A POCKET GUIDE TO

DEMENTIA AND ASSOCIATED BEHAVIORAL SYMPTOMS:

DIAGNOSIS, ASSESSMENT, AND MANAGEMENT.

FIRST EDITION

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EDITORS

Stefan Gravenstein, MD, MPH
Director, Glennan Center for Geriatrics and Gerontology
Chief, Division of Geriatrics - Professor of Medicine
John Franklin Chair of Geriatrics
Eastern Virginia Medical School
Norfolk, Virginia

H. Edward Davidson, PharmD, MPH
Partner, Insight Therapeutics, LLC
Assistant Professor, Clinical Internal Medicine
Glennan Center for Geriatrics and Gerontology
Eastern Virginia Medical School
Norfolk, Virginia

EDITORIAL ADVISORS

Lisa F. Han, MPH
Partner, Insight Therapeutics, LLC
Norfolk, Virginia

Timothy Howell, MD
Director,
Geriatric Psychiatry Fellowship Program
Associate Professor (CHS),
Department of Psychiatry
University of Wisconsin & GRECC,
Madison VA Hospital
Madison, Wisconsin

Sandra E. Karam, MS, RN, CS
Gerontological Clinical Nurse Specialist
Sentara Southside Hospitals
Norfolk, Virginia

Lewis J. Taylor, PhD
Hampton Roads Behavioral Health, P.C.
Norfolk, Virginia

Charles F. Webb, MD
Associate Professor of Medicine
Department of Internal Medicine
Eastern Virginia Medical School
Education Director, Glennan Center for Geriatrics and Gerontology
Norfolk, Virginia

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PURPOSE OF THIS GUIDE

The purpose of this guide is to provide an easy-to-use reference for health care professionals managing patients with dementia. This guide will provide an overview of the presentation and diagnosis of some of the different subtypes of dementia, patient assessment, and a rational approach to treatment based on the patient's associated medical conditions and behavioral manifestations.

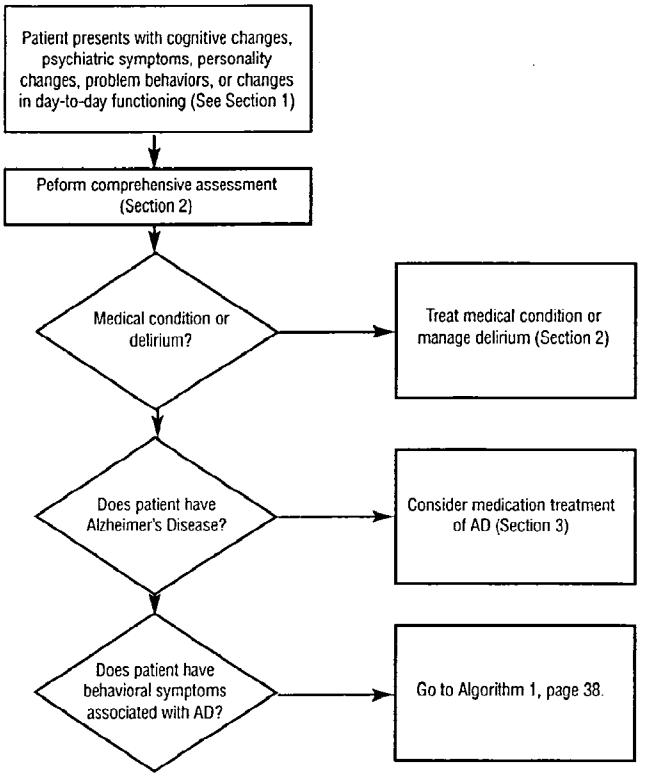
EDUCATIONAL OBJECTIVES

After reading this reference guide, you should be able to:

- Understand the basic pathophysiology of Alzheimer's disease and other dementias
- Recognize dementia and understand diagnosis and staging of Alzheimer's disease and other dementias
- Appreciate the role of non-medication interventions as first-line management for behavioral symptoms of Alzheimer's disease and other dementias
- Describe the current pharmacotherapy of Alzheimer's disease, other dementias, and behavioral symptoms associated with dementia
- Present a treatment plan for patients with newly diagnosed dementia or ongoing behavioral and cognitive symptoms of dementia

USE OF THIS GUIDE

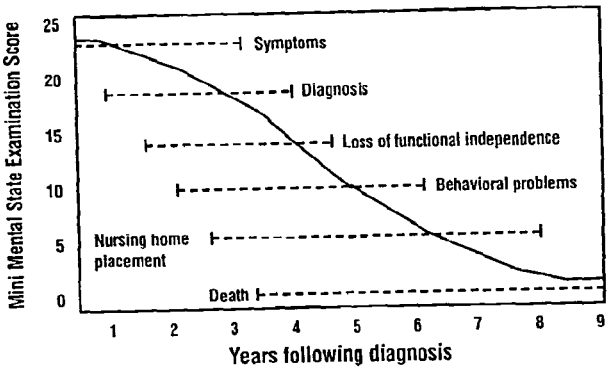
The algorithm shown below provides a roadmap to the contents of this guide.



BACKGROUND

Approximately 10% of the US population aged 65 and older suffers from dementia. Current eveidence suggests that dementia prevalence doubles every five years after age 60 (Ritchie K & Kildea D. Lancet 1995; Graves AB et al. Am J Epidemiol 1996). Defined as global cognitive deterioration sufficient to interfere significantly with social and occupational function, dementia is a growing public health threat that has adverse social, psychological, and economic consequences for affected persons and their families. (Feldman H, Gracon S, 1996.) Dementia is also a risk factor for increased home health care use, hospitalization, nursing home entry, and mortality.

Alzheimer's Disease Natural History
Typical Case



Feldman H, and Gracon S, 1996.

The prevalence of dementia in the U.S. is estimated to be between 2 and 4 million (5% and 10%) elderly (Evans DA et al., JAMA 1989; Canadian Study of Health and Aging Working Group, J Can Med Assoc 1994). The U.S. Census Bureau, in Census 2000, reported 281.4 million persons in the US, with 34.9 million 65 years of age and over. In the Framingham study, the dementia incidence rate for individuals 85 years or older was fourteen times higher than that in the 65 to 69 year age group (Bachman EL et al. Neurology 1993). It is important to note that an individuals' lifetime risk of dementia is actually lower than would be estimated from cumulative incidence rates because of the strong probability of death from other causes (Seshadri S et al. Neurology 1997).

A summary of dementia and AD prevalence and incidence studies is presented in Table 1.

The single largest subcategory of dementia is Alzheimer's disease (AD), with estimates ranging from 50% to 90% (Kukull WA et al., Neurology Clinics 2000). More recent studies support the lower number as other causes are more clinically recognized. Dementia with Lewy Bodies (DLB), and vascular dementia are other important subcategories. There is increasing evidence of the coexistence of dementia subtypes, particularly DLB, and our understanding of the prevalence of these conditions continues to improve with the evolution of diagnostic criteria and identification of new syndromes (Del Ser T et al. Alz Dis Assoc Disord 2001; Seshadri S et al. Neurology 1997)

Other important causes of dementia include alcoholism, Parkinson's disease, metabolic disorders (e.g., liver or kidney failure), endocrine disorders (e.g., hypothyroidism), nutritional disorders (e.g., vitamin B12 or folate deficiency), central nervous system infections (e.g., HIV, neurosyphilis), inflammatory disorders, frontotemporal disease (e.g., Pick's disease), and intracranial lesions. Severe depression and dilirium can also mimic dementia, and should be considered.

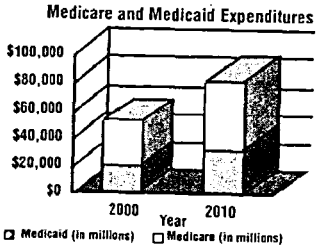
Table 1. Prevalence and Incidence Studies of Dementia in the United States.

Authors	Main Outcome Measure	Definition used for diagnosis
Evans et al, 1989	Overall prevalence of AD (>65): 10.3%	DSM-III-R, NINCDS-ADRDA
White et al, 1996	Overall prevalence of AD for study cohort: 7.6% (age-standardized)	DSM-III-R, NINCDS-ADRDA
Graves et al, 1996	Overall prevalence of AD: 6.3% (age-standardized)	DSM-III-R, NINCDS-ADRDA
Bachman et al, 1992	AD Prevalence: 2.3%	DSM-III-R, NINCDS-ADRDA
Bachman et al, 1993	Cumulative 5-year, age-specific incidence of AD: 4.3%	NINCDS-ADRDA
Kawas et al, 2000	Crude incidence rate (all dementia) 1.67% per year (≥ 55 years)	DSM-III-R, NINCDS-ADRDA

* See DSM, NINCDS-ADRDA in Appendix D. for description.

IMPACT OF DEMENTIA

Dementing illnesses have a significant impact on their victims, families, caregivers, and society. Most elderly with dementia progressively become functionally dependent on others for instrumental activities of daily living (IADLs) (e.g., driving, telephoning, shopping, cleaning, etc.) and activities of daily living (ADLs) (e.g., bathing, toileting, dressing, etc). Functional dependence is associated with diminished quality of life, increased costs, increased mortality, and significant caregiver stress. Additionally, increasing dependency on caregivers increases the risk of elder abuse or neglect (Jones JS et al. Am J Emer Med 1997; Lachs M et al. Gerontologist 1997).



Source: Alzheimer's Association, Medicare and Medicaid Costs for People with Alzheimer's Disease. April 3, 2001

The Alzheimer's Association reports that in the year 2000, Medicare and Medicaid spending for beneficiaries with AD was an estimated $31.9 billion and $18.2 billion, respectively, for a total cost of over $50 billion. (Alzheimer's Association Report, 2001). Figures for Medicaid spending are limited to nursing facilities only. By 2010, combined Medicare and Medicaid spending is expected to exceed $80 billion/year.

PATHOPHYSIOLOGY OF ALZHEIMER'S DISEASE AND OTHER DEMENTIAS

There are different types of dementia, each distinct in how they affect the functioning of the brain. The descriptions below are for the most common subtypes of dementia.

Alzheimer's Disease (AD)

Alzheimer's disease is an irreversible, degenerative brain disorder that occurs gradually and results in cognitive deterioration. The hallmark of AD is the presence of two abnormal structures in the brain: amyloid plaques and neurofibrillary tangles. In AD, plaques develop first in areas of the brain used for memory and other cognitive functions. Neurofibrillary tangles, a consequence of abnormal tau protein metabolism, result in malfunctions in communication between nerve cells and may lead to neuronal death.

The most prominent identified risk factor for AD is age. The prevalence of dementia increases from 2-3% in the 65-74 year age group to 30% or more in those 85 years of age and older (Hendrie HC. Am J Geriatr Psychiatry 1998; Ritchie K et al. Lancet 1995; Desai A, Grossberg G. Clin Geriatr 1999). There is still controversy over what happens to prevalence of AD in those more than 90 years of age, but recent epidemiological studies suggest that prevalence continues to increase, even into very late life. Other factors associated with increased risk include family history, APO E4 genotype, Down's syndrome, female gender, and a history of psychiatric illness or depression. Other factors associated with increased risk of AD include low educational level, head injury, hypertension, diabetes, and environmental exposures. (Coffey CE & Cummings JL 2000; Desai A, Grossberg G. Clin Geriatr 1999; National Institutes of Health, 2000)

Vascular dementia (sometimes referred to as multi-infarct dementia)
Vascular dementia has been described as a nondegenerative cause of dementia and results from the effects of cerebrovascular disease. The risk factors for cerebrovascular disease leading to dementia are still not completely understood, but factors such as arterial hypertension, cardiac disease, diabetes, hyperlipidemia, and smoking increase the risk of stroke and vascular dementia (Coffey & Cummings, 2000). Factors that may increase the likelihood that dementia is due to stroke include the presence of aphasia, a major dominant stroke clinical syndrome, a history of prior cerebrovascular disease, and low educational level. (Pohjasvaara T, Stroke 1998). In many patients, it is often unclear of whether the sole cause of dementia is cerebrovascular lesions, or if the lesions significantly contribute to the clinical features of an underlying neurodegenerative disease ("mixed dementia").Dementia whose onset coincides with a stroke is often the best clue.

Lewy Body Disease (also called Dementia with Lewy Bodies or Lewy Body variant of AD (LBV))
Dementia with Lewy bodies (DLB) is a progressive, degenerative dementia. On autopsy, patients with DLB are found to have extensive neuritic plaque similar to that in patients with AD, though fewer neurofibrillary tangles. Extensive Lewy body formations are found throughout the cortical areas as well as in the substantia nigra. DLB patients have a choline acetyltransferase deficit, which is more marked in patients with prominent visual hallucinations (Coffey & Cummings, 2000.) Autopsy studies indicate that Lewy bodies are in 15% –25% of all cases of elderly demented patients (McKeith et al. Neurology 1996).

DLB should be considered when determining the diagnosis of dementia because it has important implications for appropriate treatment. Primary cognitive features include progressive, insidious cognitive decline with pronounced fluctuations in attention and arousal, well-formed and detailed visual hallucinations, and motor feature consistent with parkinsonism. Impairments in executive control and visuospatial and visuomotor skills are likely early prominent features, though memory deficits may not be apparent in the early stages. The use of neuroleptics in patients with DLB should be carefully considered, due to characteristic neuroleptic sensitivity.

It remains debated whether DLB is a distinct disease entity, a form of AD, or a form of Parkinson's disease (PD). PD dementia clinically distinguishes itself from DLB as the motor findings precede cognitive changes in PD dementia whereas in DLB the opposite finding is more likely. There is considerable disagreement about the relationship of DLB with PD and AD, since DLB can be related to both and can also exist as a separate entity. It is thought there is some relationship to ApoE genotype, but weaker than that for AD.

Frontotemporal dementia
Frontotemporal dementia (FTD), involves the prefrontal cortex and anterior temporal lobes, resulting in presentation with disturbed personality, behavior, and language. Though FTD has classically been associated with Pick's disease, FTD can exist without the presence of Pick's bodies. FTD often has an earlier age of onset than is typical for AD, and is often familial. Symptoms of FTD include impulsivity, impaired judgement, disinhibition, and apathy.

Risk factors are still generally unknown, however research is starting to indicate that ApoE genotype or the chromosome 17 are related to FTD. Autopsy studies have also reported that tau abnormalities may be an important cause of FTD.

Mixed Dementia

The term "mixed dementia" has been used to refer to the coexistence of AD and vascular dementia (Cohen et al, 1997). There is debate over the term and the use of more precise terminology based on established criteria for each distinct type of dementia is preferred.

Although AD is the leading cause of dementia, other causes of dementia and conditions coexisting with AD are becoming recognized more frequently (Morris JC. Neurologic Clinics, 2000). Disorders responsible for mixed dementia may also mimic AD even when acting indepently.

Table 2. Clinical presentation of different types of dementia.

Dementia type	Typical Presentation
Alzheimer's disease	Impaired recent memory, aphasia and impaired naming, apraxia, general intellectual decline, visuospatial processing deficits, poor memory recognition and retention
Vascular dementia	General intellectual decline over time, memory disturbance, executive dysfunction, apathy, and amotivation; associated features may include gait disturbance, visual field loss, paresis, and paralysis
Dementia with Lewy Bodies	Fluctuating cognition with pronounced variation in attention and alertness, recurrent detailed visual hallucinations, spontaneous motor features of parkinsonism; usually neuroleptic sensitivity
Parkinson's dementia	Memory relatively preserved early in illness, impaired speech marked by hypophonia and dysarthria, apathy, irritable and depressive features
Frontotemporal dementia	Changes in personality, executive function, and behavior; apathy, disinhibition, instrusiveness, explosiveness, irritability, and assaultiveness; relatively preserved memory

DIAGNOSIS OF DEMENTIA

Differential Diagnosis

The most important data sources for determining the differential diagnosis of dementia include family history, infectious exposure, degenerative processes, inflammatory processes, and trauma or injury. The charts that follow address these processes. Although many specialists no longer use cortical versus subcortical differentiation, it may be useful in distinguishing between the two, based on clinical impression, to help differentiate the diagnosis.

Table 3. Cortical Versus Subcortical Dementia

	CORTICAL (primarily AD)	SUBCORTICAL (primarily vascular dementia)
Key feature	Loss of core ability (capacity) to "do" cognition	Loss of ability to coordinate cognition
Mnemonic	The four A's	The four D's
Features	Amnesia Apraxia Agnosia Aphasia	Dysmnesia Dysexecutive Delay Depletion
Typical symptoms	Can't recall or recognize Repeats questions Can't do things Doesn't "know" things Trouble with language	Benefits from cues to remember Thinking/movement are slowed Trouble planning or executing Less flexible Less initiative

Adapted from: Rabins PV, et al Practical Dementia Care. Oxford University Press. New York. 1999. pg 9.

SECTION 1: WHEN TO SCREEN FOR DEMENTIA

Many times, patients or family members approach a trusted health care provider noting signs and symptoms. Some should trigger consideration of a dementia evaluation. These include:

Cognitive changes - new forgetfulness, more trouble understanding spoken and written communication, difficulty finding words, not knowing things the person should know, disorientation

Psychiatric symptoms - withdrawal, depression, anxiety, insomnia, fearfulness, paranoia, abnormal beliefs, hallucinations, delusions, irritability

Personality changes - inappropriate friendliness, apathy, affective lability or blunting, social withdrawal, excessive flirtatiousness, low tolerance leading to frustration, suspiciousness, disinhibition

Problem behaviors - wandering, noisiness, restlessness, being out of bed at night (sundowning), catastrophic reactions, explosive spells, recklessness, carelessness; verbally and physically aggressive, verbally and physically nonaggressive agitation

Changes in day-to-day functioning - difficulty driving, handling money, shopping; neglecting self-care, hygiene, household chores; getting lost; making mistakes at work or with bills; missing appointments

Adapted from Rabins et al. Practical dementia care and AHCPR guidelines, Early Alzheimer's identification.

SECTION 2: INITIAL CLINICAL ASSESSMENT

The assessment of patients suspected of having dementia involves a broad range of skills and should include physicians, nurses, psychologists, pharmacists, social workers, family members, and others included in care of the affected individual. These individuals should have the requisite training in diagnosis and treatment of patients with dementia. The health care team should identify who will be involved in the conduct of each of the assessments outlined below.

In addition to basic identifying data (age, gender, race, referral source) the following components should be included:

Component	Typical Questions
Chief complaint	Why referred? What answers are being sought?
Personal history	Place of birth? Formal level of education obtained? Occupational history and possible toxin exposure in job? Current hobbies and activities? Religious faith? Typical day for patient? Any changes in these in past 1-5 years? Advanced directives, durable power-of-attorney, arrangements for finances and health-in-place?
Current living environment	Place of residence? Living alone? Receive help with daily activities? Any financial or legal concerns? Use any community resources? Source of water in home (i.e., well or city)?

Component	Typical Questions
Medical history	What are current medical problems? Surgical history? Any historical medical problems (review of systems)? What are current medications (including current or leftover prescriptions, OTC, herbal, borrowed medications, other)? Are any other physicians or other health care providers involved in care? History of substance abuse? Family history of illness?
Personality	What are traits of behavior and other predispositions? What is general affect/mood? What is general level of activity? What are ways of coping with stress or loss?
Neuropsychiatric history	History of psychiatric symptoms, assessments, or treatment? History of seizures, head trauma, stroke or other neurological disease? Focal weakness, transient problems with speech, strength, brief confusion, gait, incontinence?
History of present illness	What is course of present illness (onset date, pattern, and features)?
Following the thorough history assessment, a systematic series of examinations should be conducted.	
Perform Examinations	Physical examination Neurological examination Cognitive examination Mental status examination Functional assessment
Laboratory evaluation	Biochemical tests (see page 17) Other evaluations as indicated

IS IT DELIRIUM OR DEMENTIA (OR BOTH)?

It is important to distinguish the cause of cognitive impairment. The essential clinical features of delirium are 1) relatively acute onset with fluctuating course, 2) disorganized thinking, 3) alteration in level of consciousness, and 4) inattention. Delirium can be determined by using the Confusion Assessment Method (CAM) Diagnostic Algorithm, shown on the following page. In many cases, delirium is reversible. Keep in mind that delirium and dementia often coexist, unfortunately making diagnosis more difficult.

Possible causes of delirium include: dehydration, electrolyte imbalance, hypercalcemia, hyperglycemia, hypoglycemia, thyroid disorder, liver or kidney failure, hypoxia, head trauma, vasculitis, infection, severe constipation, medications (including neuroleptics, tricyclic antidepressants, anticholinergics, lithium, steroids, etc), neurologic causes, depression, and drug or alcohol withdrawal.

Dementia is a common predisposing factor for delirium but other etiologies must not be ignored.

Confusion Assessment Method (CAM)
Diagnostic Algorithm for the Diagnosis of Delirium
The diagnosis of delirium by CAM requires features 1 and 2 with either 3 or 4.

Feature 1. Acute Onset and fluctuating Course
This feature is usually obtained from a family member or nurse and is shown by positive responses to the following questions: Is there evidence of an acute change in mental status from the patient's baseline? Did the (abnormal) behavior fluctuate during the day; that is, tend to come and go, or increase and decrease in severity?

PLUS

Feature 2. Inattention
This feature is shown by a positive response to the following question: Did the patient have difficulty focusing attention, for example, being easily distractible or having difficulty keeping track of what was being said?

AND EITHER

Feature 3. Disorganized Thinking
This feature is shown by a positive response to the following question: Was the patient's thinking disorganized or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject?

OR

Feature 4. Altered Level of Consciousness
This feature is shown by an answer other than "alert" to the following question: Overall, how would you rate this patient's level of consciousness (alert [normal], vigilant [hyperalert], lethargic [drowsy, easily aroused], stupor [difficult to arouse], or coma [unarousable])?

Source: Inouye SK et al. Ann Intern Med 1990;113:941-8.

Laboratory and Other Evaluations as Part of Initial Assessment
Conducting the following laboratory and other evaluations will help determine if the cause of the dementia (or delirium) is potentially reversible (fully or in part).

Laboratory/Other procedures Primary (all patients)	Rationale or to rule out:
Complete blood count	hematologic or infectious etiology
Serum electrolytes	metabolic or electrolyte abnormalities
Other serum chemistries	other metabolic, liver or renal function, or nutritional problems
B12 and folate	CNS symptoms; can occur without anemia
Thyroid function test	thyroid disease
Serologic test for syphilis	syphilis infection
Brain computed tomography (CT) scan or MR	CNS problems or to clarify nature of the diagnosis

Laboratory/Other procedures Secondary (selected patients)	Rationale or to rule out:
ECG	cardiac problems
Chest X-ray	cardiac/respiratory etiology
Erythrocyte sedimentation rate	inflammatory conditions
Toxicology screens	substance abuse or environmental exposure
HIV test	based on history/clinical picture
Lyme disease titer	based on history/clinical picture; region of country
Lumbar puncture	rapidly progressive dementia, delirium, infectious etiology (e.g., TB, syphilis, etc.)
EEG	seizure disorder; Creutzfeldt-Jacob disease (CJD)
Apolipoprotein E testing	based on history/clinical picture; to clarify nature of diagnosis
CSF 14-3-3 protein	CJD
Brain magnetic resonance imaging (MRI)	CNS changes (e.g., stroke, ischemia, granulomas, tumor)
Single photon emission computed tomography (SPECT) or positron emission tomography (PET)	CNS focal vascular deficits

MENTAL STATUS EXAMINATION

A general mental status examination should precede other mental status testing. Components of this examination should include:

Component	Description
Substance abuse	Is the patient using or abusing alcohol or other prescription or nonprescription drugs or substances?
Appearance	Is the patient wearing appropriate clothing? (e.g., clothing neat, unwrinkled, matching color, appropriate for weather). Is the patient neatly groomed or disheveled? Does the patient appear sleepy? Level of awareness?
Behavior	Does the patient appear relaxed/calm or stressed/anxious? Is the behavior erratic or inconsistent? Is the patient able to enter the examining area unaided? What is the general posture? Are there signs of involuntary movement? Agitation or psychomotor retardation?
Speech	Is the speech fluent? Does the patient have difficulty finding words or expressing thoughts in conversation? Does the patient appear to comprehend questions? Does the patient use any repetitive phases, sounds, or words in conversation?
Sensorium	Are any of the patient's senses impaired? What is their ability to pay attention or shift attention?
Orientation	Is the patient essentially oriented to person, place, time, and situation?
Thought content/ perceptual process	Is the patient seeing, hearing, feeling, or smelling things that seem odd or unreal? Hallucinations? Delusions? Does the patient have ideas that bother him/her or that he/she cannot get out of his/her head? Paranoia? Obsessions? Paucity of thought? Suicidal ideation? Does the patient seem disinhibited (e.g., making rude, caustic, or sexual remarks)?
Mood	What is the patient's mood? Is it appropriate for the situation? Is the mood labile changing from happiness to sadness? Does the patient cry or laugh inappropriately during the examination?
Judgment	Can the patient use logical thinking to solve problems?
Insight	Is the patient aware of personal strengths or weaknesses?
General intellect	Does the patient have average intellect? Well below average? Well above?

COGNITIVE MENTAL STATUS EXAMINATION

The Mini-Mental State Examination (MMSE) developed by Folstein is the most commonly used cognitive function test. It takes approximately 10 minutes to complete. Its scoring should be consistent, its limitations understood, and it should be completed by an experienced practitioner. Individuals with high premorbid intellectual capacity typically score better than others, despite impairment. Early in the course of dementing illness, it is not sensitive and it does not discriminate severity of illness in more advanced cases. It is nonetheless a useful tool for following the course of illness in individuals with dementia. There are some individuals who score high on the MMSE, even though there is significant impairment. This should not be the only test used to determine presence of cognitive impairment.

Median Mini-Mental State Examination Score by Age and Educational Level

Age	Education (years) 0-4	5-8	9-12	≥12
60-64	23	26	28	29
65-69	22	26	28	29
70-74	22	26	27	28
75-79	21	25	27	28
80-84	20	25	25	27
≥85	19	23	26	27
Overall mean for educational level*	22	26	28	29

** Includes all ages 18 - ≥85*
Scores represent mean MMSE score for that group.
Adapted from Crum RM et al. JAMA 1993;269:2386-91

For further information on the MMSE:

Folstein MF, Folstein, SE McHugh PR. Mini-mental state: a practical method for grading the cognitive state of patients for the clinician. J Psychiatric Res 1975; 12: 196-8

Psychological Assessment Resources, Inc. (800) 331-8378 or www.parinc.com

Clock Drawing Test

Clock-drawing is used as a screening tool to test cognitive function in persons suspected of having cognitive impairment. Based on studies, clock drawing appears to be generally independent of education, ethnic, and socioeconomic status, since the clock face is generally familiar to most populations even though they may not be able to tell time.

Clock-drawing instructions

The patient is instructed to draw the numbers with a pre-drawn circle 3-3/8 inches in diameter to make that circle look like the face of a clock.

Scoring rules

1. Divide the circle into 4 equal quadrants by drawing one line through the center of the circle and the number 12 (or mark that best corresponds to the 12) and a second perpendicular to and bisecting the first.
2. Count the number of digits in each quadrant in the clockwise direction beginning with the digit corresponding to number 12. Each digit is counted only once. If a digit falls on one of the reference lines, it is included in the quadrant that is clockwise to the line. Any three digits in a quadrant is considered to be correct.
3. For any error in the number of digits in the first, second, or third quadrants assign a score of 1. For any error in the number of digits in the fourth quadrant assign a score of 4.
4. Normal range of score is 0-3. Abnormal (demented) score is 4-7.

Adapted from Watson YI et al. Clock completion: an objective screening test for dementia. J Am Geriatr Soc 1993;41:1235-40.

Functional Assessment

The Functional Activities Questionnaire is an informant-based measure of functional abilities. Informants provide performance ratings of the target person on 10 complex, higher-order activities.

Functional Activities Questionnaire (FAQ)

Individual Items of the FAQ

- Writing checks, paying bills, balancing checkbook
- Assembling tax records, business affairs, or papers
- Shopping alone for clothes, household necessities, or groceries
- Playing a game of skill, working on a hobby
- Heating water, making a cup of coffee, turning off stove
- Preparing a balanced meal
- Keeping track of current events
- Paying attention to, understanding, discussing TV, book, magazine
- Remembering appointments, family occasions, holidays, medications
- Traveling out of neighborhood, driving, arranging to take buses

The levels of performance assigned ranged from dependence to independence, and are rated as follows:

- Dependent = 3
- Requires assistance = 2
- Has difficulty but does by self = 1
- Normal = 0

Two other response options can also be scored:

- Never did [the activity], but could do now = 0
- Never did and would have difficulty now = 1

A total score for the FAQ is computed by simply summing the scores across the 10 items. Scores range from 0 to 30. A cutpoint of "9" (dependent in three or more activities) is recommended.

Adapted from: Pfeffer RI, Kurosaki TT, Harrah CH, et al. J Gerontology 1982.

Assessment of *Caregiver Burden*

Caregiver burden, which is the term used to describe the physical, emotional, and financial toll of providing care, must also be taken into account when considering the impact of dementing illness. High caregiver burden is associated with increased morbidity and mortality of caregivers and increased risk of long-term care placement of the dementia sufferer. (IPA, BPSD Educational Pack, 1998). Health problems suffered due to caregiving include depression, anxiety, low immune function, and perceived low health status. (Baumgarten M et al. Ann Intern Med 1994). Caregivers report 46 percent more physician visits, use 70 percent more prescription drugs, and are more likely to be hospitalized than others their age (Alzheimer's Association, 2001).

Caregiver burden should be assessed regardless of where the patient is residing. Both caregivers at home and in institutional settings are susceptible to the stress of caring for someone with dementia.

Factors (Patient Behaviors) Associated With Caregiver Burden

- screaming
- verbal and physical aggression
- personality clashes
- wandering
- depression
- resistance to help with ADLs
- suspiciousness, accusations
- not sleeping at night
- recklessness or careless behavior
- repetitive questions
- sexually inappropriate behavior

The above symptoms are reported to be the most burdensome and are also the most common reasons for psychiatric referral and premature institutionalization.

Predictors of Burden (patient characteristics)

Very important in predicting caregiver burden

- delusions, hallucinations, and depression
- disruptive behaviors (e.g., physical aggression)

Somewhat important in predicting caregiver burden

- male gender of patient
- younger age of patient

Doubtful or not important in predicting caregiver burden

- type of dementia
- severity of dementia (i.e., level of cognition)
- impairment (need for assistance)
- duration of dementia

Predictors of Burden (caregiver characteristics)

- care providers experience greater burden than care managers
- spouses > relatives
- women > men
- propinquity (caregiver in closest contact; cohabiting caregivers are under most stress)
- immature coping mechanism (e.g., easily angered or frustrated)
- low support from family and friends
- low knowledge about dementia, its effects, and management
- poor premorbid relationship with dementia person (e.g., high levels of negative expressed emotions, notably hostility and criticism)

Protective factors

- social support (e.g., caring neighbors)
- knowledge about dementia, its effects, and management
- mature coping skills (e.g., problem solving)
- support groups (e.g., Alzheimer's Association)

Source: International Psychogeriatric Association. Behavioral and Psychological Symptoms of Dementia Educational Pack, Module 4, 1998.

To assess family caregiver burden, the Zarit Burden Interview is recommended (see Appendix B). Caregiver interventions can be targeted at three broad areas: psychological support, educational activity, and development of a social support system.

Professional caregivers are also affected by behavioral symptoms, and should be evaluated in institutional and other care settings. Many of the same problems facing family caregivers affect professional caregivers. High dependence of a person with dementia, communication difficulties, lack of feedback from persons with dementia, and abuse can affect staff stress levels and cause low job satisfaction, guilt, low creativity, burnout, and poorer quality of care. Ongoing education and support of staff is an important component in preventing or reducing stress associated with providing care to these patients.

SECTION 3: TREATMENT OF ALZHEIMER'S DISEASE

Currently, there is no cure for AD or any other type of progressive dementia. However, there are a few pharmacotherapy options for treatment of the symptoms of AD. AD is a neurodegenerative disease with characteristic complex histological changes, including neurofibrillary tangles, neuritic plaques, and multiple neurochemical deficits that affect the serotonergic, noradrenergic, and cholinergic systems. Acetylcholinesterase inhibitors (AChE-Is) exert their beneficial effect on intellectual functioning by blocking acetylcholinesterase and enhancing cholinergic function.

Pharmacotherapy Options for Alzheimer's Disease

Before starting pharmacotherapy for AD, the diagnosis of AD stage must be determined. AChE-Is are approved for mild to moderate AD.

Tacrine HCl (Cognex®), the first FDA-approved AChE-I, is not recommended as it is no longer considered a first-line option based on the favorable toxicity profile and easier dosing protocols of the newer agents. For AD patients currently maintained on tacrine with a favorable response, the primary health care provider or family may choose to continue therapy.

The first step to consider when evaluating a patient for AChE-I therapy is the stage of dementia.

STAGES OF ALZHEIMER'S DISEASE

Developed by physicians at the New York University Medical Center's Aging and Dementia Research Center, the Functional Assessment Staging (FAST) Scale provides a method of staging AD for initial and ongoing assessment of change.

Functional Assessment Staging Scale (FAST)

Stage	Characteristics	Clinical Diagnosis
1	No functional decrement	Normal Adult
2	Personal awareness of some functional decline. (e.g., subjective deficit in recalling names or location of objects)	Normal-older adult
3	Noticeable deficits in demanding occupational and social settings (e.g., may get lost traveling by auto)	Early AD
4	Requires assistance in complicated daily life tasks such as handling finances, grocery shopping, and planning meals	Mild AD
5	Requires assistance in choosing proper attire, and for independent community functioning (e.g., the individual will wear incongruous clothing); some patients may forget to bathe regularly (unless reminded) and driving is severely compromised	Moderate AD
6	Requires physical assistance in dressing, bathing, and toileting. Urinary and fecal incontinence in the absence of infection or other etiologies	Moderately severe AD
7	Speech limited to about six words in the course of an average day. Progressive loss of abilities to walk, sit up, smile, and hold head up	Severe AD

Adapted from Reisberg B. Geriatrics 1986;41:31-46.

FDA-Approved Medications For Treatment Of Mild To Moderate Dementia of the Alzheimer's Type

Drug (Trade name, Manufacturer)	Starting dose	Titration	Target dose
Donepezil (Aricept®, Eisai/Pfizer)	5 mg daily, with or without food at bedtime	4-6 weeks, with possible Increase to 10 mg	10 mg/day
Galantamine* (Reminyl®, Janssen)	4 mg bid, with meals	8 mg bid after at least 4 weeks, if dose tolerated	12 mg bid (8 mg bid in patients with moderate hepatic or renal impairment)
Rivastigmine** (Exelon®, Novartis)	1.5 mg bid, taken with food	3 mg bid after two weeks, if tolerated	6 mg bid (12 mg daily)

General cautions: Anticholinergic medications should not be given concurrently with AChE-Is.

* If therapy interrupted for several days or longer, the patient should be restarted at the lowest dose and dose escalated to the previous dose.

**If adverse effects cause intolerance during treatment, patient or caregiver should be instructed to discontinue treatment for several doses, than restart at the same or next lower dose level. If treatment is interrupted for longer than several days, treatment should be reinitiated with the lowest daily dose and titrated as described previously.

Keep in mind that the disease continues to progress despite treatment and typical effect is modest. Ongoing assessment of cognition, behavior, and functioning should be part of the patient's ongoing care plan.

Side Effects Associated with Acetylcholinesterase Inhibitors

Agent	Significant side effects
Donepezil	Gastrointestinal effects (i.e., anorexia, nausea, diarrhea, vomiting), insomnia, dizziness, fatigue, muscle cramps, headache
Rivastigmine	Gastrointestinal toxicity (i.e., nausea, vomiting, diarrhea, abdominal pain, anorexia) Attempt slow titration to minimize
Galantamine	Gastrointestinal effects (i.e., nausea, vomiting, abdominal pain, dyspepsia, anorexia), psychiatric disorders (i.e., depression, insomnia), somnolence, urinary tract infection, dizziness, headache, fatigue, bradycardia

The AChE-Is are being examined for efficacy in other types of dementia, but are currently not approved for other uses.

Other compounds that have been used in an attempt to prevent or slow decline of AD and other dementias include:

- selegiline
- vitamin E (alpha-tocopherol)
- gingko biloba
- anti-inflammatory drugs
- estrogen

Currently there are no adequately controlled positive trials supporting the use of any of these agents. However, the American Academy of Neurology suggests that Vitamin E 1000 IU PO BID should be considered in an attempt to slow the progression of AD (Doody RS et. al. Neurol 2001; 56: 1154-66).

Drug Interactions Associated with Acetylcholinesterase Inhibitors

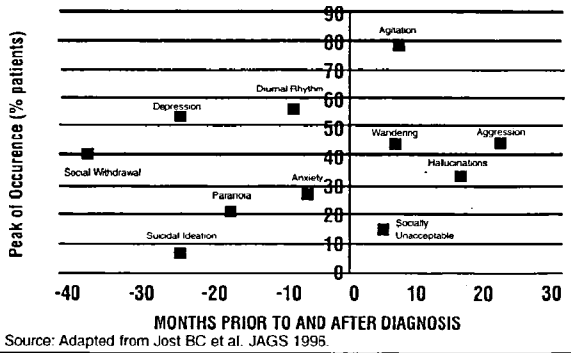
Medication	Interacts with	Effect
Donepezil	anticholinergic agents	donepezil may interfere with anticholinergic agent activity
	NSAIDs	Donepezil may increase gastric acid secretion. Monitor for symptoms of gastrointestinal bleeding (especially in patients with history of GI ulcers)
Rivastigmine	anticholinergic agents	rivastigmine may interfere with anticholinergic agent activity
	neuromuscular blocking agents	inhibits cholinesterase and may prolong or exaggerate muscle relaxation
	NSAIDs	Rivastigmine may increase gastric acid secretion. Monitor for symptoms of gastrointestinal bleeding (especially in patients with history of GI ulcers)
Galantamine	anticholinergic agents	galantamine may interfere with anticholinergic agent activity
	cimetidine, paroxetine	may increase galantamine bioavailability
	ketoconazole, erythromycin	may increase galantamine AUC

SECTION 4: BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA

Behavioral symptoms are commonly associated with the progression of dementia. Behavioral and psychological symptoms of dementia (BPSD) is a term that has been adopted by the International Psychogeriatric Association (IPA) for referring to the symptoms of disturbed perception, thought content, mood, or behavior that frequently occur in patients with dementia. In this book, the term "agitation" will be used to represent the BPSD for nonpharmacologic and pharmacologic management sections.

Agitation as defined by Cohen-Mansfield is any verbal, vocal, or motor activity which is not judged by an outside observer to result directly from the needs or confusion of the agitated individual. Agitation has been reported to be one of the most frequent and difficult to treat behaviors in residents with dementia. Agitation may be mild or severe. Mild agitation, which is non-aggressive, may be disruptive to others but poses little risk of danger to the resident or others. Severe agitation, however, may endanger the resident or caregivers.

Peak Frequency of Behavioral Symptoms with Alzheimer's Disease Progression



Source: Adapted from Jost BC et al. JAGS 1995.

For assessment purposes, it is very important to describe agitation on a resident-by-resident basis by descriptors of specific behaviors such as hitting, biting, hiding things, making strange noises, refusing to eat, using hostile language, etc.

Apathy, which is another common symptom in patients with dementia, is oftentimes as distressing to caregivers as agitation. (Kaufer DI et al. JAGS 1998) Apathy is a state of reduced motivation. Patients may be indifferent, with limited or absent emotional interests and engagement. This symptom should not be confused with dysphoria, or true sadness. Apathy can exist even the in the absence of depression. (Marin RS Psychiatric Annals 1997.)

TYPES OF AGITATED BEHAVIORS IN DEMENTIA

Agitation in the individual with dementia may mimic syndromes of other psychiatric conditions. When evaluating an agitated individual, the ability to identify which syndrome type the individual most closely resembles is critical to identify the most appropriate medication treatment.

Syndrome Type	Examples of Agitated Behaviors
Physically aggressive	Pushing, biting, hitting, scratching, grabbing, throwing objects, spitting, kicking
Physically nonaggressive	Wandering, pacing, elopement, intruding on others' rooms, constant searching, inappropriate disrobing, inappropriate voiding, repetitious mannerisms, handling things inappropriately
Verbally aggressive	Screaming, yelling, cursing, swearing, making strange noises, temper outbursts
Verbally nonaggressive	Constant requests for attention, complaining, whining, negativism, repetitive questioning, repetitively calling out, rambling disjointed sentences

Adapted from: Cohen-Mansfield J et al. J Am Geriatr Soc 1986.

The IPA groups BPSD in terms of behavioral symptoms, usually identified on the basis of observation of the patient (e.g., physical aggression, screaming, restlessness, wandering, etc) or psychological symptoms, usually and mainly assessed on the basis of interviews with patients and relatives (e.g., anxiety, depressive mood, hallucinations, and delusions). All of these symptoms can result in suffering, premature institutionalization, increased costs of care, significant loss of quality-of-life for patients and caregivers, and excess disability. (Steele et al, Am J Psychiatry 1990; Cohen-Mansfield J. Geriatr Psychiatry Neurol 1995; Finkel et al, Int Psychogeriatr 1996).

INFORMATION TO COLLECT ABOUT AGITATED BEHAVIOR

Information on the characteristics and the consequences of behaviors should be collected. This information will be critical to determining if the treatment is successful, after a strategy is chosen.

Behavioral Symptom Profile

Characteristics	Consequences
• Onset and predominant pattern • Frequency, timing, and length of agitated episodes • Factors that appear to precipitate the behavior including time of day, specific activity, specific symptom • Change in the person's routine, environment, diet, etc • Change in primary caregiver • Conflict with caregiver, family, or others • Feelings of restlessness, tension, loss, insecurity, anxiety, delusions, or hallucinations • Recent changes in cognitive status • Recent changes in medication • Previous management attempts and results • Recent changes in physical condition	• Specific interference with activities of daily living • Specific interference with caregiving • Falls and injuries • Aggravation to resident or other residents • Insomnia, disturbed sleep • Placement jeopardized

Traditional behavior monitoring forms are very useful in tracking the frequency and timing of the behavior. Proper characterization of the behavior will aid in assessing the response to interventions. See Appendix A. for a list of behavioral descriptors that may help in accurately characterizing behaviors.

A team of caregivers can be recruited to seek out the necessary information. This team may include:

- patient spouse and children
- other interested family members
- physician assistants
- nurse practitioners
- nurses, CNAs
- pharmacists
- physicians
- social workers
- physical therapists
- housekeeping staff
- others

Not only can a team approach provide valuable insight into the patient's behavior, but may also help address the feelings of helplessness and frustration that are oftentimes felt by caregivers and others in dealing with a dementia victim. Being part of a team can give members the feeling they are "doing something" to help improve the quality of life for the patient and the individuals that interact with the patient.

SECTION 5: NON-MEDICATION TREATMENT OF AGITATION

Treatment of underlying medical conditions should always be one of the first treatment strategies, when possible. For those conditions or circumstances when an agitated behavior has the potential for personal injury, impact on delivery of care, or psychosocial consequences, non-medication treatment can be effective.

Types and examples of non-medication treatment include:

Non-Medication Treatment Category and Strategies		
Sensory	*Environmental*	*Behavioral*
Music, aroma, or pet therapy, massage, light therapy, food or snacks, physical touch (with caution in some), eliminating physical discomfort	Increase in personal space, reduction in disruptive stimuli, increased or decreased lighting, availability of personal effects/ mementos	Reinforcement of alternative behaviors, positive reinforcement, validation therapy, redirection, psychotherapy (with mild dementia)

Communication	*Family support and education*
Awareness of caregiver's nonverbal, verbal, and written communication skills, keep communication simple, supportive, and positive, foreshadowing (e.g., tell patient bath time will be in 10 minutes, remind again in 5 minutes, remind again on the way to shower, etc.)	Offer caregiving classes or lectures, provide written materials, refer families and caregivers to local support groups

NON-MEDICATION MANAGEMENT STRATEGIES

The resident's underlying medical conditions should always be managed prior to or concurrently with nonmedication behavioral treatment strategies.

Management strategies may vary based on the type of behavior. Examples of behavior types, potential causes, and management strategies are presented on the following pages.

Behavior and Potential Causes or Antecedents	Possible Management Strategies
Wandering	
Stress: noise, clutter, crowding	Reduce excess stimulation, remove resident from stressful situation
Restless, bored	Provide personally meaningful activity, according to patient's abilities
Environmental stimuli	Remove or camouflage environmental stimuli
Exit signs, people leaving	ID or alarm bracelets
Resisting help with bathing, dressing, or grooming	
Task too difficult or over-whelming	Break task into small steps, don't give many choices
Caregiver impatience, rushed	Be patient, allow ample time or try again later
Can't understand or follow instructions	Simplify request; give instructions and allow performance one step at a time
Resident modesty causes embarrassment	Respect resident request for privacy
Fear of task, doesn't understand need for task	Reassure, comfort, distract with music or conversation
Agitation (e.g., catastrophic reactions)	
Fatigue	Schedule adequate rest, monitor activity schedule (too much, too little?)
Mirroring of caregiver affect	Control affect with resident, model calm with lower tone and slow rate
Too much noise, clutter, crowding	Reduce excessive stimulation, remove resident from stressful situation
Resident being thwarted from desired activity	Redirect energy to similar activity, ask person to "help" with personally meaningful activity
Unfamiliar people or environment, fear	Be consistent, avoid changes or surprises, make changes gradually; reassurance
Restlessness/ boredom	Calming music, massage, or personally meaningful activity, assign tasks that provide exercise

Behavior and Potential Causes or Antecedents	Possible Management Strategies
Incontinence	
Difficulty in finding a toilet	Place appropriate signs, picture on door, ensure adequate lighting
Lack of privacy	Provide privacy
Dependency created by socialized reinforcement	Provide increased attention for continence rather than incontinence; allow independence whenever possible, even if time-consuming
Can't express need or forgets	Schedule toileting
Inappropriate or impulsive sexual behavior	
Misinterpreting caregiver's interaction	Do not give mixed sexual message, even in jest, avoid nonverbal messages, distract while performing personal care or bathing; explain in simple words
Decreased judgment and lack of social awareness	Do not overreact or confront, respond calmly and firmly, distract and redirect
Uncomfortable – too warm, clothing too tight, need to void, genital irritation	Check temperature, assist with weather appropriate clothing, ensure elimination needs are met, examine for groin rash, perineal skin problems
Need for attention, affection, intimacy	Increase or meet basic need for touch and warmth, model appropriate touch, offer soothing objects (dolls, stuffed animals)
Self stimulating, reacting to what feels good	Offer privacy, remove from inappropriate place
Suspiciousness or paranoia	
Forgot where objects were placed	Offer to help find, have more than one of same object, learn favorite hiding places
Misinterpreting actions or words	Do not argue or try to reason with resident, distract and do not take personally
Misinterpreting who people are, suspicious of their actions	Introduce self and role routinely, draw on old memory, connections; do not argue or quiz
Misinterpreting environment	Assess vision, hearing; modify environment, provide simple explanation, distract

Adapted from Carlson DL, et al. Management of dementia-related behavioral distur-bances: A nonpharmacologic approach. Mayo Clinic Proceedings 1995;70:1108-15.

SECTION 6: MEDICATION TREATMENT OF AGITATION

Most patients with dementia will exhibit agitation at some point during their illness, and may present in many different ways. Research and practice experience has shown that a number of different presentation categories help with describing the agitation syndrome and directing the caregiver to the most appropriate medication treatment.

Agitation may be due to medical conditions as described earlier. This is always an initial assessment which must be performed prior to starting any medication. Before deciding whether to treat behavioral symptoms with medication, ask the following questions:

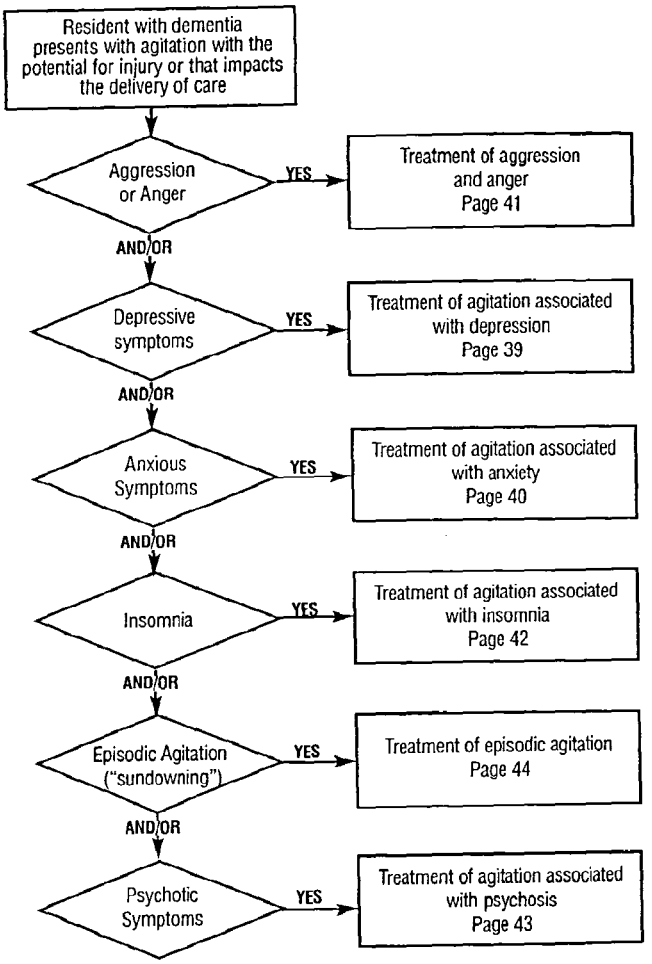
1) Does the particular symptom warrant drug treatment, and why?
2) Is this symptom drug responsive?
3) Which category of medications is most suitable for this symptom?
4) What are the predictable and potential side effects of a particular drug treatment?
5) For how long should the treatment be continued?
6) Does the severity and complexity of the behavior require a psychiatric consultation?

After these issues have been addressed, further delineation of the agitation syndrome is appropriate. Typical psychiatric diagnostic criteria are followed by a typical presentation of the agitation syndrome in the elderly resident with dementia.

In nursing facility residents, consider the HCFA Guidance to Surveyors - Long-Term-Care Facilities, Tags F329, F330, and F331 when prescribing antipsychotics, benzodiazepines, and sedative/hypnotics.

Medication recommendations made in the following sections are based on selected peer-reviewed literature, editorial advisors' opinions, and the report, "The Expert Consensus Guideline Series: Treatment of Agitation in Older Persons With Dementia" published by Postgraduate Medicine in 1998. This publication can be obtained free-of-charge from the website www.psychguides.com.

Algorithm 1. Identifying Agitation Syndromes for Appropriate Treatment



APPROPRIATE MEDICATION CHOICE

Depression and Agitation

Patients may present with tearfulness, feelings of hopelessness, helplessness, apathy, irritability, anorexia, and/or guilt and these symptoms may be with or without delusions.

Agitation associated with:	Medication	Starting dose
Depression Without Psychosis		
First-line*	Paroxetine	5-10 mg/day
	Sertraline	25-50 mg/day
	Citalopram	10-20 mg/day
	Fluoxetine	5-10 mg/day
	Nefazodone	50 mg bid
	Mirtazapine	7.5-15 mg/day
Alternative	Nortriptyline	10-25 mg/day
	Venlafaxine	25-50 mg/day
	Desipramine	10-25 mg/day
Severe depression With Psychosis		
First line	First line agent plus Risperidone	0.25-0.5 mg/day
Alternative	First line agent plus Haloperidol	0.25-0.5 mg 1-3 times/day

* Consider adding psychotherapy to antidepressant therapy for mildly demented patients. ECT may be considered for severe depression as an alternative when resident does not respond to medication.

· The Expert Consensus Guidelines only list paroxetine and sertraline as first line choices.

Anxiety and Agitation

Patients may present with physical or verbal signs of worry, nervousness, restlessness, irritability, or fear, or physical signs such as nausea and diarrhea.

Agitation associated with anxiety	Medication	Starting dose
Acute Treatment		
First-line*	Trazodone	25 mg/hs
	Lorazepam	0.25-0.5 mg/day
	SSRIs	See page 50
Alternative	Buspirone	5 mg bid
	Oxazepam	7.5-10 mg/day
Long-term Treatment		
First-line*	Trazodone	25 mg/hs
	Buspirone	5 mg bid
Alternative	Fluoxetine	5-10 mg/day
	Paroxetine	5-10 mg/day
	Sertraline	25-50 mg/day

*Note: consider communication treatment strategies (Page 34).

*The Expert Consensus Guidelines only list lorazepam as first line for acute treatment and buspirone as first-line for long-term treatment. Exercise caution when prescribing benzodiazepines in older adults and monitor for disinhibition or exacerbation of agitation/anxiety and other side effects (e.g., postural instability, increased confusion).

Anger and Agitation

Patient may present with general anger associated with activities, aggression directed at caregiver, other residents, family or self such as slapping, pushing, hitting, biting, or verbal outbursts such as accusations, name-calling, obscenities, and threats.

Agitation associated with mild anger, without aggression	Medication	Starting dose
Acute Treatment		
First-line	Trazodone	25 mg hs
Alternative	Lorazepam	0.25-0.5 mg/day
	Oxazepam	7.5-10 mg/day
Long-term Treatment		
First-line	Divalproex	125 mg bid
	Buspirone	5 mg bid
	Fluoxetine	5-10 mg/day
	Paroxetine	5-10 mg/day
	Sertraline	25-50 mg/day
Alternative	Gabapentin	100 mg qd or bid
	Carbamazepine	50 mg qd or bid
	Risperidone	0.25-0.5 mg/day

*Note: Consider all non-medication treatment strategies (page 34).

Agitation associated with severe anger, with aggression	Medication	Starting dose
Acute Treatment		
First-line	Risperidone	0.25-0.5 mg/day
Alternative	Olanzapine	2.5-5 mg/day
	Quetiapine	25 mg bid
	Haloperidol	0.25-0.5 mg 1-3 qd to tid
Long-term Treatment		
First-line	Divalproex	125 mg bid
	Risperidone	0.25-0.5 mg/day
Alternative	Carbamazepine	50-100 mg/day
	Olanzapine	2.5-5 mg/day
	Gabapentin	100 mg qd or bid

*Note: Consider all non-medication treatment strategies (page 34).

Insomnia and Agitation

Patients may present with symptoms that are physical or verbal in nature, such as wandering, frequent use of call bell, morning headaches, frequent daytime naps, and early awakenings.

Agitation associated with insomnia	Medication	Starting dose
Acute Treatment		
First-Line	Nefazodone Trazodone	50 mg bid 25 mg/hs
Alternative	Lorazepam Oxazepam Temazepam Zolpidem Zaleplon	0.25-0.5 mg/hs 7.5-10 mg/hs 7.5 mg/hs 2.5-5 mg/hs 5 mg/hs
Long-term Treatment		
First-Line	Nefazodone Trazodone	50 mg bid 25 mg hs
Alternative	Risperidone Olanzapine Quetiapine	0.25-0.5 mg/day 2.5-5 mg/day 25 mg bid
Note: consider environmental treatment strategies (Page 34).		

The agents are best used after optimizing sleep hygiene in this population. Examples of good sleep hygiene include appropriate lighting, clothing, temperature, minimal caffeine, alcohol, nicotine, or fluids use before bedtime, set bedtime every night, etc. For some residents who do not respond, setting up nighttime activities can help alleviate some of the distress associated with insomnia.

Psychosis and Agitation

Patient may present with impaired memory, visual or auditory hallucinations, delusions, disorganized speech and thought, repetitive activity.

Agitation associated with psychosis	Medication	Starting dose
Acute Treatment		
First-line	Oral: Risperidone Parenteral: Haloperidol	0.25-0.5 mg/day 0.25-0.5 mg 1-3 times/day
Alternative	Oral : Olanzapine or Quetiapine	2.5-5 mg/day 25 mg bid
Long-term Treatment		
First-line	Risperidone Olanzapine Quetiapine	0.25-0.5 mg/day 2.5-5 mg/day 25 mg bid
Alternative	Divalproex Trazodone	125 mg bid 25 mg/hs
*Note: Consider all non-medication treatment strategies (page 34).		

Episodic Agitation (also referred to as "Sundowning")
Patient may present with an increase in wandering, confusion, disorientation that starts in the late afternoon and/or becomes especially severe at night ("sundowning"). These symptoms may result from fatigue, loss of visual cues in the dark, and instability in circadian rhythm.

Medications for Episodic Agitation	Medication	Starting dose
Acute Treatment		
First Line	Divalproex	125 mg bid
	Nefazodone	50 mg bid
	Trazodone	25 mg/day
Alternative	Olanzapine	2.5-5 mg/day
	Quetiapine	25 mg bid
	Risperidone	0.25-5 mg/day
Long -Term Treatment		
First Line	Divalproex	125 mg bid
	Trazodone	25 mg/hs
Alternative	Risperidone	0.25-0.5 mg/day
*Note: Consider environmental treatment strategies (Page 34).		

Agitation due to a Medical Condition
Treatment usually limited to a few days unless a condition is identified justifying long-term treatment. Dosage titration may be required to achieve desired response.

Delirium or agitation due to medical condition	Medication	Starting dose
Acute Treatment		
First-line	Oral: Risperidone	0.25-0.5 mg/day
	Parenteral: Haloperidol	0.25-0.5 mg qd to tid
Alternative	Oral: Olanzapine or	2.5-5 mg/day
	Quetiapine	25 mg bid

Pain and Agitation
Patients with pain may present with grimacing, moaning, crying, calling out, rocking, guarding, sleep changes, and irritability. If pain is suspected, the patient should be assessed for cause, duration, and intensity, and treated with the most appropriate therapy for pain.

Agitation associated with Pain	Medication	Starting dose
Acute and Long-term Treatment		
First-line	Desipramine *†	10-25 mg/day
	Nortriptyline *†	10-25 mg/day
	Trazodone*	25 mg/hs
Alternative	Nefazodone*	50 mg bid
	Fluoxetine	5-10 mg/day
	Paroxetine	5-10 mg/day
	Sertraline	25-50 mg/day
	Citalopram	10-20 mg/day

* May cause additive sedation in residents receiving other sedating medications (e.g., opiate analgesics).
† In residents with a diagnosis of cardiac arrhythmia, these medications are considered to have a high potential for severe adverse outcomes (i.e., may induce arrhythmias).

For more information on managing pain in older persons, see the American Geriatrics Society Clinical Practice Guideline entitled, "The Management of Chronic Pain in Older Persons" available at www.americangeriatrics.org/products/chronic-pain.pdf.

Please see page 48 for determining response to therapy and changes in therapy based on response. Dosing guidelines for elderly residents with dementia are on page 50.

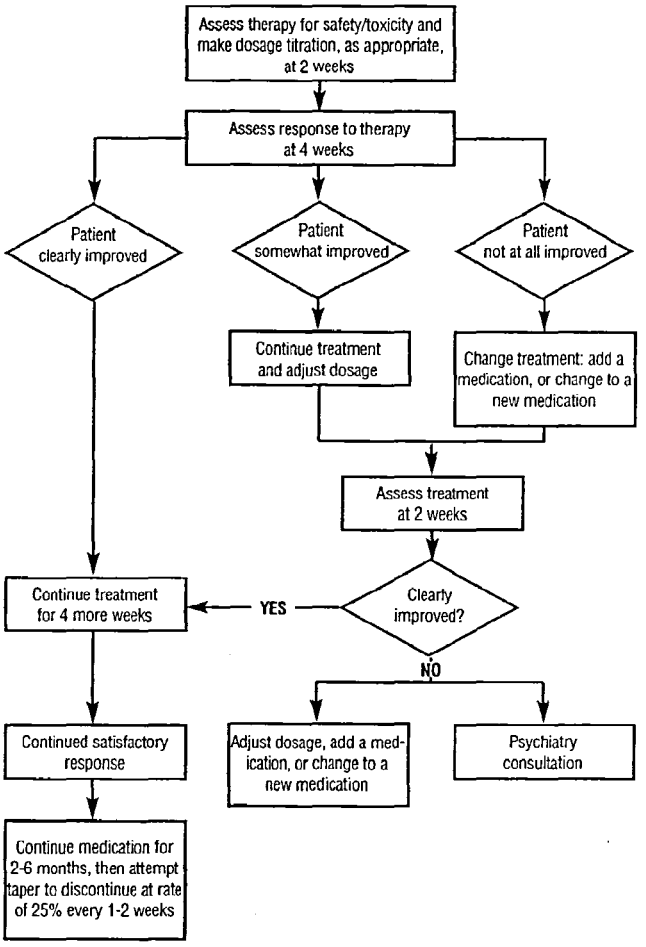
MONITORING RESPONSE TO MEDICATION TREATMENT

In order to determine the response to medication treatment, several issues need to be addressed:

1. Is the appropriate medication being taken and in the appropriate dose? (see page 50) Has the treatment been given for a long enough period to determine response? (see page 48)
2. Have any new environmental issues arisen that may have altered the response to treatment?
3. Have possible medical or medication causes of agitation been evaluated and addressed? (see page 15)
4. Has the appropriate syndrome of agitation been identified? (see page 37 and 38)
5. Have target behaviors been identified and monitored for frequency and intensity to allow you to make an assessment of response to treatment?

After these issues have been addressed, it is time to assess whether the resident has improved on the current medication regimen. A method for determining the appropriate course of action is presented in Algorithm 2 (page 47). A change in dose may be the appropriate response for some residents. Others may require the addition of a medication or a change to different medication. The dosage ranges for the medications included in the syndrome descriptions are noted in "Dosing Guidelines" (page 50). As always when dosing medications in the elderly, the "go slow" plan is suggested. Keep in mind, however, that patients are often started and left on a low dose, or inadvertently titrated to a dose that is too high, and do not receive the maximum benefit. Follow-up is critical and further titration or tapering may be required.

Algorithm 2. Monitoring Response to Therapy



ADJUNCTIVE THERAPY (May also be referred to as "augmentation")

As noted in algorithms 3 and 4, adding a drug may be an appropriate strategy for some residents, especially if a partial response is seen at the maximum titrated dose of first-line therapy.

If Initial Treatment Is		Consider Adding
Conventional antipsychotic	→	Divalproex, trazodone, SSRI
Atypical antipsychotic	→	Divalproex, trazodone, SSRI
Benzodiazepine	→	Atypical antipsychotic, conventional antipsychotic, divalproex, SSRI

As stated previously, exercise caution when prescribing benzodiazepines in older adults. Monitor for disinhibition or exacerbation of agitation/anxiety and side effects. Reconsider the need for a benzodiazepine, especially if the response is not as anticipated.

CHANGING THERAPY BASED ON RESPONSE

If the resident is clearly not improved based on the current medication or combination of medications, as explained in Algorithm 3 (page 47), then a change in therapy and a reassessment of initial diagnosis is indicated. In those who have no response to the initial treatment, a change to another medication is the appropriate strategy. As noted in algorithm 3, the initial treatment dictates which medications are appropriate for subsequent therapy.

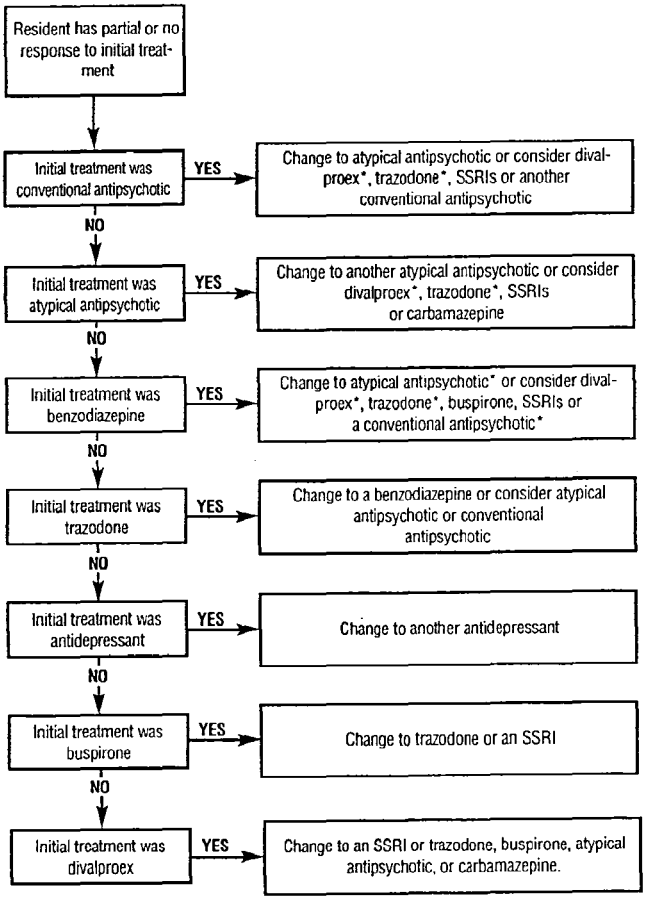
Time to Determine Response to Therapy*

The time periods listed below are guidelines for determining response to medication when used for the treatment of agitation.

Medication/Class	Acute Treatment	Long-term Treatment
Antipsychotic	2-8 days	2-4 weeks
Benzodiazepine	1-6 days	1-3 weeks
Trazodone	7-10 days	3-4 weeks
Buspirone	–	4-6 weeks
Divalproex	–	3-6 weeks
SSRI antidepressant	–	4-6 weeks
Tricyclic antidepressant	–	4-6 weeks

*Assumes an appropriate series of dosage titrations to maximize potential for response and measured from the last dose change.

Algorithm 3. Changing Therapy Based on Response



*May also be considered as adjunctive therapy to initial treatment

DOSING GUIDELINES

Medication	Initial Dose (titration)	Suggested Maximum Dose for the Elderly with dementia
Antidepressants		
Citalopram	10-20 mg/day (10 mg/day)	40 mg/day
Desipramine	10-25 mg/day (10-25 mg/day)	75 mg/day
Fluoxetine	5-10 mg/day (5-10 mg/day)	20-40 mg/day
Mirtazapine	7.5-15 mg daily (7.5 mg daily)	45 mg/day
Nefazodone	50 mg bid (50 mg/day)	200-400 mg/day
Nortriptyline	10-25 mg/day (10-25 mg/day)	75 mg/day
Paroxetine	5-10 mg/day (5-10 mg/day)	20 mg/day
Sertraline	25-50 mg/day (25-50 mg/day)	100-150 mg/day
Trazodone	25 mg/day (25 mg/day in 1-3 doses)	200-300 mg/day
Venlafaxine	25-50 mg/day in 1-2 doses (25 mg/day)	75 mg/day
Mood-stabilizing Agents		
Divalproex	125 mg bid (125 mg bid every 3-5 days)	750-2000 mg/day
Carbamazepine	50-100 mg/day (50-100 mg/day in 1-2 doses)	500-800 mg/day
Gabapentin	100 mg qd or bid	600 mg/day
Antianxiety Agents		
Buspirone	5 mg bid (10 mg/day)	60 mg/day
Lorazepam	0.25-0.5 mg/day (0.5 mg day in 1-2 doses)	2-4 mg/day
Oxazepam	7.5 - 10 mg/day (7.5-10 mg/day)	45-60 mg/day
Antipsychotics		
Loxapine	2.5 mg bid (2.5 mg bid)	10 mg/day
Olanzapine	2.5-5 mg/day (2.5 mg/day)	10 mg/day
Quetiapine	25 mg bid (25 mg/day)	200 mg/day
Risperidone	0.25-0.5 mg/day (0.25-0.5 mg/day)	2 mg/day
Ziprasidone*	20 mg bid (20 mg bid)	40-160 mg/day

**Limited experience in the elderly.*

SIDE EFFECT PROFILES

Antidepressants

	Side Effects					
			CNS	Cardiovascular		
Medication	Antichol-inergic*	Drowsiness	Insomnia/ agitation	Orthostatic hypotension	Arrhyth-mia	Gastro-intestinal
Citalopram	Low	Low	Low	Low	Low	Mod
Desipramine	Low	Low	Low	Mod	Mod	Low
Fluoxetine	Low	Low	Mod	Low	Low	Mod
Mirtazapine	Mod	Mod	Low	Low	Low	Low
Nefazodone	Low	Mod	Low	Low	Low	Low
Nortriptyline	Low	Low	Low	Mod	Mod	Low
Paroxetine	Low	Low	Mod	Low	Low	Mod
Sertraline	Low	Low	Mod	Low	Low	Mod
Trazodone	Low	High	Low	Mod	Low	Low
Venlafaxine	Low	Low	Low	Low	Low	Mod

**Dry mouth, confusion, blurred vision, urinary hesitancy, and constipation.*

Medication	Side Effects
Antianxiety Medications	
Buspirone	dizziness, lightheadedness, drowsiness, loss of consciousness, stomach upset, nausea, vomiting, unusually small pupils
Lorazepam, Oxazepam	sedation, dizziness, weakness, unsteadiness, disorientation, sleep disturbance, agitation
Mood Stabilizers	
Divalproex sodium	Somnolence, nausea, dyspepsia, diarrhea, vomiting, abdominal pain, increased appetite, asthenia, ataxia, dizziness, tremor, weight gain, back pain, alopecia, thrombocytopenia, hepatotoxicity, pancreatitis
Carbamazepine	Leukopenia, drowsiness, aplastic anemia, thrombocytopenia, rash, hepatotoxicity, ataxia, cardiac and thyroid effects
Gabapentin	Sedation, ataxia, confusion

Antipsychotics

Medication	Antichol-inergic*	Side Effect Extrapy-ramidal	Sedation	Orthostatic hypotension
Haloperidol	Low	High	Low	Low
Thioridazine¶	High	Low	High	High
Risperidone	Low	Low-Mod†	Mod	Mod
Olanzapine	Mod	Low	Mod	Low
Quetiapine	Mod	Low	Mod-High	Mod
Ziprasidone¶	Low	Low-Mod	Mod	Low

*Dry mouth, blurred vision, urinary hesitancy, constipation.
† Dose related - low at doses of less than 1 mg/day.
¶ Should not be used with other drugs that prolong the QT interval. The potential exists for any antipsychotic to affect cardiac conduction.

AVAILABLE DOSAGE FORMS

Medication	Available Forms	Usual T1/2
Mood Stabilizing Agents		
Carbamazepine (Tegretol®, Tegretol XR®)	oral suspension: 100 mg/5 ml tablets:100 mg (chewable), 200 mg (Tegretol®) extended release tablets: 100, 200, 400 mg (Tegretol XR®)	25-65 hrs chronic dose: 8-29 hrs (average 12-17 hrs)
Divalproex (Depakote®, Depakote Sprinkle®, Depakote ER®)	sprinkle capsules: 125 mg (Depakote sprinkle®) delayed release tablets: 125 mg, 250, 500 mg (Depakote®) extended release tablets: 500 mg once daily dosing (Depakote ER®)	variable, from 6 to 16 hrs; may be considerably longer in residents with hepatic function impairment, in the elderly. May be considerably shortened in residents receiving hepatic enzyme inducing anticonvulsants
Gabapentin (Neurontin®)	Capsules: 100, 300, 400 mg tablets: 600, 800 mg oral solution: 250 mg/5 ml	5-7 hours with normal renal function; CrCl, <30: 52 hrs

Available Dosage Forms (continued)

Medication	Available forms	Usual T1/2
Selective Serotonin Reuptake Inhibitor (SSRI) Antidepressants		
Citalopram (Celexa®)	tablets: 20, 40 mg oral solution: 10 mg/5 ml	mean about 35 hrs
Fluoxetine (Prozac®) (Prozac® Weekly™)	capsules: 10, 20, 40 mg tablet: 10 mg oral solution: 20 mg/5 ml capsule: 90 mg (Prozac® Weekly™)	4-6 days with long term administration
Mirtazapine (Remeron®) (Remeron® Soltab™)	tablets: 15, 30, 45 mg orally disintegrating tablets: 15, 30, 45 mg (Remeron® Soltab™)	About 20 to 40 hours; significantly longer in males than females
Nefazodone (Serzone®)	tablets: 50, 100, 150, 200, 250 mg	2-4 hrs
Paroxetine (Paxil®)	tablets: 10, 20, 30, 40 mg oral suspension: 10 mg/5 ml	about 24 hrs (range, 3-65 hrs)
Sertraline (Zoloft®)	tablets: 25, 50, 100 mg oral concentrate: 20 mg/ml	24-26 hrs
Venlafaxine (Effexor®, Effexor XR®)	tablets: 25, 37.5, 50, 75, 100 mg (Effexor®) extended release capsules: 37.5, 75, 150 mg (Effexor XR®)	5-11 hrs
Other Antidepressants		
Desipramine (Norpramin®)	tablets: 10, 25, 50, 75, 100, 150 mg	12-24 hrs
Nortriptyline (Pamelor®)	capsules: 10, 25, 50, 75 mg oral solution: 10 mg/5 ml	18-44 hrs
Trazodone (Desyrel®)	tablets: 50, 100, 150, 300 mg	3-9 hrs
Antianxiety Agents (Benzodiazepines and Others)		
Buspirone (Buspar®)	tablets: 5, 10, 15, 30 mg	about 2.5 hrs
Lorazepam (Ativan®)	oral concentrate: 2 mg/ml tablets: 0.5, 1, 2 mg injection: 2 mg/ml, 4 mg/ml	10-20 hrs
Oxazepam (Serax®)	capsules: 10, 15, 30 mg tablets: 15 mg	5-20 hrs

Available Dosage Forms (continued)

Medication	Available forms	Usual T1/2
Atypical Antipsychotics		
Olanzapine (Zyprexa®, Zyprexa® Zydis®)	tablets: 2.5, 5, 7.5, 10, 15, 20 mg (Zyprexa®) orally disintegrating tablets: 5, 10 mg (Zyprexa® Zydis®)	mean 30 hrs range: 21 to 54 hrs
Quetiapine (Seroquel®)	tablets: 25, 100, 200, 300 mg	mean, about 6 hrs
Risperidone (Risperdal®)	oral solution: 1 mg/ml tablets: 0.25, 0.5, 1, 2, 3 , 4 mg	20 to 24 hrs; in residents with renal function impairment, increased elimination half-lives have been reported
Ziprasidone (Geodon™)	capsules: 20, 40, 60, 80 mg	mean, about 7 hours
Conventional Antipsychotics		
Haloperidol (Haldol®)	oral solution: 2 mg/ml tablets: 0.5, 1, 2, 5, 10, 20 mg injection: 5 mg/ml IM or IV (5 mg/min) depot injection: 50 mg/ml, 100 mg/ml	12-36 hrs (21 days for depot inj.)
Loxapine (Loxitane®)	capsules: 5, 10, 25, 50 mg tablets: 5, 10, 25, 50 mg	
Medications for the Treatment of Alzheimer's Disease		
Donepezil (Aricept®)	tablets: 5, 10 mg	70 hours
Galantamine (Reminyl®)	tablets: 4, 8, 12 mg	7 hours
Rivastigmine (Exelon®)	capsules: 1.5, 3, 4.5, 6 mg	1.5 hours

GENERIC/BRAND NAMES OF PSYCHOTHERAPEUTIC MEDICATIONS

Generic	Brand	Manufacturer (phone number; web site)
Mood-stabilizing Agents		
Carbamazepine	Tegretol® Tegretol XR®	Novartis (800-742-2422 www.novartis.com)
Divalproex	Depakote® Depakote Sprinkle® Depakote ER®	Abbott Laboratories (800-633-9110; www.depakote.com)
Gabapentin	Neurontin®	Parke-Davis (800-223-0432; www.pfizer.com)
Antidepressants		
Citalopram	Celexa®	Forest (800-678-1605; www.celexa.com)
Desipramine	Norpramin®	Aventis (800-552-3656; www.aventispharma-us.com)
Fluoxetine	Prozac® Prozac® Weekly™	Eli Lilly and Company (800-545-5979; www.prozac.com)
Mirtazapine	Remeron® Remeron® Soltab™	Organon (800-241-8812; www.remeron.com)
Nefazodone	Serzone®	Bristol-Myers Squibb (800-321-1335; www.serzone.com)
Nortriptyline	Pamelor®	Novartis (800-742-2422 www.novartis.com)
Paroxetine	Paxil®	GlaxoSmithKline (800-366-8900; www.paxil.com)
Sertraline	Zoloft®	Pfizer (888-879-3477; www.zoloft.com)
Trazodone	Desyrel®	Mead Johnson Pharmaceuticals (800-321-1335; www.bms.com)
Venlafaxine	Effexor® Effexor XR®	Wyeth-Ayerst (800-934-5556; www.effexor.com)

GENERIC/BRAND NAMES OF PSYCHOTHERAPEUTIC MEDICATIONS

Generic	Brand	Manufacturer (phone number; web site)
Antianxiety Agents		
Buspirone	Buspar®	Bristol-Myers Squibb (800-321-1335; www.buspar.com)
Lorazepam	Ativan®	Wyeth-Ayerst (800-934-5556; www.wyeth.com)
Oxazepam	Serax®	Wyeth-Ayerst (800-934-5556; www.wyeth.com)
Atypical Antipsychotics		
Olanzapine	Zyprexa® Zyprexa® Zydis®	Eli Lilly (800-545-5979; www.zyprexa.com)
Quetiapine	Seroquel®	AstraZeneca (800-456-3669; ww.seroquel.com)
Risperidone	Risperdal®	Janssen (800-JANSSEN; ww.risperdal.com)
Ziprasidone	Geodon™	Pfizer (888-879-3477; www.pfizer.com)
Typical Antipsychotics		
Haloperidol	Haldol®	Ortho-McNeil (800-682-6532; www.ortho-mcneil.com)
Loxapine	Loxitane®	Watson Pharmaceuticals (www.watsonpharm.com)
Nonbenzodiazepine (pyrazolopyrimidine) Agents		
Zaleplon	Sonata®	Wyeth-Ayerst (800-934-5556; www.sonatatonight.com)

COMMON MEDICATION INTERACTIONS (NOT ALL INCLUSIVE)

Medication	Interacts With	Effect
Paroxetine	barbiturates	paroxetine levels may be decreased
	cimetidine	paroxetine levels may be increased
	phenytoin	levels of either drug may be decreased
	theophylline	theophylline levels may be increased
	tricyclic antidepressants (TCA)	TCA levels may be increased
	monoamine oxidase inhibitors	concurrent use contraindicated
	warfarin	risk for bleeding may be increased
Sertraline	cimetidine	sertraline levels may be increased
	monoamine oxidase inhibitors	concurrent use contraindicated
	TCA	TCA levels may be increased
	warfarin	risk for bleeding may be increased
Venlafaxine	monoamine oxidase inhibitors	concurrent use contraindicated
	cimetidine	venlafaxine levels may be increased
	haloperidol	haloperidol levels may be increased
Citalopram	monoamine oxidase inhibitors	concurrent use contraindicated
Nefazodone	cisapride, monoamine oxidase inhibitors	concurrent use contraindicated

Medication	Interacts With	Effect
Divalproex	warfarin, heparin	risk for bleeding may be increased
	barbiturates	barbiturate levels may be increased
	carbamazepine	divalproex (expressed as valproic acid) levels may be decreased
	felbamate	divalproex (expressed as valproic acid) levels may be increased
	phenytoin	divalproex (expressed as valproic acid) levels may be decreased, phenytoin levels may be increased or decreased
Carbamazepine	warfarin	warfarin effectiveness may be reduced
	phenytoin, divalproex	phenytoin and valproic acid levels may be decreased
	cimetidine, clarithromycin, erythromycin, verapamil, diltiazem, itraconazole, ketoconazole, isoniazid	carbamazepine levels may be increased
	felbamate	carbamazepine levels may be decreased
	Tricyclic antidepressants, typical antipsychotics	CNS depressant effects may be enhanced, may lower seizure threshold, anticholinergic effects may be potentiated
	lamotrigine	lamotrigine levels may be decreased
Buspirone	erythromycin, itraconazole	Cmax and AUC of buspirone increased
	monoamine oxidase inhibitors	elevation in blood pressure

APPENDIX A. GLOSSARY

Activities of daily living (ADLs) - personal care activities necessary for everyday living (e.g., eating, bathing, hygiene, and oral care; dressing and grooming; toileting; and moving between bed and chair)

Advance directives - written legal documents, completed and signed when a person is competent to make necessary decisions about the instructive statements contained in the document. They state the person's choices for future medical care decisions

Agnosia - loss or diminution of the ability to recognize familiar people, objects, or stimuli

Antecedents - the circumstances or conditions that exists before an incident; knowing what happened before a behavioral incident may help in determining what precipitates or triggers the behavior

Aphasia - loss or impairment of the power to use or comprehend words; can affect ability to follow instructions, participate in conversations, or express needs

Apraxia - loss or impairment of the ability to execute complex coordinated movements without impairment of the muscles or senses

Autonomy - making independent choices; for persons with dementia, autonomy relates to respect for rights and dignity of a person, even when his or her abilities to make choices are limited or lost

BPSD - Behavioral and Psychological Symptoms of Dementia; acronym used by the International Psychogeriatric Association (IPA) when discussing behavioral disturbances; symptoms of disturbed perception, thought content, mood, or behavior that frequently occur in patients with dementia

Catastrophic reaction - inability to cope when faced with physical or cognitive deficits and expressed with anxiety, tears, aggressive behavior, swearing, refusal, etc.

Caregiver burden - the physical, emotional, and financial toll of providing care

CMAI - Cohen-Mansfield Agitation Inventory; a list of descriptors of agitated behaviors in 4 catagories.

Cognition - an individual's meaningful thought, knowledge, and intelligence; the ability to know, understand, and make sense of the world

Cognitive abilities - brain functions associated with thinking, knowing and understanding; includes memory, intelligence, learning, skills, problem solving, judgment, comprehension, attention, orientation to time, place, and to one's own self

Cognitive impairment - decreased capacity in one or more cognitive ability

Competence - person's ability to make informed choices as determined by a court of law; a person may be legally incompetent, but may still have capacity to make decisions about things in his or her daily life

Delirium - an acute confusional state, distinct from dementia

Delusion - a false idea, sometimes originating in misinterpretation, but firmly believed and strongly maintained in spite of obvious proof or evidence to the contrary

Dementia - a syndrome of progressive decline in multiple areas (domains) of cognitive function eventually leading to a significant inability to maintain occupational and social performance

Executive function - goal formulation, planning, and execution of plans

Focal neurological signs and symptoms - include extensor plantar response, pseudobulbar palsy, gait abnormalities, exaggeration of deep tendon reflexes, or weakness of an extremity

Frontotemporal dementia - type of dementia less common than AD, vascular dementia, or DLB; typical neuropsychologic features include deficits on frontal system tasks, including verbal fluency, abstraction, and executive function; difficult to distinguish from AD

Hallucination - a sensory experience where a person sees, hears, or feels something or someone that is not audible or visible to anyone else

HCFA Guidelines - Health Care Financing Administration Nursing Home Survey Procedures and Interpretive Guidelines (HCFA name changed to Center for Medicare and Medicaid Services in 2001)

IADLs - instrumental activities of daily living; includes more complex skills required for independent living: shopping, cooking, housekeeping, laundry, using the phone, using transportation, managing money, managing medications

IPA - International Psychogeriatric Association; whose goal is to provide physicians, healthcare professionals, and scientists with information about behavioral and biological aspects of mental health in the elderly, through publications, meetings, and special educational projects

Lewy bodies - abnormal structures that remain after nerve cells in the substantia nigra have died; long recognized in brain stem nuclei of patients with Parkinson's disease

Dementia with Lewy Bodies (DLB) - common cause of dementia; presence of Lewy bodies; defined clinically by the presence of dementia, gait/balance disorder, prominent hallucinations and delusions, sensitivity to traditional antipsychotics, fluctuations in alertness, prominent deficits in attention, profound deficits in visuo-contructional skills, and relative sparing of memory

Limbic system - a group of subcortical structures (e.g., the hypothalamus, the hippocampus, and the amygdala) of the brain that are concerned especially with emotion and motivation

MDS - Minimum data set; OBRA 87 required that HCFA designate a resident assessment instrument (RAI) that includes a minimum data set. HCFA's RAI consists of the MDS, triggers, and 18 Resident Assessment Protocols (RAPs). See www.hcfa.gov/medicaid/mds20 for more information.

NINCDS-ADRDA - Neurological and Communication Disorders and Stroke and the Alzheimer's Disease and Related Disorders Associations

Praxis - the doing or performance of an action, movement, or series of movements.

Sundowning – increase in wandering, confusion, disorientation that starts in the late afternoon and/or becomes especially severe at night.

Tag F329 - HCFA interpretive guidelines section entitled "Unnecessary Drugs"

Tag F330 - HCFA interpretive guidelines section entitled "Antipsychotic Drug Dosage Levels"

APPENDIX B. - THE ZARIT BURDEN INTERVIEW

Score:	Do you feel:
	1. Your relative asks for more help than he/she needs?
	2. Because of the time you spend with your relative that you don't have enough time for yourself?
	3. Stressed between caring for your relative and trying to meet other responsibilities for your family or work?
	4. Embarrassed over your relative's behavior?
	5. Angry when you are around your relative?
	6. Your relative currently affects your relationships with other family members or friends in a negative way?
	7. Afraid of what the future holds for your relative?
	8. Your relative is dependent on you?
	9. Strained when you are around your relative?
	10. Your health has suffered because of your involvement with your relative?
	11. You don't have as much privacy as you would like because of your relative?
	12. Your social life has suffered because you are caring for your relative?
	13. Uncomfortable about having friends over because of your relative?
	14. That your relative seems to expect you to take care of him/her as if you were the only one he/she could depend on?
	15. That you don't have enough money to care for your relative in addition to the rest of your expenses?
	16. That you will be unable to take care of your relative much longer?
	17. You have lost control of your life since your relative's illness?
	18. You wish you could just leave the care of your relative to someone else?
	19. Uncertain about what to do about your relative?
	20. You should be doing something more for your relative?
	21. You could be doing a better job in caring for your relative?
	Overall, how burdened do you feel in caring for your relative (not at all, a little, moderately, quite a bit, extremely)?

Source: Zarit & Zarit, 1983

Score items 1-21 as follows: 0=never, 1=rarely, 2=sometimes, 3=quite frequently, 4=nearly always. Add the scores for the questions.
Score categories are as follows:
0-20: little or no burden
21-40: mild to moderate burden
41-60: moderate to severe burden

Catastrophic reaction - inability to cope when faced with physical or cognitive deficits and expressed with anxiety, tears, aggressive behavior, swearing, refusal, etc.

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	5. Angry when you are around your relative?
	6. Your relative currently affects your relationships with other family members or friends in a negative way?
	7. Afraid of what the future holds for your relative?
	8. Your relative is dependent on you?
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	10. Your health has suffered because of your involvement with your relative?
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	17. You have lost control of your life since your relative's illness?
	18. You wish you could just leave the care of your relative to someone else?
	19. Uncertain about what to do about your relative?
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	21. You could be doing a better job in caring for your relative?
	Overall, how burdened do you feel in caring for your relative (not at all, a little, moderately, quite a bit, extremely)?

Source: Zarit & Zarit, 1983

Score items 1-21 as follows: 0=never, 1=rarely, 2=sometimes, 3=quite frequently, 4=nearly always. Add the scores for the questions.
Score categories are as follows:
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41-60: moderate to severe burden

APPENDIX C. BEHAVIORAL DESCRIPTORS

Cohen-Mansfield Agitation Inventory (CMAI)

Biting
Complaining
Constant unwarranted requests for attention or help
Cursing or verbal aggression
Eating/drinking inappropriate substances
General restlessness
Grabbing onto people
Handling things inappropriately
Hiding things
Hitting (including self)
Hoarding things
Hurting self or others
Inappropriate dress or disrobing
Intentional falling
Kicking
Making faces
Making physical sexual advances
Making verbal sexual advances
Negativism
Pacing, aimless wandering
Performing repetitious mannerisms
Pushing
Repetitive sentences or questions
Scratching
Screaming
Spitting (including at meals)
Strange movements
Strange noises (weird laughter or crying)
Tearing things or destroying property
Throwing things
Trying to get to a different place

Source: Cohen-Mansfield J. Instruction Manual for the Cohen-Mansfield Agitation Inventory (CMAI). Rockville, MD: The Research Institute of the Hebrew Home of Greater Washington. (c) 1986, Jiska Cohen-Mansfield.

Note that each behavior is actually a group of related behaviors. If the person to be rated manifests an inappropriate behavior which is close to a behavior on the CMAI but not spelled out exactly, add it to the category.

The agitated behavior the resident is experiencing can be selected from the CMAI, the Disruptive Behavior Scale (following page), or other appropriate characterization, and recorded on a behavior monitoring form. The frequency should be charted, preferably daily, by nursing staff, or a caregiver, in order to determine the pattern of the behavior, possible antecedents, and the effectiveness of treatment strategies.

Disruptive Behavior Scale Descriptions

Ambulates inappropriately
Bangs objects non-destructively
Bears a weapon
Bites
Damages objects in the environment
Displays inappropriate sexual behavior
Disrobes/exposes self
Does not follow directions
Dresses unsuitably for environment/activity
Eats others' food
Elbows
Excessive motor activity
Hits others
Injures self
Isolates self from others (physically)
Kicks
Loses track of one's own objects
Makes insulting non-obscene gestures
Makes obscene gestures
Makes repetitious noises
Makes sexual advances
Makes threat implying physical harm to self
Makes threats implying physical harm to others
Paces
Physically takes objects from another
Pinches/squeezes
Places inappropriate substances in mouth
Pushes/shoves
Refuses to eat/drink
Repeats phrase(s)/words
Scratches others
Screams/yells
Spits
Spits medication
Spits on others
Strikes a person with an object
Tackles
Takes objects belonging to others
Talks constantly
Throws objects/food
Unkempt personal appearance
Urinates/defecates inappropriately
Uses a weapon
Uses hostile/accusatory language toward others
Uses obscene or profane language

Source: Beck C, Heithoff K, Baldwin B, Cuffel B, O'Sullivan M, Chumbler N. Aging & Mental Health 1997;1:71-79.

Distinguishing between aggression that is offensive or assaultive in nature, and aggression that is defensive or resistive is very important when attempting to reduce or eliminate the behavior.

APPENDIX D. CRITERIA FOR DELIRIUM AND DEMENTIA

Criteria for Delirium, Dementia, and Amnestic and Other Cognitive Disorders Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV Criteria)

Delirium

The disorders in the "Delirium" section share a common symptom presentation of a disturbance in consciousness and cognition, but are differentiated based on etiology: Delirium due to a general medical condition, substance-induced delirium (including medication side effects), and delirium due to multiple etiologies. Delirium not Otherwise Specified is included for presentations in which the clinician is unable to determine a specific etiology for the delirium.

Diagnostic Criteria for 293.0 Delirium due to ... [Indicate the general medical condition]

A. Disturbance of consciousness (i.e., reduced clarity of awareness of the environment) with reduced ability to focus, sustain, or shift attention.
B. A change in cognition (such as memory deficit, disorientation, language disturbance) or the development of a perceptual disturbance that is not better accounted for by a preexisting, established, or evolving dementia.
C. The disturbance develops over a short period of time (usually hours to days) and tends to fluctuate during the course of the day.
D. There is evidence from the history, physical examination, or laboratory findings that the disturbance is caused by the direct physiological consequences of a general medical condition.

Dementia

The disorders in the "Dementia" section are characterized by the development of multiple cognitive deficits (including memory impairment) that are due to the direct physiological effects of a general medical condition, to the persisting effects of a substance, or to multiple etiologies (e.g., the combined effects of cerebrovascular disease and Alzheimer's disease). The diagnostic features listed in the next section pertain to Dementia of the Alzheimer's Type, Vascular Dementia, Dementia Due to HIV Disease, Dementia Due to Head Trauma, Dementia Due to Parkinson's Disease, Dementia Due to Huntington's Disease, Dementia Due to Pick's Disease, Dementia Due to Creutzfeldt-Jakob Disease, Dementia Due to Other General Medical Conditions, Substance-induced Persisting Dementia, and Dementia Due to Multiple Etiologies. Dementia not otherwise specified is included for presentations in which the clinician is unable to determine a specific etiology for the multiple cognitive deficits.

Diagnostic Criteria for Dementia of the Alzheimer's Type

A. The development of multiple cognitive deficits manifested by both
   (1) memory impairment (impaired ability to learn new information or to recall previously learned information).
   (2) one (or more) or the following cognitive disturbances:
      (a) aphasia (language disturbance)
      (b) apraxia (impaired ability to carry out motor activities despite intact motor function)
      (c) agnosia (failure to recognize or identify objects despite intact sensory function)
      (d) disturbance in executive functioning (i.e., planning, organizing, sequencing, abstracting)
B. The cognitive deficits in Criteria A1 and A2 each cause significant impairment in social or occupational functioning and represent a significant decline from a previous level of functioning.
C. The course is characterized by gradual onset and continuing cognitive decline.
D. The cognitive deficits in Criteria A1 and A2 are not due to any of the following:

(1) other central nervous system conditions that cause progressive deficits in memory and cognition (e.g., cerebrovascular disease, Parkinson's disease, Huntington's disease, subdural hematoma, normal-pressure hydrocephalus, brain tumor)
(2) systemic conditions that are known to cause dementia (e.g., hypothyroidism, vitamin B12 or folic acid deficiency, niacin deficiency, hypercalcemia, neurosyphilis, HIV infection)
(3) substance-induced conditions

E. The deficits do not occur exclusively during the course of a delirium.
F. The disturbance is not better accounted for by another Axis I disorder (e.g., major depressive disorder, schizophrenia).

Diagnostic Criteria for 290.4x Vascular Dementia (formerly Multi-infarct Dementia)

A. The development of multiple cognitive deficits manifested by both
(1) memory impairment (impaired ability to learn new information or to recall previously learned information)
(2) one (or more) or the following cognitive disturbances:
(a) aphasia (language disturbance)
(b) apraxia (impaired ability to carry out motor activities despite intact motor function)
(c) agnosia (failure to recognize or identify objects despite intact sensory function)
(d) disturbance in executive functioning (i.e., planning, organizing, sequencing, abstracting)

B. The cognitive deficits in Criteria A1 and A2 each cause significant impairment in social or occupational functioning and represent a significant decline from a previous level of functioning.
C. Focal neurological signs and symptoms (e.g., exaggeration of deep tendon reflexes, extensor plantar response, pseudobulbar palsy, gait abnormalities, weakness of an extremity) or laboratory evidence indicative of cerebrovascular disease (e.g., multiple infarctions involving cortex and underlying white matter) that are judged to be etiologically related to the disturbance.*
D. The deficits do not occur exclusively during the course of delirium.

* These criteria subsequently shown to be too liberal. Should be temporal decline within 3 months of stroke and/or major CNS infarctions (not just one or two lacunal)

Diagnostic Criteria for Dementia Due to Other General Medical Condition

A. The development of multiple cognitive deficits manifested by both
(1) memory impairment (impaired ability to learn new information or to recall previously learned information).
(2) one (or more) or the following cognitive disturbances:
(a) aphasia (language disturbance)
(b) apraxia (impaired ability to carry out motor activities despite intact motor function)
(c) agnosia (failure to recognize or identify objects despite intact sensory function)
(d) disturbance in executive functioning (i.e., planning, organizing, sequencing, abstracting)

B. The cognitive deficits in Criteria A1 and A2 each cause significant impairment in social or occupational functioning and represent a significant decline from a previous level of functioning.
C. There is evidence from the history, physical examination, or laboratory findings that the disturbance is the direct physiological consequence of one of the general medical conditions listed below:
HIV, Head trauma, Parkinson's disease[1] Huntington's disease, Pick's disease, Creutzfeldt-Jakob disease
Other general medical condition not listed above: for example normal-pressure hydrocephalus, hypothyroidism, brain tumor, intracranial radiation.

[1] Subsequent authors have described Lewy body dementia not covered in DSM-IV.

Diagnostic Criteria for 297.1 Delusional Disorder

A. Nonbizarre delusions (i.e., involving situations that occur in real life such as being followed, poisoned, infected, loved at a distance, or deceived by spouse or lover, or having a disease) of at least 1 month's duration.
B. Criterion A for Schizophrenia has never been met. Note: Tactile and olfactory hallucinations may be present in delusional disorder if they are related to the delusional theme.
C. Apart from the impact of the delusions(s) or its ramifications, functioning is not markedly impaired and behavior is not obviously odd or bizarre.

D. If mood episodes have occurred concurrently with delusions, their total duration has been brief relative to the duration of the delusional periods.
E. The disturbance is not due to the direct physiological effects of a substance or general medical condition.

Criteria for Major Depressive Episode

A. Five (or more) or the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.
   (1) Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful).
   (2) Markedly diminished interest or pleasure in all, or almost all, activities nearly every day (as indicated by either subjective account or observation made by others).
   (3) Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month) or a decrease or increase in appetite, nearly every day.
   (4) Insomnia or hypersomnia nearly every day.
   (5) Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
   (6) Fatigue or loss of energy nearly every day.
   (7) Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
   (8) Diminished ability to think or concentrate or indecisiveness nearly every day (either by subjective account or as observed by others)
   (9) Recurrent thoughts of death (not just fear of dying) recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.
B. The symptoms do no meet criteria for a Mixed Episode.
C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The symptoms are not due to the direct physiological effects of a substance (e.g., drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism)
E. The symptoms are not better accounted for by bereavement (i.e., after the loss of a loved one, the symptoms persist for long than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation).

Criteria for Manic Episode

A. A distinct period of abnormally and persistently elevated, expansive, or irritable mood, lasting at least one week (or any duration if hospitalization is necessary).
B. During the period of mood disturbance, three (or more) of the following symptoms have persisted (four if the mood is only irritable) and have been present to a significant degree:
   1) inflated self-esteem or grandiosity
   2) decreased need for sleep (e.g., feels rested after only 3 hours of sleep)
   3) more talkative than usual or pressure to keep talking
   4) flight of ideas or subjective experience that thoughts are racing
   5) distractibility (i.e., attention too easily drawn to unimportant or irrelevant external stimuli)
   6) increase in goal-directed activity (either socially or sexually) or psychomotor agitation
   7) excessive involvement in pleasurable activities that have a high potential for painful consequences (e.g., engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments)
C. The symptoms do not meet criteria for a mixed episode.
D. The mood disturbance is sufficiently severe to cause marked impairment in occupational functioning or in usual social activities or relationships with others, or to necessitate hospitalization to prevent harm to self or others, or there are psychotic features.
E. The symptoms are not due to the physiological effects of a substance (e.g., a drug of abuse, a medication, or other treatment) or a general medical condition. (e.g., hyperthyroidism).

Diagnostic Criteria for 300.02 Generalized Anxiety Disorder

A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).
B. The person finds it difficult to control the worry.
C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months).
   1) Restlessness or feeling keyed up or on edge
   2) Being easily fatigued
   3) Difficulty concentrating or mind going blank
   4) Irritability
   5) Muscle tension
   6) Sleep disturbance (difficulty falling/staying asleep, or unsatisfying sleep)
D. The focus of the anxiety and worry is not confined to an Axis I disorder, e.g., the anxiety or worry is not about having a Panic Attack, being embarrassed in public, being contaminated, being away from home or close relatives, gaining weight, having multiple physical complaints, or having a serious illness, and the anxiety and worry do not occur exclusively during Posttraumatic Stress Disorder.
E. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
F. The disturbance is not due to the direct physiologic effects of a substance, or general medical condition and does not occur exclusively during a Mood Disorder, Psychotic Disorder, or a Pervasive Developmental Disorder.

Diagnostic Criteria for 307.42 Insomnia Related to ...[indicate the Axis I or Axis II Disorder]

A. The predominant complaint is difficulty initiating or maintaining sleep or non-restorative sleep, for at least 1 month that is associated with daytime fatigue or impaired daytime functioning.
B. The sleep disturbance (or daytime sequelae) causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

C. The insomnia is judged to be related to another Axis I or Axis II disorder (e.g., Major Depressive Disorder, Generalized Anxiety Disorder, Adjustment Disorder with Anxiety), but is sufficiently severe to warrant independent clinical attention.
D. The disturbance is not better accounted for by another Sleep disorder (e.g., Narcolepsy, Breathing-Related Sleep Disorder, a Parasomnia).
E. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition.

DSM-IIIR criteria for dementia states, "The essential feature of Dementia is impairment in short- and long- term memory, associated with impairment in abstract thinking, impaired judgment, other disturbances of higher cortical function, or personality change. The disturbance is severe enough to interfere significantly with work or usual social activities or relationships with others. The diagnosis of Dementia is not made if these symptoms occur... in Delirium..."

According to the recent practice parameter by the American Academy of Neurology, the DSM-IIIR definition and the DSM-IV definition are identical, and should be used routinely. (Knopman DS et al. Neurology 2001;56:1142-53).

Criteria for Diagnosis of Probable Alzheimer's Disease From The National Institute of Neurological and Communicative Disorders and Stroke and the Alzheimer's Disease and Related Disorders Associations (NINCDS & ADRDA)

- Dementia established by clinical examination, and documented by a standard test of cognitive function (e.g., Mini-Mental State Examination, Blessed Dementia Scale, etc.), and confirmed by neuropsychological tests
- Significant deficiencies in two or more areas of cognition, for example, word comprehension and task-completion ability
- Progressive deterioration of memory and other cognitive functions.

- No loss of consciousness
- Onset from age 40 to 90, typically after 65
- No other diseases or disorders that could account for the loss of memory and cognition

A Diagnosis of Probable Alzheimer's Disease is Supported By:

- Progressive deterioration of specific cognitive functions: language (aphasia), motor skills (apraxia), and perception (agnosia)
- Impaired activities of daily living and altered patterns of behavior
- A family history of similar problems, particularly if confirmed by neurological testing
- The following laboratory results: Normal cerebrospinal fluid (lumbar puncture test), normal electroencephalogram (EEG) test of brain activity, evidence of cerebral atrophy in a series of CT scans.

Other Features Consistent With Alzheimer's Disease

- Plateaus in the course of illness progression
- CT findings normal for the person's age
- Associated symptoms, including: depression, insomnia, incontinence, delusions, hallucinations, weight loss, sex problems, and significant verbal, emotional, and physical outbursts
- Other neurological abnormalities, especially in advanced disease including: increased muscle tone and a shuffling gait

Features That Decrease the Likelihood of Alzheimer's Disease:

- Sudden onset
- Such early symptoms as: seizures, gait problems, and loss of vision and coordination

Adapted from McKhann, G. et al. "Clinical Diagnosis of Alzheimer's Disease: Report of the NINCDS/ADRDA Work Group, Dept. of HHS Task Force on Alzheimer's Disease," Neurology 1984; 34:939.

APPENDIX E.
NURSING HOME SURVEYOR GUIDELINES

Section F330

(i) Residents who have not used antipsychotic drugs are not given these drugs unless antipsychotic drug therapy is necessary to treat a specific condition as diagnosed and documented in the clinical record; and

Antipsychotic drugs should not be used unless the clinical record documents that the resident has one or more of the following "specific conditions."

1. Schizophrenia
2. Schizo-affective disorder
3. Delusional disorder
4. Psychotic mood disorders (including mania and depression with psychotic features)
5. Acute psychotic episodes
6. Brief reactive psychosis
7. Schizophreniform disorders
8. Atypical psychosis
9. Tourette's disorder
10. Huntington's disease
11. Organic mental syndrome (now called delirium, dementia, and amnestic and other cognitive disorders by DSM-IV) with associated psychotic and/or agitated behaviors
    a. Which have been quantitatively and objectively documented. This documentation is necessary to assist in: (1) assessing whether the resident's behavioral symptoms are in need of some form of intervention, (2) determining whether the behavioral symptom is transitory or permanent, (3) relating the behavioral symptom to other events in the resident's life in order to learn about potential causes (e.g., death in the family, not adhering to the resident's customary daily routine, (4) ruling out environmental causes such as excessive heat, noise, overcrowding, (5) ruling out medical causes such as pain,

constipation, fever, infection. For a more complete description of behavioral monitoring charts and how they can assist in the differential diagnosis of behavioral symptoms see the RAP on behavior problems (soon to be known as behavioral symptoms); and

b. Which are persistent, and
c. Which are not caused by preventable reasons; and
d. Which are causing the residents to:
   (1) Present a danger to himself/herself or to others,
   (2) Continuously scream, yell, or pace if these specific behaviors cause impairment in functional capacity (to evaluate functional capacity, see S483.25. a) through k) and MDS sections B through P; MDS 2.0 sections B through P), or
   (3) Experience psychotic symptoms (hallucinations, paranoia, delusions) not exhibited as dangerous behaviors or as screaming, yelling, or pacing but which cause the resident distress or impairment in functional capacity; or

12. Short-term (7 days) symptomatic treatment of hiccups, nausea, vomiting, or pruritus. Residents with nausea and vomiting secondary to cancer or cancer chemotherapy can be treated for longer periods of time.

Antipsychotics should not be used if one or more of the following is/are the only indication;

- Wandering
- Poor self care
- Restlessness
- Impaired memory
- Anxiety
- Depression (without psychotic features)
- Insomnia
- Unsociability
- Indifference to surroundings
- Fidgeting
- Nervousness
- Uncooperativeness
- Agitated behaviors which do not represent danger to the resident or to others

Guidelines: S483.25(1)(2)(ii)

Residents must, unless clinically contraindicated, have gradual dose reductions of the antipsychotic drug. The gradual dose reduction should be under close supervision. If the gradual dose reduction is causing an adverse effect on the resident and the gradual dose reduction is discontinued, documentation of this decision and the reasons for it should be included in the clinical record. Gradual dose reductions consist of tapering the resident's daily dose to determine if the resident's symptoms can be controlled by a lower dose or to determine if the dose can be eliminated together.

Section F331

(ii) Residents who use antipsychotic drugs receive gradual dose reductions, and behavioral interventions, unless clinically contraindicated, in an effort to discontinue these drugs.

"Behavioral intervention" means modification of the resident's behavior or the resident's environment, including staff approaches to care, to the largest degree possible to accommodate the resident's behavioral symptoms.

"Clinically contraindicated" means that a resident NEED NOT UNDERGO a "gradual dose reduction" or "behavioral intervention" IF:

1. The resident has a "specific condition" (as listed under one through ten on page P-185 and has a history of recurrence of psychotic symptoms (e.g., delusions, hallucinations), which have been stabilized with a maintenance dose of an antipsychotic drug without incurring significant side effects);

2. The resident has organic mental syndrome (now called "Delirium, Dementia, and Amnestic and other Cognitive Disorders" by DSM-IV) and has had a gradual dose reduction attempted twice in one year and that attempt resulted in the return of symptoms for which the

drug was prescribed to a degree that a cessation in the gradual dose reduction, or a return to previous dose reduction was necessary; or

3. The resident's physician provides a justification why the continued use of the drug and the dose of the drug is clinically appropriate. This justification should include: (a) a diagnosis, but not simply a diagnostic label or code, but the description of symptoms; (b) a discussion of the differential psychiatric and medical diagnosis (e.g., why the resident's behavioral symptom is thought to be a result of a dementia with associated psychosis and/or agitated behaviors, and not the result of an unrecognized painful medical condition of a psychosocial or environmental stressor); (c) a description of the justification for the choice of a particular treatment, or treatments; and (d) a discussion of why the present dose is necessary to manage the symptoms of the resident. This information need not necessarily be in the physician's progress notes, but must be a part of the resident's clinical record.

Procedures: §483.25(1)(2)(i) and (ii)

In determining whether an antipsychotic drug is without a specific condition or that gradual dose reduction and behavioral interventions have not been performed, allow the facility an opportunity to justify why using the drug outside of the guidelines is in the best interest of the resident.

The facility can refer to a prescriber's (or appropriately trained health professional's) justification as a valid justification for the use of a drug. It may not justify the use of a drug, its dose, its duration, solely on the basis that "it was ordered" without supportive information.

If the survey team determines that there is a deficiency in the use of antipsychotics, cite the facility under either the unnecessary drug regulation or the antipsychotic drug regulation, but not both quality care tags.

APPENDIX F. GERIATRIC DEPRESSION SCALE

GERIATRIC DEPRESSION SCALE – SHORT FORM

1.	Are you basically satisfied with your life?	❍ Yes ❍ No*
2.	Have you dropped many of your activities and interests?	❍ Yes* ❍ No
3.	Do you feel that your life is empty?	❍ Yes* ❍ No
4.	Do you often get bored?	❍ Yes* ❍ No
5.	Are you in good spirits most of the time?	❍ Yes ❍ No*
6.	Are you afraid that something bad is going to happen to you?	❍ Yes* ❍ No
7.	Do you feel happy most of the time?	❍ Yes ❍ No*
8.	Do you often feel helpless?	❍ Yes* ❍ No
9.	Do you prefer to stay at home rather than going out and doing new things?	❍ Yes* ❍ No
10.	Do you feel you have more problems with memory than most people?	❍ Yes* ❍ No
11.	Do you think it is wonderful to be alive now?	❍ Yes ❍ No*
12.	Do you feel pretty worthless the way you are now?	❍ Yes* ❍ No
13.	Do you feel full of energy?	❍ Yes ❍ No*
14.	Do you feel that your situation is helpless?	❍ Yes* ❍ No
15.	Do you think that most people are better off than you are?	❍ Yes* ❍ No

* Each starred answer counts 1 point.
Scores of more than 5 points is suggestive of depression and warrant follow-up.

Source: Sheikh JI, Yesavage JA. Int Psychogeriatrics 1991; 3: 23-28.

APPENDIX G. RESOURCES

Administration on Aging
Public Affairs Office
Department of Health and Human Services
330 Independence Ave. SW.
Washington, DC 20201
(202) 401-4543
www.aoa.dhhs.gov

Family Caregiver Alliance
690 Market Street, Ste. 600
San Francisco, CA 94104
(415) 434-3388
www.caregiver.org

The National Institute of Neurological Disorders and Stroke
31 Center Drive, MSC 2540
Bldg. 31, Room 8A-06
National Institutes of Health
Bethesda, MD 20892-2540
(301) 496-5751; (800) 352-9424 (recording)
www.ninds.nih.gov/index.htm

Alzheimer's Disease Education and Referral (ADEAR) Center,
National Institute on Aging
P.O. Box 8250
Silver Spring, MD 20907-8250
(301) 495-3311; (800) 438-4380
www.alzheimers.org

National Family Caregivers Association
(800) 896-3650
www.nfcacares.org

Alzheimer's Association
919 Michigan Avenue, Ste. 1100
Chicago, IL 60611-1676
(800) 272-3900
www.alz.org

National Eldercare Locator
(800) 677-1116
www.aoa.dhhs.gov/elderpage/locator.html

National Center on Elder Abuse (NCEA)
1225 I Street, N.W., Ste. 725
Washington, DC20005
202-898-2586
www.elderabusecenter.org

American Association of Retired Persons (AARP)
601 E St., NW
Washington, DC 20049
800-424-3410
www.aarp.org

National Association of State Units on Aging (NASUA)
1225 I Street NW, Suite 725
Washington, DC 20005
(202) 898-2578
www.nasua.org

International Psychogeriatric Association (IPA)
550 Frontage Road, Ste 2820
Northfield, IL 60093
(847) 784-1701
www.ipa-online.org

American Geriatrics Society
The Empire State Building
350 Fifth Ave., Ste. 801
New York, NY 10118
(212) 308-1414
www.americangeriatrics.org

APPENDIX H. READING LIST

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POST-TEST REVIEW

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After completing the CME quiz and adding your personal information, please photocopy the answer sheet and evaluation form, and return it to Medical Outcomes Management, Inc, 132 Central Street, Suite 106, Foxborough, MA 02035. Credit can be awarded for submissions received through April 30, 2001. Thank you for participating in this program.

CME Post-Test

1. Which of the following accounts for the most cases of irreversible dementia in North America?
   a. Alzheimer's dementia
   b. Vascular dementia
   c. Lewy body dementia
   d. Parkinson's disease

2. Risk factors for dementia include:
   a. APOE4 gene
   b. Down's syndrome
   c. increasing age
   d. head trauma
   e. all of the above

3. Delirium differs from dementia in all of the following characteristics except:
   a. acute onset
   b. fluctuating course
   c. disorganized thinking
   d. altered consciousness
   e. none of the above

4. Worsening cognition and behavior are found in nursing facility residents with dementia when they experience a superimposed delirium. Which of the following are possible causes of delirium?
   a. infection
   b. hypoxia
   c. dehydration
   d. antipsychotic medications
   e. all of the above

5. Many of the problems faced by family caregivers in caring for individuals with dementia affect professional caregivers as well.
   a. true
   b. false

6. Which of the following behaviors are commonly observed in residents with dementia?
   a. verbal aggression
   b. physical aggression
   c. sexually inappropriate behavior
   d. all of the above
   e. none of the above
   f. a and b only

7. Underlying medical conditions should always be managed prior to initiating long-term medication therapy for dementia-related behavioral symptoms.
   a. true
   b. false

8. Which of the following statements is true regarding behavioral symptoms related to dementia?
   a. nonmedication methods of management should always be tried and can be very effective in minimizing behavioral symptoms.
   b. medication should always be tried first, as this will many times alleviate the symptoms.
   c. a combination of nonmedication approaches and medication is usually not very helpful.
   d. the living environment has little impact on the behavior of persons with dementia.

9. Which of the following non-medication interventions have been found to be useful in residents with dementia and behavioral symptoms?
   a. exercise program
   b. reduce excess stimulation
   c. eliminate caffeine and alcohol
   d. toileting schedule
   e. all of the above

10. When evaluating an agitated individual, it is critical to thoroughly describe the behavioral symptoms, so that appropriate treatment can be chosen.
   a. true
   b. false

11. The cholinesterase inhibitors are approved by the FDA for:
   a. vascular dementia
   b. mild to moderate dementia
   c. only severe dementia
   d. delirium associated with medical conditions
   e. All dementia

12. The atypical antipsychotics risperidone, quetiapine, and olanzapine, have what advantages over traditional antipsychotics?:
   a. lower sedation
   b. no extrapyramidal effects
   c. more effective in treating psychotic disorders
   d. all of the above
   e. none of the above

13. Possible side effects of benzodiazepines that may limit use in treating aggressive behavior include:
   a. confusion
   b. ataxia
   c. sedation
   d. memory disturbance
   e. all of the above

14. The class of antidepressants considered the safest for use in the elderly is:
   a. selective serotonin reuptake inhibitors
   b. tricyclic antidepressants
   c. monamine oxidase inhibitors
   d. heterocyclic antidepressants

15. For depressed residents with agitation but without psychotic symptoms, which of the following is an appropriate medication option for treatment (in addition to nonmedication interventions):
   a. SSRIs
   b. haloperidol
   c. lorazepam
   d. olanzapine

16. For a resident presenting with symptoms of mild anger, aggression aimed at other residents, and verbal aggression, possible long-term medication management may include:
   a. IM haloperidol
   b. divalproex
   c. buspirone
   d. sertraline
   e. b, c, or d
   f. none of the above

17. When encountering a resident with aggressive behavior and psychosis not adequately responsive to an atypical antipsychotic, adding another medication may be an appropriate strategy.
    a. true
    b. false

18. For some medications and some residents, determining response to therapy:
    a. is not needed. All patients respond to medication.
    b. may take up to 6 weeks to show full response.
    c. should be assessed at 1 week because response will be clear for all residents by then
    d. none of the above

19. The suggested upper limit for risperidone in the elderly is:
    a. 2 mg/day
    b. 0.5 mg/day
    c. 4 mg/day
    d. None of the above

20. The interaction between carbamazepine with clarithromycin may result in an increase in carbamazepine serum concentration.
    a. true
    b. false

21. Based on the HCFA long term care guidelines, antipsychotics should not be used if one or more of the following is/are the only indication:
    a. wandering
    b. anxiety
    c. insomnia
    d. agitated behaviors which do not represent danger to the resident or others.
    e. all of the above

22. Important resources for family members regarding care of a person with dementia include:
    a. the Alzheimer's Association
    b. the Administration on Aging
    c. the National Institute on Aging
    d. the Federal Bureau of Investigation
    e. a, b, and c

23. Aphasia, the loss or impairment of the power to use or comprehend words, may affect an individual's ability to:
    a. follow instructions
    b. participate in conversations
    c. express needs
    d. all of the above

24. A delusion is a false idea, sometimes originating in misinterpretation, but firmly believed and strongly maintained in spite of obvious proof or evidence to the contrary. To differentiate, a hallucination is a sensory experience where a person sees, hears, or feels something or someone that is not audible or visible to anyone else.
    a. true
    b. false

25. According to the HCFA Long Term Care Guidelines, antipsychotic drugs should not be used unless the clinical record documents that the resident has one or more specific conditions. All of the following conditions are included except:
    a. schizophrenia
    b. delusional disorder
    c. Tourette's disorder
    d. depression
    e. Huntington's disease

Release date: May 1, 2001
Expiration date: April 30, 2004

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ANSWER SHEET
Circle the correct answer for each question

Question							Question						
1	a	b	c	d			14	a	b	c	d		
2	a	b	c	d	e		15	a	b	c	d		
3	a	b	c	d	e		16	a	b	c	d	e	f
4	a	b	c	d	e		17	a	b				
5	a	b					18	a	b	c	d		
6	a	b	c	d	e	f	19	a	b	c	d		
7	a	b					20	a	b				
8	a	b	c	d			21	a	b	c	d	e	
9	a	b	c	d	e		22	a	b	c	d	e	
10	a	b					23	a	b	c	d		
11	a	b	c	d	e		24	a	b				
12	a	b	c	d	e		25	a	b	c	d	e	
13	a	b	c	d	e								

EVALUATION FORM
After reviewing this monograph and completing the post-test, to what degree are you able to do the following?
Scale: 1=Low, 5=High

1 2 3 4 5 Understand the basic pathophysiology of Alzheimer's disease and other dementias

1 2 3 4 5 Recognize dementia and understand diagnosis and staging of Alzheimer's disease and other dementias

1 2 3 4 5 Review the role of non-medication interventions as first-line management for behavioral symptoms of Alzheimer's disease and other dementias

1 2 3 4 5 Discuss the current pharmacotherapy of Alzheimer's disease, other dementias, and behavioral symptoms associated with dementia

1 2 3 4 5 Present a treatment plan for patients with newly diagnosed dementia or on-going behavioral and cognitive symptoms of dementia

Commercial Bias
Was the monograph free of commercial bias? ○ Yes ○ No
If no, indicate specific examples _____

Were brand names of drugs used in monograph? ○ Yes ○ No
If yes, indicate specific examples: _____

Other than acknowledgements, were pharmaceutical companies cited in monograph?
○ Yes ○ No
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What topics would you like to see in future programs? _____

How can we improve this monograph? _____

_____

_____

Would you recommend this monograph to a colleague? ○ Yes ○ No

How will the information from this monograph change your perspective in using these agents?

_____

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General comments on this monograph. _____

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