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Optimizing Pharmacotherapy for the Patient with Dementia

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Disclosures

• No conflicts of interest to report.
Learning Objectives

At the conclusion of this presentation the attendee will:
• Define the role of ACHE inhibitors and NMDA receptor antagonist in the patient with dementia
• Appreciate the history leading up to the current CMS initiative to reduce psychotropic drug use in nursing homes
• Understand the risk associated with antipsychotics in patients with dementia
• Describe the CMS Partnership to Improve Dementia Care in Nursing Homes
• List AHCA/NCAL strategies to reduce antipsychotics use in nursing homes
• Appreciate the need to re-think behaviors and their causes
• Describe non-pharmacologic interventions for patients with dementia
Neurotransmitter Deficits

- Cholinergic - dominant - correlates best with symptoms
- Noradrenergic
- Serotonergic
- Histaminergic
- Dopaminergic
Acetylcholinesterase Inhibitor Therapy

- Palliative
- Slows progression of the disease activity while on therapy (Prolongs time to NH placement?)
- Once therapy is discontinued patients fall to expected level of decline
- Greatest benefit for mild to moderate disease
Cholinesterase Inhibitor Therapy

• Donepezil (Aricept*) - 1996
  – Selective, reversible cholinesterase inhibitor
  – Dose
    • Donepezil initially at 5 mg/day for 4 - 6 weeks and then increase up to 10 mg once per day
    • Donepezil 23mg – once daily (titrate to this dose with regular Aricept*)
    • Aricept* ODT – 5 mg and 10 mg sublingual tablet. Also available generically
  – 4.1% decrease in ADAS
  – ADRs
    • Nausea – (3- 19%) – dose related
    • Diarrhea – (5-15%) – dose related
    • CNS (insomnia, dizziness) – 8-9%
Cholinergic Replacement Therapy

• Rivastigmine (Exelon*) - 2000
  – Pseudoirreversible, selective inhibitor of cholinesterase
  – Dose
    Capsule -1.5 mg BID and increase by same increment every 2 to 3 weeks up to 12 mg/day
    Transdermal Patch – initially 4.6 mg/24 hours and titrate up to 9.5 mg/24 hours if tolerated
  – 5.4% decrease in ADAS
  – ADRs
    • Nausea, vomiting, diarrhea - 3- 47% (higher doses) (may be less with transdermal patch)
    • CNS (insomnia, dizziness, headache) – 9-21%
Cholinergic Replacement Therapy

• Galantamine (Razadine*) - 2001
  – Competitive, reversible cholinesterase inhibitor
  – Dose:
    • IR initiated at 4 mg BID and increase by same increment every four weeks up to 24 mg/day
    • ER initiated at 8 mg per day then titrated upward every four weeks up to 24 mg per day
  – Decrease in ADAS
  – ADRs
    • Nausea, vomiting, diarrhea – 6 - 24%
    • CNS (dizziness, headache) – 8 – 9%
Principles of Replacement Therapy

• Equal efficacy amongst agents
• Differ by side effect profile and kinetics
• Gastrointestinal side effects may abate with continued use or lower dose
• Titrate dose from low to high may improve tolerance and decrease drop-out rate
• No head to head comparisons.
• May have beneficial effects on behavioral problems (delusions, hallucinations, psychosis, wandering, paranoia, agitation)
Guidelines for the Use of Neurotransmitter Replacement Therapy

• Duration of therapy
  – At least up to two years
  – Effects may wane so switching to another agent may be appropriate

• Monitoring
  – Establish clear goals
  – Family education
  – GI side-effects

• Switching agents
  – Because of subtle differences when one agent appears to be ineffective it may be appropriate to switch

• Severe dementia
  – When baseline MMSE is < 12 there is probably limited utility with these medications.
NMDA Receptor Antagonist Therapy

• Memantine (Namenda*)
  – Over stimulation of N-methyl-D-aspartate (NMDA) is implicated as a contributor to Alzheimer’s disease and this drug is an antagonist
  – Shown to slow progression of disease
  – Indicated in moderate to severe disease
  – Dosing
    • IR is initiated at 5 mg/day and increase dose by same increment going to BID therapy up to a maximum of 20 mg/day – This product is being discontinued
    • ER is initiated at 7 mg/day and increase dose by same increment once weekly up to 28 mg/day
  – ADRs
    • CNS (dizziness, confusion, headache) – 6-7%
    • GI (constipation, vomiting) – 3 – 5%
History

• 1987 Omnibus Budget Reconciliation Act (OBRA)
  – First initiative to reduce psychotropic medications in nursing home patients
  – Prompted by ethical concerns regarding the use of chemical restraints
  – At that time 25 to 30% of nursing home patients were receiving antipsychotics
  – Initial reduction in antipsychotic use but usage patterns returned to baseline or increased within a few years
Consequences of Unregulated Use of Psychotropics

- Falls and fractures
- Functional disability
- Irreversible neurological side effects
- Overuse to quiet difficult patients
- Inconsistent effects
Intended Consequences of HCFA Guidelines (OBRA-87)

- Limit the use of antipsychotics and other psychoactive drugs
- Limit the dose of antipsychotics and other psychoactive drugs
- Limit the duration of antipsychotics and other psychoactive drugs
- Need to establish a psychiatric diagnosis prior to medication therapy
- Preferential use of shorter acting agents
- Define parameters for monitoring efficacy, toxicity and duration of therapy
Interventions to Decrease Inappropriate Prescribing (OBRA-87)

- Remove agents from formularies
- CME for physicians and nurses
  - Lectures, academic detailing to physicians and nurses
- Seek non-drug alternatives for behavioral problems
  - Identify precipitants to behavioral problems
  - More communication between shifts
  - Redirect patients with behavioral problems
- Improved communication between the nursing staff and consultant pharmacist
  - Identify and agree upon monitoring parameters to assess therapy
## Available antipsychotic medications

<table>
<thead>
<tr>
<th>Typical</th>
<th>Atypical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prochlorperazine</td>
<td>Aripiprazole</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>Asenapine</td>
</tr>
<tr>
<td>Loxapine</td>
<td>Clozapine</td>
</tr>
<tr>
<td>Thioridazine</td>
<td>Iloperidone</td>
</tr>
<tr>
<td>Pimozide</td>
<td>Olanzapine</td>
</tr>
<tr>
<td>Trifluoperazine</td>
<td>Quetiapine</td>
</tr>
<tr>
<td>Thorazine</td>
<td>Risperidone</td>
</tr>
<tr>
<td>Perphenazine</td>
<td>Ziprasidone</td>
</tr>
</tbody>
</table>
## Side Effect Profiles of Typical vs. Atypical Antipsychotics

<table>
<thead>
<tr>
<th>Typical</th>
<th>Atypical</th>
</tr>
</thead>
<tbody>
<tr>
<td>High EPS</td>
<td>Low EPS</td>
</tr>
<tr>
<td>High TD</td>
<td>Low TD</td>
</tr>
<tr>
<td>High Anticholinergic</td>
<td>Variable Anticholinergic</td>
</tr>
<tr>
<td>Variable CV effects</td>
<td>Relatively safe CV Profile</td>
</tr>
<tr>
<td>CVA</td>
<td>Metabolic effects (weight gain, diabetes, hyperlipidemia)</td>
</tr>
<tr>
<td>CVA</td>
<td>CVA</td>
</tr>
</tbody>
</table>
Approved Indications for Antipsychotic Use

- Schizophrenia
- Bi-polar Disorder
- Treatment Resistant Depression (Olanzapine*)
- Major Depressive Disorder (Quetiapine*)
- Irritability associated with Autistic Disorder
- Tourettes
Common “Off-Label” Uses of Antipsychotics

• Dementia with behavior difficulties
  – Agitation
  – Abusive, violent
  – Wandering

• Acute Delirium

• Obsessive-compulsive disorder

• Psychotic symptoms (hallucinations, delusion)
Effectiveness of antipsychotics in patients with dementia

• Dementia symptom scores
  – Small improvement in scores with aripiprazole, olanzapine and risperidone. No improvement with quetiapine
  – Effect is weak and short lived

• Aggression
  – Improvement in aggression with risperidone and olanzapine.
  – Patients had a higher incidence of CVA, EPS and other adverse events
  – Significant drop out rate due to side effects

• Psychosis
  – Small effect with risperidone
  – Effect short lived
  – Complications as described above
Adverse effects of "Off Label" Use in Nursing Facility Residents

• Death
• Hospitalization
• Falls and fractures
• Thromboembolic events
• “For every 100 patients with dementia treated with an antipsychotic medication, only 9 to 25 will benefit and 1 will die”
  – Avorn, Choudhry and Fischcher 2012
WARNING: Increased Mortality in Elderly Patients with Dementia-Related Psychosis -

- Elderly patients with dementia-related psychosis treated with antipsychotic drugs are at an increased risk of death. Analyses of seventeen placebo-controlled trials (modal duration of 10 weeks), largely in patients taking atypical antipsychotic drugs, revealed a risk of death in drug-treated patients of between 1.6 to 1.7 times the risk of death in placebo-treated patients. Over the course of a typical 10-week controlled trial, the rate of death in drug-treated patients was about 4.5%, compared to a rate of about 2.6% in the placebo group. Although the causes of death were varied, most of the deaths appeared to be either cardiovascular (e.g., heart failure, sudden death) or infectious (e.g., pneumonia) in nature.
Current Antipsychotic Use in Nursing Homes

• According to CMS 2013 Data, 27.1% of Oklahoma nursing home residents are on an antipsychotic.

• A 2011 report by the Health and Human Services Office of Inspector General found that 22 percent of the atypical antipsychotic drugs were not administered in compliance with CMS standards, and a CMS study found that over 17 percent of nursing home patients had daily doses exceeding recommended levels.
CMS Partnership to Improve Dementia Care in Nursing Homes

• 2012 Initiative with the goals to include a focus on person-centered care and reduction of unnecessary antipsychotic medications.

• Initial goal was to decrease unnecessary antipsychotic use in nursing homes by 15% by the end of 2012.

• Approaches involve research, public reporting of nursing home antipsychotic use as well as training for providers, clinicians, and surveyors.
• CMS is emphasizing person-centered, individualized approaches to dementia care such as consistent staff assignments, increased exercise or time outdoors, monitoring and managing acute and chronic pain, and planning activities consistent with the individual’s preferences and choices.

• Multiple valuable resources to help reduce use of antipsychotic medications in NH residents.
F329 – Antipsychotic Drugs

• Based on a comprehensive assessment of a resident, the facility must ensure:
  – Residents who have not used antipsychotic drugs are not given these drugs unless they are necessary to treat a specific condition, as diagnosed and documented in the clinical records; and
  – Residents who use antipsychotics drugs receive gradual dose reductions, and behavioral interventions, unless clinically contraindicated, in an effort to discontinue these drugs.
Considerations Specific to Antipsychotics and GDR

- Within the first year in which a resident is admitted on an antipsychotic medication or after the facility has initiated an antipsychotic medication, the facility must attempt GDR:
  - In two separate quarters (with at least one month between attempts), unless clinically contraindicated
  - After the first year, a GDR must be attempted annually, unless clinically contraindicated
AHCA/NCAL* Strategies to Reduce Antipsychotic Use in Nursing Facilities

• Phase I
  – Focus on withdrawal or GDR
    • Strategies
      – Identify residents with off-label use of antipsychotics
      – Review records to assure compliance with CMS SOM
      – Use evidence based approaches for GDR to discontinue antipsychotics
        » Work with medical director and consultant pharmacist to guide the process and promote GDR to physicians, staff and families
      – Educate families about the use of antipsychotics and alternate treatments

*AHCA – American Health Care Association
NCAL – National Center for Assisted Living
AHCA/NCAL Immediate Steps to Reduce Antipsychotic Use

• No role for PRN use of antipsychotics
• Evaluate need for continuing antipsychotics at admission and for those on very low doses
  – Studies have demonstrated stopping low dose antipsychotics does not lead to significantly worsened behaviors
• Evaluate need for antipsychotics started on evening shifts or on weekends
• Consider discontinuance or GDR for patients on antipsychotics for > 12 weeks, particularly those with no change in dose or frequency
AHCA/NCAL Strategies to Reduce Antipsychotic Use in Nursing Facilities

• Phase II
  – Non-pharmacologic strategies to manage individuals with dementia
  – Change how we view dementia behaviors as attempts to communicate unmet needs
  – Strategies
    • Staff training on interacting with patients with dementia
    • Adopt policy on minimal use of medications with dementia patients
      – Educate family about these policies
    • Implement consistent assignment
    • Compare facility off-label antipsychotic use to others
Guidelines For Emergency or Acute Use of Antipsychotics in Patients With Dementia

• Indication
  – When a patient is displaying aggression or behaviors that may pose an immediate danger to themselves, staff or other residents
  – Document reason for use
  – Document goals
  – Document monitoring plan for effectiveness and toxicity
  – Document time frame for attainment of goal (< 7 days)
  – Stop therapy if goal not met or attempt GDR
  – Use the lowest recommended dose
Rethinking “Behaviors” In the Patient With Dementia

CMS definition of behavior

“Distressed behavior” is behavior that reflects individual discomfort or emotional strain. It may present as crying, apathetic or withdrawn behavior, or as verbal or physical actions such as: pacing, cursing, hitting, kicking, pushing, scratching, tearing things, or grabbing others.
Behaviors are often a rational attempt to cope with circumstances that do not make sense to a resident with dementia.

Dementia is not the cause of every behavior.
Key questions to ask

- What is the person trying to tell me?
- What is distressing the person?
- What does he or she need to be in well-being?
Behavior assessment

- Behavior monitor form
- Social/spiritual
- Activity/recreation
- Nurses notes
- Continence assessment
- Pain assessment
- Care plan
Intrinsic Triggers for Behaviors and Non-Pharmacologic Intervention*

Boredom
   During unstructured time most disturbing behaviors occur
Pain/discomfort
   History of pain or diagnosis that may lead to chronic pain
   Non-verbal indicators of pain
   Routine versus prn pain medications
Elimination needs
   Bowel and bladder plans
Medication side effects
   Especially those with anticholinergic properties
Acute changes in condition
   Infection, etc
Hunger/thirst
   Creative ways to deliver foods and fluids
Sleep issues
   Noise, lighting, temperature, type of bed or pillow

* Bish and Russell - 2012
AHCA/NCAL Questions of Ask Prior to Considering a Medication

• What did you do to try and figure out why the resident was doing <fill in the blank>?
• What is the resident trying to communicate to us about their <fill in the blank>?
• What is the reason for the resident doing <fill in the blank>?
  – Unacceptable answers – dementia or sun-downing
• What did you try before requesting a medication?
Intent of the Initiative

• The intention of the CMS initiative is to reduce the use of unnecessary antipsychotic medications. That does not mean that they should not be used at all. There are situations and conditions for which antipsychotics are indicated and appropriate.
What surveyors look for

• The surveyors will look to see that the facility has adopted and uses a proactive approach to ensure that the use of antipsychotics is appropriate and that the facility is activity monitoring their use.
Tools Available for Facilities to Use to Reduce the Use of Unnecessary Antipsychotics

• This list was provided by the OSDH/LTC
  – Partnership to improve dementia care in nursing homes: Provider implementation flow flow diagram
  – Partnership to improve dementia care in nursing homes: Suggestions for provider checklist
  – Non-drug management of problem behaviors and psychosis in dementia
  – Algorithm for treating behavioral and psychological symptoms of dementia (aka Problem Behaviors)
  – Caring for people with dementia and problem behaviors: A step-by-step evidence-based approach
  – Drugs that may cause delirium or problem behaviors
PARTNERSHIP TO IMPROVE DEMENTIA CARE IN NURSING HOMES
Provider Implementation Flow Diagram

1. Engage leadership team (DON, administrator, medical director, consultant pharmacist)
2. Leadership team meets with direct caregivers to conduct facility self-assessment and establish goals
3. Leadership team and direct caregivers review current policies and procedures related to dementia care
4. Use actual care situations to review caregiver and practitioner performance regarding implementation of desired practices *(see questions to consider)*
5. Review data on rates of antipsychotic use in the facility
Review utilization of antipsychotic medications and other psychopharmacological medications throughout the facility

Identify residents who could benefit from modification of their current treatment regimen, including (but not limited to) attempted reduction of current antipsychotic medications

Establish ongoing meetings, rounds or other means of continuous staff engagement at all levels on individualized approaches to care

Analyze and trend data regarding both outcomes and underlying processes related to dementia care and to facility-wide systems for review and action

Follow up with State partners to share challenges, successes, resources

Developed under the Partnership to Improve Dementia Care in Nursing Homes
## Partnership to Improve Dementia Care in Nursing Homes

### Suggestions for Provider Checklist

<table>
<thead>
<tr>
<th>% of residents in facility on atypical antipsychotics: _____</th>
<th>Quality Measure State Percentile Rank – antipsychotics: _____</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff in all departments, are trained in person-centered care and how to respond effectively to behaviors (access sample training programs on Advancing Excellence website; Hand in Hand).</td>
<td>YES</td>
</tr>
<tr>
<td>In addition to medical and psychiatric history, recent changes in behavior or cognition and other standard clinical evaluations, at admission information is obtained from the resident, family, and/or caregivers on the resident’s preferences, routines, pre-dementia personality, social patterns, responses to stress and effective interventions.</td>
<td>YES</td>
</tr>
<tr>
<td>The information obtained on during the admission process is conveyed to direct caregivers.</td>
<td>YES</td>
</tr>
<tr>
<td>This admission information is integrated into the care plan and may be revised over time as the resident’s condition and needs change.</td>
<td>YES</td>
</tr>
<tr>
<td>Interviews with staff demonstrate that they have implemented and are following the care plan, continue to seek input from family members or caregivers for unresolved issues, and communicate with practitioners regarding change in condition or new or persistent symptoms.</td>
<td>YES</td>
</tr>
<tr>
<td>If a resident is placed on an antipsychotic medication, there is documentation in the record that the resident or appropriate legal representative was involved in the decision.</td>
<td>YES</td>
</tr>
<tr>
<td>Facility has consistent staff assignments (same Certified Nursing Assistant to same resident 5 days/week).</td>
<td>YES</td>
</tr>
<tr>
<td>Certified Nursing Assistant to Resident Ratio 1ˢᵗ shift/2ⁿᵈ shift/3ʳᵈ shift</td>
<td>YES</td>
</tr>
<tr>
<td>Senior leadership (Nursing Home Administrator, Director of Nursing, Medical Director) attend care plan meetings periodically for residents with unresolved behavioral or psychological symptoms of dementia.</td>
<td>YES</td>
</tr>
<tr>
<td>Interdisciplinary team seeks input at care plan meetings from the Medical Director, Consultant Pharmacist and Certified Nursing Assistants for residents with behavioral or psychological symptoms.</td>
<td>YES</td>
</tr>
<tr>
<td>Providers conduct outreach and education to the resident’s family and strongly encourage their participation in care plan meetings (offering to flex the schedule or use conference calls when the family cannot physically be in attendance).</td>
<td>YES</td>
</tr>
</tbody>
</table>
Nursing Home Administrators and Directors of Nursing review quality measures (e.g., monthly) and use the Quality Measures report to identify residents who may need alternative interventions and oversee their implementation.

Each month, Nursing Home Administrators and Directors of Nursing review Quality Measures report, along with the Pharmacy Consultant report, to identify residents appropriate for possible reduction/elimination of antipsychotics. The review of aggregate data should be combined with real-time, case-based information and input from practitioners.

Nursing Home Administrators and Directors of Nursing review Pharmacy Consultant’s report quarterly with Consultant Pharmacist and Medical Director to track and trend data.

Direct caregivers (Certified Nursing Assistants), together with the family and care plan team, is involved in the process of developing and implementing effective, person-specific interventions to address behavioral symptoms.

If any resident is admitted on an antipsychotic or is started on an antipsychotic after admission, the Consultant Pharmacist, along with the practitioner, reviews that resident’s care plan, including all medications, within 24-48 hours.

A documented process is in place and is utilized when initiating an antipsychotic prescription (e.g., standard order set, decision support algorithm, routine monitoring recommendations, etc.).

“**Yes**” answers require supporting documentation and visual confirmation by quality improvement personnel.

Developed under the Partnership to Improve Dementia Care in Nursing Homes
Non-Drug Management
of Problem Behaviors and Psychosis in Dementia

**STEP 1: ASSESS & TREAT CONTRIBUTING FACTORS**

**FOCUS** on one behavior at a time
- Note how often, how bad, how long, & document specific details
- Ask: What is really going on? What is causing the problem behavior? What is making it worse?

**IDENTIFY** what leads to or triggers problems
- Physical: pain, infection, hunger/thirst, other needs?
- Psychological: loneliness, boredom, nothing to do?
- Environment: too much/too little going on; lost?
- Psychiatric: depression, anxiety, psychosis?

**REDUCE, ELIMINATE** things that lead to or trigger the problems
- Treat medical/physical problems
- Offer pain medications for comfort or to help cooperation
- Address emotional needs: reassure, encourage, engage
- Offer enjoyable activities to do alone, 1:1, small group
- Remove or disguise misleading objects
- Redirect away from people or areas that lead to problems
- Try another approach; try again later
- Find out what works for others; get someone to help

**DOCUMENT** outcomes
- If the behavior is reduced or manageable, go to Step 3
- If the behavior persists, go to Step 2
### Step 2: Select & Apply Interventions

**Consider** retained abilities, preferences, resources
- Cognitive level
- Physical functional level
- Long-standing personality, life history, interests
- Preferred personal routines, daily schedules
- Personal/family/facility resources

**Develop** a Person-Centered plan
- Adjust caregiver approaches
- Adapt/change the environment
- Select/use best evidence-based interventions tailored to the person’s unique needs/interests/abilities

**Adjust** your approach to the person
- Personal approach: cue, prompt, remind, distract; focus on person’s wishes, interests, concerns; use/avoid touch as indicated. **Do not** try to reason, teach new routines, or ask to “try harder.”
- Daily routines: simplify tasks and put them in a regular order; offer limited choices; use long-standing patterns & preferences to guide routines & activities
- Communication style: simple words and phrases; speak in short sentences; speak clearly; wait for answers; make eye contact; monitor tone of voice and body language
- Unconditional positive regard: **do not** confront, challenge or explain misbeliefs (hallucinations, delusions, illusions); accept belief as real to the person; reassure, comfort, and distract
<table>
<thead>
<tr>
<th>ADAPT or CHANGE the environment</th>
</tr>
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<tbody>
<tr>
<td>• Eliminate things that lead to confusion: clutter, TV, radio, noise, people talking; reflections in mirrors/dark windows; misunderstood pictures or decor</td>
</tr>
<tr>
<td>• Reduce things that cause stress: caffeine; extra people; holiday decorations; public TV</td>
</tr>
<tr>
<td>• Adjust stimulation: if overstimulated—reduce noise, activity, and confusion; if under-stimulated (bored)—increase activity and involvement</td>
</tr>
<tr>
<td>• Help with functioning: signs, cues, pictures help way-finding; increase lighting to reduce misinterpretation</td>
</tr>
<tr>
<td>• Involve in meaningful activities: personalized program of 1:1 and small group or large group as needed</td>
</tr>
<tr>
<td>• Change the setting: secure outdoor areas; decorative objects; objects to touch and hold; homelike features; smaller, divided recreational and dining areas; natural and bright light; spa-like bathing facilities; signs to help way-finding</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SELECT and USE evidence-based interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Work with the team to fit the intervention to the person</td>
</tr>
<tr>
<td>• Check care plan for additional information</td>
</tr>
<tr>
<td>• Contact supervisor with problems/issues</td>
</tr>
</tbody>
</table>

**STEP 3: MONITOR OUTCOMES & ADJUST COURSE AS NEEDED**

| • Track behavior problems using rating scale(s) |
| • Assure adequate “dose” (intensity, duration, frequency) of interventions |
| • Adapt/add interventions as needed to get the best possible outcomes |
| • Make sure all people working with the person understand and cooperate with the treatment plan and are trained as needed |
Algorithm for Treating Behavioral and Psychological Symptoms of Dementia (aka Problem Behaviors)

**STEP 1: IDENTIFY, ASSESS, AND TREAT CONTRIBUTING FACTORS**
- Determine and document frequency, duration, intensity, and characteristics of each problem behavior
- Identify, assess, treat or eliminate ANTECEDENTS and TRIGGERS

Unmet physical needs?
- Pain
- Infection/illness
- Dehydration/nutrition
- Sleep disturbance
- Medication side effects
- Sensory deficits
- Constipation
- Incontinence/retention

Unmet psychological needs?
- Loneliness
- Boredom
- Apprehension, worry, fear
- Emotional discomfort
- Lack of enjoyable activities
- Lack of socialization
- Loss of intimacy

Environmental causes?
- Level/type of stimulation: noise, confusion, lighting
- Caregiver approaches
- Institutional routines, expectations
- Lack of cues, prompts to function & way-find

Psychiatric causes?
- Depression
- Anxiety
- Delirium
- Psychosis
- Other mental illness

Monitor outcomes to assure full treatment response
- If problem behavior persists after antecedents are adequately treated, use NON-DRUG INTERVENTIONS

**STEP 2: SELECT AND APPLY NON-DRUG INTERVENTIONS**
- Select interventions based on the TYPE of problem and ASSESSMENT of retained abilities, preferences, and resources
  - Cognitive level
  - Physical function level
  - Long-standing personality, life history, interests/abilities
  - Preferred personal routines and daily schedule
  - Personal/family/facility resources
- Train staff to use selected interventions appropriately/following best practice and evidence-based guidelines
- Tailor intervention to individualized needs, combining approaches and interventions to promote comfort & function
- Monitor outcomes using rating scales to quantify behaviors
Adjust caregiver approaches

- **Personal approach**: cue, prompt, remind, distract (treats, activities); focus on person’s wishes, interests, concerns; use/avoid touch as indicated; avoid trying to reason, teach new routines, or ask to “try harder”

- **Daily routines**: simplify, sequence tasks; offer limited choices; use long-standing history & preferences to guide

- **Communication style**: simple words and phrases; speak clearly; wait for answers; make eye contact; monitor tone of voice/other nonverbal messages

- **Unconditional positive regard**: do not confront, challenge or “explain” misbeliefs (hallucinations, delusions, illusions); accept belief as “real” to the person; reassure, comfort, and distract

- **Involvement/Engagement**: tailor activities to increase involvement/reduce boredom; individualize social and leisure activities

Change the environment

- **Eliminate misleading stimuli**: clutter, TV, radio, noise, people talking; reflections in mirrors/dark windows; misunderstood pictures/decor

- **Reduce environmental stress**: caffeine; extra people; holiday decorations; public TV

- **Adjust stimulation**: reduce noise, activity, confusion if over-stimulated; increase activity/involvement if under-stimulated (bored)

- **Enhance function**: signs, cues, pictures to promote way-finding; increase lighting to reduce misinterpretation

- **Involve in meaningful activities**: personalized program of 1:1 and small group vs. large group

- **Adapt the physical setting**: secure outdoor areas; decorative tactile objects; home-like features; smaller, segmented recreational and dining areas; natural and bright light; spa-like bathing facilities; signage to promote way-finding

Use evidence-based interventions

- **Agitated/Irritable**: Calm, soothe, distract
  - Individualized music
  - Aromatherapy (e.g., lavender oil)
  - Simple Pleasures
  - Pet therapy
  - Physical exercise/outdoor activities

- **Resistant to care**: Identify source of threat; change routines and approaches

- **Wandering/Restless/Bored**: Engage, distract
  - “Rest stations” in pacing path
  - Adapt environment to reduce exit-seeking
  - Physical exercise/outdoor activities
  - Simple Pleasures

- **Disruptive vocalization**: Distract, engage
  - Individualized music; Nature sounds
  - Presence therapy: tapes of family

- **Apathetic/Withdrawn**: Stimulate, engage
  - Individualized music
  - Simple Pleasures

- **Repetitive questions/behaviors**: Reassure, address underlying issue, distract
  - Validation therapy/therapeutic lying
  - Simple Pleasures

- **Depression/Anxiety**: Reassure, engage
  - Physical exercise
  - Pleasant activities
  - Cognitive stimulation therapy
  - Wheelchair biking
STEP 3: MONITOR OUTCOMES AND ADJUST COURSE AS NEEDED

- Quantify behavioral symptoms using rating scale(s)
- Assure adequate “dose” (intensity, duration, frequency) of interventions
- Provide/reinforce staff training and development activities to assure full understanding and cooperation in daily care
- Adapt/add interventions as needed to promote optimal outcomes
- Consider antipsychotics for persistent and severe cases that meet criteria for use. See Antipsychotic Prescribing Guide.

Footnotes:

a. Diverse symptoms must be assessed and treated individually to assure optimal outcomes.
b. Causal and contributing factors must be fully assessed and treated before psychotropic medications are used. Ongoing monitoring of these factors is essential to high quality care. Antecedents or triggers are things that happen before a problem behavior. These may be causal or contributing factors.
c. Use of evidence-based interventions requires full understanding of the protocols and appropriate application to assure optimal outcomes.
d. For more information about Simple Pleasures, see: http://www.health.ny.gov/diseases/conditions/dementia/edge/interventions/simple/index.htm
Caring for People with Dementia and Problem Behaviors: A Step-by-Step Evidence-Based Approach

Go to igec.uiowa.edu for more information and references

This approach begins with evaluation and treatment of common causes of behaviors, then uses non-drug approaches to management. Antipsychotics are reserved for severe cases due to potential side effects, which include death. Document all behaviors, symptoms, interventions, and outcomes. Sections are color-coded to help guide you to accompanying resources, which are italicized in bold. Blue=Evaluation. Yellow=Non-drug. Pink=Antipsychotics.

1. Evaluation
- Clearly characterize and document behavior or symptom, including frequency, severity, triggers, and consequences.
- Consider environmental factors and triggers. Are they modifiable?
- Perform medical evaluation (delirium, medical conditions, pain, depression, drugs). See Common Causes of Problem Behaviors (on other side), Delirium Assessment and Management, and Drugs that May Cause Delirium or Problem Behaviors.
  - Address these causes if they are identified.
- Discuss with family any history that may explain or manage the behavior, e.g. patient habits, preferences, activities they enjoy.

2. Manage with non-drug approaches
- Engage in meaningful activities, redirect, clear communication, etc. See Non-Drug Management.
<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| 3.   | **Does the behavior pose risks to the resident or others, or is the resident severely distressed?**  
- If yes, non-drug approaches fail, and medical work-up does not reveal another cause, consider drug therapy targeted at behaviors. See *Antipsychotic Prescribing Guide.*  
| 4.   | **Monitor** drug therapy for effectiveness and side effects. Continue non-drug management. |
| 5.   | **Consider antipsychotic dose reduction or discontinuation** if the drug is not effective, side effects occur, or the behaviors have been manageable. See *Antipsychotic Prescribing Guide.*  
Re-assess need for drug therapy periodically, at least twice a year. |
| 6.   | **Use prevention and maintenance approaches to reduce further exacerbations**  
- Clear communication, meaningful activities, etc.  
- Simplify and create a calm environment  
- Manage medical conditions, depression, pain, etc.  
- See *Non-Drug Management* |
# Evaluation of Problem Behaviors in People with Dementia

## Common Causes of Problem Behaviors

<table>
<thead>
<tr>
<th>Category</th>
<th>Causes</th>
</tr>
</thead>
</table>
| Physical:              | • Pain  
                         • Hunger  
                           • Constipation, urinary retention  
                           • Fatigue, insomnia, poor sleep |
| Psychological:         | • Anxiety, fear, depression  
                           • Impaired speech, frustration  
                           • Boredom  
                           • Autonomy/privacy |
| Environmental:         | • Caregiver approaches  
                           • Institutional routines, expectations and demands  
                           • Misinterpretation of events/setting  
                           • Over/under-stimulation  
                           • Changes from normal routine |
| Delirium, secondary to medical issues such as: | • Medication side effects  
                           • Infections  
                           • Metabolic/electrolyte disturbances  
                           • Dehydration |
<table>
<thead>
<tr>
<th>Consider the Following Assessments</th>
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</thead>
<tbody>
<tr>
<td><strong>Check Vitals:</strong></td>
</tr>
<tr>
<td>• Temperature, pulse, blood pressure, respiration, oxygen saturation</td>
</tr>
<tr>
<td><strong>Physical Assessment:</strong></td>
</tr>
<tr>
<td>• Signs of constipation or urinary retention</td>
</tr>
<tr>
<td>• Changes in breath sounds</td>
</tr>
<tr>
<td>• Peripheral edema</td>
</tr>
<tr>
<td>• Fluid status: orthostatic blood pressure, mucous membranes</td>
</tr>
<tr>
<td><strong>Common Sources of Pain:</strong></td>
</tr>
<tr>
<td>• Bed sores, other skin lesions, eye pain from corneal abrasion</td>
</tr>
<tr>
<td>• Joint pain, other musculoskeletal pain, foot pain (poorly fitting shoes)</td>
</tr>
<tr>
<td>• Oral pain related to dentures/mouth ulceration</td>
</tr>
<tr>
<td><strong>Sensory:</strong></td>
</tr>
<tr>
<td>• Hearing: check hearing aids, ear wax</td>
</tr>
<tr>
<td>• Vision: check glasses</td>
</tr>
<tr>
<td><strong>Delirium Assessment:</strong></td>
</tr>
<tr>
<td>• See <em>Delirium Assessment and Management</em></td>
</tr>
<tr>
<td><strong>Urinalysis, or other urinary symptoms</strong></td>
</tr>
<tr>
<td><strong>Blood glucose, CBC with differential, electrolytes if appropriate</strong></td>
</tr>
<tr>
<td><strong>Drug side effects:</strong></td>
</tr>
<tr>
<td>• See <em>Drugs that May Cause Delirium or Problem Behaviors</em></td>
</tr>
<tr>
<td><strong>Recent changes:</strong></td>
</tr>
<tr>
<td>environmental, routine, family, drugs, medical</td>
</tr>
</tbody>
</table>
### Drugs that May Cause Delirium or Problem Behaviors

This reference card lists common and especially problematic drugs that may cause delirium or contribute to problem behaviors in people with dementia. This does not always mean the drugs should not be used, and not all such drugs are listed. If a patient develops delirium or has new problem behaviors, a careful review of all medications is recommended. Be especially mindful of new medications.

<table>
<thead>
<tr>
<th>Anticonvulsants</th>
<th>Psychiatric</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All can cause delirium, e.g.</strong></td>
<td><strong>All psychiatric medications should be reviewed as possible causes, as effects are unpredictable.</strong></td>
</tr>
<tr>
<td>Carbamazepine – Tegretol</td>
<td>Notable offenders include:</td>
</tr>
<tr>
<td>Gabapentin – Neurontin</td>
<td><em>Benzodiazepines</em> e.g.</td>
</tr>
<tr>
<td>Levetiracetam – Keppra</td>
<td>- Alprazolam – Xanax</td>
</tr>
<tr>
<td>Valproic acid – Depakote</td>
<td>- Clonazepam – Klonopin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pain</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>All opiates can cause delirium if dose is too high or increased too quickly.</strong></td>
<td><strong>Stimulants</strong> e.g.</td>
</tr>
<tr>
<td>Codiene – Empirin, many others</td>
<td>- Methylphenidate – Ritalin</td>
</tr>
<tr>
<td>Fentanyl – Duragesic</td>
<td><strong>Hypnotics (Sleep Medications)</strong> e.g.</td>
</tr>
<tr>
<td>Hydrocodone – Lortab</td>
<td>- Eszopiclone – Lunesta</td>
</tr>
<tr>
<td>Hydromorphone – Palladone, Dilaudid</td>
<td>- Zaleplon – Sonata</td>
</tr>
<tr>
<td>Meperidine – Demerol</td>
<td>- Zolpidem – Ambien</td>
</tr>
<tr>
<td>Morphine – MS Contin, MS IR</td>
<td><strong>Tricyclic Antidepressants</strong> e.g.</td>
</tr>
<tr>
<td>Oxycodone – OxyContin</td>
<td>- Amitriptyline – Elavil</td>
</tr>
<tr>
<td>Tramadol – Ultram</td>
<td>- Doxepin – Silenor, Sinequan</td>
</tr>
<tr>
<td></td>
<td>- Nortriptyline – Pamelor</td>
</tr>
<tr>
<td>Parkinson’s/Restless Legs</td>
<td>Antibiotics/Antivirals</td>
</tr>
<tr>
<td>--------------------------</td>
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</tr>
</tbody>
</table>
| **Most Parkinson’s disease medications can cause psychosis.**  
Amantadine – Symadine, Symmetrel  
Bromocriptine – Parlodel  
Levodopa – Sinemet, Stalevo  
Pramipexole – Mirapex  
Rasagiline – Azilect  
Ropinrole – Requip  
Rotigotine – Neupro  
Selegilene – Eldepril, Emsam, Zelapar | **Difficult to distinguish drug effects from effects of infection. Others may contribute as well.**  
**Antiviral**  
-Acyclovir – Zovirax  
-Valacyclovir – Valtrex  
**Fluoroquinolones e.g.,**  
-Levofloxacin – Levaquin  
-Ciprofloxacin – Cipro  
Metronidazole – Flagyl  
Vancomycin – Vancocin |

<table>
<thead>
<tr>
<th>Steroids</th>
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</table>
| **Corticosteroids e.g.,**  
-Prednisone – Deltasone, etc.  
**Testosterone** – Androgel, etc. |

<table>
<thead>
<tr>
<th>Cardiac Medications</th>
</tr>
</thead>
</table>
| **Antiarrhythmics**  
Digoxin – Digitek, Lanoxin |
## Drugs that May Cause Delirium or Problem Behaviors

*Anticholinergics—all drugs on this side of the card. May impair cognition and cause psychosis. Drugs available over-the-counter marked with *

<table>
<thead>
<tr>
<th>Tricyclic Antidepressants</th>
<th>Bladder Antispasmodics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amitriptyline – <em>Elavil</em></td>
<td>Darifenacin – <em>Enablex</em></td>
</tr>
<tr>
<td>Clomipramine – <em>Anafranil</em></td>
<td>Flavoxate – <em>Urispas</em></td>
</tr>
<tr>
<td>Desipramine – <em>Norpramin</em></td>
<td>Oxybutynin – <em>Ditropan</em></td>
</tr>
<tr>
<td>Doxepin – <em>Sinequan</em></td>
<td>Solifenacin – <em>VESicare</em></td>
</tr>
<tr>
<td>Imipramine – <em>Tofranil</em></td>
<td>Tolterodine – <em>Detros</em></td>
</tr>
<tr>
<td>Nortriptyline – <em>Aventyl, Pamelor</em></td>
<td>Trospium – <em>Sanctura</em></td>
</tr>
<tr>
<td><strong>Antihistamines / Allergy / Cough &amp; Cold Medicines</strong></td>
<td></td>
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<tr>
<td>-----------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>* Azelastine – <em>Astepro</em></td>
<td></td>
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<tr>
<td>* Brompheniramine – <em>Bromax, Bromfed, Lodrane</em></td>
<td></td>
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<tr>
<td>Carboxinexamine – <em>Rondec</em></td>
<td></td>
</tr>
<tr>
<td>* Chlorpheniramine – <em>Chlor-Trimeton</em></td>
<td></td>
</tr>
<tr>
<td>* Clemastine – <em>Tavist</em></td>
<td></td>
</tr>
<tr>
<td>Cyproheptadine – <em>Periactin</em></td>
<td></td>
</tr>
<tr>
<td>* Dexbrompheniramine – <em>Drixoral</em></td>
<td></td>
</tr>
<tr>
<td>Dextchlorpheniramine – <em>Polarame</em></td>
<td></td>
</tr>
<tr>
<td>* Diphenhydramine – <em>Benadryl</em></td>
<td></td>
</tr>
<tr>
<td>Hydroxyzine – <em>Atarax, Vistaril</em></td>
<td></td>
</tr>
<tr>
<td>Olodaprin – <em>Pataday, Patanol</em></td>
<td></td>
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<tr>
<td>Promethazine – <em>Phenergan</em></td>
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<tr>
<td>Triprolidine – <em>Triacinc</em></td>
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</table>

<table>
<thead>
<tr>
<th><strong>Insomnia / Sleep</strong></th>
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</thead>
<tbody>
<tr>
<td>* Diphenhydramine – <em>Sominex, Tylenol-PM, others</em></td>
</tr>
<tr>
<td>* Doxylamine – <em>Unisom, Medi-Sleep</em></td>
</tr>
</tbody>
</table>

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<tr>
<th><strong>Stomach and GI Tract</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ulcer and Reflux:</strong></td>
</tr>
<tr>
<td>* Cimetidine – <em>Tagamet</em></td>
</tr>
<tr>
<td>Glycopyrrolate – <em>Robinul</em></td>
</tr>
<tr>
<td>* Ranitidine – <em>Zantac</em></td>
</tr>
<tr>
<td><strong>GI Antispasmodics:</strong></td>
</tr>
<tr>
<td>Atropine – <em>Sal-Tropine, Atreza</em></td>
</tr>
<tr>
<td>Belladonna Alkaloids – <em>Donnata, Bellamine S, Bel-Tabs, B&amp;O suprrettes</em></td>
</tr>
<tr>
<td>Clidinium – <em>Librax</em></td>
</tr>
<tr>
<td>Dicyclomine – <em>Bentyl</em></td>
</tr>
<tr>
<td>Hyoscymine – <em>Levsin, Anaspaz, Cytospaz</em></td>
</tr>
<tr>
<td>Methscopolamine – <em>Pamine, Pamine Forte</em></td>
</tr>
<tr>
<td>Propantheline – <em>Pro-Banthine</em></td>
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<thead>
<tr>
<th><strong>Motion Sickness / Dizziness / Nausea</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* Dimenhydrinate – <em>Dramamine</em></td>
</tr>
<tr>
<td>* Meclizine – <em>Antivert, Dramamine less drowsy</em></td>
</tr>
<tr>
<td>Promethazine – <em>Phenergan</em></td>
</tr>
<tr>
<td>* Scopolamine – <em>Scopace, Transderm -Scop, Maldemar</em></td>
</tr>
<tr>
<td>Trimethobenzamid – <em>Tigan</em></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Movement Disorders</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Benztropine – <em>Cogentin</em></td>
</tr>
<tr>
<td>Trihexyphenidyl – <em>Artane</em></td>
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<table>
<thead>
<tr>
<th><strong>Anticholinergic Antipsychotics</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorpromazine – <em>Thorazine</em></td>
</tr>
<tr>
<td>Clozapine – <em>Clozaril</em></td>
</tr>
<tr>
<td>Loxapine – <em>Loxitane</em></td>
</tr>
<tr>
<td>Olanzapine – <em>Zyprexa</em></td>
</tr>
<tr>
<td>Pimozide – <em>Orap</em></td>
</tr>
<tr>
<td>Quetiapine – <em>Seroquel</em></td>
</tr>
<tr>
<td>Thioridazine – <em>Mellaril</em></td>
</tr>
</tbody>
</table>
Resources

- www.ascp.com
- www.amda.com
- www.nhqualitycampaign.org
- dnh behavioral health@cms.hhs.gov
- University of Iowa GEC