COURSE #99090 — 3 CONTACT HOURS/CREDITS Release Date: 09/01/24 Expiration Date: 08/31/27

Alzheimer Disease and Dementias: Early Detection and Care Planning

HOW TO RECEIVE CREDIT

- Read the enclosed course.
- Complete the questions at the end of the course.
- Return your completed Evaluation to NetCE by mail or fax, or complete online at www.NetCE.com. (If you are a physician or Florida nurse, please return the included Answer Sheet/Evaluation.) Your postmark or facsimile date will be used as your completion date.
- Receive your Certificate(s) of Completion by mail, fax, or email.

Faculty

Candace Pierce, DNP, RN, CNE, COI, is a nurse leader committed to ensuring nurses are well-prepared and offered abundant opportunities and resources to enhance their skills acquisition and confidence at the bedside. With 15 years in nursing, she has worked at the bedside, in management, and in nursing education. She has demonstrated expertise and scholarship in innovation and design thinking in health care and education, and collaborative efforts within and outside of healthcare. Scholarship endeavors include funded grants, publications, and presentations. As a leader, Dr. Pierce strives to empower others to create and deploy ideas and embrace their professional roles as leaders, change agents, and problem solvers. In her position as the lead nurse planner for Elite, she works as a project engineer with subject matter experts to develop evidence-based best practices in continuing education for nurses and other healthcare professionals.

Faculty Disclosure

Contributing faculty, Candace Pierce, DNP, RN, CNE, COI, has disclosed no relevant financial relationship with any product manufacturer or service provider mentioned.

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The division planners and director have disclosed no relevant financial relationship with any product manufacturer or service provider mentioned.

Audience

This course is designed for physicians, PAs, and nursing professionals who are involved in the care of patients who have or may develop dementia.

Accreditations & Approvals

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INTERPROFESSIONAL CONTINUING EDUCATION

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A complete Works Cited list begins on page 17.

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NetCE designates this continuing education activity for 3 ANCC contact hours.

This activity was planned by and for the healthcare team, and learners will receive 3 Interprofessional Continuing Education (IPCE) credits for learning and change.

NetCE designates this continuing education activity for 3.6 hours for Alabama nurses.

AACN Synergy CERP Category A.

Individual State Nursing Approvals

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Special Approvals

This activity is designed to comply with the requirements of California Assembly Bill 1195, Cultural and Linguistic Competency, and California Assembly Bill 241, Implicit Bias.

About the Sponsor

The purpose of NetCE is to provide challenging curricula to assist healthcare professionals to raise their levels of expertise while fulfilling their continuing education requirements, thereby improving the quality of healthcare.

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Disclosure Statement

It is the policy of NetCE not to accept commercial support. Furthermore, commercial interests are prohibited from distributing or providing access to this activity to learners.

Course Objective

The purpose of this course is to provide healthcare professionals with a clear understanding of Alzheimer disease and other dementias, including early signs, stages, and progression, in order to support effective early diagnosis, care planning, and management that improves patients' quality of life.

Learning Objectives

Upon completion of this course, you should be able to:

1. Identify the warning signs and symptoms of Alzheimer disease and other forms of dementia.
2. Recognize the importance of early detection and diagnosis of dementia.
3. Recognize a variety of tools to assess a patient's cognition.
4. Identify cognitive assessment and care planning billing codes.
5. Identify current treatments available for patients with dementia.
6. Apply appropriate communication techniques for discussing memory concerns with patients and their caregivers.

Sections marked with this symbol include evidence-based practice recommendations. The level of evidence and/or strength of recommendation, as provided by the evidence-based source, are also included so you may determine the validity or relevance of the information. These sections may be used in conjunction with the course material for better application to your daily practice.

INTRODUCTION

Dementia, including Alzheimer disease, is a significant and growing concern globally, particularly among the elderly population. According to the World Health Organization (WHO), more than 55 million people worldwide are living with dementia, and this number is expected to rise to 88 million by 2030 and 139 million by 2050 [1]. Alzheimer disease is the most common form of dementia, accounting for 60% to 70% of cases. In the United States alone, the Alzheimer's Association reports that more than 6 million Americans older than 65 years of age are living with Alzheimer disease, a number projected to reach nearly 13 million by 2050 [2; 3]. This condition not only leads to a progressive decline in cognitive function, severely impacting memory, thinking, and social abilities, but also places a substantial emotional, physical, and financial burden on families and caregivers. Early detection and diagnosis are crucial for managing symptoms, planning for the future, and improving the quality of life for those affected. Understanding the different types of dementia, their symptoms, and the importance of early intervention is essential for providing compassionate and effective care to those living with these conditions.

OVERVIEW OF DEMENTIA

Dementia is a term for a decline in cognitive function severe enough to interfere with daily life and activities [4; 5]. It includes symptoms affecting memory, thinking, and social abilities, making everyday tasks challenging. Dementia is a syndrome resulting from various conditions, such as Alzheimer disease, vascular dementia, Lewy body dementia, and frontotemporal dementia. Each type has unique symptoms and progression, but common signs include memory loss, difficulty with problem-solving, impaired judgment, and changes in behavior and personality (***Table 1***).

IMPACT ON PATIENTS AND FAMILIES

The impact of Alzheimer disease and related dementias (ADRDs) extends beyond the individual, profoundly affecting families and caregivers emotionally, physically, and financially. Patients with dementia experience a progressive decline in cognitive function, leading to increased dependency on caregivers for daily activities. This results in significant stress, burnout, and a need for support among caregivers [4].

The economic burden of dementia is substantial. In the United States, the total cost of care for individuals with Alzheimer disease and other dementias was estimated at $321 billion in 2022, with projections reaching nearly $1 trillion by 2050 due to rising prevalence and healthcare costs. These costs include medical care, long-term care, and the value of unpaid caregiving by family members [4].

Early detection and diagnosis of dementia are crucial for managing symptoms, planning for the future, and improving the quality of life for those affected. Understanding the prevalence and impact of dementia is essential for developing effective strategies and support systems to address this growing public health challenge.

ALZHEIMER DISEASE

Alzheimer disease is a progressive neurodegenerative disorder affecting older adults, leading to significant cognitive decline that interferes with daily life. It is the most common form of dementia, accounting for 60% to 70% of cases [1]. The disease is marked by amyloid plaques and tau tangles in the brain, disrupting neuronal communication and causing cell death. Early symptoms include memory loss, difficulty in planning and problem-solving, and challenges with language and spatial awareness. As it progresses, individuals may experience severe memory impairment, confusion, mood changes, and difficulty with basic activities [12].

TYPES OF DEMENTIA		
Disease	**Symptoms**	**Attributes/Causation**
Parkinson disease	Poor executive function Trouble walking, unstable gait Impaired responsiveness to visual cues Speech impairment Impaired affect/modified facial expression Decreased eye blinking Depression Confusion Insomnia Rigidity/freezing, tremor Alzheimer disease traits (memory loss, confusion, and language changes)	Basal ganglia cells die, causing dopamine levels to drop Progressive, chronic disease Personalized treatments for symptom relief Exercise can improve symptoms and may protect the brain No cure
Frontotemporal dementia (FTD)	Frontal lobe brain cell damage due to nerve damage Diagnosis confirmed postmortem Drastic change in behavior and personality Aggression Loss of speech Loss of decision-making ability Loses sense of self-awareness Patient will become completely dependent	Frontal lobe controls language and personality Also known as Pick disease No cure
Lewy body dementia (LBD)	Progressive dementia Affects ability to think, reason, and process information Impaired movement, mood, and behavior Parkinsonian-like rigidity Hallucinations, paranoia	1.4 million people living with this disease Due to unusual deposits of alpha-synuclein protein on brain Initial diagnosis may be mental/psychological health No cure
Vascular dementia	Problems with reasoning Impacted judgement, memory, and other thought processes Symptoms vary by location of actual constriction	Caused by constriction or breakdown of blood vessels in and around the brain Can be the result of a stroke(s) Lifestyle factors (diet, lack of movement, smoking) contribute to disease progression Disease can be allayed by exercise, diet, avoiding alcohol and smoking
Chronic traumatic encephalopathy (CTE)	Memory loss, confusion Mood disorder, personality changes, rage Can present in mid-life Person becomes erratic and unpredictable	Originally referred to as punch drunk syndrome Caused by extensive hits to the head Brain has tau protein like Alzheimer disease, but presents uniquely in CTE Some symptoms can be addressed with medication Diagnosed postmortem No cure
Atypical Alzheimer disease	Amnestic problems Unusually early symptoms impacting executive and motor functioning	Frontal variant of Alzheimer disease Posterior cortical atrophy
Mixed dementia	Similar to Alzheimer disease or other form of dementia Varied symptoms suggest multiple forms of dementia	Most often diagnosed as Alzheimer disease Co-existing pathology, such as blood clots or vascular disease, found postmortem Impacted by relationship between cognitive function and underlying brain abnormalities

Table 1 continues on next page.

TYPES OF DEMENTIA *(Continued)*		
Disease	**Symptoms**	**Attributes/Causation**
Corticobasal syndrome (CBS)	Asymmetric limb rigidity, dystonia, muscle jerks (myoclonus), difficulty with motor planning (apraxia) Progressive difficulty with language (aphasia), executive functioning, and visuospatial impairments Changes in personality, irritability, and apathy	Associated with abnormal tau protein accumulation in the brain, leading to neuronal degeneration Often linked to corticobasal degeneration (CBD), a rare neurodegenerative disease
Creutzfeldt-Jakob disease (CJD)	Rapid cognitive decline with memory loss, confusion, and personality changes Muscle jerks (myoclonus), loss of coordination (ataxia), visual disturbances, and speech abnormalities Anxiety, depression, and psychosis	Caused by prions, which are misfolded proteins that lead to brain damage Can be sporadic, inherited, or acquired through exposure to infected tissue
HIV-associated neurocognitive disorder (HAND)	Memory loss, difficulty concentrating, and executive dysfunction Slowed movements, clumsiness, and coordination problems Apathy, depression, and social withdrawal	Caused by the direct effects of HIV on the central nervous system, leading to inflammation and neuronal damage
Huntington disease	Involuntary jerking movements (chorea), dystonia, slowed movements (bradykinesia) Progressive decline in executive function, memory, and attention Depression, irritability, anxiety, and impulsivity	A genetic disorder caused by a mutation in the HTT gene, leading to the production of an abnormal huntingtin protein that causes neuronal death
Normal pressure hydrocephalus (NPH)	Difficulty walking, shuffling gait, and balance problems Memory loss, confusion, and difficulty with attention and decision-making Urinary incontinence and urgency	Caused by an abnormal buildup of cerebrospinal fluid (CSF) in the brain's ventricles, leading to increased pressure and damage to brain tissues
Progressive supranuclear palsy (PSP)	Difficulty with balance and walking, frequent falls, and stiffness Difficulty moving the eyes, particularly in the vertical direction Executive dysfunction, slowed thinking, and memory problems Apathy, depression, and personality changes	Caused by the accumulation of tau protein in the brain, leading to the degeneration of specific brain regions, particularly those involved in movement and cognitive function
Source: [6; 7; 8; 9; 10; 11]		*Table 1*

The exact cause of Alzheimer disease is not fully understood but is believed to involve genetic, environmental, and lifestyle factors. Major risk factors include age (primarily affecting those older than 65 years of age) and gender (more common in women). Other risks include family history, genetic mutations, and conditions like cardiovascular disease and diabetes. There is no cure, but treatments can temporarily slow symptom progression and improve quality of life. Ongoing research aims to uncover the disease's mechanisms and develop more effective therapies [4; 10].

THE LONG PRECLINICAL PHASE OF ALZHEIMER DISEASE

Research indicates that Alzheimer disease can begin 20 years or more before clinical symptoms appear [12; 13]. During this preclinical phase, amyloid-beta plaques and tau tangles accumulate in the brain, disrupting neuronal function and leading to gradual brain cell death.

This period is marked by subtle brain changes that are not yet noticeable. Advanced imaging techniques and biomarkers, like cerebrospinal fluid analysis, can detect these early changes, offering insights into disease progression [2]. Identifying individuals in this stage is crucial for early intervention and developing treatments to slow or halt the disease before significant cognitive impairment occurs.

Recognizing that Alzheimer disease starts decades before symptoms manifest highlights the importance of early detection and monitoring. It also emphasizes the need for ongoing research to develop preventive strategies and treatments targeting the disease's earliest stages. By focusing on the preclinical phase, healthcare providers can better manage the eventual onset of symptoms, improving outcomes for patients and their families.

STAGES OF ALZHEIMER DISEASE

Alzheimer disease progresses through stages marked by increasing cognitive and functional decline. The Reisberg Scale, or Global Deterioration Scale (GDS), divides this progression into seven stages, grouped into early, middle, and late stages:

- Early stages (1–3): Mild cognitive changes that may not be immediately recognized as Alzheimer disease
- Middle stages (4–5): More pronounced cognitive decline and increased dependency on caregivers
- Late stages (6–7): Severe cognitive and physical impairment, requiring comprehensive care and support

Recognizing these stages aids in planning appropriate interventions and support for individuals with Alzheimer disease and their caregivers.

Early Stage (Stages 1–3)

Stage 1: No Cognitive Decline

Description: No noticeable symptoms of cognitive impairment. The individual functions normally, with no memory problems or other signs of dementia.

Fit into early stage: This stage represents normal cognitive function without any detectable signs of Alzheimer disease.

Stage 2: Very Mild Cognitive Decline

Description: Minor memory lapses, such as forgetting familiar words or the location of everyday objects. These lapses are not evident to friends, family, or medical professionals.

Fit into early stage: This stage is often considered normal age-related memory decline and may not be recognized as Alzheimer disease.

Stage 3: Mild Cognitive Decline

Description: Noticeable difficulties in memory and concentration. Common symptoms include losing valuable objects, trouble remembering names, and difficulty performing tasks in social or work settings. Friends and family may notice these changes.

Fit into early stage: This stage marks the beginning of noticeable cognitive impairment, often referred to as mild cognitive impairment. It is a critical period for early diagnosis and intervention.

Middle Stage (Stages 4–5)

Stage 4: Moderate Cognitive Decline (Mild or Early-Stage Alzheimer Disease)

Description: Clear-cut symptoms of Alzheimer disease become apparent. Individuals may have difficulty with complex tasks such as managing finances, planning events, and remembering recent events. They may also become moody or withdrawn, especially in socially or mentally challenging situations.

Fit into middle stage: This stage is characterized by a decline in cognitive abilities that affects daily life. It is often when a formal diagnosis of Alzheimer disease is made.

AGE-RELATED VERSUS POTENTIAL ADRD DIFFERENTIALS	
Normal Age-Related Memory Issues	**Potential ADRD**
Occasionally making a bad decision	Making poor judgements and decisions occurs frequently
Misplacing or losing things occasionally	Frequently losing items and being unable to locate them
Accidentally missing a bill payment	Getting the electricity or water shut off for lack of payment over a period of time
Occasionally lacking the ability to grasp a specific word	Difficulties following or participating in a conversation
Momentarily forgetting the day of the week	Having an inability to track time; being unable to discern day or week or season
Source: [14]	*Table 2*

Stage 5: Moderately Severe Cognitive Decline (Moderate or Mid-Stage Alzheimer Disease)

Description: Significant gaps in memory and cognitive function. Individuals may need help with daily activities such as dressing and grooming. They may forget important details like their address or phone number and may become confused about the date or time.

Fit into middle stage: This stage involves more severe cognitive decline and increased dependency on caregivers for daily activities.

Late Stage (Stages 6–7)

Stage 6: Severe Cognitive Decline (Moderately Severe or Mid-Stage Alzheimer)

Description: Memory continues to worsen, and personality changes may occur. Individuals may lose awareness of their surroundings and recent experiences. They often need extensive help with daily activities and may experience changes in sleep patterns, increased wandering, and difficulty recognizing loved ones.

Fit into late stage: This stage marks a significant decline in cognitive and functional abilities, requiring substantial caregiving support.

Stage 7: Very Severe Cognitive Decline (Severe or Late-Stage Alzheimer)

Description: Individuals lose the ability to respond to their environment, carry on a conversation, and eventually control movement. They may need help with all daily activities, including eating and using the bathroom. Reflexes become abnormal, and muscles grow rigid. Swallowing can become impaired.

Fit into late stage: This final stage of Alzheimer disease involves profound cognitive and physical decline, with individuals requiring around-the-clock care.

EARLY WARNING SIGNS AND SYMPTOMS

Early warning signs and symptoms of Alzheimer disease often manifest subtly and can be easily mistaken for normal aging (***Table 2***). One of the most common early signs is memory loss, particularly difficulty remembering recently learned information or important dates and events [2]. Individuals may also experience challenges in planning or solving problems, such as difficulty following a familiar recipe or managing monthly bills. Confusion with time or place, such as losing track of dates, seasons, and the passage of time, is another early indicator.

CONDITIONS AND EVENTS THAT MAY MIMIC DEMENTIA SYMPTOMS	
Condition/Event	**Symptom(s)**
Polypharmacy	Confusion, memory problems, cognitive impairment
Respiratory infection	Hypoxia (low oxygen levels), causing confusion and cognitive decline
Urinary tract infection	Acute confusion, agitation, hallucinations
Sleep disorder	Daytime sleepiness, memory problems, decreased cognitive function
Dehydration	Confusion, dizziness, cognitive impairment
Normal pressure hydrocephalus	Walking difficulties, urinary incontinence, cognitive decline
Metabolic/endocrine imbalance	Impaired cognitive function (particularly with thyroid disorders, diabetes)
Nutritional deficiencies (e.g., vitamin B12)	Memory loss, cognitive decline
Alcohol use	Cognitive impairment, memory problems
Subdural hematoma	Steady decline in overall mental function
Poisoning/toxic exposure (heavy metals, pesticides)	Cognitive impairment
Anoxia	Cognitive impairment, somnolence
Source: Compiled by Author	*Table 3*

Additionally, people with early Alzheimer disease may have trouble understanding visual images and spatial relationships, leading to difficulties with reading, driving, judging distance, and determining color or contrast [12]. Other symptoms include new problems with words in speaking or writing, misplacing things and losing the ability to retrace steps, decreased or poor judgment, withdrawal from work or social activities, and changes in mood and personality, such as increased confusion, suspicion, depression, or anxiety [10]. Recognizing these early signs is crucial for timely diagnosis and intervention, which can help manage symptoms and improve the quality of life for those affected.

ADRDs can also present with symptoms like those of medical conditions that are potentially reversible. Recognizing these conditions is crucial, as addressing them can significantly improve cognitive function and quality of life. ***Table 3*** identifies some common conditions that can mimic dementia symptoms.

Addressing these conditions through appropriate medical intervention can lead to significant improvement or complete resolution of symptoms that mimic dementia, highlighting the importance of thorough medical evaluation in individuals presenting with cognitive decline.

IMPORTANCE OF EARLY DETECTION AND DIAGNOSIS

Early detection of Alzheimer disease and other dementias offers significant benefits for patients and their families. It can improve quality of life by allowing access to treatments that slow symptom progression, helping individuals maintain independence longer [7]. Early diagnosis also enables better symptom management through personalized care plans that address cognitive, behavioral, and physical health needs [12].

Additionally, early detection allows for future planning, helping patients and families make informed decisions about legal, financial, and care arrangements, reducing stress and ensuring the patient's wishes are respected [10]. It also provides opportunities for participation in clinical trials and research, contributing to advancements in treatment.

TESTS/EXAMINATIONS TYPICALLY USED TO DIAGNOSE ALZHEIMER DISEASE	
Test/Examination	**Assessment**
Montreal Cognitive Assessment (MoCA)	Evaluates short-term memory, visuospatial abilities, attention/concentration/memory, executive function, language, and orientation to time and place
Mini-Mental State Examination (MMSE)	Short test that assesses executive function, information registration, recall, language, ability to follow simple commands, and orientation to time and place
Bloodwork	Complete blood count (CBC) Liver function Glucose Thyroid function HIV Electrolytes Folate test Vitamin B12 concentration
CT scan	Evaluate the severity of brain degeneration
Magnetic resonance imaging (MRI)	Deep insight into brain looking for tumors, nerve damage, and unusual markings
Electroencephalogram (EEG)	Measure and evaluate brain wave activity
Positron emission tomography (PET)	Identify Alzheimer disease amyloid proteins
Source: [2]	*Table 4*

DIAGNOSTIC PROCESS

The diagnostic process for dementia involves several steps to ensure an accurate and comprehensive assessment. Initially, healthcare providers conduct a thorough medical history review and physical examination to rule out other potential causes of cognitive decline. This is followed by cognitive and neuropsychological testing to evaluate memory, problem-solving abilities, language skills, and other cognitive functions [12]. Imaging studies, such as MRI or CT scans, are often used to detect brain changes associated with dementia, while laboratory tests can help identify underlying conditions that may contribute to cognitive impairment. ***Table 4*** provides more details on tests and examinations that may be used to diagnose Alzheimer disease.

Healthcare providers play a crucial role in early detection of dementia. Primary care providers, neurologists, and geriatric specialists often notice early signs during routine check-ups or when patients present with memory concerns. They initiate the diagnostic process, coordinate care, and refer patients to specialists as needed. Additionally, they educate and support patients and families, helping them understand the diagnosis and navigate dementia care complexities [7].

The American Psychological Association asserts that an interdisciplinary team is most likely to provide all the essential information necessary to make an accurate diagnosis of dementia and develop a comprehensive treatment plan.

(https://www.apa.org/practice/guidelines/guidelines-dementia-age-related-cognitive-change.pdf. Last accessed August 21, 2024.)

Level of Evidence: Expert Opinion/Consensus Statement

ASSESSING COGNITION

Assessment Tools

Cognitive assessment tools are crucial for diagnosing and monitoring Alzheimer disease and other dementias. They evaluate cognitive domains like memory, attention, language, and executive function. Common tools include the Mini-Mental State Examination (MMSE), Montreal Cognitive Assessment (MoCA), and clock drawing test (CDT) [15; 16; 17; 18].

The MMSE assesses orientation, registration, attention, calculation, recall, language, and simple commands, scoring out of 30 points. Scores of 24–30 are normal, 18–23 indicates mild impairment, and 0–17 suggests severe impairment. The MoCA provides a comprehensive assessment, including visuospatial abilities, naming, memory, attention, language, abstraction, and orientation, with scores less than 26 indicating impairment. The CDT evaluates executive function and visuospatial abilities by having patients draw a clock showing a specific time [15; 16; 17; 18].

Administering these tools requires a standardized approach for accuracy. The MMSE and MoCA involve guided tasks and scoring, while the CDT involves drawing a clock. Scores are compared with normative data, considering age, education, and cultural background [15; 16; 17; 18].

Choosing the right tool depends on the patient's clinical presentation and the cognitive domains needing assessment. Other factors to consider include the patient's language proficiency, cultural background, and any sensory or motor impairments that may affect their performance on the tests. Healthcare providers should also consider the psychometric properties of the tools, such as their sensitivity, specificity, and reliability, to ensure accurate and meaningful results. The MMSE is good for quick screenings, the MoCA for comprehensive evaluations, and the CDT for executive function and visuospatial skills. Multiple tools can enhance diagnostic accuracy, with the MoCA being particularly sensitive for early impairment detection [15; 18].

COGNITIVE ASSESSMENT BILLING

Billing for cognitive assessment and care planning is essential for ensuring that healthcare providers are reimbursed for the time and resources spent on these critical services. The Centers for Medicare & Medicaid Services (CMS) have established specific billing codes for cognitive assessment and care planning services. These codes allow healthcare providers to bill for the time spent on comprehensive cognitive assessments and care planning for patients with cognitive impairment, including Alzheimer disease and other dementias [4]. The primary codes include [19]:

- CPT code 99483: Used for a comprehensive cognitive assessment and care planning for patients with cognitive impairment, including Alzheimer disease and other dementias. It covers services such as evaluating cognition, functional status, medication review, and the development of a care plan. Clinicians allowed to bill under this code include physicians, physician assistants, nurse practitioners, clinical nurse specialists, and certified nurse midwives. This code can be used once per 180 days (about every 6 months).
- CPT code 99484: Used for standardized cognitive performance testing, which includes the administration and scoring of tests to assess cognitive function

The code HCPCS code G0505 was previously used for cognitive and functional assessment and care planning for patients with cognitive impairment, including Alzheimer disease and other dementias. It has been replaced by CPT Code 99483 [20]. ***Table 5*** lists other diagnostic codes commonly used in the care of cognitive impairment or dementia.

More information can be found on billing codes specific to cognitive impairment by the Alzheimer's Association in their Cognitive Impairment Care Planning Toolkit found at https://www.alz.org/media/Documents/Cognitive-Impairment-Care-Planning-Toolkit_1.pdf.

COMMONLY USED DIAGNOSTIC CODES	
Code	**Description**
G31.09	Frontotemporal Dementia
G31.83	Dementia with Lewy Bodies
G31.84	Mild Cognitive Impairment
G30.0	Alzheimer's Disease with Early Onset
G30.1	Alzheimer's Disease with Late Onset
G30.9	Alzheimer's Disease Unspecified
F03.90	Unspecified Dementia without Behavioral Disturbance
F03.91	Unspecified Dementia with Behavioral Disturbance
F01.50	Vascular Dementia without Behavioral Disturbances
F01.51	Vascular Dementia with Behavioral Disturbances
F02.80	Dementia in Other Diseases Classified Elsewhere with Behavioral Disturbances
F02.81	Dementia in Other Diseases Classified Elsewhere with Behavioral Disturbances
F03.91	Unspecified Dementia with Behavioral Disturbances
Source: Compiled by Author	*Table 5*

DOCUMENTATION

Proper documentation is crucial for billing cognitive assessments accurately. It is also important to note that the total time spent on the assessment and care planning must meet the minimum requirements for the chosen billing code (typically 50 minutes for CPT code 99483). When using CPT Code 99483, healthcare providers should conduct a detailed assessment and document the assessment findings to include test scores and interpretations, clinical observations, and patient and caregiver reports. The detailed assessment should include:

- Cognitive assessment using standardized tools (e.g., MMSE, Montreal Cognitive Assessment): Detailed evaluation of the patient's cognitive function, including memory, attention, language, and executive function
- Functional assessment: Evaluation of the patient's ability to perform activities of daily living (ADLs) and instrumental activities of daily living (IADLs)
- Medication review: Comprehensive review of all medications the patient is taking, including prescription drugs, over-the-counter medications, and supplements
- Safety evaluation: Assessment of the patient's safety, including risks of falls, wandering, and other hazards
- Caregiver assessment: Evaluation of the caregiver's needs and the impact of caregiving on their health and well-being

ALZHEIMER DISEASE STAGE AND FAMILY ISSUES		
Disease Stage	**Issues/Concerns of Family**	**Steps to Address**
Early (Stages 1–3)	Accept and address an uncertain future. Identify potential areas of internal family conflict. Recognize that Alzheimer disease can often unveil past conflict.	Form a cohesive family alliance. Seek professional guidance (elder law attorneys, financial planners, social workers). Identify long-term care needs and desires for the person with Alzheimer disease. Establish an honest, open, and supportive communication method. Acknowledge collective grief and loss as the loved one declines.
Middle (Stages 4–5)	Caregiving needs become more intense to include financial, home safety, and some life management.	Family members/caregivers may feel trapped, leading to new or worsened conflicts. There may be a sense of lost freedom due to disease-related limitations. It can be hard to separate the person from the illness, necessitating additional support (e.g., respite care). Managing disease symptoms (wandering, mood swings, sleep changes) can be challenging. Balancing work, caregiving, and personal life may seem impossible as needs increase. Without prior planning, families face tough decisions about living arrangements, finances, and external support. Family members may experience grief, health issues, anger, denial, and exhaustion.
Late (Stages 6–7)	Patient will need full-time support for all activities of daily living. Family members may find themselves dealing with effects of long-term caregiving (e.g., financial and health challenges, inability to work, poor self-care).	Family cohesion may suffer due to concerns about providing safe, proper care (e.g., transferring, feeding, supervision). Long-term planning can ensure the person receives hospice care or allows the family to decide. The person is vulnerable to normal age-related health issues. Family may experience exhaustion and worry about their own well-being and the impact on their children and spouse. Long-term stress and grief can affect family relationships and cohesion, especially without planning. Family members may face physical and mental health challenges requiring additional support and lifestyle changes.
Source: [23]		*Table 6*

CARE PLANNING

Care planning is essential in managing Alzheimer disease and other dementias, addressing multiple aspects of the patient's health and well-being. A comprehensive care plan should outline treatment goals, medication management strategies, safety measures (e.g., fall prevention), and methods to manage behavioral symptoms. It should also include cognitive stimulation activities, social engagement recommendations, and caregiver support and education. Early advance care planning discussions are crucial to ensure the patient's wishes are respected as the disease progresses. Referrals to specialists and community resources should be included for comprehensive support.

Person-centered care is vital, involving both the patient and caregivers in the planning process [22]. Healthcare providers should use clear language when explaining assessments and treatment options, encouraging patients to express their preferences and concerns.

Caregivers should be included in discussions about care goals and management strategies, as they often play a primary role in day-to-day care. Education about the disease process, expected progression, and available resources should be provided to both patients and caregivers. The needs of the family evolve as Alzheimer disease progresses, and this should be considered at all phases of patient care (***Table 6***). The importance of advance directives should be discussed, and their completion encouraged. Regular reviews and updates of the care plan, with input from both the patient and caregiver, ensure its relevance and effectiveness as the disease progresses. Throughout the process, healthcare providers should offer opportunities for patients and caregivers to ask questions and voice concerns, fostering a collaborative approach to care management.

COMMUNICATION TECHNIQUES

Effective communication is crucial when caring for patients who have Alzheimer disease or other dementias. Healthcare providers should use clear, simple language, speak slowly, and maintain eye contact when discussing memory concerns. It is important to approach the topic sensitively, acknowledging the patient's feelings and concerns [24]. Building trust and rapport involves active listening, showing empathy, and respecting the patient's dignity. Providers should create a comfortable environment and allow ample time for the patient to process information and respond [22].

Engaging caregivers is equally important. Strategies include educating them about the disease, its progression, and available resources. Caregivers should be encouraged to participate in appointments and care planning discussions. Addressing caregiver concerns involves providing emotional support, offering respite care information, and connecting them with support groups. Healthcare providers should also assess caregiver stress and burnout, offering strategies for self-care and stress management [25]. By fostering open communication with both patients and caregivers, providers can ensure more comprehensive and effective care for individuals with dementia.

TREATMENT OPTIONS

Pharmacological treatments for dementia focus on managing symptoms and slowing disease progression. The main medications include cholinesterase inhibitors (donepezil, rivastigmine, galantamine) and an *N*-methyl-D-aspartate (NMDA) receptor antagonist, memantine. Cholinesterase inhibitors increase acetylcholine levels, improving cognitive function and behavioral symptoms in mild-to-moderate Alzheimer disease [2]. Memantine regulates glutamate activity and is used for moderate to severe Alzheimer disease. These medications can improve cognition, mood, and daily functioning but may have side effects. Cholinesterase inhibitors can cause nausea, vomiting, diarrhea, dizziness, and sleep disturbances, while memantine may cause dizziness, headaches, and constipation [10]. Although they do not cure dementia, they can temporarily improve symptoms or slow their worsening [26].

The European Academy of Neurology suggests that the use of a combination of cholinesterase inhibitor (ChEI) plus memantine rather than ChEI alone may provide useful benefits in patients with moderate-to-severe Alzheimer disease.

(https://onlinelibrary.wiley.com/doi/full/10.1111/ene.12707. Last accessed August 21, 2024.)

Level of Evidence: Expert Opinion/Consensus Statement

In 2021, the FDA granted accelerated approval to aducanumab for the treatment of Alzheimer disease [27]. It is the first new treatment approved for Alzheimer disease since 2003 and is the first therapy that targets the fundamental pathophysiology of the disease. Approval of aducanumab was based on evidence showing a significant reduction of beta amyloid plaque in those receiving the drug (compared with placebo) [27]. Preliminary studies have been conflicting, and the FDA's decision to grant accelerated approval to aducanumab was controversial. The manufacturer discontinued aducanumab in 2024 [29]. In 2023, the FDA granted accelerated approval to lecanemab for the treatment of Alzheimer disease [21]. Like aducanumab, lecanemab is an anti-amyloid monoclonal antibody, and the presence of amyloid beta pathology should be confirmed prior to treatment initiation. Lecanemab is an intravenous infusion given every two weeks at an infusion center, but subcutaneous delivery is being studied in trials.

Nonpharmacological treatments are essential for managing dementia and improving the quality of life for patients and caregivers. Cognitive therapies, such as cognitive stimulation, reminiscence therapy, and cognitive rehabilitation, enhance cognitive function, communication skills, and overall well-being [12]. These therapies engage patients in activities that stimulate thinking, memory, and social interaction. Lifestyle interventions, including regular physical exercise, social engagement, and a healthy diet, show promise in reducing dementia risk and slowing cognitive decline. These interventions are often combined with pharmacological treatments for a comprehensive care approach [2; 28].

FUTURE DIRECTION OF TREATMENT AND CARE

Emerging treatments and ongoing research offer hope for future dementia care. Current investigations include anti-amyloid and anti-tau therapies, neuroprotective agents, and personalized medicine approaches. Gene therapy and stem cell research are also being explored. Recent advancements, such as lecanemab, show promise in reducing amyloid plaques and potentially slowing cognitive decline [21].

Advancements in early detection and prevention strategies, like blood-based biomarkers and lifestyle interventions, are shaping the future of dementia care. While many treatments are still in development, they represent promising directions for more effective management and potential prevention of dementia [30].

Future dementia care emphasizes a holistic and personalized approach, integrating pharmacological and nonpharmacological interventions, leveraging technology for remote monitoring, and enhancing caregiver education and support. Advances in precision medicine and biomarker research are expected to enable earlier and more accurate diagnoses, allowing for timely intervention and better disease management. Ongoing research into genetic and environmental factors will likely lead to preventive strategies and more effective treatments, improving outcomes for individuals with dementia and their families [2].

CASE STUDY: MANAGING EARLY-STAGE ALZHEIMER DISEASE

INITIAL ASSESSMENT AND DIAGNOSIS

Background

Patient A, a 68-year-old retired teacher, has been experiencing memory lapses and difficulty with daily tasks over the past year. Her family has noticed that she often forgets recent conversations, misplaces items, and struggles with planning activities. Concerned about her cognitive decline, the patient's daughter, Ms. S, schedules an appointment with a neurologist specializing in dementia.

Initial Assessment

During the initial consultation, the physician conducts a thorough medical history review and physical examination. Patient A undergoes cognitive testing using the MMSE and the MoCA. Her MMSE score is 24/30, and her MoCA score is 22/30, indicating mild cognitive impairment. The physician also orders an MRI to rule out other potential causes of cognitive decline.

Diagnosis

Based on the cognitive assessment and imaging results, Patient A is diagnosed with early-stage Alzheimer disease. He explains the diagnosis to Patient A and her daughter, emphasizing the importance of early detection and intervention.

Discussion Questions

1. What were the early signs of Alzheimer disease that this patient exhibited?

Answer: Patient A exhibited memory lapses, difficulty with daily tasks, forgetting recent conversations, misplacing items, and struggling with planning activities.

2. Which cognitive assessment tools were used to evaluate Patient A's cognitive function?

Answer: The MMSE and the MoCA were used to evaluate the patient's cognitive function.

3. What is the significance of early detection and diagnosis in this patient's case?

Answer: Early detection and diagnosis allowed for timely intervention, enabling Patient A to access treatments and interventions that can slow the progression of symptoms and improve her quality of life. It also provided an opportunity for her and her family to plan for the future and make informed decisions about her care.

CARE PLAN DEVELOPMENT AND IMPLEMENTATION

Care Plan Development

Patient A's physician develops a comprehensive care plan, which includes pharmacological and nonpharmacological treatments. He prescribes donepezil, a cholinesterase inhibitor, to help manage her symptoms. Additionally, he recommends cognitive stimulation therapy (CST) and encourages Patient A to engage in regular physical exercise, maintain a healthy diet, and stay socially active.

Caregiver Involvement

Patient A's daughter is actively involved in the care planning process. The physician provides education on Alzheimer disease, its progression, and available resources. He also discusses the importance of caregiver support and suggests joining a local support group for caregivers of individuals with dementia.

Follow-Up

The physician schedules regular follow-up appointments to monitor Patient A's condition, review the effectiveness of the care plan, and make necessary adjustments. He maintains open communication with the patient and her daughter to address any concerns and provide ongoing support.

Discussion Questions

1. How was Ms. S involved in the care planning process, and why is caregiver involvement important?

Answer: Ms. S was actively involved in the care planning process by participating in discussions about treatment options, goals of care, and preferences for care. Caregiver involvement is important because it ensures that the care plan is tailored to the needs and preferences of both the patient and the caregiver, providing necessary support and education.

2. What are the key components of Patient A's comprehensive care plan?

Answer: Key components of Patient A's comprehensive care plan include medical management with donepezil, cognitive and behavioral interventions such as CST, safety measures to prevent accidents, support services for both Patient A and her daughter, and legal and financial planning.

3. Why are regular follow-up appointments important in managing Alzheimer disease?

Answer: Regular follow-up appointments are important to monitor the patient's condition, review the effectiveness of the care plan, make necessary adjustments, and provide ongoing support and education to the patient and caregiver.

CONCLUSION

Alzheimer disease and other dementias are complex conditions that significantly impact patients and caregivers. Understanding the stages and progression of these diseases is crucial for effective planning, lifestyle changes, and safety measures. As dementia prevalence rises, ongoing research, advanced testing, and robust communication within the dementia care community are increasingly important.

Healthcare providers play a key role in this landscape. We must collaborate as a multidisciplinary team to address care gaps, ensure effective communication, and share vital information. This empowers and supports our patients with honesty and integrity. Managing dementia requires a comprehensive, community-based approach to ensure access to necessary healthcare services and support systems. Through early detection, personalized care planning, and continuous learning, we can make a meaningful difference in the lives of those affected by dementia.

Implicit Bias in Health Care

The role of implicit biases on healthcare outcomes has become a concern, as there is some evidence that implicit biases contribute to health disparities, professionals' attitudes toward and interactions with patients, quality of care, diagnoses, and treatment decisions. This may produce differences in help-seeking, diagnoses, and ultimately treatments and interventions. Implicit biases may also unwittingly produce professional behaviors, attitudes, and interactions that reduce patients' trust and comfort with their provider, leading to earlier termination of visits and/or reduced adherence and follow-up. Disadvantaged groups are marginalized in the healthcare system and vulnerable on multiple levels; health professionals' implicit biases can further exacerbate these existing disadvantages.

Interventions or strategies designed to reduce implicit bias may be categorized as change-based or control-based. Change-based interventions focus on reducing or changing cognitive associations underlying implicit biases. These interventions might include challenging stereotypes. Conversely, control-based interventions involve reducing the effects of the implicit bias on the individual's behaviors. These strategies include increasing awareness of biased thoughts and responses. The two types of interventions are not mutually exclusive and may be used synergistically.

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