# BEHAVIORAL MANAGEMENT IN DEMENTIA

BOCA RATON REGIONAL HOSPITAL INTERNAL MEDICINE SYMPOSIUM

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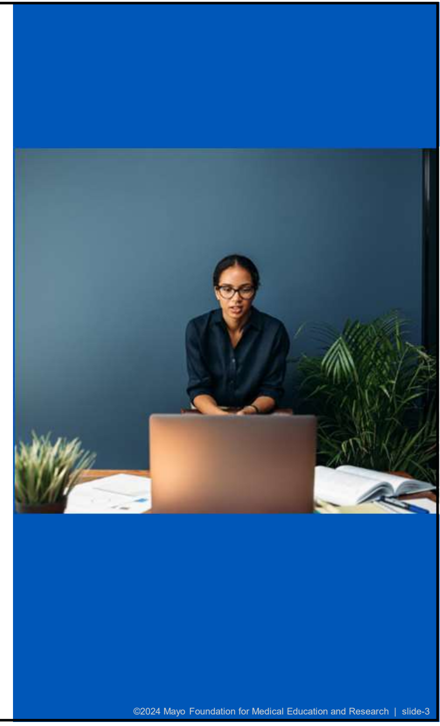
# LEARNING OBJECTIVES

1. Define Behavioral and Psychological Symptoms of Dementia (BPSD)/ Neuropsychiatric Symptoms (NPS) in dementia
2. Determine how to conduct a NPS in dementia assessment in an office visit
3. Describe non-pharmacological and pharmacological options for treating NPS in dementia



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# CASE EXAMPLE: 78-YEAR-OLD MALE "HE IS SO ANGRY AND AGITATED, I GET WORRIED"

History of progressive cognitive decline for 5-6 years manifesting as short-term memory issues, getting lost, issues managing finances and has stopped driving due to concern for safety

- Past medical history: HTN, HLD
- Social history: Married to his wife of 48 years. Denies alcohol use, tobacco abuse, drug use/abuse. Retired from civil service at 65 years old
- Family History: Father died CAD age 72 years old, Mother died due to colon cancer age 80 years old

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## DEFINITION-NEUROPSYCHIATRIC SYMPTOMS/BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA

- Apathy
- Anxiety
- Depression
- Agitation
- Aggression
- Irritability
- Delusions
- Hallucinations
- Sleep Disturbances
- Euphoria

Diagnostic and Statistical Manual of Mental Disorders, 5th edition. American Psychiatric Association (2013), Washington, D.C.

International Psychogeriatric Association criteria for agitation developed in 2014 and updated in 2023

- Presence of cognitive impairment or dementia
- Emotional distress accompanying behavioral changes
- Excessive motor activity or verbal or physical aggression
- Symptoms causing excessive disability that are not solely attributed to other psychiatric, medical or substance-related disorders

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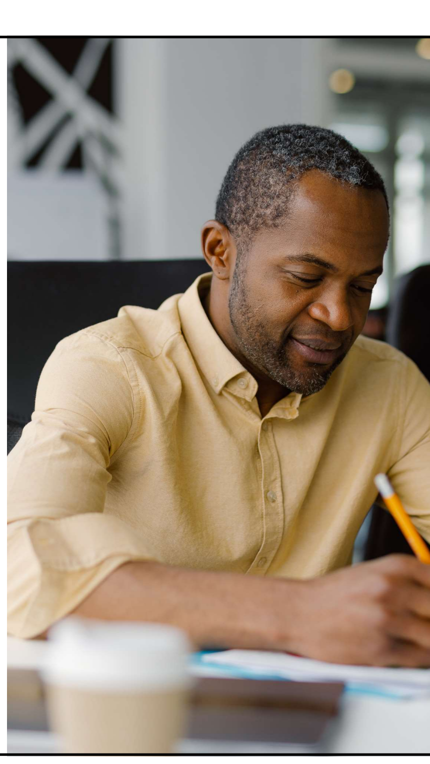
## STEP 1

- Accurate Medical and Psychiatric History
  - **Underlying cause of dementia**
  - Cognitive and functional baseline
  - Substance use/OTC meds/Medications

## STEP 2

- Specifying and characterizing the NPS
- Description of behavior
- Timing
- Onset
- Severity
- Precipitants and consequences
- History of the behavior
- Safety-patient/caregiver



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# DICE

- **D**escribe the problematic behavior
- **I**nvestigate possible causes of the behavior
- **C**reate a treatment plan
- **E**valuate the outcome of this plan

*Kales HC, Gitlin LN, Lyketsos CG. Management of neuropsychiatric symptoms of dementia in clinical settings: Recommendations from a multidisciplinary expert panel. J AM Geriatr Soc. 2014*

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# CAUSES OF BPSD

Pat

Fac

- Acu
- Pai
- Pre
- Pre disc
- Unn poo bore
- Oth

g of

od

Gerlach, L. B., & Kales, H. C. (n.d.). *Managing Behavioral and Psychological Symptoms of Dementia.* https://doi.org/10.1016/j.cger.2019.11.010

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## DESCRIBE: "HE IS SO ANGRY AND AGITATED, I GET WORRIED"

- Angry and agitated-he yells he hates me when I try to give him a shower
  - Anxiety around showering
  - Caregiver burden/response

- At night when he thinks people are in our home and this is not his house, and he sees his relatives
- He then hallucinates and becomes angry when I try to tell him no one is here, and this is his house

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## INVESTIGATE:

- He refuses to wear his hearing aids and he is very hard of hearing.
- On examination he appears to rub his shoulders and per his wife also gets angry when getting dressed
- She reports he did injure his shoulder 15 years ago while golfing
- She reports feeling overwhelmed and has less patience with him than she would like
- Prior to cognitive issues he was an avid golfer and exercised frequently
- He now spends most of the day sitting in his recliner watching television

- He gets into the bedroom, it is very dark, he sees reflections of himself in the mirror and pictures of their loved ones on his dresser
- He will then not want to get into bed because he is worried someone is in the house and wants to call the police.
- I feel unsafe alone at night with him as when I try to reassure him, he thinks I am lying to him
- On examination you see he bounces his feet often and shifts crossing his legs and wants to stand up often
- Prior to cognitive issues he was an avid golfer and exercised frequently
- He now spends most of the day sitting in his recliner watching television

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## CREATE:

- Rule out medical issue=pain
  - Torn rotator cuff?
  - Osteoarthritis in the shoulders?
  - UTI
- Wear hearing aids
- Structure, routine, routine, routine
- Physical and mental exercise
- Is it a necessity?

- Rule out medical issue=RLS
  - Iron deficiency?
  - Pain?
- Wear hearing aids
- Removal of triggering agents (mirrors, pictures, provide low light/night light)
- Therapeutic lying
- Structure, routine, routine, routine
- Physical and mental exercise

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## EVALUATE:

- Trialed topical ointment
- Limited showering to every 2-3 days
- Initiated occupational therapy home health assessment for bathroom modifications
- Began adult daycare program to allow for wife to have time not in caregiver role and to provide patient more mental and physical exercise
- Follow up 3 months later-improvement

- Ferritin 10, began iron replacement
- Removed mirrors and pictures of family members, used nightlight
- Reassured rather than corrected him when he believed he was not at his home
- Implemented nightly routine before bed
- Began adult daycare program to allow for wife to have time not in caregiver role and to provide patient more mental and physical exercise
- Follow up 3 months later-improvement

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# BUT WHAT IF BIOPSYCHOSOCIAL INTERVENTIONS FAIL? OR ARE NOT ENOUGH FOR SAFETY?

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## MEDICATION

- No medication FDA approved for BPSD in the USA (*Brexpiprazole)
  - Every medication on Beers List=caution when prescribing to older adults or should not be used in elderly
  - Reassess need at every visit for every medication
- Risperidone approved in Canada and parts of Europe

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# TARGET NPS/BPSD

- Apathy
- Anxiety
- Depression
- Agitation
- Aggression
- Irritability
- Delusions
- Hallucinations
- Sleep Disturbances
- Euphoria

| Class | Example of Medication |
|---|---|
| Antidepressants | SSRI, SNRIs, Trazodone |
| Antipsychotics | Olanzapine, Quetiapine<br>Brexpiprazole, Aripiprazole, Clonidine, Risperidone |
| Acetylcholinesterase inhibitors/Memantine | Donepezil, Rivastigmine, Memantine |
| Anticonvulsants | Gabapentin, Carbamazepine |
| Stimulants | Dextroamphetamine, amphetamine, methylphenidate |
| Benzodiazepines | Clonazepam, Diazepam, Lorazepam |
| Cannabinoids | Dronabinol, Nabilone |
| Other/Future | Pimavanserin, Dextromethorphan<br>Dexmedetomidine |

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# Apathy

| AD | DLB | FTD | PD | VCID |
|---|---|---|---|---|
| ChEI | ChEI | Stimulant? | Stimulant? | ChEI |
| Stimulant:<br>Methylphenidate<br>Amphetamine<br>Modafinil?<br>Amantadine? | Stimulant:<br>Methylphenidate<br>Modafinil?<br>Amantadine? | | | Stimulant:<br>Methylphenidate |

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# Anxiety

| AD | DLB | FTD | PD | VCID |
|---|---|---|---|---|
| ChEI | ChEI | Trazodone | SSRI | ChEI |
| SSRI | SSRI | SSRI (high dose?) | SNRI | SSRI |
| SNRI | SNRI | SNRI | | Mirtazapine |
| Mirtazapine | Buspirone | | | Buspirone |
| | Quetiapine? | | | SNRI |

No Benzodiazepines Listed

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# Depression

| AD | DLB | FTD | PD | VCID |
|---|---|---|---|---|
| ChEI | ChEI | SSRI | Citalopram | ChEI |
| SSRI | SSRI | SNRI | Paroxetine | SSRI |
| SNRI | SNRI | Trazodone | Venlafaxine | SNRI |
| | | | Nortriptyline | Bupropion? |
| | | | Pramipexole | |
| | | | Desipramine | |
| Augment:? Aripiprazole Lithium | | | | |
| ECT? | | | | |

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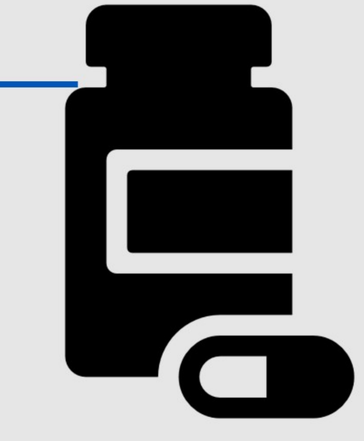
Agitation
Aggression
Irritability
Delusions
Hallucinations



## APA GUIDELINES 2016

Antipsychotics are NOT 1st line therapy

Assess response at 4 weeks and every 1-4 months reassess and consider tapering off

## FDA BLACK BOX WARNING

2005 and 2008 warnings

Increased risk for all cause mortality (RR 1.6-1.7 death (4.5%) vs placebo (2.6%))

Increased QT, Torsades de Pointes, Stroke, aspiration pneumonia

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## MEDICATION OPTIONS

- Decision for medication for treatment of these NPS/BPSD relies on clinical judgement of DICE being performed as well as safety risk to patient and others as well as immediate need for acute treatment
- Medication options should also be taken into context of dementia diagnosis

Agitation
Aggression
Irritability
Delusions
Hallucinations

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## ANTIPSYCHOTICS

- Clinical Antipsychotic Trial of Intervention Effectiveness-Alzheimer's Disease (CATIE-AD) Trial
  - 421 patients-psychosis, aggression, agitation failed to find improved outcomes over placebo
  - Risperidone, olanzapine, quetiapine efficacious but stopped due to SE/high adverse effects requiring discontinuation
- Other studies have shown only modest efficacy
- Atypical Antipsychotics have the best evidence of efficacy
  - AHRQ Comparative Effectiveness Review
    - Risperidone: psychosis, agitation, overall BPSD
    - Olanzapine: agitation
    - Aripiprazole: overall BPSD
    - Quetiapine failed to show effectiveness

Agitation
Aggression
Irritability
Delusions
Hallucinations

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Devanand, D. P. (2023). Management of neuropsychiatric symptoms in dementia. In *Current opinion in neurology* (Vol. 36, Issue 5, pp. 498–503). NLM (Medline). https://doi.org/10.1097/WCO.000
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## ANTIPSYCHOTICS

| AD | DLB | FTD | PD | VCID |
|---|---|---|---|---|
| ChEI | ChEI | Trazodone<br>Quetiapine | Pimavanserin | ChEI |
| Second Generation Antipsychotics:<br>Brexpiprazole<br>Risperidone<br>Aripiprazole<br>Olanzapine<br>Haloperidol? | Second Generation Antipsychotics:<br>Quetiapine<br>Pimavanserin | SSRI:<br>Escitalopram,<br>Citalopram,<br>Paroxetine | | Second Generation Antipsychotic:<br>Risperidone,<br>Olanzapine,<br>Quetiapine |
| SSRI: Escitalopram, Citalopram | | | | |
| Trazodone<br>Dextromethorphan/Quinidine<br>Prazosin<br>Lithium<br>Gabapentin | | | | |

| Other/Future | |
|---|---|
| Droabinol, Nabilone | Studies pending |
| Dexmedetomidine | Studies pending |
| | |

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Euphoria

- If desire to treat or need to treat, consider Second Generation Antipsychotic or Antiseizure medication

Sleep Disturbances

- Detailed sleep history prior to cognitive issues
- Routine, routine, routine
- Light exposure (type of light and timing of light)
- Prazosin
- Orexin Receptor Antagonist
- Melatonin

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# TAKE HOME MESSAGES

**DICE ASSESSMENT**

**Describe, Investigate, Create, Evaluate**

**INDIVIDUALIZE TO PATIENT AND CAREGIVER**

**Caregiver factors, Patient factors, Environmental factors**

**PHARMACOLOGICAL OPTIONS**

**Not first line**

**Use when safety is concern or immense distress**

**Tailor to patient**

**Reexamine frequently**

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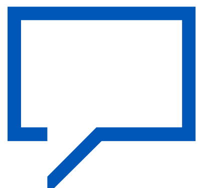
# QUESTIONS & ANSWERS



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