [rxfiles.ca/rxfiles](http://rxfiles.ca/rxfiles)

### Risperidone - Restriction of the Dementia Indication<sup>42</sup>

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](http://healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2015/43797a-eng.php)

## Resident Materials

### Antipsychotics and Dementia: Discussion Guide

Handout for families, caregivers, and co-residents discussing how antipsychotic medications are used to help people with dementia.

**URL:** [effectivepractice.org/dementia](http://effectivepractice.org/dementia)

### Treating Disruptive Behaviour in People with Dementia (Patient Material)<sup>43</sup>

Statements on how to treat disruptive behaviours without antipsychotic drug use.

**URL:** [choosingwisely.org](http://choosingwisely.org)

# References

- [1] McShane R. What are the syndromes of behavioral and psychological symptoms of dementia? *Int Psychogeriatr* 2000; 12(Suppl S1):147-153.
- [2] Rabheru K. Practical tips for recognition and management of behavioural and psychological symptoms of dementia. *CGS Journal of CME* 2011; 1(1):17-22.
- [3] Miltenberger RG. Behavior modification: principles and procedure, 4th ed. Belmont, CA: Thomson Wadsworth; 2008.
- [4] Schindel Martin L. The Dementia Observation System: a useful tool for discovering the person behind the illness. *Long-Term Care* 1998; November/December:19-22.
- [5] Cohen-Mansfield J, Marx MS, Rosenthal AS. A description of agitation in a nursing home. *J Gerontol Med Sci* 1989; 44(3):M77-M84.
- [6] Hopkins RW, Kilik LA. Kingstons Standardized Behavioural Assessment. 2015. Available from: <http://www.kingstonscales.org/behaviour-assessment.html>.
- [7] Inouye S, van Dyck C, Alessi C, Balkin S, Siegal AP, Horwitz R. Clarifying confusion: the confusion assessment method. *Ann Intern Med* 1990; 113(12):941-48.
- [8] Warden V, Hurley AC, Volicer L. Development and psychometric evaluation of the Pain Assessment in Advanced Dementia (PAINAD) scale. *J Am Med Dir Assoc* 2003; 4(1):9-15.
- [9] Hamilton P, Harris D, LeClair K, Collins J. Putting the P.I.E.C.E.S.™ together; a model for collaborative care and changing practice; a learning resource for providers caring for older adults with complex physical and cognitive/mental needs and behavioural changes, 6th ed. Shop for Learning Publishing Services; 2008. Used with permission P.I.E.C.E.S.™ Canada Consult Group.
- [10] Sorbi S, Hort J, Erkinjuntti T, Fladby T, Gainotti G, Gurvit H et al. EFNS-ENS guidelines on the diagnosis and management of disorders associated with dementia. *Eur J Neurol* 2012; 19(9):1159-79.
- [11] Livingston G, Johnston K, Katona C, et al. Systematic review of psychological approaches to the management of neuropsychiatric symptoms of dementia. *Am J Psychiatry* 2005; 162:1996e2021.
- [12] Seitz DP, Brisbin S, Herrmann N, Rapoport MJ, Wilson K, Gill SS et al. Efficacy and feasibility of nonpharmacological interventions for neuropsychiatric symptoms of dementia in long term care: a systematic review. *JAMDA* 2012; 13(6):503-6.e2.
- [13] Vermooij-Dassen M. Meaningful activities for people with dementia. *Aging Ment Health* 2007; 11(4):359-60.
- [14] Behavioural Supports Ontario. Behavioural Supports Ontario (BSO) [Internet]. Available from: <http://brainxchange.ca/Public/Resource-Centre-Topics-A-to-Z/Behavioural-Supports-Ontario.aspx>.
- [15] Herrmann N, Lanctot KL, Hogan DB. Pharmacologic recommendations for the symptomatic treatment of dementia: the Canadian Consensus Conference on the diagnosis and treatment of dementia 2012. *Alzheimer's Res Ther* 2013; 5(Suppl 1):S5.
- [16] Conn D, Gibson M, McCabe D. 2014 CCSMH guideline update - the assessment and treatment of mental health issues in long term care homes: (focus on mood and behaviour symptoms). Toronto: Canadian Coalition for Seniors' Mental Health (CCSMH); 2014.
- [17] Conn D, Gibson M. National guideline for seniors' mental health: the assessment and treatment of mental health issues in long term care homes (focus on mood and behaviour symptoms). Toronto: Canadian Coalition for Seniors' Mental Health (CCSMH); 2006.
- [18] Moore A, Patterson C, Lee L, Vedel I, Bergman H. Fourth Canadian Consensus Conference on the diagnosis and treatment of dementia: recommendations for family physicians. *Can Fam Phys* 2014; 60:433-8.
- [19] Feldman S. Psychotropic medication consent discussion tool. Baycrest Health Sciences: University of Toronto; 2015.
- [20] Maher AR, Maglione M, Bagley S, Suttrop M, Hu JH, Ewing B, et al. Efficacy and comparative effectiveness of atypical antipsychotic medications for off-label uses in adults: a systematic review and meta-analysis. *JAMA* 2011; 306(12):1359-69.
- [21] Maglione M, Ruelaz Maher A, Hu J, Wang Z, Shanman R, Shekelle PG, et al. Off-label use of atypical antipsychotics: an update. *Comparative Effectiveness Review No. 43*. Rockville MD: Agency for Healthcare Research and Quality US; 2011.
- [22] American Geriatrics Society 2015 Beers Criteria Update Expert Panel. American Geriatrics Society 2015 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. *J Am Geriatr Soc* 2015 Nov; 63(11), 2227-46.
- [23] Maust DT, Kim HM, Seyfried LS, Chiang C, Kavanagh J, Schneider LS et al. Antipsychotics, other psychotropics, and the risk of death in patients with dementia: number needed to harm. *JAMA Psych* 2015; 72(5):438-45.
- [24] Health Canada. Atypical antipsychotic drugs and dementia – advisories, warnings and recalls for health professionals [Internet]. 2005. Available from: <http://www.healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2005/14307a-eng.php>.
- [25] Schneider LS, Tariot PN, Dagerman KS, Davis SM, Hsiao JK, Ismail MS, et al. Effectiveness of atypical antipsychotic drugs in patients with Alzheimer's disease. *NEJM* 2006; 355:1525-38.
- [26] Schneider LS, Dagerman KS, Insel P. Risk of death with atypical antipsychotic drug treatment for dementia: meta-analysis of randomized placebo-controlled trials. *JAMA* 2005; 294(15):1934-43.
- [27] Ballard C, Hanney ML, Theodoulou M, Douglas S, McShane R, Kossakowski K, et al. The dementia antipsychotic withdrawal trial (DART-AD): long-term follow-up of a randomized placebo-controlled trial. *Lancet Neurol* 2009; 8:151-57.
- [28] Declercq T, Petrovic M, Azermail M, Vander Stichele R, De Sutter AI, van Driel ML et al. Withdrawal versus continuation of chronic antipsychotic drugs for behavioural and psychological symptoms in older people with dementia. *Cochrane Database Syst Rev* 2013; 28:3.
- [29] Pan YJ, Wu CS, Gau SS, Chan HY, Banerjee S. Antipsychotic discontinuation in patients with dementia: a systematic review and meta-analysis of published randomized controlled studies. *Dement Geriatr Cogn Disord* 2014; 37(3-4):125-40.
- [30] Muench J, Hamer A. Adverse effects of antipsychotic medications. *Am Fam Phys* 2010; 81(5):617-22.
- [31] Taylor D, Paton C, Kapur S. Prescribing guidelines in psychiatry, 11th ed. Wiley-Blackwell; 2012.
- [32] Bezchlibnyk-Butler KZ, Jeffries JJ, Procyshyn RM, Virani AS, ed. Clinical handbook of psychotropic drugs, 17th ed. Hogrefe & Huber Publishers; 2007.
- [33] bpacnz. Prescribing atypical antipsychotics in general practice. *BPJ* 2011; 40:14-23.
- [34] Pharmacists Letter, Prescribers Letter. Comparison of Atypical Antipsychotics PL Detail-Document #281006. Stockton, CA: Therapeutic Research Center; October, 2012.
- [35] University of Iowa College of Public Health. Antipsychotic medicines for people with dementia [Internet]. Iowa: University of Iowa; 2013. Available from: [https://www.healthcare.uiowa.edu/IGEC/IAAdapt/view/Antipsychotic\\_consumer.pdf](https://www.healthcare.uiowa.edu/IGEC/IAAdapt/view/Antipsychotic_consumer.pdf).
- [36] Adapted from Reisberg B et al. Behavioral symptoms in Alzheimer's disease: phenomenology and treatment. *J Clin Psych* 1987; 45(5 Suppl):9-15.
- [37] Overall, JE, Gorham DR. The brief psychiatric rating scale (BPRS): recent developments in ascertainment and scaling. *Psychopharmacol Bulletin* 1988; 24:9-99.
- [38] Alexopoulos GS, Abrams RC, Young RC, Shamoian CA. Cornell scale for depression in dementia. *Biol Psychiatry* 1998; 23:271-84.
- [39] Danielli E. Meaning and Solutions for Behaviours in Dementia Inventory. [Internet] Toronto: Mount Sinai Hospital; 2013. Available from: <http://www.mountsinai.on.ca/care/psych/patient-program/geriatric-psychiatry/prc-dementia-resources-for-primary-care/dementia-toolkit-for-primary-care/responsive-behaviours-in-dementia>.
- [40] Cummings JL. Neuropsychiatric inventory – nursing home version (NPI – NH) [Internet]. 1994. Available from: <http://www.npitem.net>.
- [41] Bareham J. Anticholinergics: reference list of drugs with anticholinergic effects [Internet]. RxFiles; 2014. Available from: <http://www.rxfiles.ca/rxfiles/uploads/documents/Psych-BPSD-Newsletter.pdf>.
- [42] Health Canada. Risperidone - restriction of the dementia indication [Internet]. 2015. Available from: <http://healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2015/43797a-eng.php>.
- [43] Choosing Wisely Canada. Canadian Geriatrics Society: Treating disruptive behaviour in people with dementia: antipsychotic drugs are usually not the best choice [Internet]. Choosing Wisely Canada; 2014. Available from: <http://www.choosingwiselycanada.org/materials/treating-disruptive-behaviour-in-people-with-dementia-antipsychotic-drugs-are-usually-not-the-best-choice/>.
- [44] Porsteinsson AP, Drye LT, Pollock BG, Devanand MD, Frangakis C, Ismail Z, et al. Effect of citalopram on agitation in Alzheimer disease: the CitAD randomized clinical trial. *JAMA* 2014; 311(7): 682-691.
- [45] Brodaty H, Ames D, Snowden J, Woodward M, Kirwan J, Clarnette R, et al. A randomized placebo-controlled trial of risperidone for the treatment of aggression, agitation, and psychosis of dementia. *J Clin Psych* 2003; 64(2): 134-43.
- [46] Paleacu D, Barak Y, Mirecky I, Mazeh D. Quetiapine treatment for behavioural and psychological symptoms of dementia in Alzheimer's disease patients: a 6-week, double-blind, placebo-controlled study. *Int J Geriatr Psychiatry* 2008; 23: 393-400.
- [47] Streim JE, Porsteinsson AP, Breder CD, Swanink R, Marcus R, McQuade R, et al. A randomized, double-blind, placebo-controlled study of aripiprazole for the treatment of psychosis in nursing home patients with Alzheimer disease. *Am J Geriatr Psychiatry* 2009; 16(7): 537-50.
- [48] De Deyn PP, Rabheru K, Rasmussen A, Bocksberger JP, Dautzenberg P, Eriksson S, et al. A randomized trial of risperidone, placebo, and haloperidol for behavioral symptoms of dementia. *Neurology* 1999; 53: 946-55.
- [49] Tariot PN, Schneider L, Katz IR, Mintzer JE, Street J, Copenhaver M, et al. Quetiapine treatment of psychosis associated with dementia: a double-blind, randomized, placebo-controlled clinical trial. *Am J Geriatr Psychiatry* 2006; 14(9): 767-76.

This Tool was developed by Centre for Effective Practice (CEP) with input and review from our Academic Detailing Service Team, including our clinical leads Drs. Andrea Moser and Sid Feldman. In addition, target end-users and other relevant stakeholders provided input during the development process. This Tool was funded by the Province of Ontario as part of CEP's Academic Detailing Service. For more information on the Academic Detailing Service, our Team and/or the development process please visit: [effectivepractice.org/academicdetailing](http://effectivepractice.org/academicdetailing).

**This Tool was developed for licensed health care professionals in Long-Term Care as a guide only and does not constitute medical or other professional advice. Physicians, Nurse Practitioners, Pharmacists and other health care professionals are required to exercise their own clinical judgment in using this Tool. Neither the Centre for Effective Practice ("CEP"), nor any of their respective agents, appointees, directors, officers, employees, contractors, members or volunteers: (i) are providing medical, diagnostic or treatment services through this Tool; (ii) to the extent permitted by applicable law, accept any responsibility for the use or misuse of this Tool by any individual including, but not limited to, Long-Term Care providers or entity, including for any loss, damage or injury (including death) arising from or in connection with the use of this Tool, in whole or in part; or (iii) give or make any representation, warranty or endorsement of any external sources referenced in this Tool (whether specifically named or not) that are owned or operated by third parties, including any information or advice contained therein.**



Use of Antipsychotics in Behavioural and Psychological Symptoms of Dementia (BPSD) Discussion Guide: Long-Term Care (LTC) Edition is a product of the Centre for Effective Practice. Permission to use, copy and distribute this material for all non-commercial and research purposes is granted, provided the above disclaimer, this paragraph and the following paragraphs, and appropriate citations appear in all copies, modifications, and distributions. Use of the Use of Antipsychotics in Behavioural and Psychological Symptoms of Dementia (BPSD) Discussion Guide: Long-Term Care (LTC) Edition for commercial purposes or any modifications of the tool are subject to charge and use must be negotiated with the Centre for Effective Practice ([info@effectivepractice.org](mailto:info@effectivepractice.org)).

**For statistical and bibliographic purposes, please notify the Centre for Effective Practice ([info@effectivepractice.org](mailto:info@effectivepractice.org)) of any use or reprinting of the tool. Please use the below citation when referencing the tool:**

Reprinted with Permission from Centre for Effective Practice. (April 2016). Use of Antipsychotics in Behavioural and Psychological Symptoms of Dementia (BPSD) Discussion Guide: Long-Term Care (LTC 2nd Edition).

Developed by:

