
Except for advancing age, a family history of AD, and cardiovascular disease, no environmental or health-behavioral factors strikingly increase the risk of AD. Currently, no laboratory markers exist for pre-symptomatic testing for dementia or for its major subtypes so we must wait until the individual becomes symptomatic before treatment. Considerable confusion exists about what constitutes normal memory and normal forgetfulness in late life. However, the consistent story from neuropsychology is that typical aging per se does not degrade memory – disease does. Most patients with evolving dementia never acknowledge that they have a memory dysfunction therefore, a knowledgeable informant should be interviewed. Also, a mental status examination should be performed. Two key principles underlie the concept of dementia. First, the affected person has experienced a decline from some previously higher level of functioning and second, the dementia significantly interferes with work or usual social activities. Elderly persons often have comorbid conditions that limit their independence and may obscure emerging cognitive decline. Cognitive dysfunction that is demonstrable on mental status examination or neuropsychological assessment is the other mainstay of the definition of dementia. Diagnostic criteria in the DSM-IV can be applied reliably. A person with a deficit in at least one cognitive domain (usually recent memory) but who appears to function independently in daily affairs is referred to have MCI. The likelihood of a person with MCI developing dementia is 5-10 times that of cognitively healthy individuals. These authors suggest that deficits in a single cognitive domain can occur in the absence of impairment in daily functioning and may not result in AD. Syndromic overlap is common in dementia, dementia and depression being one example. Alzheimer disease unassociated with any other pathology makes up 50-60% of most unbiased autopsy samples and up to 80% if AD occurs in conjunction with other pathologic lesions. Pervasive forgetfulness is the most common manifestation of typical AD. Several biomarkers for AD have been tested, but none reach the threshold of accuracy and utility to be recommended for routine use. Almost all patients require 24-hour care as they enter the severe stage. Seventeen percent of patients with dementia have dementia with cerebrovascular disease with sudden onset, although nondominant hemispheric lesions or other lesions might escape immediate attention. Median survival rate is 3 years. Dementia is now recognized as a frequent accompaniment of Parkinson disease (dementia with
Lewy bodies). Motor manifestation includes the gait and balance problems typical of parkinsonism, along with rigidity and bradykinesia and experience visual hallucinations. Frontotemporal dementia has been difficult to diagnose. Presentation is often dramatic, suggesting a psychiatric disorder. The principle manifestations are changes in personality, ways of behaving, and judgment with lose of interest in prior pastimes and empathy for the feelings of others. The articles also cover progressive aphasia (language), Creutzfeldt-Jakob disease and nonvasculitic autoimmune inflammatory meningoencephalopathies. To diagnose dementia, a physician must obtain a thorough patient history and assess daily functions (e.g., shopping, recalling events, preparing meals, remembering appointments.), administer and interpret mental status examinations (MMSE with consideration for education, occupational background and English as a first language), and perform a neurological examination. The examining physician should interview a knowledgeable informant. The authors suggest the use of Short Test of Mental Status (Mayo Clinic) to detect mild dementia. In practice, the two most common neurological examination patterns that are important to recognize are those of parkinsonism (extrapyramidal signs) and cerebrovascular disease (lateralized or focal neurologic signs that could be due to stroke). A flowchart is provided involving four diagnostic choices and a table outlines laboratory diagnostic evaluation for dementia.


Citing the three practice parameters published in 2001 by the Quality Standard Subcommittee of the American Academy of Neurology (AAN), Dr. Morris reviews the topics of diagnosis of dementia, risk factors, and biomarkers, mild cognitive impairment, and treatment advances for AD and other dementias. Diagnosis of dementia, based on AAN recommendations (NINCDS-ADRDA), remains a clinical diagnosis requiring collateral informants and clinical assessment methods. While accurate, many physicians lack time or opportunity to carefully interview an informant although this information can be highly sensitive for early-stage dementia. It is not surprising that 50% of patients with dementia go undiagnosed. Mixed dementia (e.g., AD coexisting with cerebrovascular pathology, cortical Lewy bodies, or both) complicates the diagnosis. Risk factors (increasing age, fewer year of education, the e4 allele of apolipoprotein E) are associated with an increase risk of AD, whereas (use of nosteroidal anti-inflammatory drugs [NSAIDs], consumption of wine and coffee, and regular physical activity) are associated with a decrease risk of AD. However, there is uncertainty as to how far the risk factor may be causal. The article lists many of the risk factor for AD and candidate biomakers under investigation. Combining PET with radiolabelled molecular imaging probes has the potential to identify the molecular pathology of AD. Imaging in AD will play an increasingly important role in the detection, diagnosis, and prognosis of dementing illnesses and may serve as an antecedent biomarker. Individual with mild cognitive impairment (MCI) progress to clinically recognized AD at an accelerated rate compared with normal adults, progression to more overt AD occurs at the rate that depends respectively to the severity of the cognitive impairment at baseline. Amnestic MCI individuals also share other features with AD patients suggesting most cases of amnestic MCI very probably already have AD pathology and that MCI stage may represent the earliest clinical expression of AD. Collateral sources generally are more sensitive and
accurate in detecting very mild but progressive cognitive impairment that heralds eventual dementia than are the self-reported memory complaints of the patient. Patients with MCI are recommended to be followed for cognitive and functional decline using general cognitive screening instruments such as the MMSE, neuropsychological batteries, and interview-based methods that use an informed collateral source. Although the effect size is small, and AD eventually progresses despite treatment, measurable benefits in cognitive, behavior, and functioning occurs with the use cholinesterase inhibitor drugs when extended over at least a year. Economic models indicate the cholinesterase inhibitors use may prolong the period before the patient requires long-term care resulting in overall savings. Two compounds with antioxidant properties, alpha-tocopheral (vitamin E; 1000 IU twice daily) and selegiline (5 mg twice daily), each delay time to clinical markers of dementia progression in moderately demented AD patients, although the combination of the two drugs yielded no additive effect and neither drug improved cognitive function. There is little or no current evidence to support the use of anti-inflammatory drugs, estrogen, or ginkgo biloba as either treatment or prevention for AD. Very preliminary data suggest that moderately demented AD patients on donepezil in combination with menatmine (an antiglutamateric agent) have improved cognitive performance in comparison with those on donepezil alone. Initial reports suggest that the cholinesterase inhibitors may have efficacy in dementia for Lewy bodies and in vascular dementia perhaps owing to high frequency of concomitant AD in these conditions. While lipid lowering agents may reduce the risk of dementia by lowering the risk of vascular brain insult, no controlled data are available at present to support their use in the therapy for AD. The pathologic process of AD culminates in synaptic and neuronal loss with corresponding reductions in the neurotransmitters characterizing the involved neural systems. The most consistent neurotransmitter deficit in AD has been for acetylcholine. The cholinergic hypothesis states that selective degeneration of basal forebrain cholinergic neurons in AD result in a cerebral cholinergic deficit that underlies the characteristic memory impairment. The cholinergic hypothesis serves as the bases for drug development in AD. Increasing evidence suggests that the conversion of the AB peptide to amyloid is central to the pathogenesis of AD. Both immunohistochemical and biochemical studies suggest that amyloid deposits occur very early in the AD process, preceding the appearance of neocortical neurofibrillary tangles. The mechanisms involved in AB accumulation and deposition are therapeutic targets in AD. The most common non-AD disorders are dementia with Lewy bodies, frontotemporal dementia, and vascular dementia. Each appear to be etiologically heterogeneous, and their clinical phenotypes often share features with dementia of the AD type.


Numerous epidemiological studies have documented the accelerated rate of progression of dementia and AD in mild cognitive impairment (MCI). An algorithm is presented to assist the clinician in classification of subjects suggesting the diagnosis of MCI can be made similar to the clinical diagnosis of AD and other dementias. Mayo AD Research initial criteria included; a) memory complaints, preferably corroborated by informant, b) objective memory impairment for age, c) relatively preserved general cognition for age, d) essentially intact activities of daily living, and e) not demented. As MCI research has
advanced, there is recognition that a second type, called md-MCI involves various
degrees of impairment in multiple cognitive domains such as language, executive
function and visuospatial skills. The third, and least common type is single nonmemory
domain MCI in which the person has an impairment in a single nonmemory cognitive
domain. There can be multiple aetiologies for each subtype. As a result, the criteria are
refined suggesting a new proposed diagnostic scheme included in the algorithm.
Perterson notes variability in rating scales, normal reference standards and sources of
subjects. He concludes, MCI represents a useful clinical entity that most practitioners
recognize in clinical practice and notes that while cognitive test and functional measures
are very useful, ultimately, the final determination relies on the clinician’s judgment.

Predictors of nursing facility admission: A 12-year epidemiological study in
A 12-year prospective longitudinal study of 1,147 adults over age 65 to identify
predictors of institutionalization based on age, sex, education, marital status, living
arrangement, ability to perform IADLs, depressive symptoms, number of prescription
medications, self report social support, hospitalization during the previous year, and
cognitive functioning. Of the 156 adults institutionalized significant predictors of
institutionalization in rank order included dementia, older age, IADL disability,
worse/less social support and number of prescription medications. The relative risk of
institutionalization associated with dementia was five times greater in older adult with
dementia than older adults without dementia.

Alzheimer’s disease and related dementias increase costs of comorbidities in
Medical costs and utilization for Alzheimer’s disease and related dementias (ADRD)
patients based on ICD-9 code were compared with those of an age/sex matched set of
controlled subjects in a large group practice model Medicare health plan. Prevalence rate
for ADRD was 4.4% with a mean annual cost of $16,127.00 for ADRD patients
compared to $5,770.00 for control patients. ADRD patients showed a higher level of
utilization for all measures (e.g., hospital days, hospital admissions) except physician
office visits and had more comorbid conditions (e.g., cerebrovascular disease, congestive
heart failure, chronic pulmonary disease, diabetes). Results indicate managed care costs
for person with ADRD are nearly three times higher than those of age/sex-matched
control subjects. After adjusting for comorbidities, age, and sex, costs for ADRD patients
were still 1.6 times those of the control group. Higher impatient (2.5 times more hospital
admission and longer stays by two days) than the control group and skilled care facility
costs accounted for 75% of the higher cost for ADRD patients.

(2004). The relationship between a dementia diagnosis, chronic illness,
Current evidence reveals a higher level of comorbidity in person with dementia than in
person without dementia, a change in the former view that persons with dementia are
healthier than age-matched individuals. Management of these comorbid conditions is more challenging in the presence of dementia because clinicians need to coordinate medical care through a surrogate. A cross-sectional analysis of 1-year (1999) of claims data (5% of random sample of fee-for-service Medicare) comparing usage by persons with claims for dementia with usage by those without dementia was conducted to determine whether dementia increased medical expenditures, the probability of hospitalization, and potentially preventable hospitalization. Person with dementia were three times more likely to be diagnosed with more than four chronic conditions. Total mean (average) annual cost for persons with dementia was $9,922 compared to $2,995 for persons without dementia with higher cost associated with inpatient hospital, outpatient hospital, skilled care nursing home, home health and physician/supplies. Hospital expenditures accounted for 54% of the total expenditures ($5,335) compared to 51% ($1,523) of total expenditures for person without dementia. The presence of dementia increased the probability of hospitalization (OR = 1.96-4.08), and hospitalizations that are potentially preventable (OR = 2.40). Dementia, as identified by Medicare claims, was associated with more than three times the expenditures, three times the odds of hospitalization, and more than twice the odds of potential preventable hospitalization, as well as, having a higher burden of chronic illness than person without dementia. Potential reasons for increased hospitalization included high rates of traumas or falls, high rates of infections and pressure wounds and the need for palliative care. Another reason provided was the complexity of and failure to manage the person’s chronic illnesses.

Fillit, H., Knopman, D., Cummings, J., & Appel, F., (1999). Opportunities for improving managed care for individuals with dementia: Part 1 and Part 2 – A framework for care. American Journal of Managed Care, 5, 309-324. In a 2-part article the authors stress the need to for managed care organizations to become aware that dementia is a manageable chronic illness that proactive management of can reduce cost, excessive service utilization and improve quality of life. On average caregivers of patients waited 1.7 years between the onset of symptoms and consultation with a physician about memory concerns. Among patients who subsequently proved to have dementia, the correct diagnosis was conveyed to caregivers in only 30% of cases during the early phase and more than 1 year elapsed until the correct diagnosis was made. Data indicates patients with dementia have considerably higher utilization than patients with other chronic diseases and have per capita expenditures of $7682 annually, compared to $4524 for individuals with no mental-health conditions. The ways in which dementia drives excess cost are not fully understood. However, the majority of patients with dementia have comorbid medical conditions that often require medication, hospitalization and skilled-care nursing. Noncompliance with medication and other therapies is a problem, delirium is present at times and 75% eventually reside in nursing homes and remain there for about three years. The authors recommend a disease management approach, a proactive way to deliver healthcare that integrates care across the continuum, enhances the traditional physician paradigm with efforts to reduce the frequency or severity of exacerbations of chronic diseases and employs non-physician practitioners specializing in the disease. These programs should include population-based screening efforts, the development of practice guidelines, the use of case managers,
education of caregivers, case managers, and physicians in issues such as availability of community services, patient/caregiver self-management techniques, and the latest development in efficacious treatment, and monitoring of care through quality assurance activities. The authors further outline specific areas that could be addresses in each area of a dementia program to make it effective.


Caregivers (N=608) of community-residing persons with dementia were surveyed about their need for and use of community services. One-third (203) agreed to be referred to the Alzheimer’s Association, AA, (Other research suggest 1/3 of people will seek help). The average respondent was a Caucasian, 60-year old, with some college education, daughter of a parent with dementia. Four significant predictors (p = .05) of willingness to be referred to the AA; (1) high school education or less, (2) unmarried caregivers, (3) felt more services would make it easier to provide care, and (4) caregiver who believed more services would help ensure the person with dementia remained at home. The study recommends local AA chapters target outreach efforts to caregivers with less formal educations, pay particular attention to helping unmarried caregivers, and focus referral efforts that help the person with dementia remain at home.


MN participated in a national initiative to improve the identification and diagnosis of dementia, and the ongoing management of care for persons and their families. Outcomes from the Chronic Care Networks for Alzheimer’s Disease Initiative (CCN/AD) suggests: a) physician, nurses and other health-care providers reported increased dementia care skills, b) willingness to diagnosis dementia was tied the ability to “do” something for the patient (e.g., pharmacotherapy and referral to quality resources), and c) CCN/AD tools for identification, diagnosis and management of dementia had a positive impact on care for people with cognitive impairment and their families and the tools were quick and easy to use. In addition, the partnerships created between the health systems and the Alzheimer’s Association (AA) improved care and satisfaction for people with dementia and their family caregivers. The AA provided as least one service to 87% of the referred families and on average five services contacts were made. Families who used AA services reported greater satisfaction with care and less strain. CCN/AD tools are available at [www.nccconline.org](http://www.nccconline.org) or [www.alzmdak.org](http://www.alzmdak.org).


Based on the findings that attempts to change physicians’ practices through traditional continuing medical education have been largely ineffective, condition-specific interventions were designed to change medical practices. These multicomponent practice-change efforts include (a) efficient collection of condition-specific clinical data, (b) medical record prompts to encourage performance of essential care processes, (c) patient
education material and activation of the patient’s role in follow-up and, (d) physician 
decision support and physician education. Application of these four change efforts were 
employed in the Assessing Care of the Vulnerable Elders (ACOVE-2) project designed to 
 improve primary care for three geriatric conditions (falls, urinary incontinence, and/or 
cognitive impairment/dementia) for outpatients 75 years and older. Phone screening was 
completed prior to clinic visit and screening results were placed on the patient’s chart at 
the time of the visit with additional data attached if screening was positive for one or 
more study conditions. Patient information was made available at the time of the clinic 
visit including referral to community-based services and follow-up sheets to prompt 
both the patient and the physician. Lastly, a three-hour educational group session led by a 
geriatrician that demonstrated practical approaches to each of the three conditions within 
the context of a busy practice without adding time to the visit which was considered 
essential. No follow up data was gathered to evaluate the success of this project.

July 20-32.
While moderate-to-severe dementia is easier to recognize, milder dementia is often not 
detected and should be to allow families to deal successful with this chronic progressive 
disease. Patients often do not recognize or acknowledge symptoms in themselves and 
therefore do not report complaints, making an independent informant who knows the 
patient critical in the evaluation process. The mental-status evaluation is one of the most 
important parts of the medical evaluation and needs to be administered without coaxing 
or coaching. The history and physical are also critical to complete with an informant who 
knows the patient present. The article list several examples of information that should be 
gathered (memory loss, change in former level of functioning, changes in gait and 
movement, medications, family history of dementia, vision and hearing changes and 
facial symmetry etc.) noting that driving concerns and the behavioral changes, which 
often is the reason help is being sought, also need to be addressed and to establish an 
etiology. The author recommends the patient be present with the significant other during 
the examination to keep an open relationship and to not shield the patient for the 
diagnosis. Also, the article lists ways to test neurological functioning throughout the 
examination by ways of instructing the patient.

preexisting cognitive impairment in older intensive care unit patients: Use of 
A descriptive statistical study of the use of proxy tools, the Modified Blessed Dementia 
Rating Scale (MBDRS) and the Informant Questionnaire on Cognitive Decline in the 
Elderly (IQCODE) to screen for preexisting cognitive impairment among patients 
admitted to an intensive care unit. Preexisting cognitive impairment was found to exist 
among 42 % of the patients and both proxy tools were equally effective at identifying the 
preexisting cognitive impairment.

Clinical Guidelines/Practice Parameter

issues for people with Alzheimer’s disease and other dementias. Disease Manage Health Outcomes 10, 693-706.

These authors summarized guidelines and consensus statement for the ongoing identification, diagnosis, and ongoing management of dementias published between 1981 and 2001 and present a comprehensive model of care, Chronic Care Networks for Alzheimer’s Disease (CCN/AD; tools available at www.ncconline.org and www.alzmndak.org). AD is the most common cause of dementia with a survival range of 3-9 years. Substantial agreement among the guidelines include;

- Identification: Train healthcare professionals to note signs and symptoms of dementia and use of mental status test with person/family complaints of cognitive functioning. Use structured informant interviews to gather collateral information.
- Diagnosis: Patient interview for presenting problem and medical history, neurological exam, assess cognitive status, lab test.
- Ongoing Management: Six areas are identified: cognitive, behavioral and psychiatric symptoms, depression, safety, family caregivers and community services. The article provides specific recommendations in each area.

The authors identify two extensive disease management protocols developed by managed care organizations: Los Angeles Alz. Assoc. and Kaiser Permanente of So. CA. and Kaiser Permanente of Ohio and Cleveland Alz Assos and the National Alz. Assoc and National Chronic Care Consortium. Basis for the challenges associated with the management of AD are noted: AD is often not recognized or diagnosed, intentional ongoing medical management is not provided, limited referrals are made to existing community-based care due to lack of knowledge of their existence, coexisting diseases complicates care resulting in poor outcomes, and studies suggest AD increase medical cost.

American Academy of Neurology Summary for Points of Care: Detection, diagnosis and management of dementia. See www.ana.com

The guidelines conclude that Alzheimer’s disease should be detected and treated early. Patients with Mild Cognitive Impairment should be identified and monitored for progression to AD. The clinical criteria for diagnosing AD (DSM-IV and NINCDS-ADRDA) are reliable and valid. Although AD is not curable, there are treatment options available today that can manage symptoms, improve quality of life, and delay time to nursing home placement. Guidelines outline evidence-based treatment options.


Comparing the relative rates of crashes and other performance measurements of driving ability in the populations studied, driving was found to be mildly impaired in those drivers with probable Alzheimer’s disease at a severity of Clinical Dementia Rating (CDR) 0.5. (roughly MMSE equivalent of 25) This impairment was no greater than that tolerated in other segments of the driving population (e.g., divers age 16 to 21 and those driving under the influence of alcohol at a blood alcohol concentration < 0.08 %. Drivers with AD at a severity of CDR 1 (roughly MMSE equivalent of < 25 but > than 19) were found to pose a significant traffic safety problem for both crashes and for driving performance measurement. Patients and their families should be told that AD with a
severity of CDR 1 or greater have a substantially increased accident rate and driving performance errors, and therefore, discontinuation of driving should be strongly considered. Patients and families should be told that patients with possible AD with a severity of CDR 0.5 pose a significant traffic safety problem when compared to other elderly drivers. Referral of the patient for a driving performance evaluation by a qualified examiner should be considered. Because of the high likelihood of progression to a severity CDR 1 within a few years, clinicians should reassess dementia severity and appropriateness of continued driving every 6 months.


Drivers with dementia are at a greater risk for getting lost and having crashes than other older drivers. Despite family member concerns, many AD drivers and their families have not made plans for driving cessation. The topic is one of the most emotionaly and psychologically difficult issues for the patient and the family. Clinicians need to actively engage patients and families in discussions about planning for driving cessation early on and repeatedly while also being sensitive to the loss of dignity and self-esteem often associated with driving.


The U. S. Prevention Services Task Force concludes that the evidence is insufficient to recommend for or against routine screening for dementia in older adults. The USPSTF found good evidence that some screening test have good sensitivity but only fair specificity in detecting cognitive impairment. Screening tests can detect undiagnosed dementia. Screening in primary care settings could double the number of patients receiving the diagnosis with dementia. The DSM-IV criteria are the widely accepted as the standard for diagnosis. More than 50% of people with dementia have never been diagnosed by a physician. There is fair to good evidence that several drug therapies have beneficial effect on cognitive function, the equivalent to delaying the natural progression of Alzheimer’s disease from 2-7 months, but the evidence of their beneficial effects on instrumental activities of daily living is mixed, with the benefit being small, at best. The evidence is weak that drugs other than cholinesterase inhibitors have important benefits for person with Alzheimer disease, some evidence that vitamin E delayed institutionalization. Intensive multicomponent caregiver interventions may delay nursing home placement of patients who have caregivers (between 11-19 months). Clinical Considerations included; (a) the MMSE is the best-studied instrument for screening for cognitive impairment, accuracy enhanced when age and education are considered. Tests that assess functional limitations rather than cognitive impairment, such as the Functional Activities Questionnaire (FAQ) can detect dementia with sensitivity and specificity comparable to that of the MMSE. (b) early recognition of cognitive impairment is helpful
to treatment and life planning decisions and (c) although good evidence does not support routine screening of patients whom cognitive impairment is not otherwise suspected, clinicians should assess cognitive function whenever cognitive impairment or deterioration is suspected, based on direct observation, patient report, or concerns raised by the family member, friends and caretakers. This article provides scientific evidence regarding epidemiology and clinical consequences, accuracy and reliability of screening tests, effectiveness of early detection, pharmacological interventions, and potential adverse effects of screening and recommendations of others. No high-quality study has been done to verify, or refute the potential benefits of the earlier knowledge of a dementia diagnosis that might improve patient and family planning nor the adverse impact of (denial of long-term care insurance or acceptance into a retirement community). Surveys of older patients and caregivers showed most persons want to be told of the dementia diagnosis.


Guidelines for diagnosis include; (a) differentiating dementia from normal aging, (b) criteria for making a diagnosis and (c) medications that can cause cognitive impairment. Additional guides include; (a) co-morbidity and dementia, (b) issues in family caregiving, and (c) safety issues. A 47-page “Practical Guide for the Primary Care Physician on the Diagnosis, Management and Treatment of Dementia” can be received from the American Medical Association of Aging and Community Health, 515 N State St. Chicago, IL 60610.

**American Family Physicians**


It is becoming increasingly important to diagnose dementia early. Although screening all elderly patients for dementia is not warranted, being alert to cognitive and functional decline is a prudent way of recognizing dementia in its early stages. It may be suspected if memory deficits are exhibited during the medical history and physical examination. Information from the patient’s family members and caregivers may also point to signs of dementia. Distinguishing among age-related cognitive decline, mild cognitive impairment and Alzheimer’s disease may be difficult and requires evaluation of cognitive and functional status. Careful medical evaluation to exclude treatable causes of cognitive impairment is important. Patients with early dementia may benefit from formal neuropsychological testing to aid in medical and social decision-making. Follow-up by the patient’s family physician is appropriate for most patients. However, a sub-specialist may be helpful in the diagnosis and management of patients with dementia with an unusual presentation of following an atypical course. Clinical presentation is defined by the DSM IV criteria. Median scores on the MMSE by age and education level is provided along with the laboratory tests for evaluation of dementia and the types of questions that should be asked during the physical examination. A decision tree is provided for diagnostic work up along with differential diagnosis for dementia, age-related cognitive decline and mild cognitive disorder are provided. Referral is recommended for less common dementia including Pick’s disease, dementia of the
frontal lobe type, dementia with Lewy bodies, progressive supranuclear palsy, multiple-system atrophy, and normal-pressure hydrocephalus. Treatment and management guidelines are listed. Screening instruments included: Signs and symptoms that may indicate the need for evaluation for dementia, MMSE with scores by age and education level, and table of laboratory test for evaluation of dementia.

The growth of Managed Medicare has increased the number of older persons receiving medical care from family physicians. These guideline offer practical guidance in directing the care of patients after diagnosis including assessment of daily functions, cognition, comorbid medical conditions, disorders of mood and emotion, caregiver status, and reassessment. The following screening tools are included in the article: Instrumental Activities of Daily Living, Neuropsychiatric Inventory Questionnaire, and Caregiver Burden Scale.

Treatment plans should be developed ASAP after diagnosis encompassing patient/family preferences. Treatment plans for person with Alzheimer’s disease include cholinesterase inhibitor therapy, management of comorbid conditions, treatment of behavioral symptoms and mood disorder, provisions of support and resources for patient and caregiver, and response to state-mandated reporting for driving impairment and elder abuse. The primary caregiver can be ally in care management. Patients’ symptoms and care needs change as the disease progresses. Throughout the course of the disease routine use of community resources such as social service agencies and the Alzheimer’s Association is recommended. Cholinesterase inhibitors are described, as well as, nonpharmacologic intervention for reducing behavioral disturbances and pharmacologic treatment for behavior and mood disorders. Patient and caregiver education and support resources are provided. Lastly, the physician’s role in helping the family make decisions such as advance directive and terminal care is provided. Physicians are encouraged to respond to situation where one’s ability to drive safety is impaired. However, the state of California requires the reporting of persons with Alzheimer’s disease to public officials. Elder abuse reporting is mandatory in MN.

Drugs that inhibit the degradation of acetylcholine within synapses are the mainstay of drug therapy for Alzheimer’s disease. Donepezil (Aricept), rivastigmine (Exelon), and galantamine (Reminyl) are safe but have potential cholinergic side effects including nausea, anorexia, diarrhea, vomiting, and weight loss. They are often self-limiting and can be minimized by slow drug titration. Acetylcholinesterase inhibitors appear to be
effective (20% show one year delay in cognitive deterioration) but evidence is less robust in practice than in clinical trails and in delaying nursing home placement and improving functional ability and behaviors. The benefits of vitamin E or selegiline (Eldepryl; monoamine oxidase inhibitor) have been suggested but supporting evidence is not strong. Periodic measurement of cognitive (MMSE) and functional ability (FAQ) is recommended and discontinuing acetylcholinesterase inhibitors when dementia is severe. Although estrogen may have a neuroprotective effect, it does not appear to improve cognitions or functions in patients with AD, several studies of anti-inflammatory drugs do not show a benefit for treatment, and while ginkgo biloba shows modest therapeutic benefit there are reports of serious side effects and pharmaceutical-quality ginkgo is not available in the U. S. Acetylcholinesterase inhibitors do not have to be withdrawn if a patients develops behavior disturbances. Treatment with nonpharmacologic strategies or even psychototropic medication may be required.

**Kaiser Permanente Care Management Institute: Guidelines for the Diagnosis and Management of Dementia Care (Revised 1/2004).** For more information contact: Kaiser Permanente Care Management Institute, 1 Kaiser Plaza, Oakland CA 94612 Kaiser Permanente, Care Management Institute (2004). Guidelines for the Diagnosis and Management of Dementia Care.

Provides guidelines for prevention, screening, diagnosis, pharmacological treatment for dementia and management of behaviors, non-pharmacological management of behaviors and special considerations (driving and caregiving).

**Guidelines For Alzheimer’s Disease Management (2002). California, Dept of Health, Alzheimer’s Disease and Related Disorder Association, Inc. Los Angeles Chapter & the CA Geriatric Education Center. ([www.caalz.org](http://www.caalz.org))**

A California workgroup developed guidelines for the ongoing management of people with AD intended for primary care practitioners, including physicians, nurse practitioners, physician assistants, and other professionals providing primary care to AD patients and their families. The guidelines comprises basic recommendations for care and treatment, including treatment of the condition and its symptoms, and coexisting medical conditions and related issues that primary care practitioners will most likely refer to others to address (e.g., social worker or Alzheimer’s Association). Assessment, treatment, patient and caregiver education and support, and reporting requirement are address in detail and summary sheet format. Copies can be downloaded from the web site [www.caalz.org](http://www.caalz.org).


Recognizing the “clinical guideline” movement and the modest use of guidelines, the CA Department of Health and the Los Angeles Chapter of the Alzheimer’s Association developed dissemination and implementation strategies and plans for the AD Guidelines being developed at the same time. Strategies include quality improvement and educational recommendations, implications for dissemination and implementation,
dissemination strategies and plans and implementation strategies and plans and evaluation approaches and methods and lastly funding opportunities.


Using the diagnostic and treatment guidelines supported by social work care managers a collaborative project between a managed care organization and the Alzheimer’s Association resulted in improved quality of care for persons with dementia. Using consensus-based diagnostic practice guidelines developed by Kaiser Permanente practitioners and the Alzheimer’s Association’s Medical and Scientific Advisory Board were implemented as part of a dementia care project to improve the quality of care for people with dementia. Results show a significant increase in the use of the guidelines, recording of the MMSE scores, supported lab tests, referrals to the Alzheimer’s Association, assessment of ADLs, decision making capacity, depression, and wondering potential. Physicians who attended workshops conducted by the project were more likely to report that they recalled the diagnostic guidelines for dementia and all surveyed indicated increased satisfaction with the treatment and support provided by the guidelines. There was also a significant increase in satisfaction among the caregivers. The two specially trained social workers where identified as clearly an asset to the quality dementia care when quality indicators of post-diagnostic management were examined. These social workers were the professionals who evaluated patients most often for ADLs, risk of wondering and referral to the Alzheimer’s Association. They also provided some assessment for depression and decision-making capacity.


These authors suggest physicians reserve therapy/screening for those with sufficient life expectancy to realize benefit, engaging a more palliative care model. Besides the diagnosis of dementia and treatment of the associated behavior and end-of-life issues, primary physician must respond to non-dementia illnesses. Besides the caveats of avoiding drugs that may affect cognition or induce delirium and procedures that may be assaults for patients who have little insight into the purpose and intentions when in advance stages of dementia, physicians need to address treatment of patients with less severe stages of dementia in the following ways. Physicians need to evaluate the patient’s decision-making capacity via a conversation with attention to his or her ability to communicate choices, understand relevant information, appreciate the situation and its consequences. When decision-making capacity is impaired, the physician needs to turn to a surrogate decision maker. Patients most likely will have problems correctly following instructions and may benefit from written instruction when in the milder stages of dementia. Patients may have problems communicating early adverse effects of treatment. Coaching caregivers to look for behavioral changes (decreased appetite or increased restlessness) or asking about each potential adverse reaction may be helpful. Physician needs to seek clarification of responses and use nonverbal communication such as pointing at the body part. The primary ethical imperative involves beneficence
(maximizing the patient’s good) and non-maleficence (minimizing harms) as the physician assesses potential benefits and burdens of treatment.

**Geldmacher, D. S., Provenzano, G., McRae, T. Master, V. & Ieni, J. R. (2003).**


An observational follow-up study found the use of donepezil of 5 mg per day or more for at least 9-12 months was associated with significant delays in nursing home placement of the 763 persons followed; 21.4 months for the first dementia related nursing home placement and 17.5 months for permanent nursing home placement.

**Carpenter, B. & Dave, J. (2004).**


Sensitivity to individual differences may promote an optimal approach to disclosure of a dementia diagnosis. Research in the area of dementia disclosure is sparse and often contradictory. Reasons to inform the patient include respecting patient autonomy, offering an explanation for the symptoms and allowing the patient to participate in the care decisions. Reasons to not inform the patient included limited treatment options, the patient’s limitations, the possibility of increased anxiety, and affect on insurance coverage. Reasons to inform the family member included offering an explanation of the symptoms, and allowing them to plan and seek support. Reasons to not inform the family member included breaking the patient’s confidentiality, potential for abuse of the patient, and family member’s anxiety and reaction. Provider’s reasons to inform included respecting patient autonomy, promoting trust, and avoiding potential liability. Reasons not to inform included therapeutic privilege, avoiding burdening the patient, professional futility, and avoidance of uncomfortable conversations. Despite practice guidelines in favor of disclosure, studies indicated 20-54% of the practitioners did not disclose the dementia diagnosis. Factors influencing disclosure included the severity of dementia with less disclosure to persons with severe dementia, the professional’s belief about the benefits of early detection and disclosure (34% saw no benefit to early diagnosis and 66% foresaw negative consequences for making an early diagnosis) and diagnostic certainty, patient’s wish to be told, and patient’s emotional stability. Family surveys confirm 1/3 to 2/3 of families did not know the diagnosis of dementia even though 92% said they would want to know. There is also inconsistency in disclosure of and process of disclosure of the diagnosis to the patient and/or the family caregiver. The authors concluded sensitivity to individual differences may promote an optimal approach to disclosure of a dementia diagnosis.

**Gaugler, J. E., Kane, R. L., Kane, R. A., & Newcomer, R. (2005).**

*Early community-Based service utilization and its effects on institutionalization in dementia caregiver. The Gerontologist, 45*, 177-185.

These researchers reviewed the utilization of community-based long-term-care services early in the caregiver’s role for persons with dementia to determine delayed nursing home placement. Their review found that caregivers who used in-home services earlier in
their care giving were more likely to delay institutionalization. Adult day services and respite care also delayed out-of-home placement.

**Gwyther, L. (2005). Family care and Alzheimer’s disease: What do we know? What can we do? NC Medical Journal, 66, 39-44.** Research indicates that 30% of persons with moderate to severe dementia live alone in the community, often relying upon close supervision by family members. Family caregiving is associated with physical and mental-health decline. Family caregivers most at risk to negative outcomes include those who co-reside and provide a high level of direct care, especially low-income or low-educated females over the age of 50 who perceive no choice in the decision to provide care or frail older wives. Often families lack health literacy, knowledge of or access to information and support, or limited health capacity. Families turn to physicians as gatekeepers. This article identifies transition times during which physicians can be helpful; diagnosis, changes in driving, safety about living alone, hospitalization and surgery, use of medications, changes in primary caregiver, need for constant supervision, out of home placement, and palliative/hospice care. Using these transitions or decision points to focus education can be most effective. Key messages for family caregivers and other assessment strategies are identified.


Most patients with dementia are cared for in primary care clinics that are seldom designed to provide comprehensive care. This article describes nonpharmacologic protocols for the management of AD that are administered as part of a successful care-management intervention program coordinated by a geriatric nurse practitioner. They included educational guidelines and protocols to treat common behavioral disturbances and monthly psychodecational support groups. A complete protocol package may be obtained by contact Mary Guerriero Austrom, Ph.D. at maustrom@iupui.edu.

**Desai, A. K., & Grossberg, G.T. (2001). Recognition and management of behavioral disturbances in dementia. Journal of Clinical Psychiatry, 3, 93-109.** Early recognition and prompt treatment of behavioral disturbances improves quality of life of patients and caregivers and reducing healthcare costs. Ninety percent of persons with dementia are expected to develop significant behavioral problems. Premorbid personality problems are correlated with higher incidence of behavioral disturbances. The author provides an algorithm for the management of behavioral disturbances and provides management strategies for loneliness, boredom, psychosis, depression, anxiety, sundowning, screaming, sleep problems, wandering/pacing, physical aggression, self-injurious behavior, hoarding, resistiveness, sexual disinhibition and delirium. Secondary causes include pain, comorbid medical conditions, drug-induced, and environmental causes. A four-step approach to management is provided; (a) ensure patient is not in imminent danger to self or others, (b) assess for delirium, comorbid illness, environmental factors, or drugs causes, (c) treat any psychiatric syndromes, and (d)
formulate and implement a behavioral plan to identify the antecedents and modify the consequences. The authors further review nonpharmacologic and pharmacologic interventions.

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