Dementia

Including Mild and Major Neurocognitive Disorders (NCD)

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Learning Objectives

Upon completion of this module, learners will be able to:

1. Discuss dementia pathophysiology, epidemiology, risk factors, and prognosis
2. Discuss the different types and stages of dementia and review the progression of symptoms
3. Utilize appropriate assessment tools for diagnosing dementia
4. Discuss the pharmacologic and nonpharmacologic treatment of dementia
5. Identify the resource needs of patients and caregivers, including safety issues and caregiver burden and burnout
6. Evaluate the need for hospice/palliative care referral

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Presentation Contents

Overview:

- Definition and types of dementia
- Pathophysiology
- Epidemiology
- Risk factors
- Prognosis

Presentation:

- Stages of dementia
- Clinical presentation

Workup:

- Assessment
- Diagnosis

Treatments:

- Pharmacologic and nonpharmacologic

Long-Term Management:

- Behavioral changes
- Safety
- Caregiver support and resources

Neurocognitive Domains DSM-5

- Dementia is the impairment of cognitive and functional abilities together with behavioral symptoms (Dubois et al., 2016)
- Dementia was renamed a *neurocognitive disorder* (NCD) in DSM-5 (APA, 2013)
- For the purpose of this presentation, we will use the term dementia
- *NCD* is equivalent to *dementia* (terms are interchangeable)

Neurocognitive Domains DSM-5

- “Mild NCD” is equivalent to mild cognitive impairment
- “Major NCD” is significant cognitive decline from a previous level of function in one or more of the DSM-5 cognitive domains: complex attention, executive function, learning and memory, language, perceptual-motor, and social cognition

Common Types of Dementia

Type of Dementia	% of Dementia Cases	Presenting Symptoms
Alzheimer's Disease (AD)	60-70%	• Slow progressive memory loss
Vascular Dementia (formerly multi-infarct dementia)	15-20%	• Can develop abruptly (after stroke) or stepwise (small vessel disease) • Wide range of symptoms: language, information processing, decision-making, and visuospatial deficits, as well as memory loss

https://www.alz.org/documents_custom/2016-facts-and-figures.pdf

(Robinson et al., 2015)

Common Types of Dementia

Type of Dementia	% of Dementia Cases	Presenting Symptoms
Dementia with Lewy Bodies (DLB) Lewy Body Dementia	10-25%	• Visual hallucinations in early stages • Parkinsonism (tremor, bradykinesia, shuffling gait) • Fluctuations in cognitive function (can be difficult to distinguish from delirium)

https://www.alz.org/documents_custom/2016-facts-and-figures.pdf

(Robinson et al., 2015)

Common Types of Dementia

Type of Dementia	% of Dementia Cases	Presenting Symptoms
Frontotemporal Dementia (FTLD)	10%	• More common in younger patients (50-60 years of age) • Behavior and personality changes, disinhibition, and impulsiveness • Memory intact in early stages

https://www.alz.org/documents_custom/2016-facts-and-figures.pdf

(Robinson et al., 2015)

Common Types of Dementia

Type of Dementia	% of Dementia Cases	Presenting Symptoms
Dementia related to Other Disorders (e.g., Parkinson's Disease Dementia [PDD])	2%	• ~80% of persons with Parkinson's develop dementia • Similar to Lewy Body Dementia, although motor symptoms are present before cognitive changes

https://www.alz.org/documents_custom/2016-facts-and-figures.pdf

(Robinson et al., 2015)

Rare Dementias

Rare Dementias
Alcohol-related, Creutzfeldt-Jakob
HIV-related cognitive impairment
Huntington's Disease
Progressive supranuclear palsy
Multiple sclerosis
Niemann-Pick
Normal pressure hydrocephalus

https://www.alz.org/documents_custom/2016-facts-and-figures.pdf

(Robinson et al., 2015)

Pathophysiology

Alzheimer's Dementia	• Amyloid plaques/oligomers formed • Abnormal phosphorylation of Tau proteins resulting in neurofibrillary tangles
Vascular Dementia	• Ischemia • Vasculopathy
Dementia with Lewy Bodies	• Lewy Body deposits (cytoplasmic α-synuclein inclusion bodies)
Frontotemporal Dementia	• Tau or protein abnormalities or proteinopathies

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(Threlfall et al., 2013)

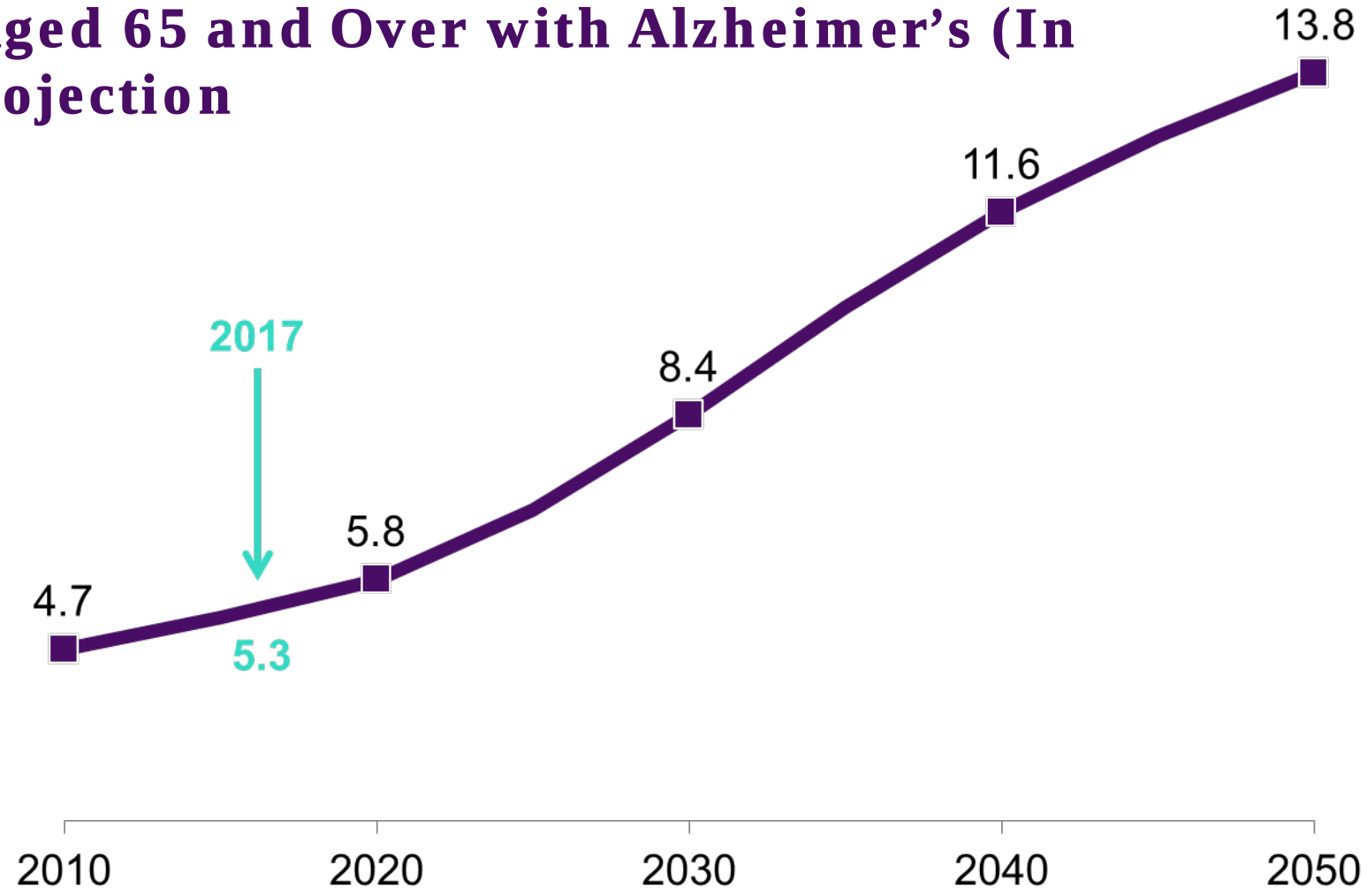
Epidemiology

- Every 66 seconds, someone in U.S. develops dementia
- It is the 6th leading cause of death in U.S.
  - It kills more people than breast cancer and prostate cancer combined
- By 2050, the number of seniors in America with Alzheimer's is projected to nearly triple to 13.8 million and it could be as many as 16 million

(Alzheimer's Association, 2015; Robinson et al., 2015)

Epidemiology

Americans Aged 65 and Over with Alzheimer's (In Millions), Projection



(Alzheimer's Association, 2015)

Epidemiology

Prevalence doubles every 5 years after age 60 (Threlfall et al., 2013)

The Prevalence of people with Alzheimer's Dementia increases with age:

Age 65-74 years = 3%

Age 75-84 years = 17%

Age 85 and older = 32% www.alz.org/facts/

Caregivers

- 15 million Americans provide unpaid care to persons with dementia
- In 2016, caregivers provided 18.2 billion hours of care, valued at $230 billion
- 35% of caregivers of persons with dementia report their health has gotten worse related to caregiving, as compared to 19% providing care to older adults without dementia

(Alzheimer's Association, 2017; Robinson et al., 2015)

Assessment Question 1

The prevalence of Alzheimer's Dementia:

a) Decreases as we age
b) Doubles every 5 years after age 60
c) Is 30% higher among older men
d) Is increasing in the U.S. but decreasing worldwide

Assessment Question 1: Answer

The prevalence of Alzheimer's Dementia:

a) Decreases as we age
b) Doubles every 5 years after age 60 (Correct Answer)
c) Is 30% higher among older men
d) Is increasing in the U.S. but decreasing worldwide

Impact of Dementia

Cost and Societal Impact

- Globally, $604 billion spent on dementia care (2010)

In U.S.:

- In 2017, U.S. spent $259 billion
- By 2050, cost estimated to increase to $1.1 trillion www.alz.org/facts/
- Dementia is one of the greatest burdens contributing to dependence and disability

(Alzheimer's Association. 2015; Robinson et al., 2015)

Risk Factors and Prevention

Risk Factors

- Age over 65
- Family history (apolipoprotein E gene, epsilon 4 allele on chromosome 19)
- Head trauma
- Cardiovascular disease (hypertension, hyperlipidemia)
- Diabetes
- Depression
- Smoking
- Decreased physical activity
- Less education (possibly) (Simmons et al., 2011)

Risk Factors and Prevention

Prevention

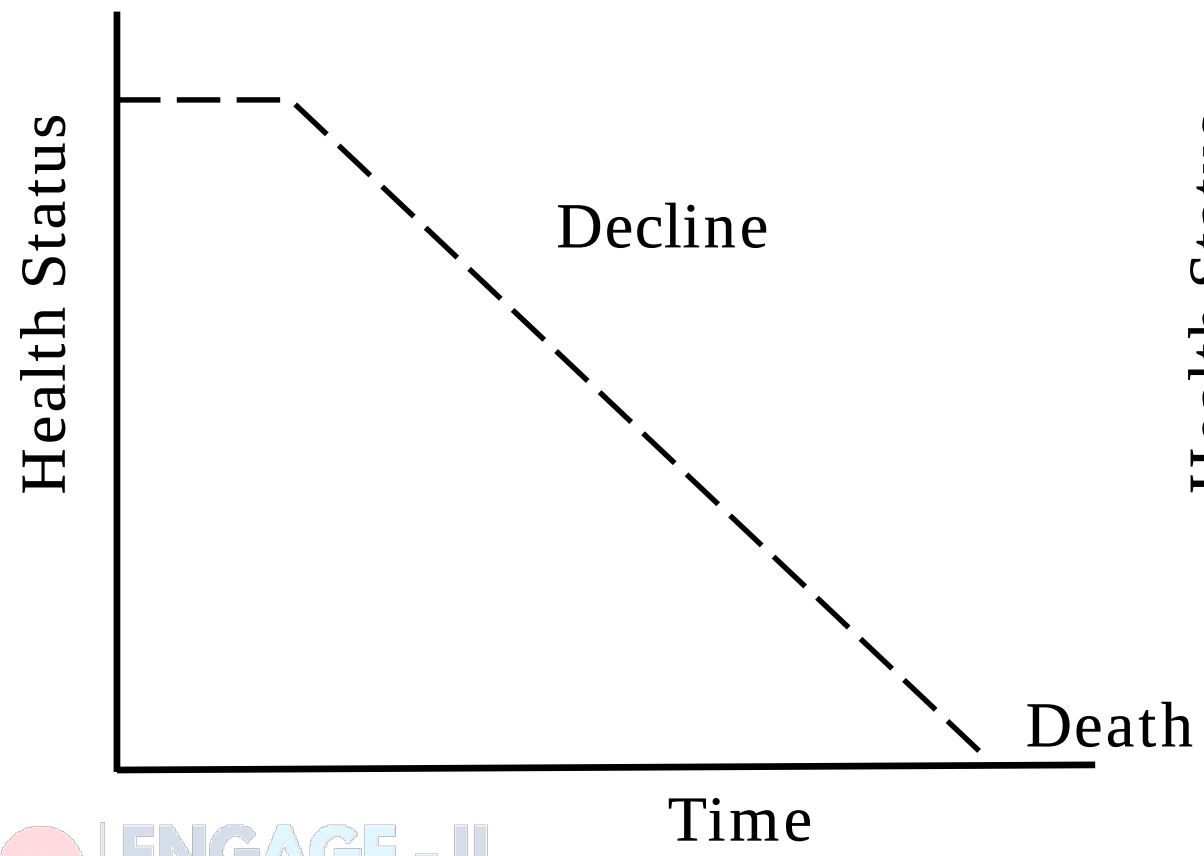
- Healthy lifestyle, including physical and intellectual activity
- Use helmets, seatbelts
- Optimize treatment of hypertension and other diseases
- Smoking cessation
- Still an active field of investigation
    - No drug or supplemental therapies yet proven to reduce risk

Prognosis

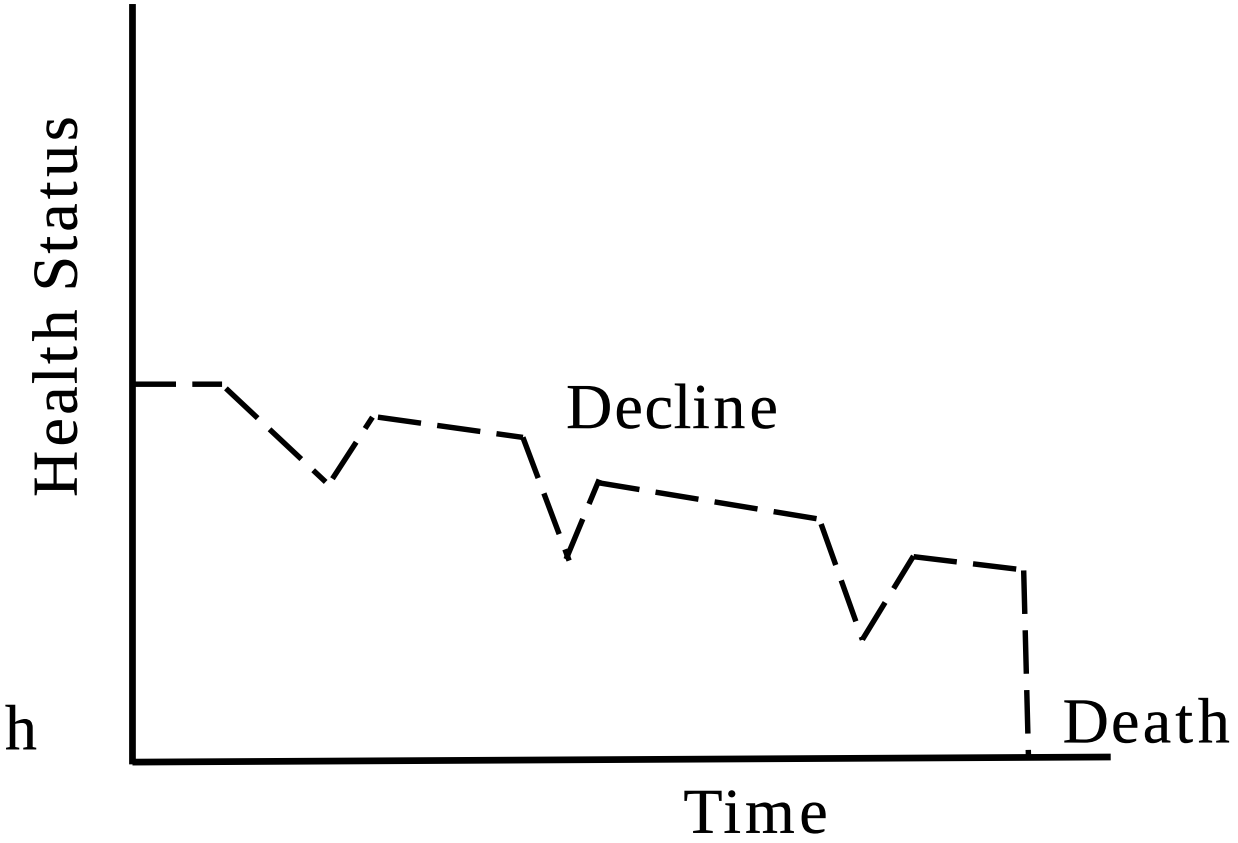
- No cure or disease-modifying treatments at this time; however, appropriate care has the potential for improving quality of life and reducing disease burden
- Life expectancy:
  - Typically 6-8 years after diagnosis made; however, some persons live up to 20 years after the first signs
  - Older age at onset associated with earlier mortality
  - Comorbidities decrease life expectancy
- Clinical approach should be “dementia-positive” and focus on quality of life

Estimating Prognosis in Dementia

Death Trajectory in Cancer



Death Trajectory in Dementia and Chronic Disease



(Hallenback, 2003; Murray & Sheikh, 2008; Sachs et al., 2004; Shega & Levine, 2012)

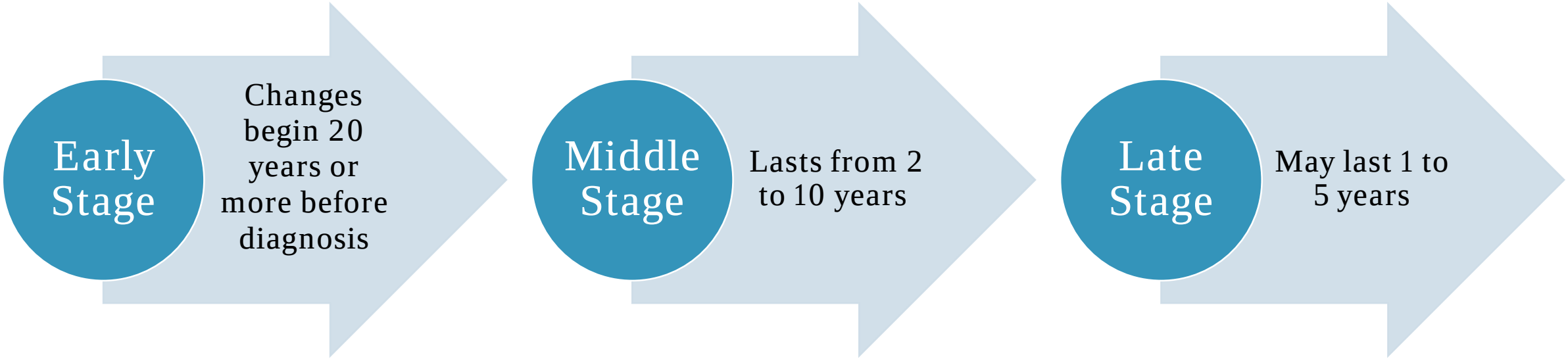
Stages of Dementia

Stages of Dementia

- Dementia is conceptualized as a disease continuum

- Therefore, this presentation covers the disease in three “stages” (Dubois et al., 2016)
  - Early Stage, including Mild Cognitive Impairment (MCI)
  - Middle Stage
  - Late Stage

Clinical Course for Alzheimer's Dementia



https://www.alz.org/braintour/progression.asp

Progressive Decline of Alzheimer's Dementia

Mild

- Short-term memory impairment
- Personality changes
- Loss of some Instrumental Activities of Daily Living (IADLs)

Moderate

- Further declines in short- and long-term memory
- Aphasia, apraxia
- Difficulty with most IADLs and some Activities of Daily Living (ADLs) (bathing, grooming)

Severe

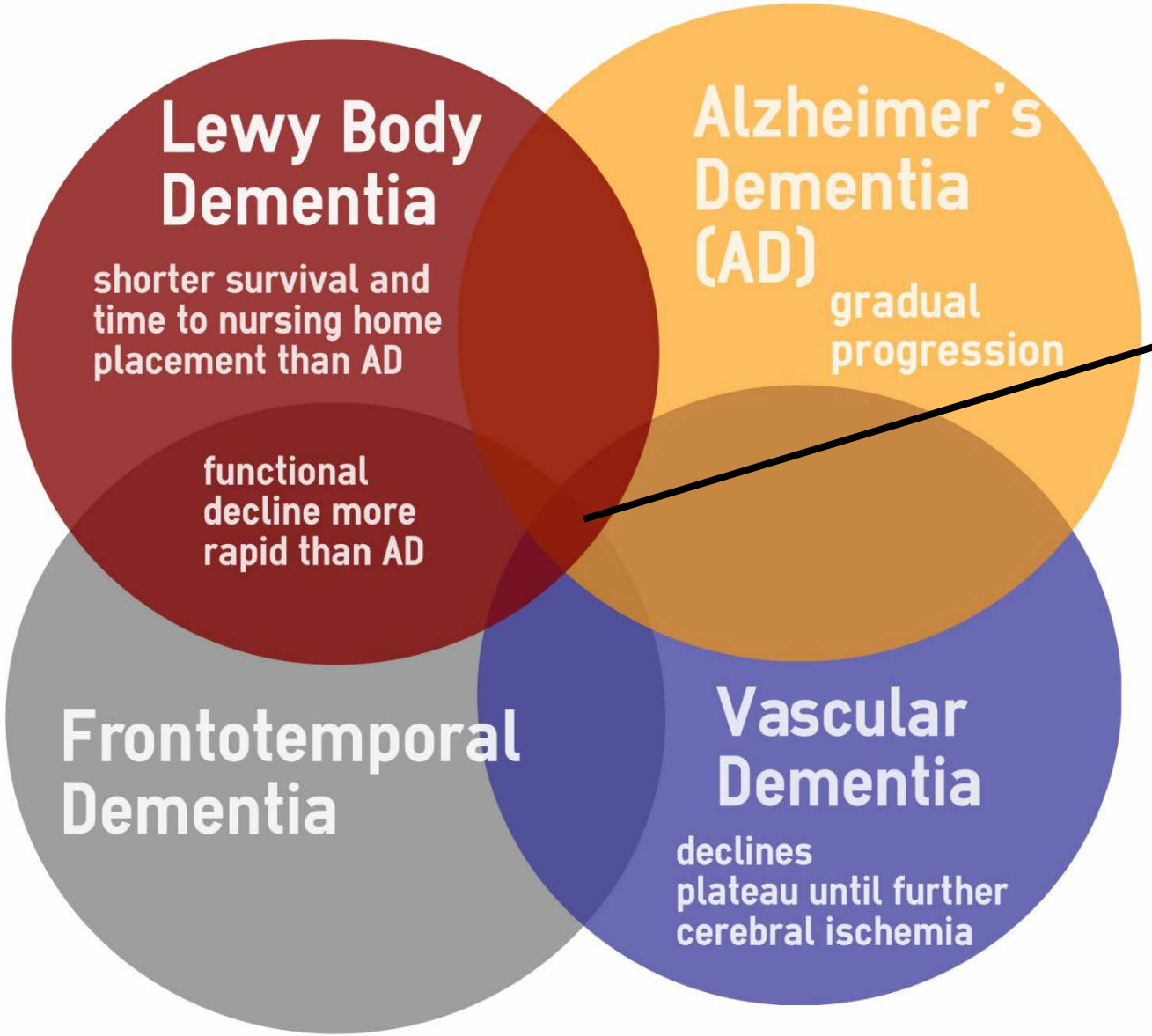
- Most memory is lost
- Difficulty with basic ADLs
- Behavioral symptoms (agitation, delusions)
- Motor impairment
- Agnosia

Terminal

- Verbal ability is lost
- Bed-bound, incontinent
- Swallowing difficulties
- Inability to perform any ADLs

(Hurley & Volicer, 2002; Mitchell, 2015; Shega & Levine, 2012)

Clinical Course of Other Dementias



- Prognostic challenges
- Marginally effective medications for cognition/behaviors
- Clinical complications
- Decision-making difficulties

(Galvin et al., 2010; Hanyu et al., 2009; Zanni & Wick, 2007)

Mild Cognitive Impairment

Stage: Mild Cognitive Impairment (MCI)

- MCI is cognitive loss that is atypical of aging, but does not meet criteria for a diagnosis of dementia
- There is normal, gradual cognitive decline with aging; however, it is minimal and should not impair function
- About 1% of people have no cognitive decline at all
- Prevalence is approximately 10-20% in people ≥65 years
- Increased risk for developing dementia

(Petersen, 2011)

Mild Cognitive Impairment Types

Amnestic

- Clinically significant memory loss that does not meet criteria for dementia
- Executive function, language, visuospatial skills usually intact
- More common; likely precursor to Alzheimer's

Nonamnestic

- Decline in attention, language, or visuospatial skills
- Memory intact
- Less common; likely precursor to frontotemporal or Lewy Body

(Petersen, 2011)

Early Stage Dementia

Presentation

- Patients typically present with changes in:

Cognition (Thinking)

Language

Psychosocial Behavior

Functioning (Change in needs)

(Dubois et al., 2016)

Symptom Presentation: Differences in Common Types of Dementia

	Cortical Dementia: Alzheimer's Disease	Frontal-Subcortical Dementia: Dementia with Lewy Bodies (DLB); Frontotemporal; Parkinson's Dementia (PDD); Vascular Dementia
Language	Aphasia early	No aphasia (anomia and comprehension deficit when dementia severe)
Memory	Recall and recognition impaired	Recall impaired, recognition normal or better preserved
Calculation	Involved early	Preserved until late
Frontal systems abilities	Impaired to a degree consistent with involvement of other abilities	Disproportionately affected compared with other neuropsychological abilities

(Bonelli & Cummings, 2008)

Symptom Presentation: Differences in Common Types of Dementia

	Cortical Dementia: Alzheimer's Disease	Frontal-Subcortical Dementia: Dementia with Lewy Bodies (DLB); Frontotemporal; Parkinson's Dementia (PDD); Vascular Dementia
Speed of cognitive processing	Normal until late in disease course	Early slowing
Personality	Unconcerned	Apathetic, inert
Mood	Euthymic	Depressed
Speech	Normal articulation until late	Dysarthria
Posture	Upright	Bowed or extended

(Bonelli & Cummings, 2008)

Symptom Presentation: Differences in Common Types of Dementia

	Cortical Dementia: Alzheimer's Disease	Frontal-Subcortical Dementia: Dementia with Lewy Bodies (DLB); Frontotemporal; Parkinson's Dementia (PDD); Vascular Dementia
Coordination Motor speed	Normal coordination until late, normal motor speed	Impaired coordination, slowed motor speed
Adventitious movements	Absent (myoclonus occurs in some cases of AD)	Present: Chorea, tremor, tics, dystonia

(Bonelli & Cummings, 2008)

Early Stage - Summary

Type	Onset	Etiology	Cognitive Symptoms	Motor Symptoms	Progression	Imaging	Pharmacology
Mild Cognitive Impairment	Gradual		Memory loss	Rare	Unknown; 12% progress to Alzheimer's	Global atrophy, small hippocampal volumes	Acetylcholinesterase inhibitors (AChEIs) possibly protective for 18 months
Alzheimer's	Gradual	Plaques/ oligomers formed; abnormal phosphorylation of Tau proteins resulting in neurofibrillary tangles	Memory loss predominates, language, visuospatial symptoms	Rare early, apraxia later	Gradual (8-10 years)	Global atrophy, small hippocampal volumes	AChEIs for mild to severe N-methyl-D-aspartate (NMDA) receptor antagonists; memantine for moderate to severe

Adapted from: Threlfall et al., 2013; Robinson et al., 2015

Early Stage - Summary

Type	Onset	Etiology	Cognitive Symptoms	Motor Symptoms	Progression	Imaging	Pharmacology
Vascular	May be sudden (after stroke) or stepwise	Ischemia, vasculopathy	Dependent on location of ischemia (language, information processing, decision-making, visuospatial deficits, memory loss)	Correlates with ischemia	Gradual or stepwise with further ischemia	Cortical or subcortical changes	AChEIs for memory deficit only. Risk factor modification
Lewy Body	Gradual	Cytoplasmic α-synuclein inclusion bodies	Memory loss, visuospatial, hallucinations (early stage), fluctuating symptoms	Parkinsonism	Gradual but faster than Alzheimer's	Global atrophy	AChEIs +/- Carbidopa-Levodopa for movement

Adapted from: Threlfall et al., 2013; Robinson et al., 2015

Early Stage - Summary

Type	Onset	Etiology	Cognitive Symptoms	Motor Symptoms	Progression	Imaging	Pharmacology
Frontotemporal	Gradual; age < 60	Tau or protein abnormalities or proteinopathies	Executive, disinhibition (behavioral changes), apathy, language, +/- memory intact in early stage	None	Gradual but faster than Alzheimer's	Atrophy in frontal and temporal lobes	Not recommended

Adapted from: Threlfall et al., 2013; Robinson et al., 2015

Assessment Question 2

Persons with dementia typically present with changes in all of the following <u>EXCEPT</u>:

a) Cognition
b) Language
c) Muscle tone
d) Functioning (change in needs)
e) Psychosocial behavior

Assessment Question 2: Answer

Persons with dementia typically present with changes in all of the following <u>EXCEPT</u>:

a) Cognition
b) Language (Correct Answer)
c) Muscle tone (Correct Answer)
d) Functioning (change in needs)
e) Psychosocial behavior

Middle Stage Dementia

Middle Stage Dementia

- Typically lasts the longest from diagnosis and can last for many years (anywhere from 2-10 years)

  https://www.alz.org/braintour/progression.asp

- Changes in cognition, language, psychosocial and function
  - Caregiving requires flexibility and patience

Presentation of Middle Stage

- Patients typically present with changes in cognition, language, psychosocial, and function

Dubois et al., 2016	DSM-5 Cognitive Domains (6)
Cognition (Thinking): • May demonstrate repetitive behaviors • Difficulty understanding others and losing train of thought	Learning and Memory: • Includes free recall, cued recall, recognition memory, semantic and autobiographical long-term memory, and implicit learning • It also includes complex attention, which is sustained attention, divided attention, selective attention, and information processing speed

Presentation of Middle Stage

Dubois et al., 2016	DSM-5 Cognitive Domains (6)
Language: • Lose ability to find words, express thoughts, or follow conversations • May revert to native language, rely on nonverbal communication	Language: • Includes object naming, word finding, fluency, grammar and syntax, and receptive language
Psychosocial: • May experience depression, anxiety, irritability, physical and verbal outbursts • May wander	Social Cognition: • Including recognition of emotions, theory of mind, and insight

Presentation of Middle Stage

Dubois et al., 2016	DSM-5 Cognitive Domains (6)
Function: • May experience changes in sleep • Need assistance with eating, dressing, and grooming (Slaughter et al., 2011) • They will need to stop driving	Perceptual-Motor Function: • Includes visual perception, visuoconstructional reasoning, and perceptual-motor coordination Executive Function: • Includes planning, decision-making, working memory, responding to feedback, inhibition, and mental flexibility

Middle Stage Dementia (Moderate): Symptoms

Cognition/Thinking Changes

- Apraxia (loss of purposeful movement) (Kovach, 2013)
- Agnosia (Funnell, 2000)
- Difficulty following a conversation, movie, or story (Daly, 2016)
- Difficulty following directions (Daly, 2016)
- Disorientated to place and time (Kovach, 2013)
- Loss of remote and recent memory (Kovach, 2013)
- Often cannot learn new things (Anjum, 2016)
- Poor recall (Kovach, 2013)

Middle Stage Dementia (Moderate): Symptoms

Language Changes

- Aphasia (Kovach, 2013)
- Loss of vocabulary, especially proper nouns (Daly, 2016)
- More word-finding difficulty (Anjum, 2016; Daly, 2016)
- May use word substitution or make up new words (Daly, 2016)
- Strength: Intact phonology, syntax, and oral reading of familiar text

  (Bourgeois & Hickey, 2009)

Middle Stage Dementia (Moderate): Symptoms

Psychosocial Behavioral Changes

- Tendency to talk about nothing or ramble (Kovach, 2013)
- Wandering and wayfinding difficulties (Kovach, 2013)
- Behavioral changes (Cipriani et al., 2013; Kovach, 2013)
- Hallucinations (Lerner et al., 1997)
- Sleep disturbance
- "*Sundowning*" (Cipriani et al., 2013)
- Onset of behavioral symptoms such as agitation, impulsive and aggressive behaviors, and socially inappropriate behaviors - though these symptoms do not always appear

Middle Stage Dementia (Moderate): Symptoms

Change in Function/Needs

- Increasing loss of functional abilities (mobility, toileting, telephone use, shop independently, manage own medications, handle finances) (Kovach, 2013)
- Requiring more assistance with personal care (bathing, dressing, eating) (Kovach, 2013)
- Increased concern for safety of the Person with Dementia (PwD) (DiZazzo-Miller et al., 2013)
- Should stop driving (Anjum, 2016)

Middle Stage: Summary

Type	Onset	Etiology	Cognitive Symptoms	Motor Symptoms	Progression 2-10 Years	Imaging	Pharmacology
Alzheimer's	Gradual, progressive	Plaques/oligomers formed; abnormal phosphorylation of Tau proteins resulting in neurofibrillary tangles	Memory loss predominates, aphasia, apraxia, difficulty with most IADLs and some ADLs	Apraxia, normal motor speed	Further decline in short- and long-term memory	Global atrophy, small hippocampal volumes	AChEIs for mild to severe; N-methyl-D-aspartate (NMDA) receptor antagonists; memantine for moderate to severe
Vascular	May be sudden (status post stroke) or stepwise	Ischemia, vasculopathy	Language, information processing, decision-making, visuospatial deficits, memory loss	Correlates with ischemia	Gradual or stepwise with further ischemia	Cortical or subcortical changes	AChEIs for memory deficit only Risk factor modification

Adapted from: Threlfall et al., 2013; Robinson et al., 2015

Middle Stage: Summary

Type	Onset	Etiology	Cognitive Symptoms	Motor Symptoms	Progression 2-10 Years	Imaging	Pharmacology
Lewy Body	Gradual	Cytoplasmic α-synuclein inclusion bodies	Visual hallucinations, fluctuations in cognitive function, no aphasia	Parkinsonism: tremor, bradykinesia, shuffling gait	Gradual but faster than Alzheimer's	Global atrophy	AChEIs +/- Carbidopa-Levodopa for movement
Fronto-temporal	Gradual < 60 y.o.	Tau or protein abnormalities or proteinopathies	Behavior and personality changes, disinhibitions and impulsiveness, memory intact, no aphasia	None	Gradual but faster than Alzheimer's	Atrophy in frontal and temporal lobes	Not recommended

Adapted from: Threlfall et al., 2013; Robinson et al., 2015

Late Stage

Late Stage Complications

Eating Problems

- Dysphagia
  - Oral dysphagia (pocketing food in the cheek)
  - Pharyngeal dysphagia (swallowing difficulties → aspiration)
- Inability to perform the task of eating
- Refusal to eat

(Mitchell, 2007, 2015)

Late Stage Complications

Treatment Options for Eating Problems (Mitchell, 2007, 2015)

- Rule out reversible causes (acute illness, ill-fitting dentures, constipation)
- Conservative measures: Offer finger foods, smaller portions, favorite foods, altered food texture, high calorie nutritional supplements, and hand feeding, discontinue any previous dietary restrictions (diabetic diet, low salt diet)
- Environment: Congregate eating so PwD will model others (Alzheimer's Association, 2017)
- Include interprofessional team approach including Registered Dietician

Late Stage Complications

Treatment Options for Eating Problems (Mitchell, 2007, 2015)

- Invasive measure: Long-term feeding tube not recommended
  - No benefit in survival, nutrition, or prevention of aspiration (Sampson et al., 2009)
  - Higher incidence of pressure sores (Sampson et al., 2009)
  - Risks: Procedural complications, use of chemical/physical restraints, and hospitalizations for tube blockage, leakage, and dislodgement (Givens et al., 2012)

Late Stage Complications

Infections Increase

- Due to aspiration, incontinence, reduced mobility, and immune function changes (Hurley & Volicer, 2002)

- In the last two weeks of life, nearly 50% of patients with advanced dementia are diagnosed with pneumonia (Chen et al., 2006)

Late Stage Complications

Infections Increase

- The use of antibiotics in patients in advanced dementia is common
  - 42% of nursing home residents with advanced dementia received an antibiotic in the last two weeks of life (D'Agata & Mitchell, 2008)
  - Hospitalization due to pneumonia is common in the last three months of life (Mitchell et al., 2009)

Late Stage Complications

Infections Increase

- Potential decreased efficacy
  - Antibiotic effectiveness decreases in recurrent infections (Hurley & Volicer, 2002)
  - Antibiotics may not have a significant impact on survival in advanced dementia (Fabiszewski et al., 1990; Luchins et al., 1997)
- Probable increased discomfort associated with treatment (IV therapy, blood draws, medication side effects)

Late Stage Complications

- Hospitalizations in advanced dementia:

65% hospitalized in the last three months of life

22% received ICU care in the last 30 days of life

18% died in the hospital

(Teno et al., 2013)

Hospice Eligibility Guidelines

Functional Assessment Staging Tool (FAST)
Stage 7a: Has speech limited to fewer than six intelligible words during an average day
Stage 7b: Has speech limited to one intelligible word during an average day
Stage 7c: Is unable to ambulate independently
Stage 7d: Cannot sit up independently
Stage 7e: Cannot smile
Stage 7f: Cannot hold up head independently

These guidelines do not accurately predict 6-month survival (Mitchell et al., 2004, 2010; Mitchell, 2007, 2015) (National Hospice Organization, 1996)

Late Stage – Summary

Type	Onset	Etiology	Cognitive Symptoms	Motor Symptoms	Progression	Imaging	Pharmacology
Alzheimer's	Gradual, progressive	Plaques/oligomers formed; abnormal phosphorylation of Tau proteins resulting in neurofibrillary tangles	Most memory is lost; difficulty with basic ADLs; agnosia; behavior changes (delusions, psychosis, agitation, anxiety); greatly decreased or nonexistent verbal abilities	Inability to ambulate independently; dysphagia; incontinence; bed-bound in terminal phase	Progressive decline in memory, language, motor impairments, and behavioral changes More years will be spent in the late or severe stage vs. earlier stages	Global atrophy, small hippocampal volumes	Minimal role for AChEIs in severe stage (undesirable side effects may outweigh modest benefit) Memantine not indicated in advanced/terminal stages

www.alz.org/dementia

Adapted from: Threlfall et al., 2013

Late Stage – Summary

Type	Onset	Etiology	Cognitive Symptoms	Motor Symptoms	Progression	Imaging	Pharmacology
Vascular	May be sudden (status post stroke) or stepwise	Ischemia, vasculopathy	Further declines in language, memory, decision making, visuospatial deficits as a result of vascular insults	Correlates with ischemia	Rate of progression dependent on vascular risk factors and recurrent ischemic events	Cortical or subcortical changes	No clear benefits of AChEIs or memantine, regardless of the severity of dementia; vascular risk factor management strategies

www.alz.org/dementia

Adapted from: Threlfall et al., 2013

Late Stage – Summary

Type	Onset	Etiology	Cognitive Symptoms	Motor Symptoms	Progression	Imaging	Pharmacology
Lewy Body	Gradual	Cytoplasmic α-synuclein inclusion bodies	Visual hallucinations, prominent behavioral problems (delusions), decreased executive function; memory problems may become more evident in late stage vs. earlier stages	Parkinsonism; postural instability; falls	Rapid functional decline leading to earlier nursing home placement and shorter survival compared to Alzheimer's	Global atrophy	AChEIs and memantine not specifically studied in severe Lewy Body dementia (some evidence for moderate disease) Caution with antipsychotics (increased sensitivity to adverse effects)

www.alz.org/dementia

Adapted from: Threlfall et al., 2013

Late Stage – Summary

Type	Onset	Etiology	Cognitive Symptoms	Motor Symptoms	Progression	Imaging	Pharmacology
Frontotemporal	Gradual < 60 y.o.	Tau or protein abnormalities or proteinopathies	Profound behavioral problems (apathy, agitation, disinhibition); language difficulties; memory loss may occur in this stage	May experience physical decline and become wheelchair-bound	Gradual but faster than Alzheimer's Rate of decline variable	Atrophy in frontal and temporal lobes	Not recommended Therapies directed at depression, agitation, or behavioral disturbance

www.alz.org/dementia

Adapted from: Threlfall et al., 2013

Workup: Assessing and Diagnosing Dementia

Dementia Assessment Tools

Functional Assessment Staging (FAST) (Sclan & Reisberg, 1992)

- https://www.mccare.com/pdf/fast.pdf

Mini-Cog™ (Borson et al., 2000)

- http://mini-cog.com/

Montreal Cognitive Assessment (MoCA) (Nasreddine et al., 2005)

- http://dementia.ie/images/uploads/site-images/MoCA-Test-English_7_1.pdf

Rapid Cognitive Screen (RCS) (Malmstrom et al., 2015)

- http://aging.slu.edu/uploads/Rapid%20Cognitive%20Screen_may7_2015.pdf

Dementia Assessment Tools

Saint Louis University Mental Status Examination (SLUMS) (Morley & Tumosa, 2002)

- http://medschool.slu.edu/agingsuccessfully/pdfsurveys/slumsexam_05.pdf

Brief Cognitive Rating Scale (BCRS) (Allen, 2011)

- http://www.iowahealthcare.org/userdocs/Documents/BCRS_GDS_assessments02262010.pdf

Geriatric Deterioration Scale (GDS) (on next slide) (Reisberg et al., 1982)

- https://www.fhca.org/members/qi/clinadmin/global.pdf

Mini-Mental Status Exam (MMSE) no longer used (due to copyright)

Stages of Dementia Assessment

Global Deterioration Scale (GDS) tool to determine stage of dementia

Stages	Recommendation
Stage 1: No cognitive decline	Independent living
Stage 2: Very mild cognitive decline	Independent living
Stage 3: Mild cognitive decline	Independent living
Stage 4: Moderate cognitive decline	Assisted Living Facility (ALF)/Adult Day Care or other supervision
Stage 5: Moderately severe cognitive decline	Appropriate for a Special Care Unit (SCU, Skilled Nursing Facility (SNF), or ALF
Stage 6: Severe cognitive decline	Appropriate for SCU, SNF, or ALF
Stage 7: Very severe cognitive decline	SNF or Hospice Care

(Reisberg et al., 1982)

Dementia Assessment Tools: Neuropsychological Evaluations

Benefits of a Neuropsychological Evaluation

- Comprehensive evaluation by a neuropsychologist can provide highly detailed and specific recommendations that can assist clinicians to develop comprehensive care plans
- Sequential evaluations can help determine disease progression, prognosis and changes in decisional capacity (Moye et al, 2006)
  - Additional screenings may not be covered by Medicare/Medicaid
- Neuropsychological evaluations are expert reports and may be used as evidence in Guardianship cases or to help families understand the decisional capacity of their family member (Demakis, 2013)

Dementia Assessment Tools: Neuropsychological Evaluations

Neuropsychological Evaluation may aid in:

- Addressing the distinction between normal aging and Dementia
- Addressing the potential progression from MCI to Dementia
- Provide a differential diagnosis of Dementia and other syndromes of cognitive impairment
- Determining whether there has been progression of cognitive impairment or the development of new impairment(s) to assist in the determination of decisional capacity

(Jacova et al, 2007)

Assessment Question 3

An 80-year-old man was noted to have excellent cognitive and motor skills 2 years ago. His wife reports that during the past 2 years his function has progressively deteriorated and he has short-term memory loss. Which of the following initial assessments may reveal the cause of his changes?

a) Montreal Cognitive Assessment (MoCA)
b) Complete Blood Count (CBC)
c) Serum thyroid-stimulating hormone
d) CT scan

Assessment Question 3: Answer

An 80-year-old man was noted to have excellent cognitive and motor skills 2 years ago. His wife reports that during the past 2 years his function has progressively deteriorated and he has short-term memory loss. Which of the following initial assessments may reveal the cause of his changes?

a) **Montreal Cognitive Assessment (MoCA) (Correct Answer)**
b) Complete Blood Count (CBC)
c) Serum thyroid-stimulating hormone
d) CT scan

Dementia Diagnosis

Timely diagnosis is important to:

- Offer opportunity of early intervention
- Implementation of integrated care plan created by an interprofessional team
- Better management of symptoms
- Patient safety
- Quality of life

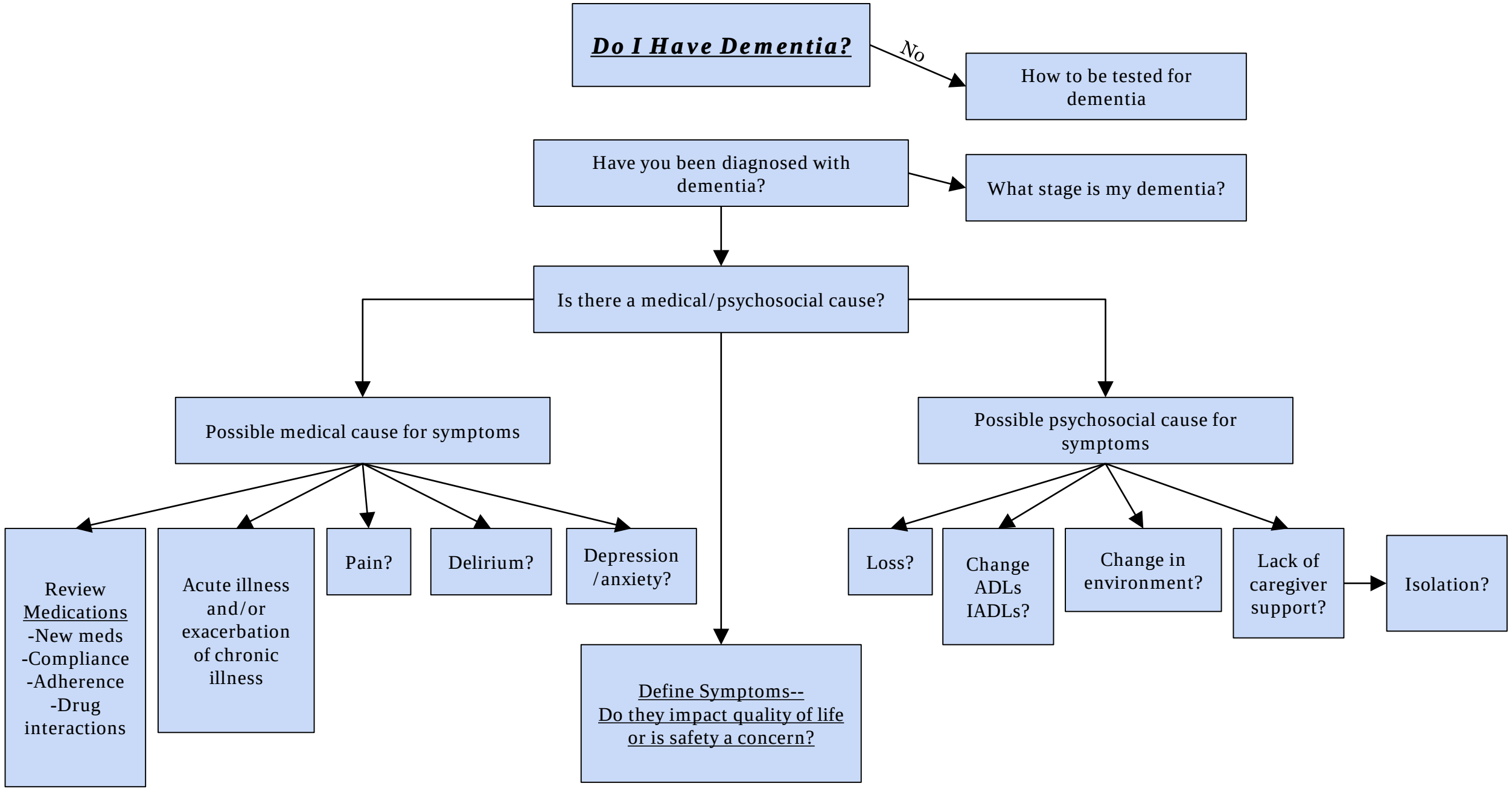
(Dubois et al., 2016)

Evaluation for Changes in Cognition

A typical workup for changes in cognition includes:

- Medical history and functional assessment
- Medication reconciliation
- Lab tests: Complete Blood Count (CBC), Comprehensive metabolic panel, Vitamin B12/folate levels, Thyroid-Stimulating Hormone (TSH), Rapid Plasma Reagin (RPR) and HIV Ab/Ag if risk factors
- Urinalysis, urine culture, heavy metal screening if clinical suspicion
- +/- CT head/MRI brain
- Neuropsychology evaluation

(Simmons et al., 2011)



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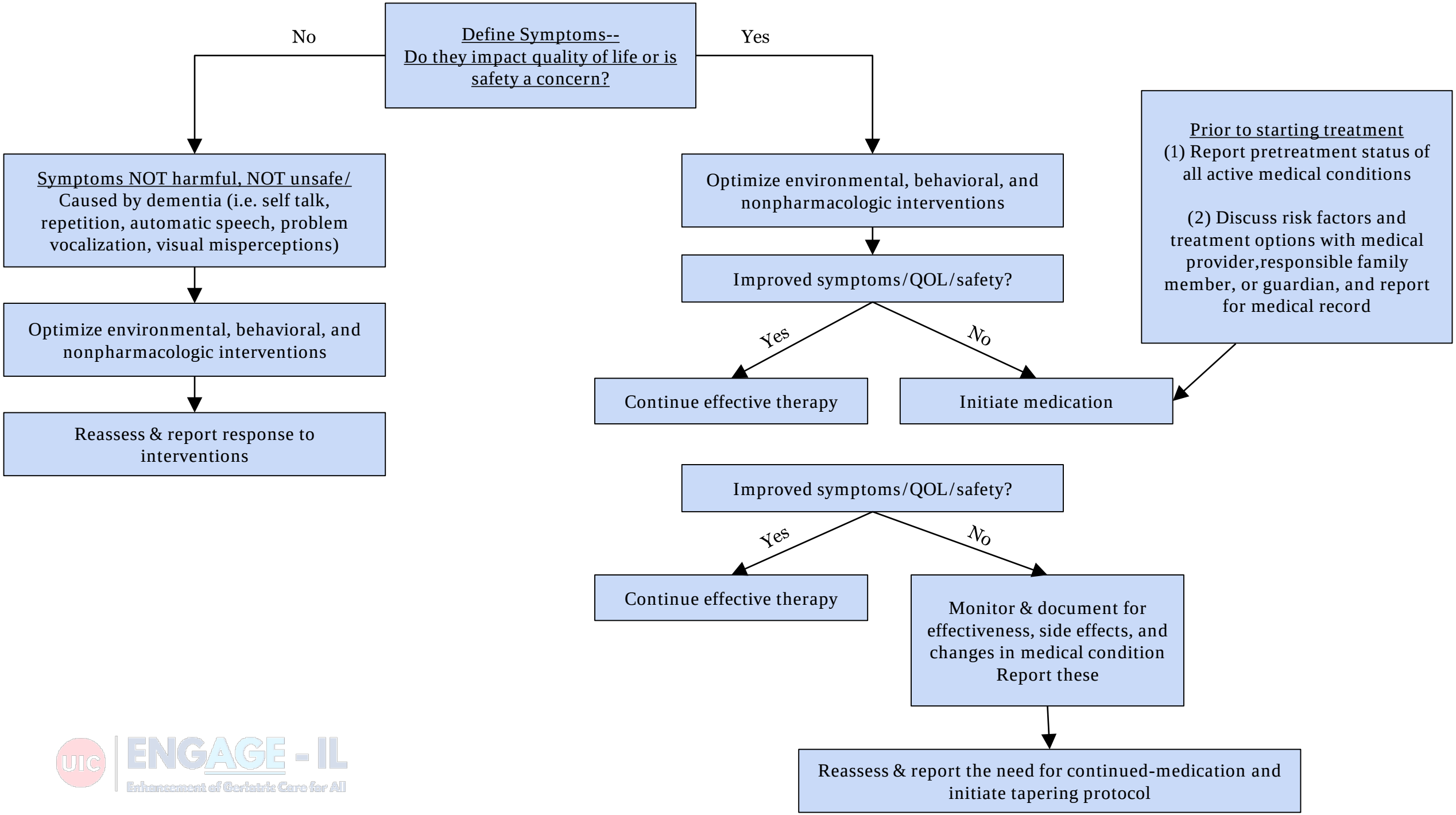

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Treatment

Treatment for Dementia

- Dementia is incurable, yet treatable
- Treatment approaches include:
  - Pharmacologic treatment
  - Nonpharmacologic treatment
  - Cognitive therapy
  - Noncognitive: Behavioral approaches

Treatment for Dementia

- Long-term management
  - Safety issues
  - Advance care planning
  - Hospice
- PwD may be treated with multiple approaches simultaneously from an interdisciplinary team

Pharmacologic Treatment

- Medications should be considered in early stage unless there is a delay in diagnosis, then begin in middle stage or at time of diagnosis
- FDA-approved medications
  - Acetylcholinesterase inhibitors (AChEIs)
  - N-methyl-D-aspartate (NMDA) receptor antagonists
  - Combination medication therapy

Pharmacologic Treatment of Early Dementia

- Acetylcholinesterase inhibitors (AChEIs)
  - donepezil, galantamine, rivastigmine
- Patients with early Alzheimer's dementia can receive a trial of an AChEI
- Only 10-25% of patients show modest improvement, but medications may slow progression of disease
- May worsen behavior in frontotemporal dementia

(Reuben et al., 2014)

Pharmacologic Treatment of Early Dementia

Adverse effects of Acetylcholinesterase inhibitors *(worse with increased dose)*

- Nausea, vomiting, diarrhea, dyspepsia, anorexia, weight loss, leg cramps, bradycardia, syncope, insomnia, agitation

Note:

- AChEIs approved for mild-moderate dementia
- Memantine is NOT approved for use in mild dementia; generally reserved for moderate to severe Alzheimer type dementia as monotherapy or in combination

(Reuben et al., 2014)

Pharmacologic Treatment of Early Dementia

- May lower rate of functional decline but no evidence of improved cognition
  - Vitamin E: Efficacy and safety controversial
  - Selegiline (MAO-B inhibitor)
- Ginkgo biloba: No benefit shown

(Reuben et al., 2014)

Pharmacotherapy in Moderate Dementia: Antipsychotics

FDA Warning

Elderly patients with dementia-related psychosis treated with antipsychotic drugs are at an increased risk of death. These agents are NOT approved for the treatment of patients with dementia-related psychosis. (Drugs@FDA, 2018)

- **Do not prescribe antipsychotic medications for behavioral and psychological symptoms of dementia (BPSD) in individuals with dementia without assessment for an underlying cause of the behavior.** (Choosing Wisely, AMDA, 2016)

- **Do not use antipsychotic medications as the first choice to treat behavioral and psychological symptoms of dementia (BPSD).** (Choosing Wisely, APA and AGS, 2015)

Pharmacotherapy in Moderate Dementia: Antipsychotics

Benefits (Reus et al., 2016)

- Manage dangerous agitation or psychosis (immediate risk to patient or others)
- May allow patient to stay in home or attend adult day programs
- Modest efficacy: ranges from nonsignificant to small
- Modest reduction in caregiver burden (Mohamed et al., 2012)

Pharmacotherapy in Moderate Dementia: Antipsychotics

Best evidence for:

- Treatment of agitation increases psychosis or overall behavioral/psychological symptoms of Dementia (BPSD)
- Risperidone for psychosis
- Risperidone, olanzapine, and aripiprazole for agitation
- Aripiprazole for overall BPSD
- Quetiapine no better than placebo for overall BPSD
- Haloperidol vs. risperidone—similar efficacy; ↑ extrapyramidal symptoms (EPS) with haloperidol

Pharmacotherapy in Moderate Dementia: Antipsychotics

Harms (Reus et al., 2016)

- Two- to three-fold higher risk of **mortality** with antipsychotic treatments
  - Higher risk with first generation vs. second generation (atypical) antipsychotics
    - 1.5 times higher risk with haloperidol vs. risperidone
  - Greatest risk during first 120-180 days of treatment
  - Higher doses ↑ risk

Pharmacotherapy in Moderate Dementia: Antipsychotics

Harms

- Number needed to harm* (NNH) in terms of mortality (Maust, 2015)
  - Haloperidol NNH = 26
  - Risperidone NNH = 27

  } ↑ risk of death
  - Olanzapine NNH = 40
  - Quetiapine NNH = 50

*Number needed to harm (NNH):

The number of patients treated with a specific therapy in order for one of them to have a bad outcome. (Bjornson, 2004, Strauss, Evidence Based Medicine, Fourth Edition, 2010)

Pharmacotherapy in Moderate Dementia: Antipsychotics

Harms (Reus et al., 2016)

- Cerebrovascular accidents (CVA)
- Greatest risk with risperidone (Maglione et al., 2011)
- FDA warnings in product labeling for risperidone, olanzapine, and aripiprazole

(Aripiprazole, 2016; Olanzapine, 2015; Risperidone, 2016)

Antipsychotic	Studied Dose Range for BPSD (average)	Dosage Form	Sedation	EPS	Anti-cholinergic	Orthostatic Hypotension	Meta-bolic Effects	QTc ↑ Risk (Beach et al., 2013)
Haloperidol (Chan et al., 2001; De Deyn et al., 1999)	0.5-4 mg/d (≈1-2 mg)	Tablet Liquid IM/IV	Low	High	Low	Low	Low	IV: +++ PO: ++ IM: ++
Risperidone (Brodaty, 2005; Deberdt et al., 2005; Schneider et al., 2006)	0.5- 2 mg/d (≈ 1 mg)	Tablet ODT Liquid	Low/ Moderate	Low	Very Low	Moderate	Low/ Moderate	+
Quetiapine (Schneider et al., 2006; Tariot et al., 2006)	25-600 mg/d (≈ 50-100 mg)	Tablet (IR or ER)	Moderate / High	Very Low	Moderate	Moderate	Moderate	+
Olanzapine (Deberdt et al., 2005; Schneider et al., 2006; Street et al., 2000)	2.5-15 mg/d (≈ 5 mg)	Tablet ODT IM	Moderate / High	Low	Moderate	Moderate	High	+
Aripiprazole (De Deyn et al., 2005; Streim, 2008)	2-15 mg/d (≈ 10 mg)	Tablet ODT Liquid IM	Low	Low	Very Low	Very Low	Low	_

Pharmacotherapy in Severe Dementia: Cholinesterase Inhibitors

- Alzheimer's Disease: Donepezil 10 mg po daily x 6 months (Winblad et al., 2006)
- Eligibility:
  - Nursing home residence
  - Mini-Mental State Examination (MMSE) score: 1-10
  - FAST score: Stage 5 (requires assistance in choosing clothing) to Stage 7c
  - Ability to walk

Many not hospice eligible

Pharmacotherapy in Severe Dementia: Cholinesterase Inhibitors

- Participants:
  - 30/128 (23%) had a FAST score of 7a or worse; Mean MMSE: 6
- Primary Outcome Results:
  - 5.7-point improvement on a 100-point Severe Impairment Battery (SIB) score ($p = 0.008$)
  - 1.7-point improvement on a 54-point ADL scale ($p = 0.03$)
- 22% Drop out rate possibly due to adverse effects (AEs)?
- AEs: Donepezil 23 mg/day > Donepezil 10 mg/day (Farlow et al., 2010)

Clinically significant? (Hogan, 2006)

Pharmacotherapy in Severe Dementia: Cholinesterase Inhibitors

- Alzheimer's Disease: Rivastigmine 13.3 mg/day patch x 16 weeks (after 8 week titration) (Farlow et al., 2013)
- Eligibility:
  - Community-dwelling or assisted living facility residence
  - MMSE: 3-12

Pharmacotherapy in Severe Dementia: Cholinesterase Inhibitors

- Primary outcome results for 13.3 mg/day vs. 4.6 mg/day rivastigmine patch
  - 4.9-point improvement on a 100-point Severe Impairment Battery (SIB) score ($p < 0.0001$)
  - 1.2-point improvement on a 54-point ADL scale ($p = 0.025$)

Clinically significant?

- Adverse Events:
  - Dose-related increase in nausea, vomiting, diarrhea, weight loss, insomnia, falls

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Pharmacotherapy in Severe Dementia: Memantine

- Alzheimer's Dementia: Memantine 20 mg/day x 28 weeks (Reisberg et al., 2003)
- Eligibility:
  - Community-dwelling
  - MMSE 3-14
  - Global Deterioration Scale (GDS) 5 or 6
  - FAST Score: 6a (cannot dress) or better

Moderate to Severe Dementia

Pharmacotherapy in Severe Dementia: Memantine

- Participants:
  - 47% had a GDS of 5
  - 51% had a GDS of 6
  - 29/126 memantine-treated patients dropped out
- Primary outcome results:
  - 6-point improvement on a 100-point Severe Impairment Battery (SIB) score ($p < 0.001$)
  - 2.1-point improvement on a 54-point ADL scale ($p = 0.02$)

Pharmacotherapy in Other Dementias: Cholinesterase Inhibitors

Vascular Dementia

- No effect with rivastigmine (Ballard et al., 2008) or galantamine (Auchus et al., 2007)
- Questionable effect with donepezil (Kavirajan & Schneider, 2007)

Frontotemporal Dementia

- No effect with galantamine (Kertesz et al., 2008)
- American Psychiatric Association guidelines: “little evidence overall to support the use of any particular agent for frontotemporal dementia” (APA, 2007, 2014)

Pharmacotherapy in Other Dementias: Cholinesterase Inhibitors

Lewy Body Dementia

- Benefit with rivastigmine (McKeith et al., 2000)
  - Eligibility: MMSE >9
  - Mean MMSE 17.9 (range 10-29)
- Benefit with donepezil (Mori et al., 2012)
  - Eligibility: MMSE 10-25
  - Mean MMSE not reported

Treatment of Dementia: Nonpharmacologic

- Exercise, balanced diet, stress reduction
- Smoking cessation counselling
- Optimized management and treatment of other medical conditions
- Work to maximize and maintain function
- Interprofessional team of health care providers should establish a relationship with patient and caregivers and have regular appointments every 3-6 months
- Realistic goals
- Supportive individual and group therapy
- Attention to safety
- Cognitive and noncognitive behavior therapy

(Reuben et al., 2014)

Nonpharmacologic Treatment of Dementia: Cognitive Therapy

- Patients should be advised to:
  - Stay active
  - Get enough restful sleep
  - Eat right
  - Minimize stress
  - Keep brain active through games and engaging activities
  - Socialize
    - Example: Memory Cafes
  - Create supportive environmental modifications – calendars, clocks, to-do lists
- Cognitive Stimulation Therapy (CST):
  - Formal CST: 14 or more sessions of themed activities which run twice/week

http://www.cstdementia.com/page/guiding-principles

http://www.healthinaging.org/files/documents/tipsheet

Nonpharmacologic Treatment of Dementia: Cognitive Therapy

- Cognitive focused interventions:
  - Cognitive training
  - Cognitive rehabilitation

Nonpharmacological Treatment of Dementia: Noncognitive Behavioral Approaches

Optimize Environment: Environmental Treatments

- Aromatherapy (Nguyen & Paton, 2008)
- Balanced stimulation-consistent routines and consistent caregivers (Gruss et al., 2004)
- Bright light therapy (Onega et al., 2016)
- Music therapy (music and memory) https://musicandmemory.org/
- "Natural" environments (Whear et al., 2014)
- Snoezelen therapy (controlled multisensory environment) (Huesgen et al., 2014)
- White noise treatments (Kaneko et al., 2013)

Nonpharmacologic Treatment of Dementia: Noncoognitive Behavioral Approaches

Behavioral Approaches/Treatments

- Behavioral rehabilitation and modification: ABC Model of Care (Smith & Buckwalter, 2005)
- Dementia care mapping and person-centered care (Chenoweth et al., 2009)
- Meaningful activities for middle- and late-stages:
  - Reminiscence, family and structured social activities, music, dancing (Harmer & Orrell, 2008)
  - Animal-assisted therapies (Sellers, 2006)
- Simulated presence therapy (Abraha et al., 2017)
  - Touch therapy (Nicholls et al., 2013)
  - Validation therapy (Feil, 2014)

Assessment Question 4

Which of the following statements is <u>TRUE</u> regarding cognitive drug therapies in the management of dementia?

a) NMDA receptor antagonist “add on” therapy with memantine may be beneficial in severe stages

b) Adverse effects commonly seen with cholinesterase inhibitors include an increase in nausea, vomiting, weight loss, and falls

c) Cognitive benefits of drug therapies have been demonstrated up to 5 years in clinical trials

d) Cholinesterase inhibitors are considered effective in all stages of dementia

Assessment Question 4: Answer

Which of the following statements is <u>TRUE</u> regarding cognitive drug therapies in the management of dementia?

a) NMDA receptor antagonist “add on” therapy with memantine may be beneficial in severe stages

b) Adverse effects commonly seen with cholinesterase inhibitors include an increase in nausea, vomiting, weight loss, and falls (Correct Answer)

c) Cognitive benefits of drug therapies have been demonstrated up to 5 years in clinical trials

d) Cholinesterase inhibitors are considered effective in all stages of dementia

Assessment Question 5

Which one of the following is <u>TRUE</u> regarding the risk of prescribing psychotropic medications to patients with dementia?

a) First- and second-generation antipsychotics increase morbidity but not all-cause mortality

b) Second-generation antipsychotics do not increase morbidity and all-cause mortality

c) First-generation antipsychotics do not increase morbidity and all-cause mortality

d) First- and second-generation antipsychotics increase both morbidity and all-cause mortality

Assessment Question 5: Answer

Which one of the following is <u>TRUE</u> regarding the risk of prescribing psychotropic medications to patients with dementia?

a) First- and second-generation antipsychotics increase morbidity but not all-cause mortality

b) Second-generation antipsychotics do not increase morbidity and all-cause mortality

c) First-generation antipsychotics do not increase morbidity and all-cause mortality

d) First- and second-generation antipsychotics increase both morbidity and all-cause mortality (Correct Answer)

Behavioral Changes and Safety

Management: Behavioral Changes

Difficult Behaviors

- Physically aggressive
- Physically nonaggressive
- Verbally aggressive
- Verbally nonaggressive
- Other: hallucinations, paranoia, delusions; inappropriate sexual behaviors, impulsivity

Tegeler, 2015

Management: Behavioral Changes

Etiology of Difficult Behaviors

- Medical causes
- Environmental causes
- Task-related causes

Tegeler, 2015

Management: Behavioral Changes

Repetitive Actions/Words

- Avoid: Telling patient to stop or asking why she or he is doing it
- Suggestions:
  - Touch
  - Mirroring
  - Eye contact
  - Music
  - Occupy person's hand with an activity, doll, stuffed animal, ball
  - Distract with food, music, exercise
  - Ignore behavior or question
  - Give him/her full attention and respond to emotional needs

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Tegeler, 2015

Management: Behavioral Changes

Wandering

Suggestions:

- Direct person to labeled rooms (bedroom, toilet)
- Decrease noise levels and number of people interacting at one time
- Go for a walk with patient
- Redirect with food, conversation, activity
- Home safety to avoid elopement

Tegeler, 2015

Management: Behavioral Changes

Hallucinations, Paranoia, Delusions

Suggestions:

- Address environmental cause
- Decrease noise levels and number of people interacting at one time
- Go for a walk with patient
- Redirect with food, conversation, activity
- Home safety to avoid elopement

Tegeler, 2015

Safety Issues

Areas of Safety (Lach & Chang, 2007)

- A safe home
- Driving
- Traveling
- Wandering

Safety Issues

Safety Tips https://www.alz.org/care/alzheimers-dementia-home-safety.asp

- Reassure the PwD you are there to help them
- Remove potentially harmful, sharp, or breakable objects
- Use safety plugs on electric outlets
- Keep childproof caps on medication and household cleaners
- Install locks out of sight
- Have PwD wear ID bracelet, ankle bracelet, etc.
- Caregivers/families should have recent photo for Silver Alert or in the event of a lost PwD

Safety Issues: Natural Disasters and Emergencies

Safety Tips http://www.alz.org/national/documents/topicsheet_disasterprep.pdf

- Advance preparations for natural disasters & emergency situations:
  - If the person with dementia lives in a residential building or attends an adult day center, learn about its disaster and evacuation plans and find out who is responsible for evacuating everyone in the event of an emergency
  - Be sure the evacuation plan takes special needs into consideration, for example, if a walker or wheelchair is used, how will accommodations be made
  - Provide copies of the person's medical history, a list of medications, physician information and family contacts to people other than a partner/spouse

Safety Issues: Natural Disasters and Emergencies

Safety Tips http://www.alz.org/national/documents/topicsheet_disasterprep.pdf

- Advance preparations for natural disasters & emergency situations:
  - Prepare an emergency kit
  - If oxygen is used, be sure there is easy access to portable tanks
  - Enroll in Alzheimer's Association Safe Return , a 24-hour nationwide emergency response service for people with dementia and their caregivers

    https://www.alz.org/care/dementia-medic-alert-safe-return.asp
  - Purchase extra medication; keep other supplies well stocked

Caregiver Support and Resources

Caregiver Burden

- Over 50% of caregivers develop depression
- Physical illness, isolation, anxiety, and burnout are common
- Educate and support caregivers
- Advise caregiver about sources of care and support, financial and legal issues
- Support services: Alzheimer's Association, Family Caregiver Alliance, National Institute on Aging

https://www.nia.nih.gov/alzheimers/relieving-stress-anxiety-resources-alzheimers-caregivers

Impact of End-of-Life Care on Family Caregivers

Year Before Death:

Increased time caregiving

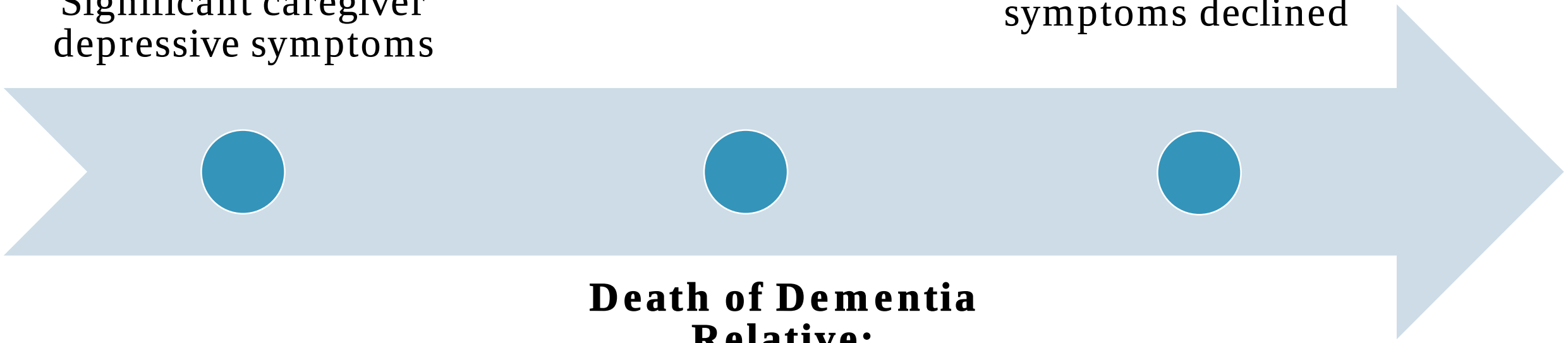
Significant caregiver depressive symptoms

Death of Dementia Relative:

72% of family caregivers felt considerable relief

3 Months After Death:

Depressive symptoms declined



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(Schulz et al., 2003)

Resource Needs of PwD and Caregivers

Difference in Caregivers' Needs by Stage of Dementia

Early-stage care recipients and caregivers report:

- Receiving the diagnosis of Alzheimer's disease from health professional was helpful
- Information overload, too much information initially given
- Difficult to navigate websites
- Lack of information on how to assist PwD with their ADLs
- Need information for low-income families
- Distance and travel issues were a barrier to attending support meetings

(DiZazzo-Miller et al., 2013)

Resource Needs of PwD and Caregivers

Difference in Caregivers' Needs by Stage of Dementia

Middle-stage care recipients and caregivers report:

- Would have preferred "one-stop shopping" to access resources
- Preference and use of internet in searching for resources
- Want more locations for respite care, mobility/transportation, and home health care agencies specializing in dementia care
- Want to speak one-on-one with people to discuss concerns and seek further resources

(DiZazzo-Miller et al., 2013)

Resource Needs of PwD and Caregivers

Difference in Caregivers' Needs by Stage of Dementia

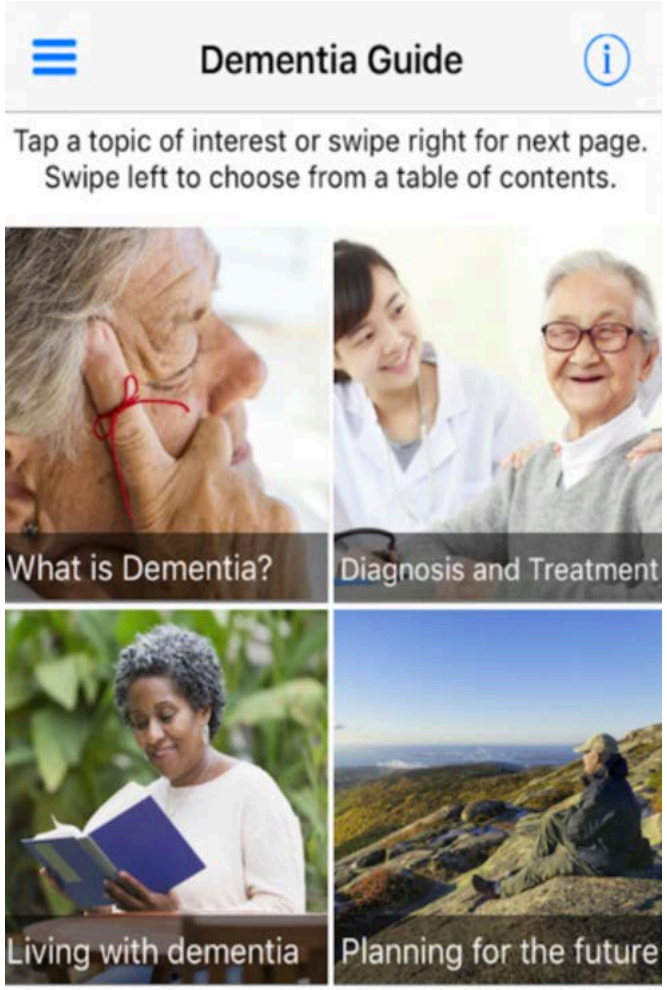
Late-stage care recipients and caregivers report:

- Access internet for resources
- Depend on family for support
- Access Alzheimer's Association programs

(DiZazzo-Miller et al., 2013)

Resource Needs of PwD and Caregivers: Dementia Guide Expert for Families Mobile App

- Caregivers from all stages report the lack of a "one-stop shopping" for resources and information related to caring for a person with dementia www.engageil.com has developed a on-line free mobile app called ***Dementia Guide Expert for Families***
- Available for iOS on Apple App Store
- Available for Android on Google Play



Resource Needs of PwD and Caregivers: Dementia Guide Expert for Families Mobile App

- The dementia guide is a resource guide for persons with dementia, families, and caregivers, and offers helpful advice and support as they travel through each stage of the dementia experience
- The approach is dementia-positive and the goal is to improve the quality of life of persons with dementia, families, and caregivers
- Download for free today!

Advanced Care Planning

To prepare family member for difficult decisions (feeding, management of infection, hospitalization, nursing home placement), health care professionals should:

- Discuss the disease trajectory and expected complications
- Discuss basic principles of surrogate decision-making before complications occur to prevent unwanted treatments or interventions
- Educate families on the role of hospice and palliative care

(Mitchell, 2007, 2015)

Advanced Care Planning

Treatment decisions in late Dementia should:

- Correspond with the patient's goals of care
- Be a shared decision among health care proxies and health care professionals
- Involve a discussion of potential benefits and harms

(Mitchell, 2007, 2015)

Take-Home Messages: End-Stage Dementia

- Advance care planning documents should be in place
- Patient's preferences and goals of care must be respected
- Refer to hospice/palliative care
- Avoid cholinesterase inhibitors in advanced dementia
- Avoid antipsychotics as first-line agents to treat behavioral symptoms
- Careful hand feeding is preferred over feeding tubes
- Bereavement and support services should be offered before and after death

Assessment Question 6

Advance care planning is recommended to prepare family members for future difficult decisions, including:

a) Management of heart disease
b) Evaluation of need for hospice and/or palliative care
c) Using only clinician's preferences for care
d) Using antipsychotic medications

Assessment Question 6: Answer

Advance care planning is recommended to prepare family members for future difficult decisions, including:

a) Management of heart disease

b) Evaluation of need for hospice and/or palliative care (Correct Answer)

c) Using only clinician's preferences for care

d) Using antipsychotic medications

On the Horizon

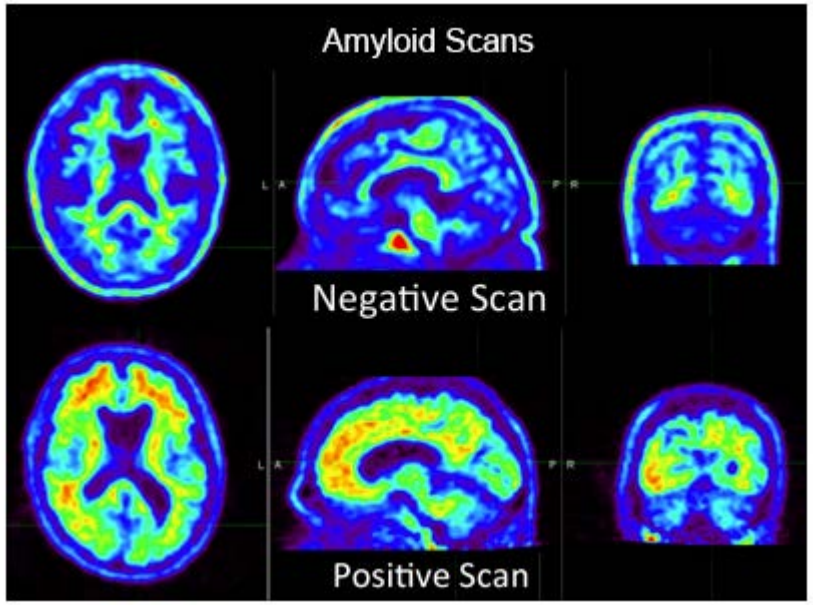
Future testing/imaging:

- Brain imaging (neuroimaging)
- Structural brain imaging
- Functional brain imaging
- Molecular brain imaging
- Cerebrospinal fluid proteins
- Blood/genetic biomarkers
- Amyloid PET imaging

(Alzheimer's Australia, 2015)

Dementia Diagnosis with Imaging

- Amyloid PET imaging for assessment of cognitive impairment; amyloid PET scanning makes amyloid plaques “light up” on a brain PET scan



https://radiology.ucsf.edu/patient-care/services/specialty-imaging/alzheimer

Alzheimer's Association Resources for Clinicians

Cognitive Impairment Care Planning Toolkit helps you deliver person-centered care

INTERVIEW with

Terrianne Reynolds, MPH, SMP

Director, Medical and Research Activities

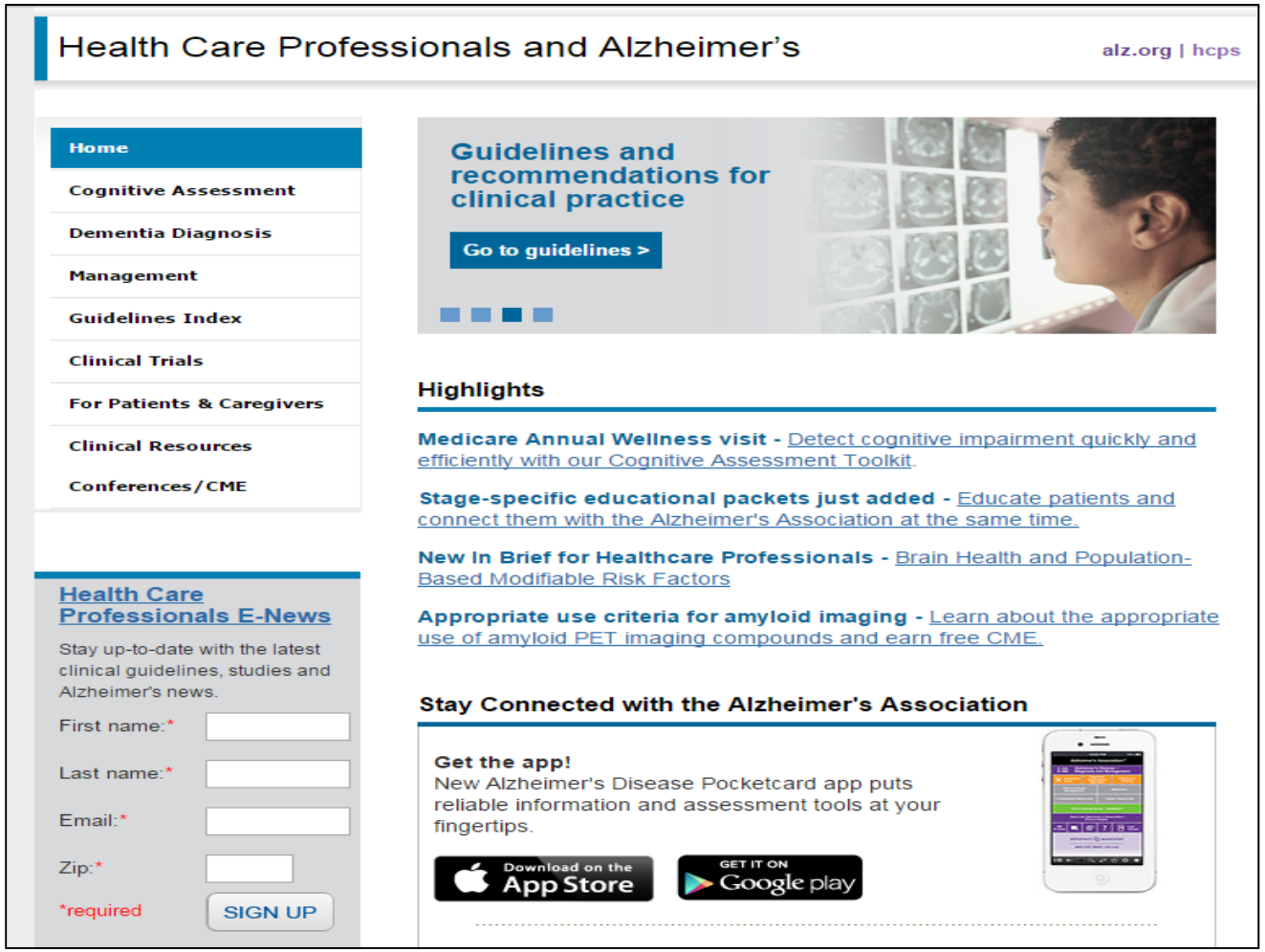
Alzheimer's Association

Greater Illinois Chapter

Resources: Web-based information for clinicians
alz.org/hcps

Easy navigation

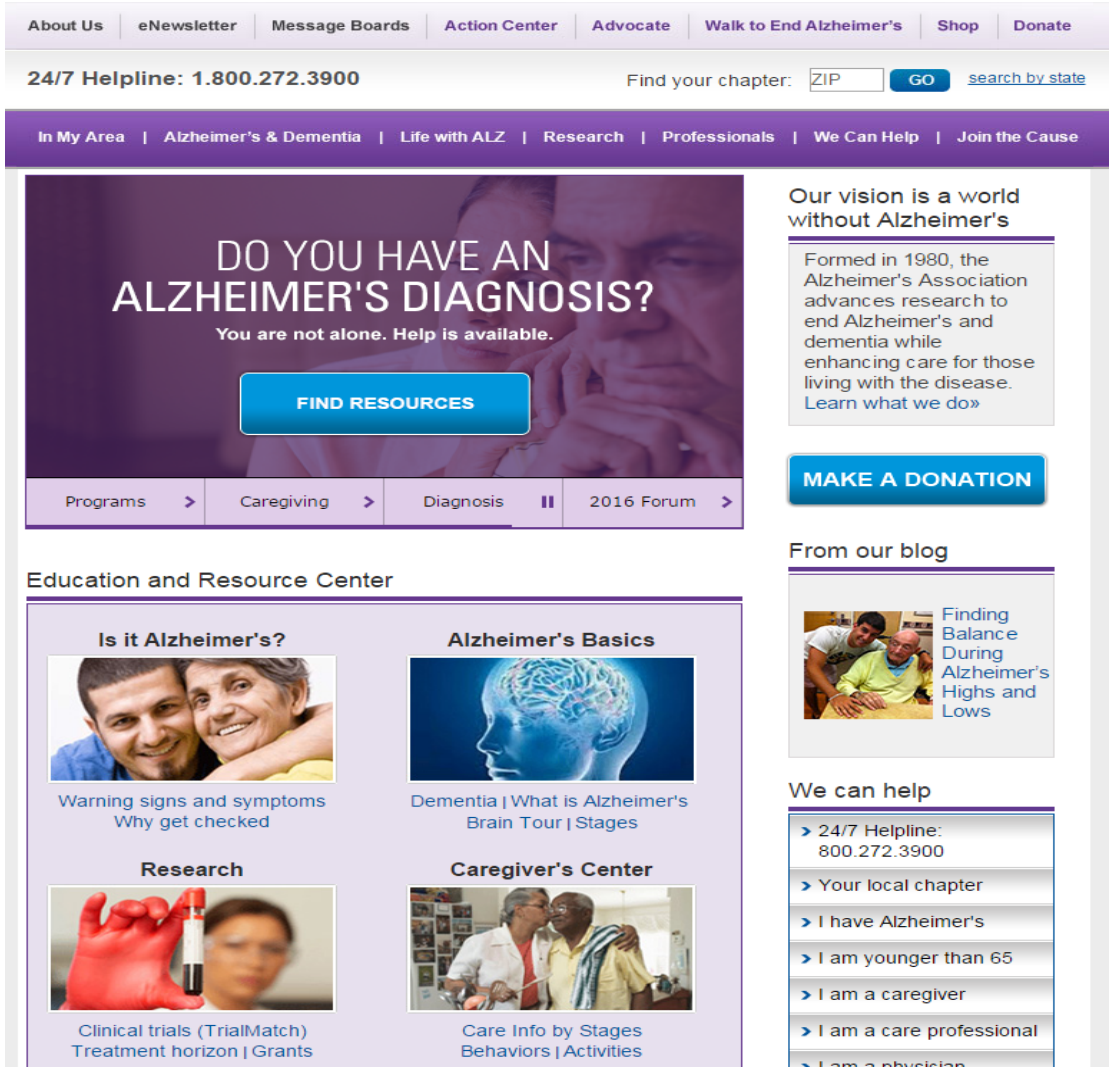
Sign up for Newsletter



Resources: Patient and Caregiver Education

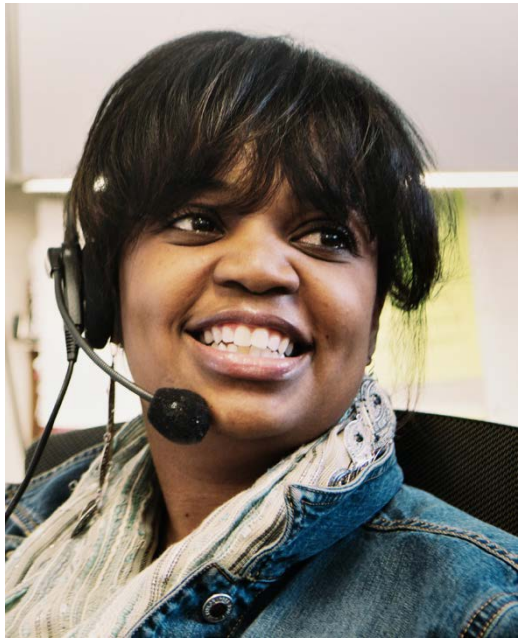
www.alz.org

Robust website with reliable information



Alzheimer's Association: 24/7 Helpline: 800.272.3900

We have the time: Free reliable information and support all day, every day



- Triaged by information specialists and master's-level care consultants
- Support and advice on critical aspects of dementia care
- Call times between 5-45 mins
- All medical calls are directed back to the physician

Alzheimer's Association: How they help…

- **24/7 Helpline 800-272-3900**
- **Care Navigation Planning -** Individual sessions in-person or by phone help individuals with memory loss and their families plan and cope with the disease
- **Education Programs -** Variety of programs/conferences for people with dementia, their families, the public, and continuing education for professionals
- **Support Groups -** Patients, families, and caregivers can confidentially share concerns, encouragement, and information
- **Medic-Alert® + Safe Return® -** A nationwide service for those with medical emergencies or who become lost and need help in finding their way home

Resources

https://www.alz.org/downloads/facts_figures_2013.pdf Accessed May 2, 2017

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