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Assessing and Managing Behavioural and Psychological Symptoms of Dementia (BPSD) in LTC

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Faculty/Presenter Disclosure

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Disclosure of Financial Support

- **Potential for conflict(s) of interest:**
 - nil



Mitigating Potential Bias

- No mitigation required

Objectives

- By the end of the session, participants will be able to:
 1. Compare and contrast behavioural assessment tools (e.g. DOS, ABC-charting, DICE, PIECES, and the Baycrest Quick-Response Caregiver Tool TM)
 2. Choose appropriate behavioural strategies to help support LTC residents, staff, and family members
 3. Recognize when pharmacological therapy is useful (or not) and use evidence-based approaches for the selection of pharmacological agents.

Outline

- Didactic - Behavioural Interventions
- Case 1 and break
- Didactic – Pharmacological Interventions
- Case 2
- Case 3
- Let's hear your cases
- Q and A





What are Responsive Behaviours?

- Delusions
- Hallucinations
- Aggression
- Screaming
- Restlessness
- Wandering
- Depression
- Anxiety
- Disinhibition
- Sexual behaviours
- Apathy
- Sleep disturbance
- Compulsive or repetitive behaviour



Agitation

- Inappropriate verbal, vocal, or motor activity that is not judged by an outside observer to result directly from apparent needs or confusion of the agitated individual
 - Aggressive behaviours
 - Physical non-aggressive behaviours
 - Verbal agitation



Why is it important?

- Impaired quality of life, increased cost of care, rapid cognitive decline, caregiver burden
- Shorten time to LTC admission
- Inadequate treatment of medical conditions
- Staff burnout/turnover

Jeste et al., Neuropsychopharmacology 2008;33:957-970

Salzman et al., J Clin Psychiatry 2008;69(6):889-898

Rabins et al., Am J Psychiatry 2007;164(Suppl12):5-56,



Models

- Unmet Needs Model
 - Unable to express needs
- Progressively Lowered Stress Threshold Model
 - Ability to deal with stress or stimuli is impaired
- ABC (learning theory)

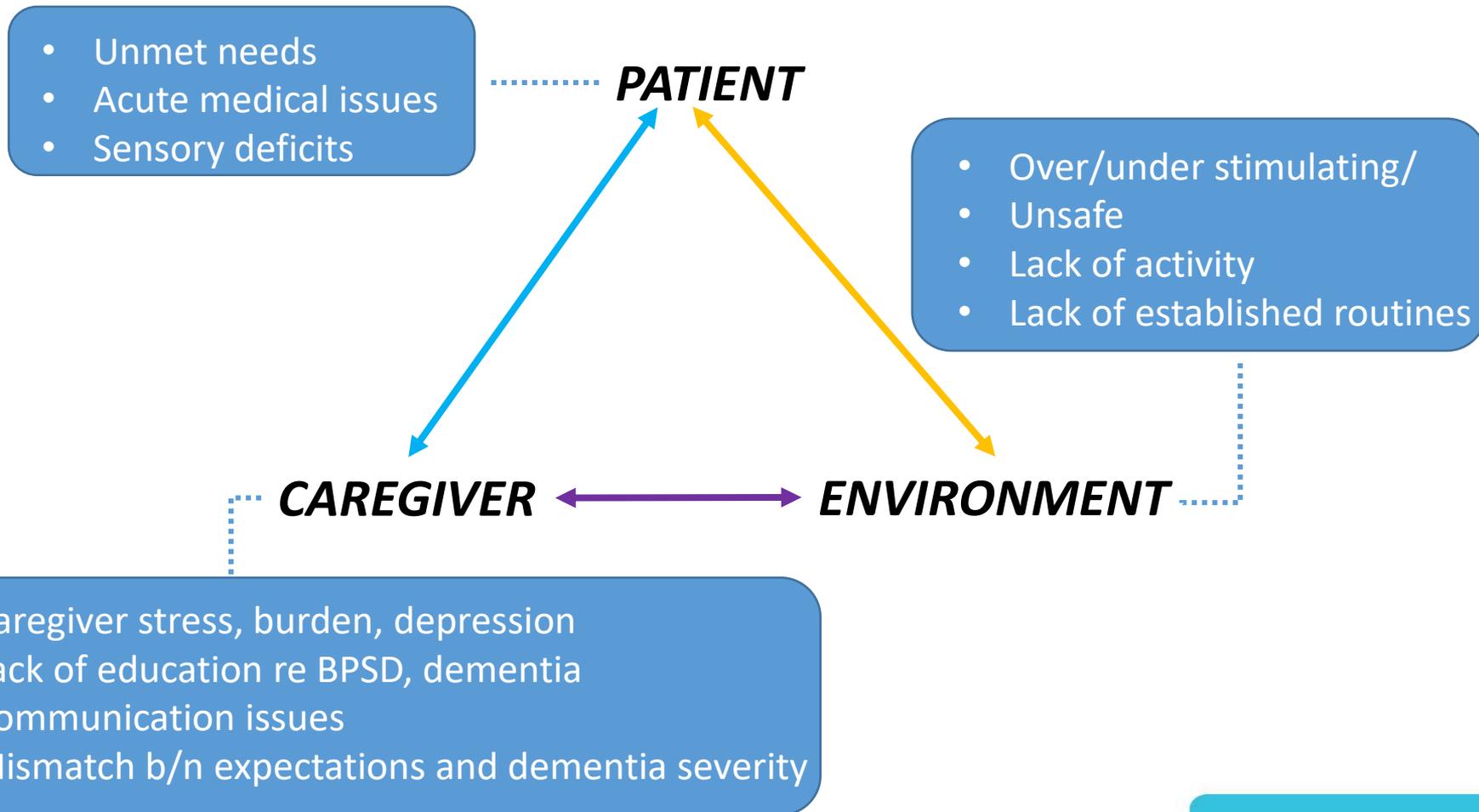
Behavioural Tools

- DICE
- GPA
- Baycrest Quick-Response Caregiver Tool™
- PIECES
- ABC

DICE Approach

- **D** - describe
 - **I** - investigate
 - **C** - create
 - **E** - evaluate
- Patient considerations
 - Caregiver Considerations
 - Environmental Considerations

DICE



Describe – Patient and Caregiver Considerations

- What behaviour did the patient exhibit?
 - How did the patient perceive what occurred?
 - How did the patient feel about it?
 - Is the patient's safety at risk?
-
- How much distress did the behaviour generate for the caregiver?
 - Does the caregiver feel their safety is threatened by the behaviour?
 - What about the behaviour is distressing to the caregiver?
 - What did the caregiver do during and after the behaviour occurred?

Describe – Environmental Considerations

- Who was there when behaviour occurred (e.g. family members, unfamiliar people)?
- When did the behaviour occur (time of day) and what relationship did this have to other events (e.g. occurring while bathing or at dinner)?
- Where did the behaviour occur (e.g. home, daycare, restaurant)?
- What happened before and after the behaviour occurred in the environment?

Investigate – could the behaviour be caused by/contributed to by:

- **Patient considerations:**

- Recent changes in medications?
- Untreated or undertreated pain?
- Limitations in functional abilities?
- Medical conditions (e.g. pneumonia)?
- Underlying psychiatric comorbidity?
- Severity of cognitive impairment, executive dysfunction?
- Poor sleep hygiene?
- Sensory changes (vision, hearing)?
- Fear, sense of loss of control, boredom?

Investigate – could the behaviour be caused by/contributed to by:

- **Caregiver considerations:**

- Caregiver’s lack of understanding of dementia(e.g. patient is “doing this to” them “on purpose”)?
- Caregiver’s negative communication style (e.g. overly critical or harsh, use of complex questions, offering too many choices)?
- Caregiver’s expectations not aligned with dementia stage(under or over estimation of capability)?
- Caregiver’s own stress/depression?
- Family/Cultural context (e.g. not wanting to involve “outsiders” or “air dirty laundry”, promise to keep patient at home)?

Investigate – could the behaviour be caused by/contributed to by:

- **Environmental Considerations:**

- Over- (e.g. clutter, noise, people) or under-(e.g. lack of visual cues, poor lighting) stimulating environment?
- Difficulty navigating or finding way in environment?
- Lack of predictable daily routines that are comforting to patient?
- Lack of pleasurable activities tapping into preserved capabilities and previous interests?

Create

- **Provider, caregiver and team collaborate to create and implement treatment plan:**
 - Respond to physical problems
 - Strategize behavioural interventions
 - Providing caregiver education and support
 - Enhancing communication with the patient
 - Creating meaningful activities for the patient
 - Simplifying tasks
 - Ensuring the environment is safe
 - Increasing or decreasing stimulation in the environment

Evaluate

- Provider **evaluates** whether “CREATE” interventions have been implemented by caregiver and are safe and effective
- NOTE: the D.I.C.E algorithm suggests pharmacotherapy at any stage in the process if there are safety issues

Gentle Persuasive Approach (GPA)

- Originated in Ontario 2004
- *“An innovative, evidence-based curriculum, GPA addresses the attitudes, knowledge, and skill required by staff to work with patients with challenging behaviors associated with dementia”*

Person-Centred Care/Approach

- *“Person centered care is a focus on elders’ (residents' and clients') emotional needs and care preferences, consistent with their lifestyle”*
- Respecting and valuing the individual as a full member of society
- Providing individualized emotional and physical spaces for care that are in tune with people's changing needs
- Understanding the perspective of the person in all care and activities
- Providing supportive opportunities for social engagement to help people live their life and experience well-being.

Training

- Principles of person-centered care
- Meaning behind responsive behaviors exhibited by persons with dementia and delirium
- Introduction to the impact of dementia and delirium on the brain, and the resulting care implications
- Emotional, environmental, and interpersonal communication strategies that diffuse responsive behaviors
- Suitable, respectful self-protective and physical intervention techniques to use in response to physically acting-out behavior

GPA Basics Education - 4 modules

- An Introduction to Personhood
 - “I am not my disease”, meaning of behaviour, disease
- Brain and Behaviour
 - E.g., amnesia, aphasia..
- The Interpersonal Environment
 - Apply strategies
- Gentle Persuasive Techniques for Respectful Self-Protection (solo and in teams) <https://www.youtube.com/watch?v=lpYEWb5xgME>
 - How to de-escalate and reduce risk

TABLE 1. GENTLE PERSUASIVE APPROACHES (GPA): A FEW KEY STRATEGIES

- Decipher the meaning behind the behavior and understand it as a form of communication
- Know the personhood of the individual as it helps understand the behavior
- Interact with family to understand the meaning behind specific behaviors and to identify person-centered strategies
- Recognize that most behavioral displays are time limited, thus are not amenable to intervention using p.r.n. psychoactive medication
- Identify and address unmet needs or triggers as they often lead to responsive behaviors
- Recognize behaviors as a consequence of the disease and do not take things personally
- Watch for signs and symptoms of escalating behavior such as pacing, agitation, calling out
- Ask permission to enter an individual's personal space
- Learn when to back off if an individual asks you to stop what you are doing or when behavior escalates, and reapproach
- Respond to the emotion of the message—respect and validate those feelings
- Work in pairs when providing care—designate one person to communicate with the individual
- Communicate respectfully and supportively when using self-protective and redirection techniques
- Communicate respectfully and with professionalism when interacting with families to update them about behavioral profile changes
- Acknowledge the good work of your peers and provide support for your colleagues and to families

Note. p.r.n. = as needed. Adapted from *Gentle Persuasive Approaches in Dementia Care: Responding to Persons With Challenging Behaviours* by L. Schindel Martin, M. Montemuro, M. Dempsey, and R. Crane, 2005, Hamilton, Ontario, Canada: Advanced Gerontological Education. Retrieved from <http://www.ageinc.ca/>

Conducting the GPA Workshops

competence in the application of the core competencies



Baycrest Quick-Response Caregiver Tool™

- Behaviours expressed in PWD are meaningful and attempt to communicate unmet feelings/needs so that...focus and/or blame is removed
- Responsive behaviours lead to caregiver distress and caregiver distress leading to poor interpersonal interactions worsen responsive behaviours
- Problems are co-constructed as every relationship includes 2 people and when things don't go as planned it's good to ask how much is it me and how much is it the other person?
- Encouraging caregivers in the moment to reflect on their own as well as the feelings and motivations of PWD



- Emotionally stressed caregivers are more likely to respond in ways that elicit more difficult behaviours
- “We all have feelings – it’s how we handle our feelings in the moment that’s most important. Our responses can make interactions better or worse.”

Baycrest Quick-Response Caregiver Tool™

- **C** - Calm down (self-talk)
- **A** - Attend to the interaction without immediately reacting
- **R**- Reflect on your own feelings
- **E**- Empathize with other person's feelings
- **R**- Respond



Step 1

- **C** - Calm down (self-talk)
- slow down, take deep breaths, use some positive self-talk



Step 2

- **A** - Attend to how the interaction is going.
- remind yourself that this person is unwell, distressed, and can't explain why



Step 3

- **R** - Reflect on one's feelings through "self-talk"
- What am I feeling?
- Why do I feel this way?



Step 4

- **E** - Empathize with other's feelings (try to understand what PWD is feeling)
- What is the other feeling?
- Why is the other person feeling this way?



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Step 5

- **R** - Respond



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Baycrest Quick-Response Caregiver Tool™

<https://www.baycrest.org/Baycrest/Education-Training/Educational-Resources/Baycrest-Quick-Response-Caregiver-Tool>

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P.I.E.C.E.STM Framework 1997

- P - physical
- I - intellectual
- E - emotional
- C - capabilities
- E - environmental
- S- social

<https://www.baycrest.org/Baycrest/Education-Training/Educational-Resources/Responsive-Behaviours/P-I-E-C-E-S>

CEP tool incorporates PIECES approach

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^{1, 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

Mania



Euphoria
Irritable
Pressured speech

Apathy



Amotivation
Lacking interest
Withdrawn

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)³ 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.TM RISKS mnemonic to assess risks to the resident and others:⁴

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 himself or others?

3 Identify BPSD Causes

- Obtain history from caregivers, family, and staff⁵
- Consider environmental factors and triggers, including possible role of team members
- Consider using P.I.E.C.E.S.TM to identify causes (see box on right)

4 Clinical Evaluation⁶

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.TM to Identify Causes⁴

Use the P.I.E.C.E.S. 3-Question TemplateTM 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, fluorquinolones, lithium, opioids, systemic corticosteroids)
See Reference List of Drugs with Anticholinergic Effects⁴

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

Disability (e.g. sensory loss)

Intellectual
think "the 7As"

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 4Ds"

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/spiritual heritage



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ABC Charting

- A = antecedent
 - B = behavior
 - C = consequences
-
- Is there a pattern? Is it predictable?
 - Most staff do not identify a pattern on their own

Date/time	Antecedent	Behavior	Consequence

Date/time	Antecedent	Behavior	Consequence
March 2, 1:30 pm	PWD was sitting in recreational program	Screaming, yelling	Removed from the activity and sat in room. Settled
March 3, 7:30 pm	PWD was in room and co-resident entered the room	Yelling, pushed co-resident	Co-resident re-directed and escorted elsewhere
March 4, 3:00 PM	PWD was sitting at nursing station along with other residents during handover	Patient hit another resident that was calling out	He was removed from the area and told not to do hit – settled down eventually
March 5, 10:45 AM	PWD was brought to the concert	Began screaming, cursing, striking out	Patient was brought to his room and settled down.

Comparison

	Evidence	Human Resources	Training	Focus
DICE	+	++	++	Formulating Planning
GPA	++	-	++	Understanding Action
Baycrest Quick-Response Caregiver Tool	+? Submitted for publication	-	+	Self-reflection In-the-moment; understand the pwd & caregiver
PIECES	+	++	++	Formulating Planning
ABC	-	+	+	Formulating Planning



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Studies

- Pre-post
- Mixed methods
- Measures of self-confidence, knowledge, satisfaction
- 1 study measured incidents of aggressive behavior and sick days (GPA)

Application to a Case

- 72 year old man with Alzheimer's Disease
- Lived with his partner in a home, now in LTC
- Used to work as a landscaper
- Not a “people person”
- Medical Hx:
 - Degenerative Disc Disease
 - Macular Degeneration
 - Hearing Impairment
 - MMSE 12/30
- Aggressive during care
- Easily triggered by others and noise

How will DICE help?

- Unmet needs of patient
 - Sensory impairment
 - Pain
 - Unclear what he perceives to be happening
 - Need for fresh air or exercise?
- Environmental factors
 - Overstimulation
- Caregiver factors
 - Challenge in communication
 - What are his cognitive capacities
 - Recipient of aggression -fear, burnout, injury
- Interdisciplinary assessment and plan, and re-evaluation

How will GPA help?

- Understand the perspective of the person with dementia
 - Meaning of the symptom
 - Look for unmet needs (pain? Overstimulation? Sensory issues? Need for fresh air or exercise?)
- Emotional, environmental and physical techniques
 - Why is this happening now? (sensory, overstimulation, fear)
 - Validation
 - Address communication (sensory, cognitive)

How will PIECES help?

- P – physical
 - Pain, sensory
- I – intellectual
 - Moderate to severe dementia, poor memory, confused
- E – emotional
 - Possibly scared
- C – capabilities
 - Take into consideration sensory issues, optimize hearing and vision
 - gardening
- E – environmental
 - Reduce stimulation, provide access to outdoors
- S- social
 - Don't overstimulate, sensory, 1:1 better

How will Baycrest Quick-Response Caregiver Tool help?

- Stop before things escalate
- Reflective exercise leads to empathic validation
- Respond once escalation
- Re-assessment of one's approach
 - May consider aspects of DICE, GPA, PIECES...)

How will ABC help?

- May pick up on triggers
- May learn about what interventions escalate and de-escalate
- Look for unintentional reinforcements

- E.g. ABC charting may show how noise and environment triggers symptoms → relieved by reducing stimulation, prevention!!

Questions?

Case 1: AB

Ms. AB is an 82 year old woman. Admitted 1 month ago to LTC following a hospital admission and inability to care for herself at home.

PMHx: hypertension, peripheral dependent edema, osteoarthritis (hip, knee), Alzheimer's (5 years, last MMSE 14/30), hypothyroidism

Medications: ramipril 5 mg daily, acetaminophen 650 mg, vitamin D, donepezil , l-thyroxine

Social history: She came to Canada at the age of 25, with her young son. She divorced fairly young and raised her three children without much support. She takes pride in her ability to have successfully raised her family. Her children remain loving and engaged but all live at least a few hours from her LTC home.

- She worked in a variety of jobs throughout her life, including being a crossing-guard, housekeeper and restaurant server.
- She was always very engaged in church activities, still loves to sing and dance, and had a large social group of friends.

Case 1: AB

Behavioural issues:

- Aimless wandering, including at night
- Collecting stuff
- Resistive to giving items back if approached too quickly, and has hit staff when they try and take items away from her.
- Appears frightened during personal care. Will start to scream: “She’s killing me! She’s killing me!” Pushes staff away during care.
- Staff: Caring but overworked, LTC home has been needing to use external care providers from an Agency to fill staffing needs. They can get pretty frustrated in trying to provide care to this person. Manager fairly task-focussed.
- Environment: Older, larger LTC home. Narrow and long hallways. AB shares a room with 1 other resident.

Case 1: AB

Instructions:

- **Table groups:** As a group, use the tools that have been discussed to develop a behavioural assessment for this LTC resident (extrapolate if you need to, as we have provided just some basic information) and begin to develop a management plan, based on your assessment. Take 15 minutes in total for this. Please identify one individual to report back to the larger group.
- **Virtual attendees:** Similar exercise but work independently.



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Pharmacological Management

- Antipsychotics (typical/atypical)
- Antidepressants
- Cholinesterase inhibitors
- Anticonvulsants
- Prazosin

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Atypical Antipsychotics

- Best evidence for behavioral disturbance in dementia
 - **Risperidone** up to 2 mg (indication in Canada for BPSD)
 - **Aripiprazole** up to 10 mg
 - ?Olanzapine up to 7.5mg
 - *Quetiapine: mixed evidence – may try for those with parkinsonism (eg PD, DLB); recent meta analysis of 6 data sets -> unclear if clinically significant, strong placebo
 - Brexpiprazole 2 mg/day - 1 RCT



Risks with Atypical Antipsychotics

- 2-3 fold increase in relative risk of cerebrovascular adverse event
- 1.7 fold increase in risk of death (FDA 2005)
- Risk of death highest for haloperidol, lowest for quetiapine (Kales et al., AM J Psych 2012;169:71)
- Falls, metabolic, EPS, hypotension, cognition, pneumonia

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.

NNT = 5-14

Antipsychotics: Potential Benefits	Antipsychotics: Potential Harms
<p>Limited benefit: modest improvement seldom observed</p> <ul style="list-style-type: none"> • effect size: 0.12-0.2 • NNT variable: -5-14 <p>(At best, compared to placebo, antipsychotic therapy results in targeted behaviour benefit in 1 out of 5 people treated)^{20,21}</p>	<p>Side effects: sedation, falls, postural hypotension, QT prolongation, confusion, EPS (rigidity, stiffness, akinesia), tardive dyskinesia, diabetes, weight gain²²</p> <p>Stroke: increased risk</p> <p>Death: possible increase</p> <p>Health Canada Advisory noted a 1.5 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).^{24,25,26}</p>

NNH = 100

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^{20, 21, 30, 31, 32, 33, 34}

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	↑ BPS ²⁰	Ach	Sedation	EPS	TD ³¹	Diabetes	Weight Gain ³²	Usual Dose	\$/Month	
Atypicals	Risperidone* (Risperdal) ^{20,24,30}	<ul style="list-style-type: none"> • 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
	Olanzapine* (Zyprexa) ^{20,24,30}	<ul style="list-style-type: none"> • Off-label use in BPSD • Evidence for efficacy in agitation & aggression 	+	+++	+++	++	+	+++	↑↑↑ (1.0lb/month)	1.25mg - 7.5mg/d	\$17-38
	Aripiprazole* (Abilify) ²⁰	<ul style="list-style-type: none"> • Off-label use in agitation or aggression³⁴ • Evidence for efficacy in agitation & aggression • Not eligible for dementia or BPSD in the elderly^{20,31,32,33,34} • Not for psychosis^{33,34,35,36,37} 	+	+	++	+	+	-	↑	2.0mg - 12.5mg QHS	\$112-260
	Quetiapine (Seroquel) ^{20,24,30}	<ul style="list-style-type: none"> • 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	Haloperidol (Haldol)	<ul style="list-style-type: none"> • Useful short term in acute BPSD or delirium 	+	+	+	+++	+++	++	↑↑	0.25mg - 2.0mg/d	\$14-25
	Loxapine (Loxapac, Xylac) ²	<ul style="list-style-type: none"> • 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-AD²⁰, Brief Psychiatric Rating Scale (BPRS)²¹, and Neuropsychiatric Inventory (NPI)³⁰

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%)
 +++: Frequent (>30%)
 ↑: Increase
 ↑↑: Moderate (>10%)

Tips for Reassessing Antipsychotics for Possible Deprescribing

- Stopping or tapering antipsychotics may decrease "all cause mortality"^{20,21}
- 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.²⁸ As some may worsen, approach cautiously, and monitor behaviour²⁹
- 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

Antipsychotics

2. Don't use antipsychotics as first choice to treat behavioural and psychological symptoms of dementia.



Antipsychotics

- Antipsychotics are commonly prescribed for behavioural symptoms for residents with dementia
- Antipsychotics can cause serious harm, including premature death
- These medications should be limited to cases where non-drug measures have been tried and failed
- Frequently review attempts at reduction or discontinuation to reduce harm

When Psychosis isn't the Diagnosis: A Toolkit for Reducing Inappropriate Use of Antipsychotics in Long Term care



<https://choosingwiselycanada.org/toolkit/when-psychosis-isnt-the-diagnosis/>

Steps to avoid unnecessary antipsychotic use

1. Establish an inter-professional team
2. Agree on appropriateness criteria
 - Severe delusions/hallucinations
 - Behaviours that put others at risk of injury
3. Educate care staff as to reasons for responsive behaviours
 - Environmental
 - Medical/biological
 - Basic physical needs
 - Psychosocial

Steps to avoid unnecessary antipsychotic use

4. Inform and involve family
5. Establish a regular medication review process
6. Taper residents off potentially inappropriate antipsychotic prescriptions
7. Implement supportive strategies



Deprescribing antipsychotics

- Harder than starting: have clearly targeted goals. Articulate goals to team and SDM BEFORE prescribing. Stop if not achieving goals.
- Most neuropsychiatric symptoms of dementia are time limited. Consider attempting gradual dose reduction once symptoms stabilized.
- Can taper by 25% every 2-4 weeks. Some evidence that GDR can be quicker.
- Avoid prn antipsychotics
- Team effort. QI approach. Have staff help identify “low-hanging fruit” for deprescribing.
- Good resources to support deprescribing. E.g. deprescribing.org



Why is patient taking an antipsychotic?

- Psychosis, aggression, agitation (behavioural and psychological symptoms of dementia - BPSD) treated ≥ 3 months (symptoms controlled, or no response to therapy).

- Primary insomnia treated for any duration or secondary insomnia where underlying comorbidities are managed

- Schizophrenia
- Schizo-affective disorder
- Bipolar disorder
- Acute delirium
- Tourette's syndrome
- Tic disorders
- Autism
- Less than 3 months duration of psychosis in dementia

- Intellectual disability
- Developmental delay
- Obsessive-compulsive disorder
- Alcoholism
- Cocaine abuse
- Parkinson's disease psychosis
- Adjunct for treatment of Major Depressive Disorder

Recommend Deprescribing

Strong Recommendation (from Systematic Review and GRADE approach)
Taper and stop AP (slowly in collaboration with patient and/or caregiver; e.g. 25%-50% dose reduction every 1-2 weeks)

Stop AP
 Good practice recommendation

Monitor every 1-2 weeks for duration of tapering

Expected benefits:

- May improve alertness, gait, reduce falls, or extrapyramidal symptoms

Adverse drug withdrawal events (closer monitoring for those with more severe baseline symptoms):

- Psychosis, aggression, agitation, delusions, hallucinations

If BPSD relapses:

Consider:

- Non-drug approaches (e.g. music therapy, behavioural management strategies)

Restart AP drug:

- Restart AP at lowest dose possible if resurgence of BPSD with re-trial of deprescribing in 3 months
- At least 2 attempts to stop should be made

Alternate drugs:

- Consider change to risperidone, olanzapine, or aripiprazole

Continue AP

or consult psychiatrist if considering deprescribing

If insomnia relapses:

Consider

- Minimize use of substances that worsen insomnia (e.g. caffeine, alcohol)
- Non-drug behavioural approaches (see reverse)

Alternate drugs

- Other medications have been used to manage insomnia. Assessment of their safety and effectiveness is beyond the scope of this deprescribing algorithm. See AP deprescribing guideline for details.

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Bjorne LM, Farrell B, Hogel M, Graham I, Lemay G, McCarthy L, et al. Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia: Evidence-based clinical practice guideline. *Can Fam Physician* 2018;64:17-27 (Eng), e1-e12 (Fr).





Antidepressants

- Best evidence - citalopram
 - 2 RCTs and 1 comparator
 - delusions (odds ratio=0.40), anxiety (odds ratio=0.43), and irritability/lability (odds ratio=0.38)
- Trazodone: insufficient evidence (2/3 negative trials but 1 good RCT for frontotemporal dementia)
- Inconclusive evidence for depression (Nelson et al., 2011 JAGS 59:577)



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Anticonvulsants

- Carbamazepine (Tariot et al., 1998 Amer J Psy 155)
- No evidence for valproate

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Cannabinoid Meta -Analysis

- 2 meta- analyses with contradictory findings

Bahji et al, (2020) The Canadian Journal of Psychiatry 65(6)
Ruthirakuhan et a., J Clin Psychiatry 2019;80(2)

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Acetylcholinesterase Inhibitors

- Dementia with Lewy Bodies: fairly good evidence and 1st line
- May be good for apathy

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Memantine

- Unclear
- Post hoc analyses positive
- Prospective RCT X 2 are negative
- Systematic review – unclear clinical significance

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Other

- Pathological Affect → Dextromethorphan-quinidine JAMA. 314(12):1242-54, 2015 Sep 22-29
- Prazosin 1 RCT
- Sexual Disinhibition
 - serotonergics (SSRIs)
 - antiandrogens: cyproterone or MPA
 - LHRH agonists (leuprolide) or estrogens



Other Issues

- How do you manage hyperorality?
 - Consider fluoxetine or clomipramine
- How to manage other compulsive behaviours
 - Consider SSRI or clomipramine
- Can I use clozapine , loxapine, depots?
 - Yes, in certain cases



Pharmacological Summary

- Atypical antipsychotics for severe, distressing or dangerous **aggression and psychosis**
 - Risperidone, aripiprazole, quetiapine, ?olanzapine
- Citalopram for agitation, delusions (but less evidence than atypicals), lability, anxiety
- Carbamazepine for agitation/aggression (not 1st line)
- Trazodone for FTD
- Acetylcholinesterase inhibitor for Lewy Body Dementia

Questions

Case 2: Mr. EF

- Resident EF: 84 year old man admitted to LTC 6 months ago following a fall and hip fracture. Developed mixed dementia roughly 8 years ago. His wife died 15 years ago and he has lived alone since that time. 1 daughter (SDM) in town. He is a retired police officer. He likes watching sports. He likes predictable routine and gets very angry when things feel chaotic. His daughter says he was quite active when younger, less so in the last decade. He loves to tell a good story (that now can be rambling and don't always make sense).

Case 2: Mr. EF

Behavioural issues:

- Territorial-punches and kicks when he perceives that someone is getting into his space
- Yells and swears-provoked by loud noise or by certain other residents he dislikes.
- Hits during personal care.
- No psychosis noted
- **Past medical history:** Diabetes (type 2) with neuropathy, hyperlipidemia, hypertension, COPD (mild), IHD, osteoarthritis, hip fracture with ORIF, hearing impaired. ECG NSR, QTc 425; eGFR 54
- **Medications:** ASA, metformin, linagliptin, rosuvastatin, lisinopril, amlodipine, tiotropium inhaler, risedronate, vitamin D, acetaminophen prn
- Hearing aid and walker.

Case 2: Mr. EF

Staff: Frightened but willing to provide care.

Medications tried so far, all ineffective and caused sedation and increased gait imbalance:

- trazodone
- risperidone
- aripiprazole
- olanzapine

Case 2:

What would be your next step?



Case 3: JK

Resident: 63 year old man, admitted 2 months ago as he was unable to cope at home.

Social history:

- Father is his SDM. Sister-in-law assists with translation.
- Non-English speaking, can understand some phrases and has a few words in English. Google translate can help with short phrases or questions. He usually responds with 1-2 word answers and gestures. Previously did intermittent warehouse work. Often poorly housed or no housing.
- In an environment where no one speaks his language (rare PSW)
- Can get quite irritable, often wants to be left alone
- Likes martial arts movies
- In a LTC home where he has little access to his culturally pleasurable food
- Night owl – enjoys staying up late and sleeping in

Case 3: JK

Past medical history:

- Prior traumatic subdural hematoma
- Previous alcohol use disorder, currently no access to alcohol
- Alcohol-induced major neurocognitive disorder
- Chronic headaches
- Dental issues and intermittent dental pain

Medications:

- Acetaminophen
- lactulose

Case 3: JK

Critical incident 1:

- Another younger resident on the unit (female)
- He sits beside her-she smiles
- He touches her breast, she smiles
- Staff remove him from the situation and he leaves without protest

Critical incident 2:

- He is being showered by a female PSW.
- She pulls his pants down
- He touches her breast
- She calls a male staff member to takeover showering and resident continues without protest or distress

Staff: Wary of providing care due to sexual disinhibited behaviour

Case 3: JK

How would you handle this situation?

Q and A and/or more Cases

Training Family and Staff Caregivers in the DICE Approach

- One-day caregiver training program
- Three different geographical sites in Michigan
- Participants: Family (n = 40) and professional (paid; n = 140) caregivers, (total n = 180) for people with dementia
- Measures: Pre- and post self-ratings (directly after training)
 - Confidence in aspects of dementia care management
- Family caregivers > 50% showed improvement in confidence post-training on 11 of 12 items with significant improvement in 4 items
- Professionals > 50% of caregivers showed improved confidence on 3 of 12 items, with 4 items showing significant improvement
- Family caregivers were significantly more likely than professionals to show improved confidence on 6 of 12 items

- The acceptability and effectiveness of the GPA intervention
- 7 LTCHs in Central South Ontario
- Mixed-methods design
- Significant increase in:
 - self-efficacy to manage episodes of aggression associated with dementia ($p < .001$)
- Themes
 - (1) building knowledge, confidence, and skill
 - (2) building relationships and teams
 - (3) reinforcing commitment to an organizational vis careion of

- Pre- and post intervention approach
- Staff Satisfaction Surveys immediately after GPA training and after 3 months, (b) risk event profiling to monitor aggressive behavior rates, (c) occupational health and safety records pre- and post-GPA training, and (d) Residential Assessment Instrument –Mental Health indicators pre- and post-GPA training.
- 108-bed unit
- 99 staff participants (nutrition services, housekeeping, social work, nursing, therapeutic recreation, administration, and clerical staff)
- Incidents of aggressive behavior declined by 50% 3 months after the GPA training
- Staff were very satisfied

- Interactive case-based training in group of 10-12 led by coach
- 578 coaches by 2009, trained 37,000 staff in 600 LTC homes, hospitals and day centres
- Non-published study
 - 600 staff workshop
 - Increase competence in identifying triggers, communicate, find responses, and de-escalate
 - Less sick days/lost time due to injuries
 - Reduced benzodiazepine use

GPA Third Edition Study 2016

- Nonrandomized controlled, repeated-measures
- intervention group (IG, n = 468), compared to a wait-listed group (n = 277),
- Multisite hospital
- Self-efficacy for dementia and satisfaction measures and provided written descriptions - baseline, postintervention (IG only), and at 8 weeks
- Significant improvement in self-efficacy scores from baseline to immediately post intervention ($P < .001$), sustained at 8 weeks
- There were no changes from baseline to 8 weeks postintervention evident in the wait-listed group ($P = .21$). Intervention group participants described positive impacts including implementation of person-centered care approaches



Feasibility Study: Baycrest Quick-Response Caregiver Tool

- The purpose: to determine the feasibility and effectiveness of implementing the Baycrest Quick –Response Caregiver Tool through an online video approach to assist family caregivers of persons with BPSD/Responsive behaviours
- The second purpose of this study: feedback from healthcare providers (HCP) - insight on the usefulness and scalability of the tool
- Online training
- family caregivers
- health care providers

Caregiver Feedback (N=10)

	Mean (SD)
Impact caregiver compassion towards the person with dementia: <i>(1=very negatively, 2=negatively, 3=neutral, 4=positively, 5=very positively)</i>	4.0 (0.7)
Change caregiver interactions with the person with dementia: <i>(1=gotten much worse, 2=gotten somewhat worse, 3=stayed the same, 4=improved somewhat, 5=improved a lot)</i>	3.8 (0.8)
Learn effective approaches to respond to the person with dementia's responsive behaviours: <i>(1=not at all, 2=a little, 3=somewhat, 4=much, 5=very much)</i>	3.5 (1.4)
Implement concepts taught in the training videos: <i>(1=very poor, 2=poor, 3=acceptable, 4=good, 5=very good)</i>	3.9 (0.9)
Reflect on and understand their own feelings as related to the person with dementia's responsive behaviours: <i>(1=not at all helpful, 2=slightly helpful, 3=moderately helpful, 4=very helpful, 5=extremely helpful)</i>	3.5 (1.1)

“The greatest challenge is to overcome your own anger and hurt and recognizing and separating ingrained personality issues from the illness. [The Baycrest Quick-Response Caregiver Tool] helped me to be more accepting of the disease and take a step back before responding. I stopped arguing.”

Healthcare Provider Feedback (N=12)

	Mean (SD)
Comprehensive	4.5 (0.5)
Easy to understand	4.8 (0.5)
Easy to access and navigate	4.6 (0.7)
Provides enough examples	3.8 (1.0)
Useful	4.6 (0.5)
<i>Scale: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree</i>	

“The 5 step pocket guide is quick and easy to use, which will increase the likelihood caregivers engage with it. The videos are a good way to share examples of how this tool can be used.”

“I would recommend this tool as a way of expanding one's therapeutic toolkit. The process of stepping back, attending to the situation, letting in perspective and the process of self-reflection and building empathy are all helpful strategies to enable clinicians to work with our individuals, families and groups to be responsive rather than reactive related to working with responsive behaviours...”

Healthcare professionals' perceptions of P.I.E.C.E.S. (acute care)

- 15 healthcare professionals from acute medical settings in a hospital
- Semi structured interviews
- Promoted interdisciplinary collaboration.
- **Challenging to sustain P.I.E.C.E.S. in practice**
 - **Tapering off approximately one year post-education**
- **Barrier: limited time**
- Suggestions: need for educational reinforcements and sustainability strategies