



**Report of the Committee on
Changing the Culture of Dementia Care
to Reduce Inappropriate
Use of Antipsychotic Medication**

**Health Care Association
of New Jersey**

Table of Contents

Introduction	3
1. Environment	4
2. Hiring, Education and Retention	10
3. Comprehensive Care Plan and Evaluation	13
4. Activities and Family Relationship Building	14
5. Time to MOVE— Exercise Benefits People with Dementia.....	15
6. Dementia without Drugs, <i>Pharmacy Consultant Review</i>	21
7. Proactive Prevention v. Catastrophic Reaction	38
a. Validation Method.....	39
b. Crisis Management.....	40
8. Resources and References	43
9. Bibliography.....	44
10. Acknowledgements	45

*For the purposes of this document, the term **resident** will be used to identify residents, patients and clients.*

Introduction

In 2011, CMS mandated that the use of inappropriate antipsychotic medications be reduced by 15% by December 2012. As a result, the Health Care Association of New Jersey formed the interdisciplinary “Committee on Changing the Culture of Dementia Care to Reduce the Inappropriate Use of Antipsychotic Medication.” This committee was comprised of administrators and professionals from skilled post-acute care, assisted living, long term care administrators and professionals from the fields of pharmacy, nursing, physical, occupational and speech therapy, recreational professionals, and a psychologist. Input was also gathered by dementia care staff including recreational team members as well as primary care givers and family members. The work of the committee was also reviewed by a geriatric physician.

The goal of the committee was to create a manual and best practices guide that would assist healthcare staff reduce the inappropriate use of psychotropic drugs. The committee found that the best way to achieve a non-pharmacological solution was to pursue changing the culture of dementia care to reflect a more person-centered approach.

The current bio-medical approach to healthcare focuses almost exclusively on the physical condition of a person. Health and well-being, however, are contingent upon more than the physical condition, and also includes psychosocial spiritual dimensions. The separation or disregard of interconnected components of healthcare has created an impersonal and fragmented healthcare culture.

The Person-Centered Approach was developed by Carl Rogers (1902-1987). Rogers stated that “Individuals have within themselves vast resources for self-understanding and for altering their self-concepts, basic attitudes, and self-directed behavior; these resources can be tapped if a definable climate of facilitative psychological attitudes can be provided.” (Rogers, *A Way of Being*) Person-centered dementia care focuses on enhancing the “personhood” of individuals who have dementia through respectful, close relationships between resident, staff, and family members. The core values emphasize these meaningful relationships, focus on strengths and capabilities, and entering the world of the person with dementia.

Qualitative studies have found that the way in which people with dementia are viewed by society in general and healthcare – service providers in particular – influence the very nature of their care. It is vital that the nature of dementia care culture be modified in order to reflect person-centered care with the aim to support non-pharmacological solutions. In this way the inappropriate use of psychotropic drugs to control challenging behaviors can be reduced.

Chapter 1 - Environmental Considerations

“You are the product of your environment. So choose the environment that will best develop you toward your objective. Analyze your life in terms of its environment. Are the things around you helping you toward success – or are they holding you back?” –W. Clement Stone

Reducing the use of psychotropic drugs in healthcare settings requires that an honest look be taken at the environment in which patients/residents find themselves immersed.

Depending upon arrangement, and contents, the environment can help a person circumvent challenges – or create them. Composing a setting that supports, rather than hinders, those with particular needs or disabilities is a crucial factor in reducing or preventing behaviors that can lead to overuse of psychotropic drugs. This will promote, in a non-pharmaceutical manner, a successful and dignified life. The environment of a residential healthcare setting is especially important to consider as it is the primary, or even the sole, environment experienced day to day by the individual. The following points are best practices for encouraging and cultivating a successful environment.

Dining

Dining naturally provides nourishment as well as social opportunity and reaffirmation. As a life-long daily ritual, it can also be an assertion of independence and dignity. Therefore, it is important that in dining, the setting support these three aspects:

- Tables should not be so large as to prevent conversation. A seating for four is the best standard. The table should also be well-contrasted in terms of tableware and table surface (e.g., white plates on a darker tablecloth or vice versa) and be set with silverware suited for easy use by residents.
- To promote independent decisions, a menu with daily specials (in addition to an “Always Available” menu) can provide a choice of “either/or” dishes, promoting a dignified experience. These “either/or” choices can be plated and served restaurant style by staff to create a dignified dining experience.



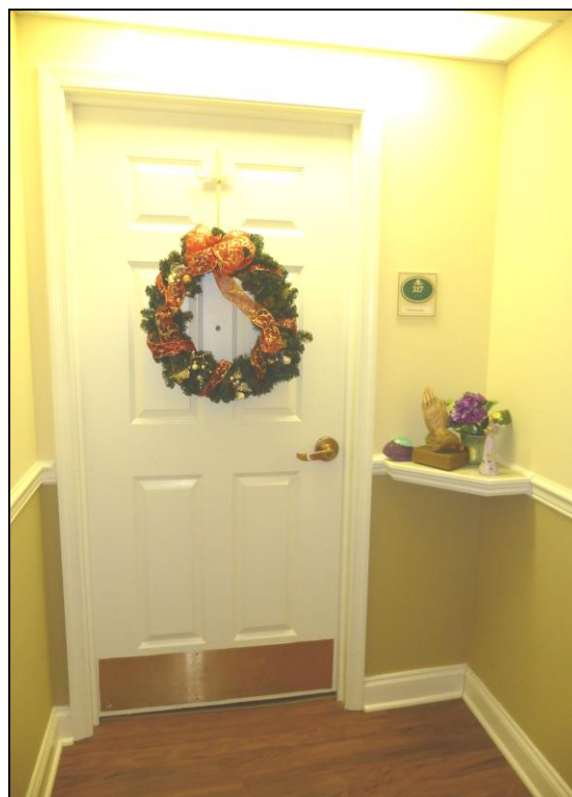
- The dining experience should be customized for success and modified to fit individual needs. A resident with difficulty dining may benefit from an evaluation with a speech or occupational therapist. Modifications may include adapted cutlery, special cups, and dinner ware.
- Food and beverages can be customized as well, including consistency and texture. Certain residents may also benefit from having “finger foods,” that are easily picked up by hand. Items such as mini-sausages, French toast sticks, pizza, sandwiches, cucumber slices, strawberries, large sliced cottage fries, crackers, and cookies, are all readily available options.



Examples of Adapted Dining Ware

Cueing For Success

- Hallways should have contrasting moulding and artwork that leads the eye and helps residents navigate. For hallway and apartment/room doors, having the entrances slightly inset and lit avoids the feel of an intimidating hallway of doors and gives a home-like ambiance.
- Apartments/rooms should reflect the resident’s personality and have recognizable decorations, items that support the recognition of his or her room facilitating identification of and entering the correct room.
- Different floors in a building should have different carpeting or flooring for instant recognition so that an individual can easily find his or her way around the building. Numbers labeling the level are not sufficient. Stepping off an elevator on the first floor should be distinct from disembarking at the third floor. Different flooring, wallpaper, mirrors, chairs, and artwork can all promote this distinction.



- Cueing can help promote the enhancement of activities of daily living (ADLs) such as in the bathroom where the commode should contrast with the wall for visual prompting. Keeping the bathroom door open when not in use can cue successful toileting. Independent dressing can be prompted by hanging the next day's clothing in sight.



Familiar Furnishings

- Resident apartments and bedrooms should contain a resident's own furnishings, making them feel more home-like.
- Memorabilia and photographs should be displayed throughout to create a comfortable and familiar place of living.



Recreation As An Active Part of the Environment

Recreation is an enormous factor in promoting quality of life for a resident. A balanced schedule of activities will promote community, socialization, stimulation of skills, and memories. Making sure that this schedule is well-publicized and accessible to the residents is half of the battle. Running an excellent activities program is of no benefit if nobody is aware that the activity is taking place.

- **Display boards** help to make the activities schedule always available and in the minds of residents, as well as cuing what season it is and any upcoming holidays or event. Such displays and handouts also serve as a convenient reference for staff in all departments in advertising upcoming activities or even for conversation.
- **Daily handout schedules or daily shedule boards** ought to be present and include the day of the week as well as the date and season. They should be located in an area frequently visited by the residents such as by the dining room or front desk.
- Activity rooms should be designed with purpose - inviting conversation, be naturally versatile, comfortable, and provide interactivity whenever possible. They ought to be the heart of a building and ideally, be situated in an easily accessible place and not a room off to the side that is unnoticed.



Sensory Stimulation

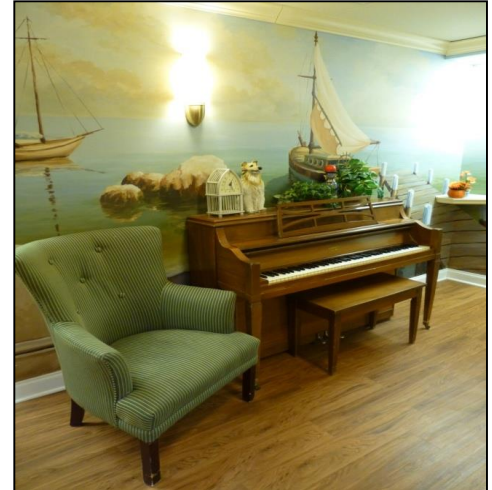
Sensory and/or quiet rooms are a specific type of activity room that can be of enormous benefit to individuals in need of stimulation or soothing ambiance. They are meant to engage the following senses:

- **Smell** (such as a breadmaker or scent machine)
- **Sights** (LCD displays, fiber optic strings)
- **Sound** (soothing music or soundboards)
- **Touch** (texture boards or soft blankets, stuffed animals)

The Use of Life Stations

Life stations are themed areas of a building that:

- **Stimulate** memories
- **Encourage** conversation
- **Enhance** the environment for the benefit of the residents
- **Utilize** public space in a positive manner.



Turning an unused corner or wall of the building into a display that sparks memories of the 50's music scene, or creating a corner that suggests laundry day in the form of a basket and clothesline, can all be creative ways for residents to get more out of their environment, especially in between scheduled activities. Themed rooms such as beauty salons or ice cream parlors recreate cherished traditions and memories as well as fulfill their functions.



Before: Space under-utilized and not of interest for residents or visitors



After: "50s Music" Lifestation stimulates conversation and memories

Outdoor Life Stations can include gardens with circular pathways, structures that encourage interactivity, and a landscape with nostalgic details. Including items appropriate to their era (*examples: garden sculptures, rockers, classic cars, wheelbarrows, vintage watering cans*). These provide an outlet for energy and a therapeutic setting for enjoying the outdoors.

Indoor Walking

The interior of the building should have adequate space for residents to walk safely. A path that loops can be a great advantage and again provides an outlet for energy and opportunities for exercise which can greatly improve mood and function. Be sure to include interesting artworks or murals, and points of interest (such as Life Stations) and remove any obstacles that block the flow of traffic.

Staff Attire

Casual, familiar attire should be standard in order to give staff an approachable and friendly appearance. Scrubs should be avoided by staff present in the environment to avoid the clinical feel of a hospital.



The environment plays an enormous role in promoting successful living and independent, healthy behavior. It should be designed to anticipate residents' needs and interests which in turn will support the efforts of resident families and staff. Examining and modifying existing surroundings should always be the first step when brainstorming about how to reduce undesirable behaviors. Environmental considerations ought to be taken into account from the start before negative behaviors emerge in order to promote and secure the quality of life benefits that a well-tailored environment can provide for residents.

Chapter 2 – Hiring, Education and Retention

“I am convinced that nothing we do is more important than hiring and developing people. At the end of the day, you bet on people, not on strategies.” – Lawrence Bossidy, former Chief Operating Officer, GE

Person-centered services refer to the actual provision of care and support based upon individual preferences, values, and lifestyle choices and needs to support each individual’s unique patterns of daily living. Caregivers must be educated and provided on-going training in person-centeredness and dementia care competencies. For staff, a person-centered dementia care culture values and recognizes their importance as more than just people being paid to accomplish tasks, but rather as integral to successful quality care of the residents.

This chapter will provide recommendations for the hiring process based on evidence of best practices for the selection and education of staff that will best adapt to the needs of the residents with dementia. That staff that is hired must provide consistency and be empowered to enhance culture by providing a safe, comfortable environment, thereby reducing the need for psychotropic medications.

Hiring

The core of a successful program starts with hiring the right people. You want to make sure that when you are interviewing people you are getting to the ‘heart’ of what makes them tick.

- Be sure to ask open ended questions (questions that cannot be answered with yes or no) and give the interviewee time to answer, they may add more than required to answer and give you better insight into the core of their personality.
- Try to use questions designed to reveal his or her character content and not just that they know the right answer. *Example: Describe a recent difficult situation at work and what was the outcome?*
- Scenario-based questioning is a key component of an effective interview. Give them a situation they may encounter at work and ask them how they would handle it. Look for answers that demonstrate creativity and a willingness to modify his or her approach to support a resident’s needs. Be wary of answers that involve forcing residents to conform. *Example: “We try to have the residents up and dressed by 8am, but one resident is determined to stay in bed until 12pm. What would you do?”*
- Conduct group interviews and/or bringing in direct care staff to be part of the interview process when possible. By bringing in direct care staff you are empowering them to give honest feedback on how they think a potential candidate will interact with residents.

This page may be copied and used as a guide when conducting initial interviews.

Interview Questions

It is recommended that you conduct a “Walking Interview” in which the interviewee can be observed interacting with residents. Be mindful of answers or body language that suggests frustration with older persons or dementia.

A peer interview is also recommended if possible.

1. Describe your experiences with older persons.
2. Have you ever known someone who has special needs?
3. What types of activities do you feel are best suited for individuals living with a diagnosis of dementia?
4. Describe a recent difficult situation at work. What was the outcome?
5. If a resident that you are working with in a group or individual activity suddenly gets up to leave and “go home,” how would you handle the situation? What would you do or say?
6. If a resident is arguing with another resident who she feels is in her home, what would you do?
7. If a family comes to visit and complains to you that the resident’s apartment looks like it hasn’t been cleaned in weeks, what would you do or say?
 - *Look for answers that demonstrate accountability and taking ownership of situations.*
 - *Look for assumption of responsibility. “Passing the buck” or blaming other departments for the problem is not acceptable.*
8. If you notice that a resident is not eating her meals, how would you help this resident?
 - *Look for answers that demonstrate creativity and outside of the box thinking.*
9. You are trying to encourage a resident who typically paces around the community to sit down and eat with the others. What would you do?
10. We try to have the residents up and dressed by 8am, but one resident is determined to stay in bed until 12pm. What would you do?
11. Two residents are found naked in an apartment and in bed together. How would you respond to this situation? What might these residents need more of in terms of care and life enrichment?
 - *Look for answers that demonstrate the ability to handle intense situations without upsetting the residents.*
 - *Recognize that intimacy and touch are a biological need and must be addressed with sensitivity and recognition that this behavior is normal.*

Education

Training is essential to help staff understand how to respond to a resident's needs. The orientation process is the first step in successfully acclimating staff. It is recommended that you offer at least a day-long classroom style orientation, followed by a few days of on-the-job training. It is imperative that the on-the-job training is in the form of shadowing a seasoned employee who demonstrates the good skills that you want replicated. A collaborative team checklist should be developed and used to ensure that all areas are covered during the on-the-job training days. The checklist should be signed by the trainer and the trainee to ensure that all areas are covered. The supervisor should also sign the checklist after the training is complete and before the new employee works with the residents.

On-going education is important, especially in the first 90 days on the job. Monthly in-services should be held to ensure that information is passed to direct care staff in a timely manner. Some companies may use computer-based in-servicing but there should also be in-person in-services given by the supervisor or the nurse. It is important that the education addresses the disease process of dementia and the decline of functionality of the resident as the disease progresses.

Team members should always know what is expected of them. Annual review of their job performance is a good way to reinforce the expectations you have in the way they carry out their job responsibilities.

Along with staff education, it is important to offer educational opportunities for family members. Hosting a monthly support group is a helpful forum to provide family members to ask questions, learn about new techniques and medications, and to talk with other families experiencing the same changes in their loved one. These groups can help family members understand each stage of the disease and how they can best communicate with their loved one. Families should be instructed about advanced care planning and the importance of using the POLST (Practitioner's Orders for Life Sustaining Treatment) at the time the dementia diagnosis is established.

Retention

Employee retention is important to ensure consistency of care delivery and communication. Consistent assignments are important for the delivery of effective care but they also play a role in promptly identifying changes in the resident's condition. Although all team members must be flexible, consistency is an important factor in employee morale. Team members are more likely to remain in a community when they know what their responsibilities are each day.

Staff meetings enable the distribution of information and provide team members the opportunity to offer ideas and suggestions. All staff must be treated as valued members of the team and their input must be heard and acted upon. Staff meetings should recognize team members for going above and beyond with a resident, family member or fellow team member.

*For further resources concerning education and training
visit the Alzheimer's Association Website at www.alz.org*

Chapter 3 – Comprehensive Care Plan and Evaluation

"If there is any one secret of success, it lies in the ability to get the other person's point of view and see things from his angle as well as your own." -Henry Ford

A crucial step in changing the culture of dementia care is investing time to gather information about a resident's history, preferences, and routines prior to move-in. Each resident has a unique story and personal history; by learning and understanding their stories we have the opportunity to connect with, celebrate, and honor the resident as an individual, rather than just another person living with a diagnosis of dementia. This initial investment of time is the first step in building a foundation of trust and mutual respect among residents, caregivers, and families. A supportive approach creates an environment where residents are valued as individuals and their life experiences are validated.

Listed below is an outline that can be used to begin compiling the resident's personal profile. The profile is a "living" document that should be updated whenever any member of the team has learned something new about the resident's story, needs, and/or preferences.

It should be reviewed at intervals to ensure all information is current and accurate.

Life History Information

- Date and place of birth
- Parents and "Who raised you?"
- Siblings (Names—Involved? Living? Location? Order and date of birth?)
- Education
- Religious affiliation
- Nationality of ancestors
- Military experience
- Marriage(s), date(s)s, name of spouse(s), years married
- Children, grandchildren (names)
- Names of close friends (childhood and recent)
- Employment history
- Volunteer work
- Affiliations with organizations or clubs

Daily Routine

- Morning, afternoon, evening routine, bedtime routine
- Dietary preferences (favorite and disliked foods)
- Preferred leisure activities (independent, small group, large group)

Conversation starters

- Topics of interest
- Important events
- Significant life changes, traumas, tragedies, or losses

Personality description

- Favorite things
- Special challenges and/or solutions that should be used
- Cues: changes that mean the resident is becoming uneasy or upset
- Situations, stressors that are upsetting, triggers
- Ways to calm down or comfort

Chapter 4 – Activities and Family Relationship Building

“Creativity is merely a plus name for regular activity. Any activity becomes creative when the doer cares about doing it right, or better.” -John Updike

- Build the activities programs around the idea of a “structured environment with individual routines.”
- Divide the unit into three groups (usually high, medium, and low functioning) then review each resident and decide which group would benefit them the most.
- Each resident should have a specific, individual plan of care *Example: “Sally will assist the activity staff in setting the table for lunch.”*
- Individual “profile cards” taped to the inside of residents’ closets should list 1-10 non-pharmacological interventions for staff to use specifically for that person. Profile cards should incorporate family tips, background, and useful tactics to avoid a catastrophic reaction. *Example: If Sally asks for “red medicine” know that it is cranberry juice.*
- Involve family members in “everyday” activities as well as special large group events.
- Assemble and label individual boxes for each resident that reflect their past. *Example: Make up bag, mechanics box, or a sewing kit with any sharp objects removed*
- Be sure to designate an area in the resident common area for these supplies so that any staff member can use them as a 1:1 activity. *Example: resident awake at night, a CNA can grab cards, book, puzzles for a 1:1 activity*
- Be sure to include pictures around the unit of staff, residents, and families involved in activities; update as needed
- Seasonal display boards of crafts and pictures of their creation by the residents
- Activities should validate each resident by engaging them in success-oriented, self-esteem-building activities that are tailored to the individual’s needs and which incorporate their past life skills
- Plan a long term special event, such as a Valentine’s Day Lunch, with many short term goals towards the larger event such as:
 - Crafts (residents and family members make decorations, gifts, etc.)
 - Pictures of couples for the event
 - Plan menu
 - Encourage staff and family to take part in the preparation of the meal
 - Decorate the unit on the day of the event as a group
 - Have pictures of couples on the table the day of the event
- Memory (shadow) boxes in front of residents’ rooms that contain cues and items to tell the person’s story
- Create engaging programming that takes place during shift change to minimize its impact on residents.

Chapter 5--Time to MOVE

Exercise Benefits People with Dementia

Diane Wormser, PT, MS; Editing assistance: Lisa Clark

*“Movement is a medicine for creating change
in a person’s physical, emotional and mental states.” - Carol Welch*

Physical activity and exercise cannot be underestimated in their contributions toward health and quality of life for older adults and particularly for people with dementia. Benefits of regular exercise and physical activity to people who have dementia include:

- improved cognition (1)
- increased strength and endurance (2)
- reduced risk of falls (3)
- lower cholesterol (4)
- decreased blood pressure, diabetes mellitus (4)
- improved bone mineral density (a condition related to osteopenia and osteoporosis) (5)
- improved cardiovascular health (6)
- weight reduction and/or maintenance (7)
- improved sleep (8)
- better functioning in activities of daily living (9)

There is evidence that people with dementia who exercise regularly or remain physically active have additional benefits including:

- improved physical function (gait speed, mobility, balance), better performance in basic activities of daily living (10)
- improved motor performance (11)
- reduced depression, improved quality of life (12)
- better sociability and slowed progression of dementia when performed in groups (13)
- decreased restlessness (14, 15)

Use it or lose it

How can we support our residents with dementia and their family members to maintain the benefits of physical activity? The National Institute on Aging (NIA) offers a valuable guide called “Exercise and Physical Activity: Your Everyday Guide from the National Institute on Aging.” The exercise recommendations and guidelines in this resource are very worthwhile for people who have mild cognitive changes and no limiting co-morbidities or illnesses. To download and print the guide from the NIH (National Institutes of Health), visit:

http://www.nia.nih.gov/sites/default/files/nia_exercise_and_physical_activity.pdf

Special considerations

As dementia progresses, there can be functional, neurological, cognitive and behavioral changes that challenge participation in physical activities. How can caregivers be more successful in supporting people who have dementia to remain active? The following are suggestions that can help—but remember that each person may respond differently to various approaches.

- Modify activities so the person will experience successes. Activities that require more skill than the person has may quickly become too frustrating and provoke unpleasant reactions.
- Engage the person in activities that have previously been of interest. What kind of sports, leisure activities, professional activities, or hobbies that involve physical movement does he or she enjoy? Can those interests be adapted to the person's current abilities? *For example, gardening can be accomplished in raised beds, in half wine barrel planters, window box planters, or indoor containers.*
- Various sports activities are available in video game formats.
- For many, walking while chatting is an enjoyable physical activity that is also socially and cognitively stimulating.
- Activities performed in groups can enhance the fun of movement and exercise while increasing social stimulation.
- Music is wonderful tool to use, especially music that the person previously enjoyed or associates with pleasant memories. Although language functions are affected at early stages of dementia, the appreciation of music continues into more advanced stages. Music has been found to reduce agitation (16) and improve behavior, cognition and social interactions in people who have dementia (17). Many caregivers have reported that playing customized music selections to people with advanced dementia (using personal music devices) have resulted in increased social interaction, increased verbalization, greater facial expressiveness associated with positive emotions and more indications of greater quality of life.
- Activities are more accessible and enjoyable if the person is not over- or under-stimulated. The level of optimal stimulation is unique for each person, and is adjusted according to their stage of dementia. Monitor reactions and behaviors in order to determine that person's ideal level of stimulation.
- Familiar activities are more readily accepted by many people with dementia.
- The ability to pay attention to one activity becomes shorter in duration as cognitive decline progresses. Be prepared to change activities after about 30 minutes to accommodate this phenomenon.

How to modify or adapt activities

Here are some examples for physical activities and exercise that can successfully engage the patient at the three stages of dementia:

Early stage dementia: Group activities that are lead by one person are most effective when limited to 10-15 participants. People at this stage are capable of attending to an activity for about 20-30 minutes from various areas in a room with 1-2 verbal or visual cues.

- Exercising to music
- Walking
- Kicking a ball
- Throwing and catching
- Dancing
- Gardening
- Chores: cooking, folding and putting away laundry, dusting, decorating with seasonal or holiday themes, pet care
- Yoga, Tai Chi
- Exercising at a gym, health club or senior center
- Some people feel accomplished and valued when they have appropriate responsibilities or chores that help the group: passing out activity supplies or helping to collect them afterwards, reading to others, helping to decorate the common spaces, etc.
- Invite the person to accompany the caregiver on an errand that involves walking (such as mailing letters, bringing papers to another part of the building, volunteer activities)

Middle stage of dementia: Group activities that are lead by one person are most effective when limited to 5-7 participants and for periods of 5-20 minutes for each activity. The participants should be positioned within 3-6 feet in front of or to the side of the group leader. Participants will need cues and instructions to progress to each step of the activity.

- Break down each activity by steps. Use simple language to instruct or prompt each step. Allow the person additional time to follow the instructions before proceeding to the next step. *For example: Balloon batting activity: Offer a fly swatter to each participant, saying, 'Hold this.' Demonstrate the action and say, "Hit the balloon."*
- Use simply-worded cueing and appropriate, set up, supervision or assistance for any activity.
- Encourage the person to perform as much of the self-care and mobility tasks in daily activities as possible. Everyone benefits from having purposeful activities, greater autonomy and control of their experiences.
- Throwing and catching (balls, bean bags, soft toys, balloons)
- Kicking a ball

- Folding laundry, watering plants, cooking, pet care
- Rolling yarn
- Supervised walking, if it can be done safely
- Sorting items by size, color, shape
- Exercising and moving to music

Late stage dementia: At this stage, there is a higher risk of falls. Walking alone is not usually safe. Assisted supervised walking or transferring from sitting should be encouraged when appropriate. In the earlier part of the late stage of dementia, some activities can be enjoyed in a group setting.

- Use all five senses to offer stimulation: visual, hearing, tactile, taste, movement. Sensory stimulation should be provided one-to-one and not primarily as a group activity.
- The person will process verbal and visual information at a much slower rate than during earlier stages. Offer sufficient time (sometimes several minutes) for the person to respond to a request, instruction or question.
- Most tasks will be safer if performed while sitting or lying down.
- Offer opportunities to perform repetitive actions: tearing paper, rolling yarn, using percussion instruments.
- Agitated behavior may indicate discomfort with some aspect of the activity or environment. Use knowledge of past and current responses to modify the activity or environment for an improved experience.
- Offer opportunities to experience movement, interact with the environment for a variety of sensory experiences. Examples include:
 - Smell: cooking ingredients, candles, oils, scented lotions, tea, plants and herbs
 - Touch: pets, stuffed animals, hand massage, hugs
 - Visual: Fish tanks, birds (attracted by bird feeders), wind socks, mobiles, gardens, plants, photo albums of family and themselves. Some enjoy eye-to-eye contact, especially if you use a warm, relaxed facial expression and soothing voice.
 - Hearing: music, recorded nature sounds, recorded singing of a loved one, wind chimes
 - Movement: guided and assisted motions of the arms, legs and trunk can be pleasurable and offer changes of positioning that the person cannot independently initiate. Gently guide and assist the person in the available movement of various areas of the body:
 - Move arms across midline, away from the body, bending and straightening the various joints (shoulders, elbows, wrists, hands, fingers).

- Bend and straighten the legs, move them out away from the midline and back. Bend and straighten the various joints (hips, knees, ankle, feet and toes).
- Trunk motions can be assisted in bed or in a chair: turning/rotating or tipping from side to side, bending forward and extending back.

There may be instances when caregivers are unsure about how to safely support or assist people with dementia in safe participation in exercise and physical activity. Rehabilitation professionals (occupational therapists and physical therapists) are available to consult and to offer training in safe strategies and approaches that are individually suited to each person, regardless of their stage of dementia. The American Physical Therapy Association (<http://www.apta.org>) or the American Occupational Therapy Association (www.aota.org) may be contacted for a referral to a nearby rehabilitation professional.

The need for and enjoyment of movement continues well into the later stages of dementia. By providing appropriate opportunities to experience physical activity, caregivers are enhancing the health and quality of life of people with dementia disorders.

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Chapter 6 – Dementia Without Drugs

Pharmacy Consultant Review

Objective: The Pharmacy Consultant, through in-depth, focused medication review will be a vital part of any team that attempts to avoid the inappropriate use of psychoactive agents to treat symptoms of delirium in the resident with dementia.

Purpose: To address the behaviors associated with dementia through non-pharmacological methods whenever possible and to utilize antipsychotic agents in a responsible manner, only when all other interventions have failed. With the ever-growing incidence of AD, effective and appropriate means of caring for and addressing the needs of these residents in a way that offers the best quality of life will be a focus of all involved in health care. By 2050 it is estimated that there will be 11 million Americans afflicted with this disease. Those involved in caring for these residents can no longer be satisfied with the currently accepted means of treatment.

In the efforts to establish a best practice approach to the needs of the AD resident, the pharmacy consultant is in unique position to assist the care team in its efforts to decrease the use of psychoactive agents as the primary response to the negative behaviors associated with this population. An effective pharmacy consultant should use their knowledge of pharmaceutical agents prescribed for these residents along with the understanding of co-morbid disease states. During a focused review, the pharmacy consultant should proactively identify any inappropriate use of medications or supplements that may be an underlying cause of delirium-associated symptoms. This includes evaluating for proper dosing based on age, renal and liver function, medication interactions, appropriate diagnosis, and adverse effects, both acute and those associated with the long term use of common medications that may present as delirium. By proactively identifying and removing treatable causes of delirium, the behaviors that often lead to a critical response, including additional psychoactive interventions, can be effectively reduced.

It is imperative that the pharmacy consultant establishes and maintains a strong working relationship with the entire care team and is available to review the use of antipsychotic agents in the facility. This review should take place with all team members in an effort to eliminate the inappropriate use of antipsychotic agents to address symptoms of delirium in our residents with dementia.

A focused pharmacy consultant review should include the following:

1. Is the resident receiving medications that may cause anticholinergic side effects? (Table 1)
 - Is there an alternative to this medication?
 - Is there a current diagnosis and continued need for this medication?
2. Is the resident receiving medication or have a co-morbid condition that may result in a low B12 level? Examples:
 - long term glucophage use?
 - long term use of PPIs or H2 Blockers?
3. Has there been a decline in renal function that may warrant dose decreases in common medications to avoid adverse events including delirium-related symptoms?
4. Is the resident receiving medications on the Beers List? (Table 2)
 - Has the physician documented the rationale for the medication?
 - Is there a diagnosis?
 - Are there alternative agents?
 - Would a decreased dose offer efficacy and lower risk of adverse events?
5. Is the resident receiving medication that may cause an electrolyte imbalance?
 - Request lab work
 - Consider alternative agents
6. If the resident is receiving antipsychotic agents is a dose decrease warranted?
 - Is resident experiencing side effects? (Table 3)
 - Are specific behaviors monitored for stability?
 - Can the staff engage this resident in non-drug activities?
 - When was the last dose review and can a plan be made to follow up for further reductions?
7. If an antipsychotic agent must be started, is all the documentation in order?
 - Are target symptoms clear and appropriate?
 - Do nurses notes clearly indicate the benefit to the resident?
 - Are all prior non-drug interventions documented with results?
8. Is there an exit plan?
 - Once medication is started the pharmacist must continue to monitor the documentation of behaviors, status, interventions, and side effects so that they may appropriately ask for a dose review.
 - Using both CMS guidelines as a baseline, and best practice initiatives, the pharmacist must diligently monitor for opportunities to request antipsychotic dose reviews.

Table 1

Drugs with ACB Score of 1

Generic Name	Brand Name
Alimemazine	Theralen™
Alverine	Spasmonal™
Alprazolam	Xanax™
Aripiprazole	Ablify™
Asenapine	Saphris™
Atenolol	Tenormin™
Bupropion	Wellbutrin™, Zyban™
Captopril	Capoten™
Cetirizine	Zyrtec™
Chlorthalidone	Diuril™, Hygroton™
Cimetidine	Tagamet™
Cilidinium	Librax™
Clorazepate	Tranxene™
Codeine	Contin™
Colchicine	Colcrys™
Desloratadine	Clarinex™
Diazepam	Valium™
Digoxin	Lanoxin™
Dipyrindamole	Persantine™
Disopyramide	Norpace™
Fentanyl	Duragesic™, Actiq™
Furosemide	Lasix™
Fluvoxamine	Luvox™
Haloperidol	Haldol™
Hydralazine	Apresoline™
Hydrocortisone	Cortef™, Cortaid™
Iloperidone	Fanapt™
Isosorbide	Isordil™, Ismo™
Levocetirizine	Xyzal™
Loperamide	Immodium™, others
Lorazepam	Clonazepam™
Metoprolol	Lopressor™, Toprol™
Morphine	MS Contin™, Avinza™
Nifedipine	Procardia™, Adalat™
Paliperidone	Invega™
Prednisone	Deltasone™, Sterapred™
Quinidine	Quinaglute™
Ranitidine	Zantac™
Risperidone	Risperdal™
Theophylline	Theodur™, Uniphyll™
Trazodone	Desyrel™
Triamterene	Dyrenium™
Venlafaxine	Effexor™
Warfarin	Coumadin™

Drugs with ACB Score of 2

Generic Name	Brand Name
Amantadine	Symmetrel™
Belladonna	Multiple
Carbamazepine	Tegretol™
Cyclobenzaprine	Flexeril™
Cyproheptadine	Periactin™
Loxapine	Loxitane™
Meperidine	Demerol™
Methotrimeprazine	Levoprome™
Molindone	Moban™
Nefopam	Nefogesic™
Oxcarbazepine	Trileptal™
Pimozide	Orap™

Categorical Scoring:

- Possible anticholinergics include those listed with a score of 1; Definite anticholinergics include those listed with a score of 2 or 3

Numerical Scoring:

- Add the score contributed to each selected medication in each scoring category
- Add the number of possible or definite Anticholinergic medications

Notes:

- Each definite anticholinergic may increase the risk of cognitive impairment by 46% over 6 years.³
- For each on point increase in the ACB total score, a decline in MMSE score of 0.33 points over 2 years has been suggested.⁴
- Additionally, each one point increase in the ACB total score has been correlated with a 26% increase in the risk of death.⁴

Aging Brain Care

www.agingbraincare.org

Drugs with ACB Score of 3

Generic Name	Brand Name
Amitriptyline	Elavil™
Amoxapine	Asendis™
Atropine	Sal-Tropine™
Benzotropine	Cogentin™
Brompheniramine	Dimetapp™
Carbinoxamine	Histex™, Carbihist™
Chlorpheniramine	Chlor-Trimeton™
Chlorpromazine	Thorazine™
Clemastine	Tavist™
Clomipramine	Anafranil™
Clozapine	Clozaril™
Darifenacin	Enablex™
Desipramine	Norpramin™
Dicyclomine	Bentyl™
Dimenhydrinate	Dramamine™, others
Diphenhydramine	Benadryl™, others
Doxepin	Sinequan™
Doxylamine	Unisom™, others
Fesoterodine	Toviaz™
Flavoxate	Urispas™
Hydroxyzine	Atarax™, Vistaril™
Hyoscyamine	Anaspaz™, Levsin™
Imipramine	Tofranil™
Mecizine	Antivert™
Methocarbamol	Robaxin™
Nortriptyline	Pamelor™
Olanzapine	Zyprexa™
Orphenadrine	Norflex™
Oxybutynin	Ditropan™
Paroxetine	Paxil™
Perphenazine	Trilafon™
Promethazine	Phenergan™
Propantheline	Pro-Banthine™
Propiverine	Detrunorm™
Quetiapine	Seroquel™
Scopolamine	Transderm Scop™
Solifenacin	Vesicare™
Thioridazine	Mellaril™
Tolterodine	Detrol™
Trifluoperazine	Stelazine™
Trihexyphenidyl	Artane™
Trimipramine	Surmontil™
Tropium	Sanctura™

AGS BEERS CRITERIA

FOR POTENTIALLY INAPPROPRIATE MEDICATION USE IN OLDER ADULTS

FROM THE AMERICAN GERIATRICS SOCIETY

This clinical tool, based on *The AGS 2012 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults (AGS 2012 Beers Criteria)*, has been developed to assist healthcare providers in improving medication safety in older adults. Our purpose is to inform clinical decision-making concerning the prescribing of medications for older adults in order to improve safety and quality of care.

Originally conceived of in 1991 by the late Mark Beers, MD, a geriatrician, the *Beers Criteria* catalogues medications that cause adverse drug events in older adults due to their pharmacologic properties and the physiologic changes of aging. In 2011, the AGS undertook an update of the criteria, assembling a team of experts and funding the development of the AGS 2012 *Beers Criteria* using an enhanced, evidence-based methodology. Each criterion is rated (quality of evidence and strength of evidence) using the American College of Physicians' Guideline Grading System, which is based on the GRADE scheme developed by Guyatt et al.

The full document together with accompanying resources can be viewed online at www.americangeriatrics.org.

INTENDED USE

The goal of this clinical tool is to improve care of older adults by reducing their exposure to Potentially Inappropriate Medications (PIMs).

- This should be viewed as a guide for identifying medications for which the risks of use in older adults outweigh the benefits.
- These criteria are not meant to be applied in a punitive manner.
- This list is not meant to supersede clinical judgment or an individual patient's values and needs. Prescribing and managing disease conditions should be individualized and involve shared decision-making.
- These criteria also underscore the importance of using a team approach to prescribing and the use of non-pharmacological approaches and of having economic and organizational incentives for this type of model.
- Implicit criteria such as the STOPP/START criteria and Medication Appropriateness Index should be used in a complementary manner with the 2012 AGS *Beers Criteria* to guide clinicians in making decisions about safe medication use in older adults.

The criteria are not applicable in all circumstances (eg, patient's receiving palliative and hospice care). If a clinician is not able to find an alternative and chooses to continue to use a drug on this list in an individual patient, designation of the medication as potentially inappropriate can serve as a reminder for close monitoring so that the potential for an adverse drug effect can be incorporated into the medical record and prevented or detected early.

TABLE I: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults	
Organ System/ Therapeutic Category/Drug(s)	Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR)
Anticholinergics (excludes TCAs)	
First-generation antihistamines (as single agent or as part of combination products) ■ Brompheniramine ■ Carbinoxamine ■ Chlorpheniramine ■ Clemastine ■ Cyproheptadine ■ Dexbrompheniramine ■ Dextchlorpheniramine ■ Diphenhydramine (oral) ■ Doxylamine ■ Hydroxyzine ■ Promethazine ■ Triprolidine	Avoid. Highly anticholinergic; clearance reduced with advanced age, and tolerance develops when used as hypnotic; increased risk of confusion, dry mouth, constipation, and other anticholinergic effects/toxicity. Use of diphenhydramine in special situations such as acute treatment of severe allergic reaction may be appropriate. QE = High (Hydroxyzine and Promethazine), Moderate (All others); SR = Strong
Antiparkinson agents ■ Benztropine (oral) ■ Trihexyphenidyl	Avoid. Not recommended for prevention of extrapyramidal symptoms with antipsychotics; more effective agents available for treatment of Parkinson disease. QE = Moderate; SR = Strong

Table 2

Table I (continued from page 1)

TABLE I: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults	
Organ System/ Therapeutic Category/Drug(s)	Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR)
Antispasmodics ■ Belladonna alkaloids ■ Clidinium-chlordiazepoxide ■ Dicyclomine ■ Hyoscyamine ■ Propantheline ■ Scopolamine	Avoid except in short-term palliative care to decrease oral secretions. Highly anticholinergic, uncertain effectiveness. QE = Moderate; SR = Strong
Antithrombotics	
Dipyridamole, oral short-acting* (does not apply to the extended-release combination with aspirin)	Avoid. May cause orthostatic hypotension; more effective alternatives available; IV form acceptable for use in cardiac stress testing. QE = Moderate; SR = Strong
Ticlopidine*	Avoid. Safer, effective alternatives available. QE = Moderate; SR = Strong
Anti-infective	
Nitrofurantoin	Avoid for long-term suppression; avoid in patients with CrCl <60 mL/min. Potential for pulmonary toxicity; safer alternatives available; lack of efficacy in patients with CrCl <60 mL/min due to inadequate drug concentration in the urine. QE = Moderate; SR = Strong
Cardiovascular	
Alpha ₁ blockers ■ Doxazosin ■ Prazosin ■ Terazosin	Avoid use as an antihypertensive. High risk of orthostatic hypotension; not recommended as routine treatment for hypertension; alternative agents have superior risk/benefit profile. QE = Moderate; SR = Strong
Alpha agonists ■ Clonidine ■ Guanabenz* ■ Guanfacine* ■ Methyldopa* ■ Reserpine (>0.1 mg/day)*	Avoid clonidine as a first-line antihypertensive. Avoid others as listed. High risk of adverse CNS effects; may cause bradycardia and orthostatic hypotension; not recommended as routine treatment for hypertension. QE = Low; SR = Strong
Antiarrhythmic drugs (Class Ia, Ic, III) ■ Amiodarone ■ Dofetilide ■ Dronedarone ■ Flecainide ■ Ibutilide ■ Procainamide ■ Propafenone ■ Quinidine ■ Sotalol	Avoid antiarrhythmic drugs as first-line treatment of atrial fibrillation. Data suggest that rate control yields better balance of benefits and harms than rhythm control for most older adults. Amiodarone is associated with multiple toxicities, including thyroid disease, pulmonary disorders, and QT interval prolongation. QE = High; SR = Strong
Disopyramide*	Avoid. Disopyramide is a potent negative inotrope and therefore may induce heart failure in older adults; strongly anticholinergic; other antiarrhythmic drugs preferred. QE = Low; SR = Strong
Dronedarone	Avoid in patients with permanent atrial fibrillation or heart failure. Worse outcomes have been reported in patients taking dronedarone who have permanent atrial fibrillation or heart failure. In general, rate control is preferred over rhythm control for atrial fibrillation. QE = Moderate; SR = Strong
Digoxin >0.125 mg/day	Avoid. In heart failure, higher dosages associated with no additional benefit and may increase risk of toxicity; decreased renal clearance may increase risk of toxicity. QE = Moderate; SR = Strong

Table 1 (continued from page 2)

TABLE 1: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults	
Organ System/ Therapeutic Category/Drug(s)	Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR)
Nifedipine, immediate release*	Avoid. Potential for hypotension; risk of precipitating myocardial ischemia. QE = High; SR = Strong
Spironolactone >25 mg/day	Avoid in patients with heart failure or with a CrCl <30 mL/min. In heart failure, the risk of hyperkalemia is higher in older adults if taking >25 mg/day. QE = Moderate; SR = Strong
<i>Central Nervous System</i>	
Tertiary TCAs, alone or in combination: n Amitriptyline n Chlordiazepoxide-amitriptyline n Clomipramine n Doxepin >6 mg/day n Imipramine n Perphenazine-amitriptyline n Trimipramine	Avoid. Highly anticholinergic, sedating, and cause orthostatic hypotension; the safety profile of low-dose doxepin (≤6 mg/day) is comparable to that of placebo. QE = High; SR = Strong
Antipsychotics, first- (conventional) and second- (atypical) generation (see online for full list)	Avoid use for behavioral problems of dementia unless non-pharmacologic options have failed and patient is threat to self or others. Increased risk of cerebrovascular accident (stroke) and mortality in persons with dementia. QE = Moderate; SR = Strong
Thioridazine Mesoridazine	Avoid. Highly anticholinergic and greater risk of QT-interval prolongation. QE = Moderate; SR = Strong
Barbiturates n Amobarbital* n Butabarbital* n Butalbital n Mephobarbital* n Pentobarbital* n Phenobarbital n Secobarbital*	Avoid. High rate of physical dependence; tolerance to sleep benefits; greater risk of overdose at low dosages. QE = High; SR = Strong
Benzodiazepines Short- and intermediate-acting: n Alprazolam n Estazolam n Lorazepam n Oxazepam n Temazepam n Triazolam Long-acting: n Chlorazepate n Chlordiazepoxide n Chlordiazepoxide-amitriptyline n Clidinium-chlordiazepoxide n Clonazepam n Diazepam n Flurazepam n Quazepam	Avoid benzodiazepines (any type) for treatment of insomnia, agitation, or delirium. Older adults have increased sensitivity to benzodiazepines and decreased metabolism of long-acting agents. In general, all benzodiazepines increase risk of cognitive impairment, delirium, falls, fractures, and motor vehicle accidents in older adults. May be appropriate for seizure disorders, rapid eye movement sleep disorders, benzodiazepine withdrawal, ethanol withdrawal, severe generalized anxiety disorder, periprocedural anesthesia, end-of-life care. QE = High; SR = Strong
Chloral hydrate*	Avoid. Tolerance occurs within 10 days and risk outweighs the benefits in light of overdose with doses only 3 times the recommended dose. QE = Low; SR = Strong
Meprobamate	Avoid. High rate of physical dependence; very sedating. QE = Moderate; SR = Strong

Table 1 (continued from page 3)

TABLE 1: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults	
Organ System/ Therapeutic Category/Drug(s)	Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR)
Nonbenzodiazepine hypnotics n Eszopiclone n Zolpidem n Zaleplon	Avoid chronic use (>90 days) Benzodiazepine-receptor agonists that have adverse events similar to those of benzodiazepines in older adults (e.g., delirium, falls, fractures); minimal improvement in sleep latency and duration. QE = Moderate; SR = Strong
Ergot mesylates* Isoxsuprine*	Avoid. Lack of efficacy. QE = High; SR = Strong
<i>Endocrine</i>	
Androgens n Methyltestosterone* n Testosterone	Avoid unless indicated for moderate to severe hypogonadism. Potential for cardiac problems and contraindicated in men with prostate cancer. QE = Moderate; SR = Weak
Desiccated thyroid	Avoid. Concerns about cardiac effects; safer alternatives available. QE = Low; SR = Strong
Estrogens with or without progestins	Avoid oral and topical patch. Topical vaginal cream: Acceptable to use low-dose intravaginal estrogen for the management of dyspareunia, lower urinary tract infections, and other vaginal symptoms. Evidence of carcinogenic potential (breast and endometrium); lack of cardioprotective effect and cognitive protection in older women. Evidence that vaginal estrogens for treatment of vaginal dryness is safe and effective in women with breast cancer, especially at dosages of estradiol <25 mcg twice weekly. QE = High (Oral and Patch), Moderate (Topical); SR = Strong (Oral and Patch), Weak (Topical)
Growth hormone	Avoid, except as hormone replacement following pituitary gland removal. Effect on body composition is small and associated with edema, arthralgia, carpal tunnel syndrome, gynecomastia, impaired fasting glucose. QE = High; SR = Strong
Insulin, sliding scale	Avoid. Higher risk of hypoglycemia without improvement in hyperglycemia management regardless of care setting. QE = Moderate; SR = Strong
Megestrol	Avoid. Minimal effect on weight; increases risk of thrombotic events and possibly death in older adults. QE = Moderate; SR = Strong
Sulfonylureas, long-duration n Chlorpropamide n Glyburide	Avoid. Chlorpropamide: prolonged half-life in older adults; can cause prolonged hypoglycemia; causes SIADH Glyburide: higher risk of severe prolonged hypoglycemia in older adults. QE = High; SR = Strong
<i>Gastrointestinal</i>	
Metoclopramide	Avoid, unless for gastroparesis. Can cause extrapyramidal effects including tardive dyskinesia; risk may be further increased in frail older adults. QE = Moderate; SR = Strong
Mineral oil, given orally	Avoid. Potential for aspiration and adverse effects; safer alternatives available. QE = Moderate; SR = Strong
Trimethobenzamide	Avoid. One of the least effective antiemetic drugs; can cause extrapyramidal adverse effects. QE = Moderate; SR = Strong

Table 1 (continued from page 4)

TABLE 1: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults	
Organ System/ Therapeutic Category/Drug(s)	Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR)
Pain Medications	
Meperidine	Avoid. Not an effective oral analgesic in dosages commonly used; may cause neurotoxicity; safer alternatives available. QE = High; SR = Strong
Non-COX-selective NSAIDs, oral n Aspirin >325 mg/day n Diclofenac n Diflunisal n Etodolac n Fenoprofen n Ibuprofen n Ketoprofen n Meclofenamate n Mefenamic acid n Meloxicam n Nabumetone n Naproxen n Oxaprozin n Piroxicam n Sulindac n Tolmetin	Avoid chronic use unless other alternatives are not effective and patient can take gastroprotective agent (proton-pump inhibitor or misoprostol). Increases risk of GI bleeding/peptic ulcer disease in high-risk groups, including those ≥75 years old or taking oral or parenteral corticosteroids, anticoagulants, or antiplatelet agents. Use of proton pump inhibitor or misoprostol reduces but does not eliminate risk. Upper GI ulcers, gross bleeding, or perforation caused by NSAIDs occur in approximately 1% of patients treated for 3–6 months, and in about 2%–4% of patients treated for 1 year. These trends continue with longer duration of use. QE = Moderate; SR = Strong
Indomethacin Ketorolac, includes parenteral	Avoid. Increases risk of GI bleeding/peptic ulcer disease in high-risk groups (See Non-COX selective NSAIDs) Of all the NSAIDs, indomethacin has most adverse effects. QE = Moderate (Indomethacin), High (Ketorolac); SR = Strong
Pentazocine*	Avoid. Opioid analgesic that causes CNS adverse effects, including confusion and hallucinations, more commonly than other narcotic drugs; is also a mixed agonist and antagonist; safer alternatives available. QE = Low; SR = Strong
Skeletal muscle relaxants n Carisoprodol n Chlorzoxazone n Cyclobenzaprine n Metaxalone n Methocarbamol n Orphenadrine	Avoid. Most muscle relaxants poorly tolerated by older adults, because of anticholinergic adverse effects, sedation, increased risk of fractures; effectiveness at dosages tolerated by older adults is questionable. QE = Moderate; SR = Strong
*Infrequently used drugs. Table 1 Abbreviations: ACEI, angiotensin converting-enzyme inhibitors; ARB, angiotensin receptor blockers; CNS, central nervous system; COX, cyclooxygenase; CrCl, creatinine clearance; GI, gastrointestinal; NSAIDs, nonsteroidal anti-inflammatory drugs; SIADH, syndrome of inappropriate antidiuretic hormone secretion; SR, Strength of Recommendation; TCAs, tricyclic antidepressants; QE, Quality of Evidence	

*Infrequently used drugs. Table 1 Abbreviations: ACEI, angiotensin converting-enzyme inhibitors; ARB, angiotensin receptor blockers; CNS, central nervous system; COX, cyclooxygenase; CrCl, creatinine clearance; GI, gastrointestinal; NSAIDs, nonsteroidal anti-inflammatory drugs; SIADH, syndrome of inappropriate antidiuretic hormone secretion; SR, Strength of Recommendation; TCAs, tricyclic antidepressants; QE, Quality of Evidence

TABLE 2: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults Due to Drug-Disease or Drug-Syndrome Interactions That May Exacerbate the Disease or Syndrome

Disease or Syndrome	Drug(s)	Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR)
Cardiovascular		
Heart failure	NSAIDs and COX-2 inhibitors	Avoid.
	Nondihydropyridine CCBs (avoid only for systolic heart failure) n Diltiazem n Verapamil	Potential to promote fluid retention and/or exacerbate heart failure. <i>QE = Moderate (NSAIDs, CCBs, Dronedarone), High (Thiazolidinediones (glitazones)), Low (Cilostazol); SR = Strong</i>
	Pioglitazone, rosiglitazone	
	Cilostazol Dronedarone	

Table 2 (continued from page 5)

TABLE 2: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults Due to Drug-Disease or Drug-Syndrome Interactions That May Exacerbate the Disease or Syndrome

Disease or Syndrome	Drug(s)	Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR)
Syncope	Acetylcholinesterase inhibitors (AChEs) Peripheral alpha blockers n Doxazosin n Prazosin n Terazosin Tertiary TCAs Chlorpromazine, thioridazine, and olanzapine	Avoid. Increases risk of orthostatic hypotension or bradycardia. <i>QE = High (Alpha blockers), Moderate (AChEs, TCAs and antipsychotics); SR = Strong (AChEs and TCAs), Weak (Alpha blockers and antipsychotics)</i>
Central Nervous System		
Chronic seizures or epilepsy	Bupropion Chlorpromazine Clozapine Meprobamate Olanzapine Thioridazine Thiothixene Tramadol	Avoid. Lowers seizure threshold; may be acceptable in patients with well-controlled seizures in whom alternative agents have not been effective. <i>QE = Moderate; SR = Strong</i>
Delirium	All TCAs Anticholinergics (see online for full list) Benzodiazepines Chlorpromazine Corticosteroids H ₂ -receptor antagonist Meperidine Sedative hypnotics Thioridazine	Avoid. Avoid in older adults with or at high risk of delirium because of inducing or worsening delirium in older adults; if discontinuing drugs used chronically, taper to avoid withdrawal symptoms. <i>QE = Moderate; SR = Strong</i>
Dementia & cognitive impairment	Anticholinergics (see online for full list) Benzodiazepines H ₂ -receptor antagonists Zolpidem Antipsychotics, chronic and as-needed use	Avoid. Avoid due to adverse CNS effects. Avoid antipsychotics for behavioral problems of dementia unless non-pharmacologic options have failed and patient is a threat to themselves or others. Antipsychotics are associated with an increased risk of cerebrovascular accident (stroke) and mortality in persons with dementia. <i>QE = High; SR = Strong</i>
History of falls or fractures	Anticonvulsants Antipsychotics Benzodiazepines Nonbenzodiazepine hypnotics n Eszopiclone n Zaleplon n Zolpidem TCAs/SSRIs	Avoid unless safer alternatives are not available; avoid anticonvulsants except for seizure. Ability to produce ataxia, impaired psychomotor function, syncope, and additional falls; shorter-acting benzodiazepines are not safer than long-acting ones. <i>QE = High; SR = Strong</i>
Insomnia	Oral decongestants n Pseudoephedrine n Phenylephrine Stimulants n Amphetamine n Methylphenidate n Pemoline Theobromines n Theophylline n Caffeine	Avoid. CNS stimulant effects. <i>QE = Moderate; SR = Strong</i>
Parkinson's disease	All antipsychotics (see online publication for full list, except for quetiapine and clozapine) Antiemetics n Metoclopramide n Prochlorperazine n Promethazine	Avoid. Dopamine receptor antagonists with potential to worsen parkinsonian symptoms. Quetiapine and clozapine appear to be less likely to precipitate worsening of Parkinson disease. <i>QE = Moderate; SR = Strong</i>

Table 2 (continued from page 6)

TABLE 2: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults Due to Drug-Disease or Drug-Syndrome Interactions That May Exacerbate the Disease or Syndrome

Disease or Syndrome	Drug(s)	Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR)
<i>Gastrointestinal</i>		
Chronic constipation	<p>Oral antimuscarinics for urinary incontinence</p> <ul style="list-style-type: none"> ▫ Darifenacin ▫ Fesoterodine ▫ Oxybutynin (oral) ▫ Solifenacin ▫ Tolterodine ▫ Trospium <p>Nondihydropyridine CCB</p> <ul style="list-style-type: none"> ▫ Diltiazem ▫ Verapamil <p>First-generation antihistamines as single agent or part of combination products</p> <ul style="list-style-type: none"> ▫ Brompheniramine (various) ▫ Carbinoxamine ▫ Chlorpheniramine ▫ Clemastine (various) ▫ Cyproheptadine ▫ Dexbrompheniramine ▫ Dexchlorpheniramine (various) ▫ Diphenhydramine ▫ Doxylamine ▫ Hydroxyzine ▫ Promethazine ▫ Triprolidine <p>Anticholinergics/antispasmodics (see online for full list of drugs with strong anticholinergic properties)</p> <ul style="list-style-type: none"> ▫ Antipsychotics ▫ Belladonna alkaloids ▫ Clidinium-chlordiazepoxide ▫ Dicyclomine ▫ Hyoscyamine ▫ Propantheline ▫ Scopolamine ▫ Tertiary TCAs (amitriptyline, clomipramine, doxepin, imipramine, and trimipramine) 	<p>Avoid unless no other alternatives.</p> <p>Can worsen constipation; agents for urinary incontinence: antimuscarinics overall differ in incidence of constipation; response variable; consider alternative agent if constipation develops.</p> <p><i>QE = High (For Urinary Incontinence), Moderate/Low (All Others); SR = Strong</i></p>
History of gastric or duodenal ulcers	Aspirin (>325 mg/day) Non-COX-2 selective NSAIDs	<p>Avoid unless other alternatives are not effective and patient can take gastroprotective agent (proton-pump inhibitor or misoprostol).</p> <p>May exacerbate existing ulcers or cause new/additional ulcers.</p> <p><i>QE = Moderate; SR = Strong</i></p>
<i>Kidney/Urinary Tract</i>		
Chronic kidney disease stages IV and V	<p>NSAIDs</p> <p>Triamterene (alone or in combination)</p>	<p>Avoid.</p> <p>May increase risk of kidney injury.</p> <p>May increase risk of acute kidney injury.</p> <p><i>QE = Moderate (NSAIDs), Low (Triamterene); SR = Strong (NSAIDs), Weak (Triamterene)</i></p>
Urinary incontinence (all types) in women	Estrogen oral and transdermal (excludes intravaginal estrogen)	<p>Avoid in women.</p> <p>Aggravation of incontinence.</p> <p><i>QE = High; SR = Strong</i></p>

Table 2 (continued from page 7)

TABLE 2: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults Due to Drug-Disease or Drug-Syndrome Interactions That May Exacerbate the Disease or Syndrome

Disease or Syndrome	Drug(s)	Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR)
Lower urinary tract symptoms, benign prostatic hyperplasia	<p>Inhaled anticholinergic agents</p> <p>Strongly anticholinergic drugs, except antimuscarinics for urinary incontinence (see Table 9 for complete list).</p>	<p>Avoid in men.</p> <p>May decrease urinary flow and cause urinary retention.</p> <p><i>QE = Moderate; SR = Strong (Inhaled agents), Weak (All others)</i></p>
Stress or mixed urinary incontinence	<p>Alpha-blockers</p> <ul style="list-style-type: none"> ▫ Doxazosin ▫ Prazosin ▫ Terazosin 	<p>Avoid in women.</p> <p>Aggravation of incontinence.</p> <p><i>QE = Moderate; SR = Strong</i></p>

Table 2 Abbreviations: CCBs, calcium channel blockers; AChEIs, acetylcholinesterase inhibitors; CNS, central nervous system; COX, cyclooxygenase; NSAIDs, nonsteroidal anti-inflammatory drugs; SR, Strength of Recommendation; SSRIs, selective serotonin reuptake inhibitors; TCAs, tricyclic antidepressants; QE, Quality of Evidence

TABLE 3: 2012 AGS Beers Criteria for Potentially Inappropriate Medications to Be Used with Caution in Older Adults

Drug(s)	Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR)
Aspirin for primary prevention of cardiac events	<p>Use with caution in adults ≥80 years old.</p> <p>Lack of evidence of benefit versus risk in individuals ≥80 years old.</p> <p><i>QE = Low; SR = Weak</i></p>
Dabigatran	<p>Use with caution in adults ≥75 years old or if CrCl <30 mL/min.</p> <p>Increased risk of bleeding compared with warfarin in adults ≥75 years old; lack of evidence for efficacy and safety in patients with CrCl <30 mL/min</p> <p><i>QE = Moderate; SR = Weak</i></p>
Prasugrel	<p>Use with caution in adults ≥75 years old.</p> <p>Greater risk of bleeding in older adults; risk may be offset by benefit in highest-risk older patients (eg, those with prior myocardial infarction or diabetes).</p> <p><i>QE = Moderate; SR = Weak</i></p>
Antipsychotics Carbamazepine Carboplatin Cisplatin Mirtazapine SNRIs SSRIs TCAs Vincristine	<p>Use with caution.</p> <p>May exacerbate or cause SIADH or hyponatremia; need to monitor sodium level closely when starting or changing dosages in older adults due to increased risk.</p> <p><i>QE = Moderate; SR = Strong</i></p>
Vasodilators	<p>Use with caution.</p> <p>May exacerbate episodes of syncope in individuals with history of syncope.</p> <p><i>QE = Moderate; SR = Weak</i></p>

Table 3 Abbreviations: CrCl, creatinine clearance; SIADH, syndrome of inappropriate antidiuretic hormone secretion; SSRIs, selective serotonin reuptake inhibitors; SNRIs, serotonin-norepinephrine reuptake inhibitors; SR, Strength of Recommendation; TCAs, tricyclic antidepressants; QE, Quality of Evidence

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Antipsychotic Medication Reference*

User Guide

- Usual dosage ranges represent treatment of schizophrenia in healthy adults unless otherwise indicated. Dosage adjustments are often required based on patient age, renal and hepatic function, etc.
- Side effects in bold type represent those listed in "Warnings and Precautions" section of product information
- Side effects/adverse effects are not necessarily listed in order of severity or frequency
- Not all side effects/adverse effects are represented. Consult full prescribing information for complete list and frequency of side effects
- Off-label uses identified by one or more references/compendia do not imply appropriate use

Drug Name	FDA-Approved Indications	Other FDA-Approved Indications	Age Group for Which Approved	Off Label Uses	Side-Effects/Adverse Effects
1st generation antipsychotics					
Chlorpromazine (Thorazine®): usual oral dosage range for acute treatment of schizophrenia – 300-1000mg/day ¹ in divided doses	<ul style="list-style-type: none"> • Management of manifestation of psychotic disorders² • Treatment of schizophrenia² • Control the manifestations of the manic type of manic-depressive illness² • Short-term treatment of hyperactive children who show excessive motor activity with accompanying conduct disorders consisting of some or all of the following symptoms: impulsivity, difficulty sustaining attention, aggressivity, mood lability and poor frustration tolerance² 	<ul style="list-style-type: none"> • To control nausea and vomiting² • For relief of restlessness and apprehension before surgery² • For acute intermittent porphyria² • As an adjunct in the treatment of tetanus² • For relief of intractable hiccups² 	Adults and Children (6 months-12 years) ²	<ul style="list-style-type: none"> • Behavioral symptoms associated with dementia (elderly); psychosis/agitation related to Alzheimer's dementia³ • Treatment of migraine in adults (intramuscular/intravenous)⁴ 	Drowsiness, extrapyramidal symptoms (dystonia, motor restlessness, pseudo-parkinsonism, tardive dyskinesia), neuroleptic malignant syndrome, lowering of seizure threshold, hyperprolactinemia, jaundice, hematologic disorders, agranulocytosis, hypotensive effects, ECG changes, convulsive seizures, allergic reaction, endocrine disorders, autonomic reactions, changes in skin pigmentation, ocular changes, increase in appetite, peripheral edema, lupus-like syndrome, weight changes, hyperpyrexia²
Fluphenazine (Prolixin®): Usual oral dosage range for treatment of acute schizophrenia – 5-20mg/day in divided doses ¹	Management of manifestations of psychotic disorders ⁵		Adults ⁵	<ul style="list-style-type: none"> • Psychosis/agitation related to Alzheimer's dementia⁶ • Postherpetic neuralgia • Antiemetic⁷ 	Extrapyramidal symptoms, neuroleptic malignant syndrome, hyperprolactinemia, drowsiness, lethargy, nausea, loss of appetite, salivation, polyuria, perspiration, dry mouth, headache, constipation, hypertension, fluctuations in blood pressure, blurred vision, glaucoma, bladder paralysis, fecal impaction, paralytic ileus, tachycardia, nasal congestion, metabolic and endocrine (weight change, peripheral edema, abnormal lactation), gynecomastia, menstrual irregularities, impotence), allergic reactions, hematologic changes, jaundice, lupus-like syndrome, hypotension severe enough to cause fatal cardiac arrest, altered electrocardiographic and electroencephalographic tracings, altered cerebrospinal fluid proteins, cerebral edema, laryngeal edema, and angioneurotic edema

Drug Name	FDA-Approved Indications	Other FDA-Approved Indications	Age Group for Which Approved	Off Label Uses	Side-Effects/Adverse Effects
Haloperidol (Haldol®): usual oral dosage range for treatment of acute schizophrenia – 1-20mg/day in divided doses ^{1,8}	<ul style="list-style-type: none"> Management of manifestations of psychotic disorders⁹ Tourette's Syndrome⁹ 		Adults and Children (3-12 years)	<ul style="list-style-type: none"> Treatment of non-schizophrenia psychosis May be used for the emergency sedation of severely-agitated or delirious patients Adjunctive treatment of ethanol dependence Postoperative nausea and vomiting (alternative therapy) Psychosis/agitation related to Alzheimer's Dementia⁸ Hiccups Obsessive-compulsive disorder Prevention of chemotherapy-induced nausea and vomiting Phencyclidine psychosis (improving phencyclidine-induced aggression, combativeness, and schizophreniform symptoms like hallucinations, delusions, and disorganized thinking¹⁰ 	Cardiovascular effects (arrhythmias, QT prolongation), torsades de points , sudden death , tachycardia), tardive dyskinesia , dystonia , neuroleptic malignant syndrome , hyperprolactinemia , extrapyramidal symptoms, hypotension, hypertension, insomnia, restlessness, anxiety, euphoria, agitation, drowsiness, depression, lethargy, headache, confusion, vertigo, grand mal seizures, exacerbation of psychotic symptoms including hallucinations and catatonic-like behavior states, hematologic effects, jaundice, dermatologic reactions, endocrine disorders, gastrointestinal effects, autonomic reactions (dry mouth, blurred vision, urinary retention, diaphoresis), respiratory effects (laryngospasm, bronchospasm), cataracts, retinopathy, visual disturbances
Loxapine (Loxiane®): usual oral dosage range for acute treatment of schizophrenia -30-100mg/day in divided doses ¹	Treatment of schizophrenia ¹¹		Adults ¹¹		Tardive dyskinesia , neuroleptic malignant syndrome , hematologic effects , extrapyramidal symptoms, tachycardia, hypotension, hypertension, orthostatic hypotension, lightheadedness, syncope, EKG changes, anticholinergic effects, dermatologic effects, hematologic effects, gastrointestinal side effects, weight gain, weight loss, dyspnea, ptosis, hyperpyrexia, flushing, headache, paresthesia, and polydipsia, galactorrhea, amenorrhea, gynecomastia, and menstrual irregularity ¹¹
Perphenazine (Trilafon®): usual oral dosage range for acute treatment of schizophrenia – 16-64mg/day in divided doses ¹	Treatment of schizophrenia ¹²	Control of severe nausea and vomiting ¹²	Adults and Children ≥ 12 years ¹²		Tardive dyskinesia , neuroleptic malignant syndrome , hypotension (if pressor needed , use norepinephrine) , hyperprolactinemia , extrapyramidal symptoms, convulsive seizures, jaundice, sedation, dry mouth or salivation, nausea, vomiting, diarrhea, anorexia, constipation, obstipation, fecal impaction, urinary retention, frequency or incontinence, bladder paralysis, polyuria, nasal congestion, pallor, myosis, mydriasis, blurred vision, glaucoma, perspiration, hypertension, change in pulse rate, allergic reactions, endocrine effect, cardiovascular effects (tachycardia, bradycardia, ECG changes), hematological effects, ocular changes

Drug Name		FDA-Approved Indications	Other FDA-Approved Indications	Age Group for Which Approved	Off Label Uses	Side Effects/Adverse Effects
Pinzide (Orap®): usual oral dosage range for treatment of Tourette's Syndrome – 1-10mg/day in ¹³ divided doses		Suppression of motor and phonic tics in patients with Tourette's Syndrome who have failed to respond satisfactorily to standard treatment ¹⁴		Adults and Children ≥ 12 years ¹⁴	Parasitosis (delusional) ¹⁵	Tardive dyskinesia, sudden death, neuroleptic malignant syndrome, hematologic effects, extrapyramidal symptoms, ECG changes, hyperpyrexia, asthena, chest pain, peribulbar edema, postural hypotension, hypotension, hypertension, tachycardia, palpitations, increased salivation, nausea, vomiting, anorexia, GI distress, loss of libido, weight gain, weight loss, dizziness, tremor, parkinsonism, fainting, dyskinesia ¹⁴
Prochlorperazine (Compazine®) usual oral dosage range for acute treatment of schizophrenia – 50-150mg/day in divided doses		<ul style="list-style-type: none"> Treatment of schizophrenia¹⁶ Short-term treatment of generalized non-psychotic anxiety¹⁶ 	Control of severe nausea and vomiting ¹⁶	Adults and Children ≥ 20 pounds and ≥ 2 years ¹⁶		Tardive dyskinesia, neuroleptic malignant syndrome, hypotension, extrapyramidal symptoms, drowsiness, dizziness, amenorrhea, blurred vision, ¹⁶ skin reactions, leukopenia, agranulocytosis, jaundice
Thioridazine (Mellaril®): usual oral dosage range for acute treatment of schizophrenia – 300-800 mg/day ¹ in divided doses		Management of schizophrenic patients who fail to respond adequately to treatment with other antipsychotic drugs ¹⁷		Adults and pediatric patients with schizophrenia who are unresponsive to other agents	Management agitation and psychotic events in patients with dementia and Alzheimer's disease ¹⁸	Proarrhythmic effects (prolongation of QT interval), orthostatic hypotension, neuroleptic malignant syndrome, extrapyramidal symptoms, hyperprolactinemia, drowsiness, nocturnal confusion, lethargy, dry mouth, blurred vision, constipation, nausea, vomiting, diarrhea, dermatitis, skin eruptions, endocrine effects ¹⁷
Thiothixene (Navane®): usual oral dosage range for acute treatment of schizophrenia – 6-50 mg/day in divided doses ^{1,19}		Management of schizophrenia ¹⁹		Adults and Children ≥ 12 years ¹⁹	Nonpsychotic patient, dementia behavior (elderly); psychosis/agitation related to Alzheimer's dementia ²⁰	Tardive dyskinesia, extrapyramidal symptoms, sudden death, hyperprolactinemia, seizures, hematologic effects, neuroleptic malignant syndrome, hepatic effects, dry mouth, blurred vision, nasal congestion, constipation, increased sweating, increased salivation, tachycardia, hypotension, light-headedness, syncope, drowsiness, restlessness, agitation, insomnia, impotence, allergic reaction, jaundice, endocrine effects, hyperpyrexia, anorexia, nausea, vomiting, diarrhea, increase in appetite and weight, weakness or fatigue, polydipsia, and peripheral edema ¹⁹
Trifluoperazine (Stelazine®): usual oral dosage range for acute treatment of schizophrenia – 4-40 mg/day in divided doses		<ul style="list-style-type: none"> Management of schizophrenia²¹ Short-term treatment of generalized non-psychotic anxiety²¹ 		Adults and Children 6-12 years ²¹		Extrapyramidal symptoms, drowsiness, dizziness, skin reactions, rash, dry mouth, insomnia, amenorrhea, fatigue, muscular weakness, anorexia, lactation, blurred vision, hematologic effects ²¹

Table 3a

Drug Name	FDA-Approved Indications	Other FDA-Approved Indications	Age Group for Which Approved	Off Label Uses	Side-Effects/Adverse Effects
2 nd generation (atypical) antipsychotics					
Aripiprazole (Abilify®): usual oral immediate release dosage range for monotherapy for treatment of schizophrenia – 15-30mg/day ²² (see full prescribing information for dosages for other indications)	<ul style="list-style-type: none">Autistic disorder - Psychomotor agitation²³Bipolar disorder – Psychomotor agitation²³Bipolar I disorder, Adjunctive therapy with lithium or valproate²³Bipolar I disorder, Monotherapy, manic or mixed episodes²³Major depressive disorder, Adjunctive treatment in patients receiving antidepressant²³Schizophrenia – Psychomotor agitation²³Schizophrenia²³		Can be used in children 6 and older, however, recommended ages differ for the various indications. ²³	<ul style="list-style-type: none">Cocaine dependence²⁴Restless legs syndrome²⁴Trichotillomania²⁴Psychosis/agitation related to Alzheimer's dementia²⁵	Suicide, increased mortality in elderly patients with dementia-related psychosis, neuroleptic malignant syndrome, orthostatic hypotension, tardive dyskinesia, commonly observed adverse reactions (incidence ≥ 5% and at least twice placebo): <ul style="list-style-type: none">Adult schizophrenia: akathisiaAdult (monotherapy) bipolar mania, akathisia, sedation, restlessness, tremor, and extrapyramidal disorder. Adult (adjunctive therapy with lithium or valproate) bipolar mania: akithisia, insomnia, and extrapyramidal disorder. Adult major depressive disorder (adjunctive treatment to antidepressant therapy): akathisia, restlessness, insomnia, constipation, fatigue, and blurred vision.Adult agitation associated with schizophrenia or bipolar mania: nausea.²³
Asenapine (Saphris®): usual oral dosage range for treatment of schizophrenia – 10-20mg/day in divided doses ²²	<ul style="list-style-type: none">Schizophrenia – acute treatment²⁶Schizophrenia – maintenance treatment²⁶Bipolar mania or mixed – monotherapy²⁶Bipolar mania or mixed – as an adjunct to lithium or valproate²⁶		Safety and efficacy have not been established in children. ²⁶		Neuroleptic malignant syndrome, tardive dyskinesia, cerebrovascular events, QT prolongation, suicide, commonly observed adverse reactions (incidence ≥5% and at least twice placebo): <ul style="list-style-type: none">Schizophrenia: akathisia, oral hypoesthesia, and somnolenceBipolar Disorder (Monotherapy): somnolence, dizziness, extrapyramidal symptoms other than akathisia, and weight increase.Bipolar disorder (Adjunctive): somnolence and oral hypoesthesia.²⁶
Clozapine (Clozaril®, FazaClo®ODT): usual oral immediate release dosage range for treatment of schizophrenia – 50-500mg/day in divided doses ²²	<ul style="list-style-type: none">Schizophrenia, Treatment-resistant²⁷Recurrent suicidal behavior in patients with schizophrenia or schizoaffective disorders²⁷		Safety and efficacy has not been established in children. ²⁷	<ul style="list-style-type: none">Parkinson's disease – Psychotic disorder²⁸Schizoaffective disorder²⁹Acute manic episodes associated with bipolar disorder; treatment of refractory bipolar mania²⁸Obsessive-compulsive disorders²⁸May be effective in treatment of tardive dyskinesia²⁸Psychosis/agitation related to Alzheimer's dementia²⁸	Increased mortality in elderly patients with dementia-related psychosis, agranulocytosis (mandatory monitoring, fatal if not detected early and therapy interrupted), seizures, myocarditis, adverse events observed in incidence of >5% <ul style="list-style-type: none">Central nervous system complaints including drowsiness/sedation, dizziness/vertigo, headache and tremorAutonomic nervous system complaints including salivation, sweating, dry mouth and visual disturbancesCardiovascular findings including tachycardia, hypotension and syncopeGastrointestinal complaints including constipation and nausea; fever.

Drug Name	FDA-Approved Indications	Other FDA-Approved Indications	Age Group for Which Approved	Off-label Uses	Side-Effects/Adverse Effects
lloperidone (Fanapt®): usual oral dosage range for treatment of schizophrenia – 2-24mg/day in divided doses ²² (must titrate slowly from a low starting dose to avoid orthostatic hypotension due to alpha-adrenergic blocking properties)	Schizophrenia ³⁰		Safety and effectiveness in pediatric patients has not been established. ³⁰		Increased mortality in elderly patients with dementia-related psychosis, neuroleptic malignant syndrome, QT prolongation, tardive dyskinesia, commonly observed adverse reactions (incidence ≥5% and at least twice placebo): dizziness, dry mouth, fatigue, nasal congestion, orthostatic hypotension, somnolence, tachycardia, and weight increase. ³⁰
Lurasidone (Latuda®): usual oral dosage range for treatment of schizophrenia ³¹ 40-160mg/day ³¹	Schizophrenia ³¹		Safety and effectiveness in pediatric patients has not been established. ³¹		Increased mortality in elderly patients with dementia-related psychosis, neuroleptic malignant syndrome, tardive dyskinesia, metabolic changes, commonly observed adverse reactions (incidence ≥5% and at least twice placebo): somnolence, akathisia, nausea, and parkinsonism. ³¹
Olanzapine (Zyprexa®, Zyprexa® Zydys®, Zyprexa® Relprevv®): usual oral immediate release dosage range for schizophrenia 10-20mg/day ²²	<ul style="list-style-type: none"> Agitation – Bipolar I disorder³² Agitation - Schizophrenia³² Bipolar I disorder, Acute mixed or manic episodes³² Bipolar I disorder – adjunct therapy with lithium or valproate³² Bipolar I disorder, Maintenance therapy³² Schizophrenia³² Depressed bipolar I disorder³² Depression, Treatment-resistant, Adjunct³² Bipolar disorder, depressed phase³² Major depressive disorder (treatment resistant)³² 		<ul style="list-style-type: none"> Adults and Children > 13 years old³² 	<ul style="list-style-type: none"> Agitation, acute – Dementia^{33,34} Delirium³⁴ Obsessive-compulsive disorder – adjunct therapy, treatment resistant^{33,35} Severe major depression with psychotic features³⁵ Chronic pain; prevention of chemotherapy-associated delayed nausea or vomiting³⁴ Tourette's syndrome³⁵ Stuttering³⁵ Parasitosis (delusional)³⁵ Insomnia (elderly)³⁵ 	Increased mortality in elderly patients with dementia-related psychosis, suicide, neuroleptic malignant syndrome, metabolic changes, commonly observed adverse reactions oral olanzapine (incidence ≥5% and at least twice placebo): postural hypotension, constipation, weight gain, dizziness, personality disorder, akathisia, asthenia, dry mouth, dyspepsia, increased appetite, somnolence, and tremor. ³²

Drug Name		FDA-Approved Indications	Other FDA-Approved Indications	Age Group for Which Approved	Off-label Uses	Side-Effects/Adverse Effects
Olanzapine/Fluoxetine (Symbyax®): usual oral dosage range for bipolar and major depressive disorders 6/25-12/50mg/day ³⁶		<ul style="list-style-type: none"> Bipolar disorder, depressed phase³⁶ Major depressive disorder (treatment resistant)³⁶ 		Safety and effectiveness in children and adolescent patients has not been established. ³⁶		Suicide, increased mortality in elderly patients with dementia-related psychosis, neuroleptic malignant syndrome, metabolic changes, commonly observed adverse reactions (incidence ≥5% and at least twice placebo): disturbance in attention, dry mouth, fatigue, hypersomnia, increased appetite, peripheral edema, sedation, somnolence, tremor, vision blurred, and weight increased. Adverse reactions reported in clinical trials of olanzapine and fluoxetine in combination are generally consistent with treatment-emergent adverse reactions, during olanzapine or fluoxetine monotherapy. ³⁶
Paliperidone (Invega®): usual oral immediate release dosage range for schizophrenia 3-9mg/day INvega®Sustenna® 39-234mg/month IM ²²		<ul style="list-style-type: none"> Schizoaffective disorder³⁷ Schizophrenia³⁷ 		Adults >18 years old ³⁷	Psychosis/agitation related to Alzheimer's dementia ³⁸	Increased mortality in elderly patients with dementia-related psychosis, QT prolongation, neuroleptic malignant syndrome, tardive dyskinesia, commonly observed adverse reactions (incidence ≥ 5% and at least twice placebo): <ul style="list-style-type: none"> Schizophrenia: extrapyramidal symptoms, tachycardia, akathisia Schizoaffective disorder: extrapyramidal symptoms, somnolence, dyspepsia, constipation, weight increase and nasopharyngitis.³⁷
Quetiapine (Seroquel®), Seroquel®XR: usual oral immediate release dosage range for schizophrenia 250-500mg/day in divided doses ²²		<ul style="list-style-type: none"> Bipolar disorder, depressed phase³⁹ Bipolar disorder (maintenance) as an adjunct to lithium or divalproex³⁹ Acute treatment of manic episodes associated with bipolar I disorder, as monotherapy³⁹ Acute treatment of manic as an adjunct to lithium or divalproex³⁹ Schizophrenia³⁹ Adjunctive treatment of major depressive disorders (XR only-with antidepressants)^{41, 42} 		Adults and children >13 years old ³⁹	<ul style="list-style-type: none"> Autism⁴⁰ Psychosis/agitation related to Alzheimer's dementia⁴¹ Insomnia, adjunct therapy in elderly⁴¹ Treatment resistant obsessive-compulsive disorder^{33, 41} Alcohol dependence⁴¹ Psychosis in Parkinson's disease⁴¹ Trichotillomania⁴¹ 	Suicide; increased mortality in elderly patients with dementia-related psychosis, neuroleptic malignant syndrome, metabolic changes, QT prolongation, commonly observed adverse reactions (incidence ≥ 5% and at least twice placebo): somnolence, dry mouth, dizziness, constipation, asthenia, abdominal pain, postural hypotension, pharyngitis, weight gain, lethargy, ALT increased, dyspepsia. ³⁹

Drug Name	FDA-Approved Indications	Other FDA-Approved Indications	Age Group for Which Approved	Off-label Uses	Side-Effects/Adverse Effects
Risperidone (Risperdal®): usual oral immediate release dosage range for schizophrenia 2-8mg/day in divided doses Risperdal® Consta® 25-50 mg every 2 weeks IM ²²	<ul style="list-style-type: none"> Schizophrenia⁴³ Autistic disorder – Irritability⁴³ Bipolar I disorder – short term of acute manic or mixed episodes, in combination with lithium or valproate⁴³ 		Adults and children >5 years old, however, recommended ages differ for the various indications. ⁴³	<ul style="list-style-type: none"> Stuttering⁴⁴ Insomnia⁴⁴ Tardive dyskinesias⁴⁴ Psychosis in Parkinson's disease⁴⁴ Management of agitation and psychotic events in patients with dementia and Alzheimer's disease⁴⁴ Tourette's syndrome⁴⁴ Psychosis/agitation related to Alzheimer's dementia^{33,44} Obsessive-compulsive disorder- adjunct therapy⁴⁵ Post-traumatic stress disorder (PTSD)⁴⁶ Delirium in the critically-ill patient 	Increased mortality in elderly patients with dementia-related psychosis, neuroleptic malignant syndrome, tardive dyskinesia, metabolic changes, orthostatic hypotension, common adverse reactions in clinical trials (≥10%): somnolence, increased appetite, fatigue, insomnia, sedation, parkinsonism, akathisia, vomiting, cough, constipation, nasopharyngitis, drooling, rhinorrhea, dry mouth, abdominal pain-upper, dizziness, nausea, anxiety, headache, nasal congestion, rhinitis, tremor and rash. ⁴³
Ziprasidone (Geodon®): usual oral dosage range 40-16- mg/day ²²	<ul style="list-style-type: none"> Bipolar I disorder, acute manic or mixed episodes, monotherapy⁴⁶ Schizophrenia⁴⁶ Acute agitation in schizophrenic patients⁴⁶ 		Safety and effectiveness for pediatric patients has not been established ⁴⁶	<ul style="list-style-type: none"> Psychosis/agitation related to Alzheimer's dementia⁴⁷ Autism⁴⁸ Tourette's syndrome⁴⁸ 	Increased mortality in elderly patients with dementia-related psychosis, neuroleptic malignant syndrome, tardive dyskinesia, hyperglycemia and diabetes mellitus, rash, commonly observed adverse reactions (incidence ≥ 5% and at least twice placebo): <ul style="list-style-type: none"> Somnolence, respiratory tract infection, extrapyramidal symptoms (extrapyramidal syndrome, hypertonía, dystonia, dyskinesia, hypokinesia, tremor, paralysis and twitching. None of these adverse reactions occurred individually at an incidence greater than 10% in bipolar mania trials, dizziness and lightheadedness), akathisia, abnormal vision, asthenia, vomiting, headache.

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*This document is intended for educational purposes only as a quick reference guide to commonly used antipsychotic drugs. Information contained herein is condensed and incomplete. Please refer to full prescribing information and additional reference materials for detailed information on a specific drug or drug use, dosing in special populations and drug use in patients with specific medical conditions. Promethazine and droperidol may be prescribed as antiemetic agents; however these agents have the same cautions as 1st generation antipsychotics. HQSI and DMFC are not responsible for any omissions or errors. This document is not intended to override a clinician's judgment in individual patient's management.

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Table 3b

Monitoring Guidelines and Adverse Effects

Assessments to monitor physical status and detect concomitant physical conditions		
Assessment	Initial or Baseline	Follow-Up
Vital signs	Pulse, blood pressure, temperature	As clinically indicated, particularly as medication doses are titrated
Hematology	CBC	If clinically indicated, including assessment of patients treated with clozapine
Blood chemistries	Electrolytes, renal function tests (BUN/creatinine ratio), liver function tests, thyroid function tests	Annually and as clinically directed
Infectious diseases	Test for syphilis, hepatitis C and HIV, if clinically indicated	
Pregnancy	Consider pregnancy test for women of childbearing potential	
Toxicology	Drug toxicology/screen, heavy metal screen, if clinically indicated	Drug toxicology screen, if clinically indicated
Imaging/EEG	EEG, brain imaging (CT or MRI, with MRI being preferred), if clinically indicated	
Practice Guideline for the Treatment of Patients with Schizophrenia Second Edition, American Psychiatric Association, 2010; 1-184		

Table 76-7 Relative Side-Effect Incidence of commonly Used Antipsychotics^{a,b}

	Sedation	EPS	Anticholinergic	Orthostasis	Weight Gain	Prolactin
Aripiprazole	+	+	+	+	+	+
Asenapine	+	++	+/-	++	+	+
Chlorpromazine	++++	+++	+++	++++	++	+++
Clozapine	++++	+	++++	++++	++++	+
Fluphenazine	+	++++	+	+	+	++++
Haloperidol	+	++++	+	+	+	++++
Iloperidone	+	+/-	++	+++	++	+
Olanzapine	++	++	++	++	++++	+
Paliperidone	+	++	+	++	++	++++
Perphenazine	++	++++	++	+	+	++++
Quetiapine	++	+	+	++	++	+
Risperidone	+	++	+	++	++	++++
Thioridazine	++++	+++	++++	++++	+	+++
Thiothixene	+	++++	+	+	+	++++
Ziprasidone	++	++	+	+	+	+

EPS, extrapyramidal side effects; Relative side-effect risk: \pm , negligible; +, low; ++, moderate; +++, moderately high; +++++, high.

^aSide effects shown are relative risk based on doses within the recommended therapeutic range

^bIndividual patient risk varies depending on patient specific factors.

Pharmacotherapy: A Pathophysiologic Approach. DiPiro J., et. al. Copyright 2011. Reproduced with permission from McGraw-Hill Companies, Inc. [October 17, 2012]

Table 3b cont'd

Monitoring Guidelines and Adverse Effects 2

Second-Generation Antipsychotic Monitoring Guide							
	Baseline	4 Weeks	8 Weeks	12 Weeks	Quarterly	Annually	Every 5 years
Personal Family History [*]	✓					✓	
Weight & Height (BMI)	✓	✓	✓	✓	✓		
Waist Circumference	✓					✓	
Blood Pressure	✓			✓		✓	
Fasting Plasma Glucose	✓			✓		✓	✓
Fasting Plasma Lipids	✓			✓			✓
[*] Family history of obesity, diabetes, dyslipidemia, hypertension, and/or cardiovascular disease Adapted from American diabetes Association, American Psychiatric Association, American Association of Clinical Endocrinologists, North American Association for the Study of Obesity. Consensus development conference on antipsychotic drugs and obesity and diabetes. Diabetes Care 2004; 27(2):596-601							

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Chapter 7 – Proactive Prevention v. Catastrophic Reaction

“When you really listen to another person from their point of view, and reflect back to them that understanding, it's like giving them emotional oxygen.” - Stephen Covey

Understanding and responding to behavioral symptoms in dementia is multi-faceted. The term “dementia” refers to symptoms typically characterized by a loss of cognitive and intellectual ability, impairment in memory, and brain changes affecting areas such as language, reasoning, and judgment severe enough to interfere with everyday functioning. Dementia can be caused by many conditions, the most common of which is Alzheimer’s Disease which accounts for 60 to 80 percent of dementia. Other common forms include vascular dementia, Lewy body dementia, and frontal temporal dementia.

Validation is a method of communication with older adults living with dementia. It was pioneered and developed by Naomi Feil in the 1960’s and is now practiced worldwide. It is an approach by which a caregiver can effectively explore the unmet needs of an individual. Its therapeutic effects include establishing trust, restoring self-worth, reducing use of drugs, meeting basic human needs, and alleviating caregiver burnout. When deeply buried lifelong emotions are genuinely listened to with the use of validation, the anxiety is lessened and the person can live a meaningful, purposeful, and dignified life.

Understanding the resident’s unique personality is key. Supporting staff in *allowing* person-centered care activity is just as important. If we are to allow person-centered care, it does not come risk-free. Conversation, education, and communication with the family is essential. Supporting a resident’s independence to enable them to do as much for themselves as they can sometimes includes risks such as falling.

Validation Method

- Recognize that the majority of residents diagnosed with Dementia will exhibit various forms of challenging behaviors
- **All behaviors are manifestations of unmet needs and are forms of communication.**
- **You must connect behaviors to unmet needs**

Recognize basic human needs (Maslow):

- | | |
|---|----------------------------|
| • Physiological needs: food, air,
water, shelter, clothing, pain, etc. | • Love and belonging needs |
| • Security Needs | • Esteem needs |
| | • Purpose and meaning |

Begin validation with...

- Centering (relax, deep breathing exercise and center yourself)
- Observe emotions of resident
 - Forehead, jaw, posture, body movement, eyes, lips, chest breathing, arms/hands
- Mirror and match the emotions
 - Use empathy
 - Clear warm voice
 - Match voice tone; if the resident is pacing, pace with the resident
- Therapeutic touching when appropriate such as a gentle touch on the arm or shoulder to establish a connection
- Music (childhood music, religious music, country of origin)
- Warm and reassuring tone of voice
- Rephrasing
- Open-ended questions
- Genuine, close eye-contact

Approach

- If angry – more distance needed; stand a few feet away
- If confused – use less distance; move closer and use touch after establishing connection
- If inwardly withdrawn – get closer to the resident

Activities should be:

- | | |
|--------------------|----------------|
| ○ Success-oriented | ○ Purposeful |
| ○ Meaningful | ○ Failure free |

Involve family, friends, volunteers

Video/audio recording/love letters of family member comforting the resident

Engage in social interactions

- Provide sensory stimulation
- Document effective, customized approaches on the general service plan and communicate them to team members

Crisis Management

The following is taken from the HCANJ publication “A Guide for Caregivers in Managing Challenging Behavior,” which was developed specifically for caregiver use.

1. Be mindful of YOUR ATTITUDE AND FEELINGS about what is Going On.

Tune in ... to Yourself!

- **Are You Calm, Cool, and Collected? *Your Feelings are Contagious.***
- Use positive self-talk to get yourself under control and keep yourself there!

2. REMEMBER switch with another staff member if necessary.

- **If you can't get your feelings under control—leave the area and ALERT other staff if needed.**

3. Keep track of your BODY LANGUAGE

- Move SLOWLY and STEADILY....NO SURPRISES.
- **Make Eye Contact** as much as possible.
- Keep HANDS out, where a person can see them, PALMS UP and OPEN.
- RESPECT person's "PERSONAL SPACE."
- STAND to the SIDE of the person.
- **DO NOT:** STARE, GLARE, or CHALLENGE with Eye Contact.
- ALWAYS leave yourself an ESCAPE ROUTE
- AVOID standing over the person as this can be threatening.

4. IF HE OR SHE IS:

- ANGRY- stand a few feet away and GIVE THEM SPACE.
- CONFUSED- less distance - use touch after establishing a connection
- INWARDLY WITHDRAWN, get closer to the person

5. THINK about WHAT you say and HOW you say it

- Be polite and USE his or her NAME
- SPEAK in short-simple phrases.
- Ask ONE question at a time.
- MONITOR YOUR TONE OF VOICE
- TALK at Normal Rate, not too fast and NOT TOO LOUD!
- SHOW Concern and Caring
- AVOID humor, sarcasm, and insulting remarks
- REASSURE them that you are here to help.
- WAIT FOR THEIR RESPONSE and LISTEN CAREFULLY to its meaning.

6. Use DIRECTIONS or EXPLANATIONS APPROPRIATE for the PERSON and SITUATION

7. Listen CAREFULLY to WHAT THEY ARE SAYING and TRY to Respond to Message

- STOP doing your task and give them your undivided attention.
- Try to understand what they are upset about
- Respond to that unmet need or feeling
- Check for meaning, “You’re saying that...”
- DON’T ASSUME that they have heard or understood you
- AVOID giving advice.

8. DON’T try to TELL them WHY THEY ARE WRONG (“Reasoning” with them)

9. TRY to CALM or SOOTHE THEM

- LOOK AROUND, remove unnecessary people and noises
- MOVE to a quiet place if possible
- GUIDE but DON’T CONTROL
- IDENTIFY ANY UNMET NEEDS. Are they hungry, tired, bored, lonely, or uncomfortable in some way? Any hearing aids, glasses, or dentures missing or not working/fitting properly? **All behaviors are manifestations of unmet needs and part of how the person communicates them to you!**

10. Distract them by leading to another other activity or topic.

11. REMEMBER TO PROTECT YOURSELF AND OTHERS

- LEAVE room or area if threatened
- Get out of striking distance if you sense trouble coming. Protect yourself with a pillow if you are able.
- If grabbed by the person, don’t pull away—distract and continue talking until he lets go on his own.
- Get ASSISTANCE. Start with asking for help from one person, crowds can make things worse.
- **USE PHYSICAL CONTROL ONLY AS A LAST RESORT!**



After A Crisis or Behavior Incident Has Occurred

It is recommended that a team meeting be held as immediately as possible after an incident or behavior has occurred. Priority questions and conversation to have are:

- What occurred?

- When and where did it happen? Has it happened before?

- How long did the event last? What made it stop?

- Was it mild, moderate, or severe?

- What parties were involved? What did they do during the event?

- What happened right before the problem? What happened after?

- Why do you think the incident or behavior took place?

- **Brainstorm as a team:** What can be changed in the care plan to decrease the frequency of the behavior? Can it be eliminated entirely? Do we need to adjust **our** expectations?

Chapter 8 - Resource Page

When you need help in managing mental health and behavioral crises you can contact the Statewide Clinical Consultation and Outreach Program for the Elderly (S-COPE), which is a state funded free-of-charge crisis response service that assists staff and residents within long term care:

- They provide on-site assessments, coaching, consultation, on-site training and off-site regional trainings to help you better manage behavioral challenges within nursing facilities
- They provide phone consultations, on-site training and access to regional training to help you support residents in assisted living
- They welcome staff from community-based programs for the aged to their regional trainings and annual conference

You can reach them at their toll-free number: 855.718.2699

Further Recommended Resources:

<http://www.ahcancal.org> The American Health Care Association/National Center for Assisted Living Quality Initiative, Reducing Antipsychotic Drug Use and Enhancing Dementia Care. A Competency Based Approach, AHCA/NCAL Toolkits and guides available for download.

www.alz.org Alzheimer's Association Official Website The leading voluntary health organization in Alzheimer's care, support and research. Resources available through website and an always available helpline is also available 1.800.272.3900

<http://www.amda.com/tools/guidelines.cfm>. The Society for Post-Acute and Long-Term Care Medicine has available a wide array of clinical practice guidelines for long-term care settings.

www.ascp.com American Society of Consultant Pharmacists official website. Industry news, articles, practical resources, and initiatives.

<http://www.cms-handinhandtoolkit.info/Index.aspx> **Hand in Hand: A Training Series for Nursing Homes. CMS** Please visit for information and download the training modules or inquire about receiving a copy or replacement copies of The Hand in Hand Toolkit

Memorybridge.org "Memory Bridge creates programs that connect people with Alzheimer's disease and related dementias to family, friends, and other people in their local community."

Vfvalidation.org The Home Page of The Validation Training Institute, Inc. Provides information about the Validation Method, benefits, Naomi Feil's work, and online tutorials.

UMDNJ- Center for Aging New Jersey Geriatric Education Center. Reach them at 856.566.7141

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