



MASSACHUSETTS
GENERAL HOSPITAL

PSYCHIATRY ACADEMY

Geriatric Psychiatry

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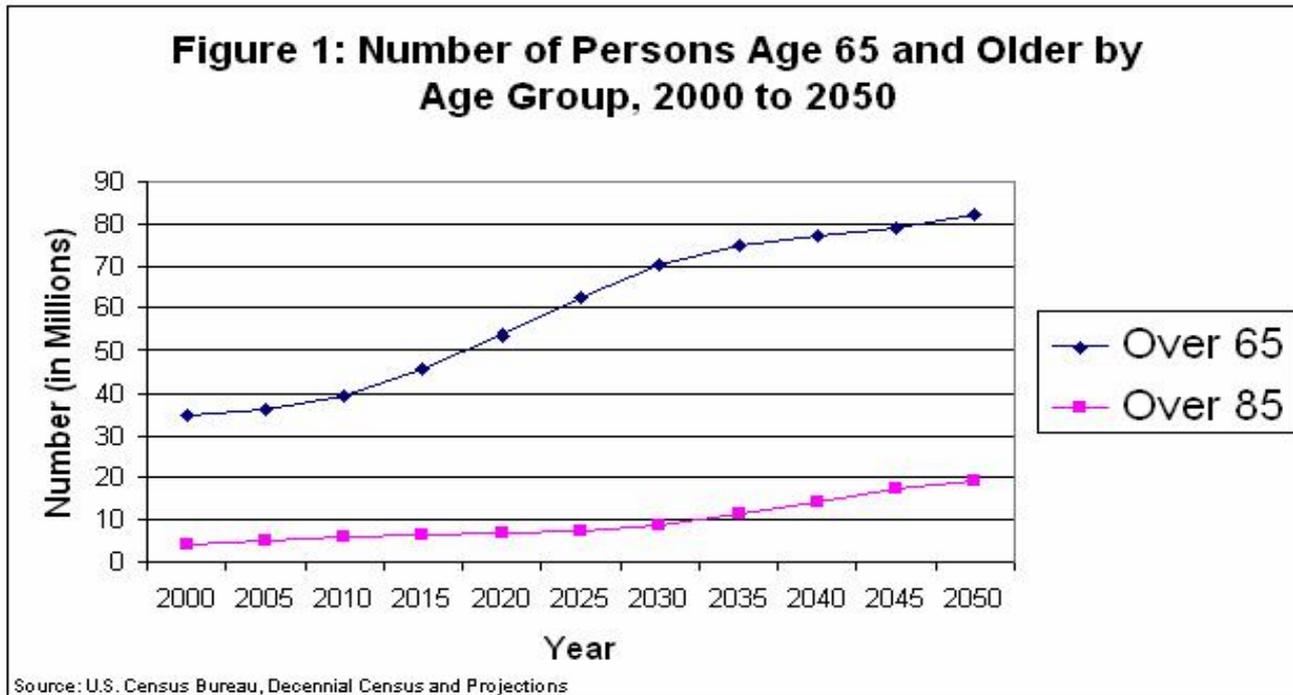
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Disclosures

Neither I nor my spouse has a relevant financial relationship with a commercial interest to disclose.

Geriatric Population Growth



2050: 88.5 million (25% population)

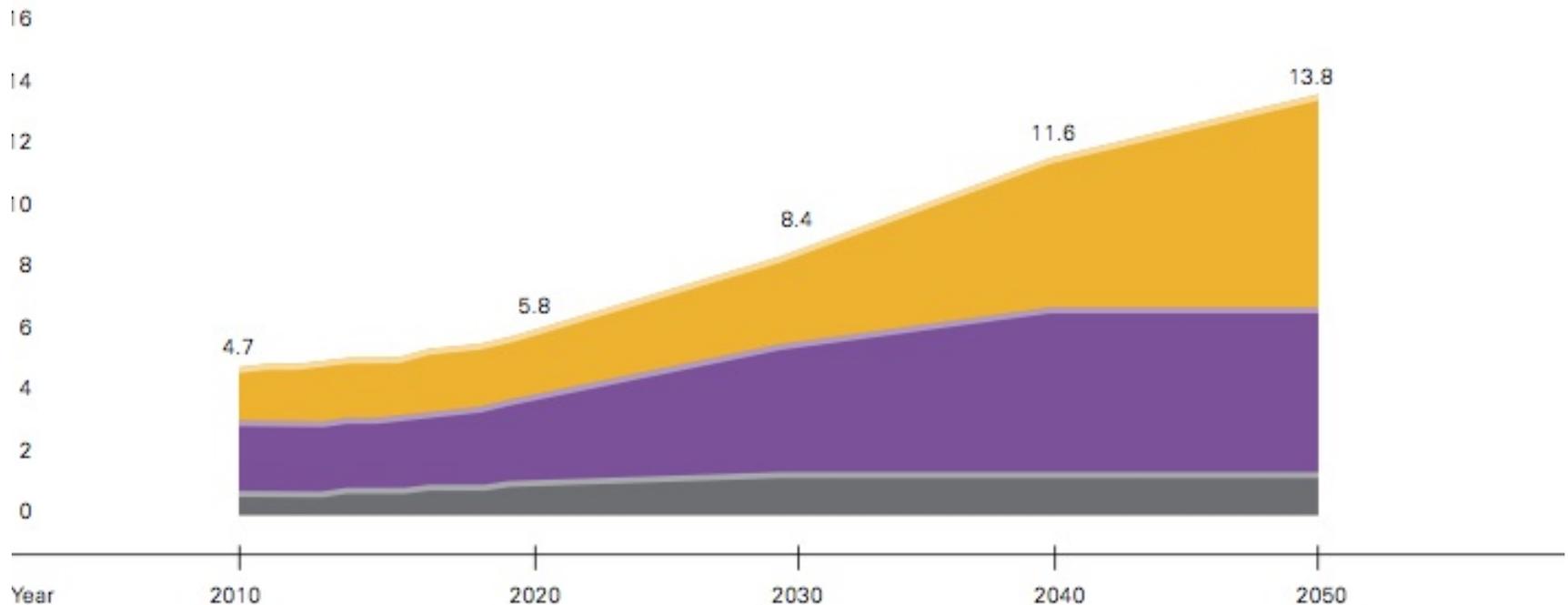
Alzheimer's Disease

FIGURE 4

PROJECTED NUMBER OF PEOPLE AGE 65 AND OLDER (TOTAL AND BY AGE GROUP) IN THE U.S. POPULATION WITH ALZHEIMER'S DISEASE, 2010 TO 2050

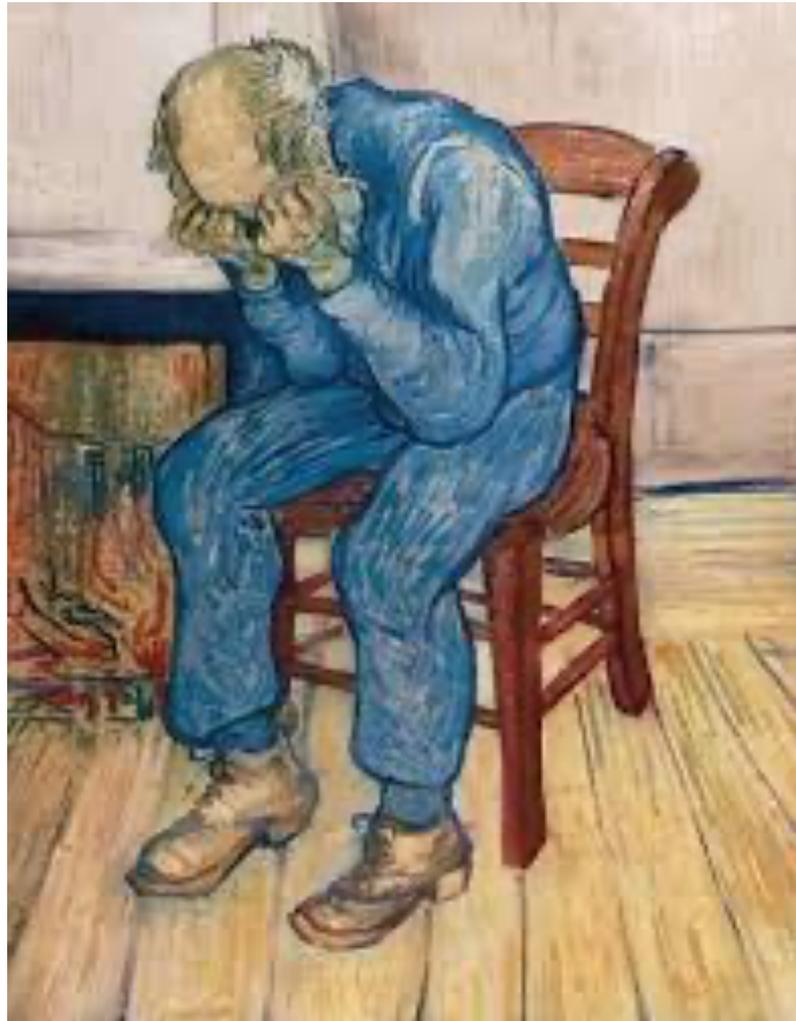
Millions of people with Alzheimer's

■ Ages 65-74 ■ Ages 75-84 ■ Ages 85+



Created from data from Hebert et al.¹⁸³, A10

Late Life Depression



Case Recognition

- 40% of elderly who commit suicide have seen physician within 1 week of death
- Difficulties
 - Misconceptions
 - Misdiagnosis
 - Stigma
 - Stoicism
 - Cognitive Impairment
 - Unique presentation

Unique Presentation

- Apathy
- Withdrawal
- Irritability
- Anxiety
- Somatic Complaints
- Hypochondriasis
- Psychosis

Chief Complaints

- Persistent Pains
- Difficulty sleeping
- Withdrawal from activities
- “Memory problems”
- Excessive worries (finances, health)
- Easy fatiguability

Late Life Depression

- Major Depression
 - 1-3% community
 - 12% primary care settings
 - 21-37% hospitals, nursing homes
- Minor Depression 15%
- Adjustment with Depression 4%
- Dysthymia 2%

Depression in Medical Illness

- Post-Stroke 50%
- Post-Myocardial Infarction 30%
- Parkinson's disease 50%
- Alzheimer's disease 40%
- Cancer 25%
- Worsens the course of illness
- Predictor of mortality
- Predictor of dementia

Suicide Risk Factors

- White male
- History of depression
- Prior attempts
- Living alone, poor supports
- *Psychotic features*
- *Alcoholism*
- Physical illness
- Chronic Pain
- *Disability/debility*

Substance Abuse

- Problems even at low level use
- Low recognition, untreated
- Prescription medicines
 - Benzodiazepines, Opiates
- NIAAA guidelines
 - >1 drink = at-risk
 - >5/day = binge

Psychotic Depression

- 4% community vs 40% hospitalized
- Mood congruent delusions (somatic, nihilistic, jealous, failures)
- Guilt, inadequacy, disease, punishment
- Pronounced agitation or retardation
- Persisting low use of antipsychotics
- Requires combination treatment
- High relapse rate

Vascular Depression

- Frontostriatal dysfunction
- White matter hyper intensities
- Apathy
- Lack of insight
- Executive dysfunction
- Treatment Resistance

Choosing an Antidepressant

- Side Effect profile
 - Safety
 - Tolerability
- Drug interactions
- History of response
- First line: SSRI (Celexa, Lexapro, Zoloft) or Mirtazepine (Remeron)

Pharmacokinetics

- Absorption
- Distribution
 - Increased body fat
 - Decreased protein
- Metabolism
 - p450 decreases
- Elimination
 - Renal

Pharmacodynamics

- Sensitivity
 - Anticholinergic
 - Dopaminergic
 - Orthostatic
 - Hyponatremia/SIADH
 - Bradycardia
 - Bleeding
 - Serotonin Syndrome

Drug Interactions

- 2D6 Inhibitors
 - Prozac, Paxil, Wellbutrin, Effexor
- Dependent drugs w/narrow index
 - TCAs
 - Antipsychotics
 - B-blockers
 - Oxycodone, Tramadol
 - Anti-arrhythmics

Comorbid Anxiety

- 60% prevalence in the depressed elderly
- Impacts treatment resistance
 - Withdrawal from treatment
 - Decreased response
 - High 52% vs. Low 75%
 - Longer time to response
 - High 11 wks vs. Low 7 wks
 - Recurrence
 - High 58% vs. Low 29%

Antidepressant dosing

| Medication | Starting (mg/day) | Therapeutic Range (mg/day) | Side Effects |
|-------------------|--------------------------|-----------------------------------|---------------------------|
| Citalopram | 10 | 10 - 20 | Mild GI, QTC prolongation |
| Escitalopram | 5 | 5- 20 | Very Mild GI |
| Sertraline | 25 | 50 - 150 | Sedation, Moderate GI |
| Paroxetine | 10 | 10 - 30 | Sedation, Anticholinergic |
| Fluoxetine | 10 | 10 - 60 | Agitation, Insomnia |
| Mirtazapine | 7.5 | 15 - 45 | Sedation, Weight gain |

Antidepressant dosing, cont.

| Medication | Starting (mg/day) | Therapeutic Range (mg/day) | Side Effects |
|------------------------|--------------------------|-----------------------------------|---|
| Bupropion | 75 | 75 - 300 | Anxiety, Insomnia, Constipation |
| Venlafaxine | 37.5 | 75 - 225 | Moderate GI, Sweating, Hypertension |
| Duloxetine | 20 | 30 - 120 | Dry Mouth, Constipation |
| Desvenlafaxine | 50 | 50 - 100 | Orthostasis |
| Nortriptyline (TCA) | 10 | 30 - 100 | Sedation, cardiac, anticholinergic |
| Tranylcypromine (MAOI) | 10 | 10 - 30 | Insomnia, Weakness GI, Orthostasis, HTN, Hypoglycemia |

Treatment Refractory Depression

- ECT
 - Success rate 80% or more in elderly patients refractory to medication trials
 - Tolerated as well as younger patients
 - Relapse rate 50% without post-ECT intervention (such as maintenance ECT + antidepressant)
 - Cognitive worsening usually transient, even in dementia
 - PRIDE study: ultrabrief ECT

Treatment Refractory Depression

- Atypical Antipsychotics
 - Aripiprazole: 2.5 – 15mg
 - Quetiapine: up to 100mg
- TMS
 - Prefrontal atrophy may predict response
 - Role in vascular depression
- Lithium
- Lamotrigine
- Methylphenidate, Modafinil
- Ketamine

Depression and Dementia

- Episodes of pseudo-depression predict dementia: 50% progress in 5 years
- Worsens the course of illness
- Clues include facial expression, sobbing, irritability, fear, loss of interest/motivation
- Short-lived, recurrent symptoms
- Cornell Scale for Depression in Dementia (CSDD)

Identifying Depression in Dementia

- Facial expression, sobbing
- Irritability and fear
- Mood symptoms short-lived, recurrent
- Loss of interest and motivation
- Cornell Scale for Depression in Dementia (CSDD)

Depression in Dementia

- Treatment with antidepressant
 - Mild/moderate vs. Moderate/severe
 - Well tolerated, efficacy unclear
- Treatment with ECT
 - 80% success when refractory to medications
 - Tolerate treatment as well as younger
 - Best response maintenance ECT + antidepressant
 - Cognitive worsening transient

Dementia

- DSM 5 Changes
- Neurocognitive disorders
 - Delirium
 - Major (dementia) impaired iADLs
 - Minor (new) approximates MCI
- Removal of memory impairment as essential criterion
- Use of objective neuropsych assessment
- Specification of behavioral symptoms

Descriptive Features

- With Psychosis
- With Mood Disturbance
- with Apathy
- with Agitation
- with other Behavioral Disturbance

Subtypes of Dementia by Etiology

- Alzheimer's disease
- Frontotemporal lobar degeneration
- Lewy Body Disease
- Vascular Disease
- Traumatic Brain Injury
- HIV infection
- Parkinson's disease

| Disease | First Symptom | Mental Status | Neuropsych | Imaging |
|-------------|---|--|--|---|
| Alzheimer's | Memory Loss | Episodic memory loss | Initially normal | Entorhinal cortex and hippocampal atrophy |
| FTD | Apathy; Poor insight/judgment; Speech; Hyperorality | Frontal/executive, language; spares drawing | Apathy, disinhibition, hyperorality, euphoria, depression | Frontal, insular or temporal atrophy; spares posterior parietal |
| DLB | Visual hallucinations, delirium, Capgras syndrome, Parkinsonism | Drawing and frontal/executive; spares memory; delirium prone | Visual hallucinations, depression, sleep disorder, delusions | Posterior parietal atrophy; hippocampus larger than in Alzheimer's |
| Vascular | Sudden and variable; apathy, focal weakness | Frontal/executive slowing, can spare memory | Apathy, delusions, anxiety | Cortical or subcortical infarctions, confluent white matter disease |

Dementia

- Goals of Treatment
 1. Set realistic expectations
 2. Slow cognitive decline
 3. Improve daily functioning
 4. Reduce behavioral complications
 5. Enhancing/maintain quality of life
 6. Support caregiver health
 7. Foster safe environment

Primary Prevention

- Medical/Vascular risk factor
 - HTN, Diabetes, Hypercholesterolemia
- Lifestyle changes
 - Exercise, Diet, Cognitive/Social stimulation
- Hazard reduction
 - Depression, anxiety, loneliness, PTSD, sleep
 - Hospitalizations, stressor exposure
- Supplements
 - omega-3, antioxidants, vitamin E, vitamin D, coffee, metformin, curcumin

Meds for Cognitive Decline

| Medication | Stage of dementia | Starting dose | Target Dose |
|------------------------|---------------------------|-----------------------|-----------------------|
| Donepezil (Aricept) | Mild, Moderate and Severe | 5mg daily | 10-23mg |
| Rivastigmine (Exelon) | Mild, moderate | 1.5mg BID | 6mg BID |
| Rivastigmine patch | Mild, moderate | 4.6 mg daily | 9.6 - 13.3 mg |
| Galantamine (Razadyne) | Mild, moderate | 4mg BID | 12mg BID |
| Memantine (Namenda) | Moderate, severe | 5mg daily (or 7mg ER) | 10mg BID (or 28mg ER) |

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Cholinesterase Inhibitors

- No difference in efficacy or tolerability
- Side effects
 - 2-3% nausea, vomiting, diarrhea
 - 2% bradycardia
- Choices
 - Donepezil: daily dosing simple
 - Galantamine: reduced nausea
 - Rivastigmine: approved for PD, patch
- Combination therapy: most useful for moderate to advanced disease

Neuropsychiatric Symptoms

- Mood and psychotic symptoms
- Behavioral agitation
- Associated with amyloid positive PET
- Accelerates disease progression
- Functional decline, worse quality of life
- Significant caregiver distress
- Earlier nursing home placement

Agitation in Dementia

- “Agitation” = ?paranoid, restless, pacing, yelling, aggressive, impulsive, intrusive, resistant to care, hypersexual, hallucinating
- Rule out
 - Infections
 - GI change (constipation)
 - Pain control
 - Metabolic (hyponatremia, hypoglycemia)
 - Medications
 - anticholinergic, steroids, dopaminergic

Antipsychotic Dosing

| Medication | Dosage in Dementia, Psychotic Depression | Dosage in Schizophrenia, Mania |
|-------------------------|--|--------------------------------|
| Risperidone (Risperdal) | 0.5mg – 2mg | up to 4mg |
| Olanzapine (Zyprexa) | 2.5-10mg | up to 15mg |
| Quetiapine (Seroquel) | 50- 200mg | up to 300mg |
| Aripiprazole (Abilify) | 2.5 – 15mg | up to 30mg |
| Ziprasidone (Geodon) | 10-20mg | up to 80mg |
| Clozapine (Clozaril) | 12.5mg – 50mg | up to 300mg |

Newer Antipsychotics

| Medication | Advantages | Disadvantages |
|-----------------------|---|---|
| Asenapine (Saphris) | Well tolerated up to 10mg BID May improve cognition | Somnolence, Orthostatic hypotension |
| Paliperidone (Invega) | Well tolerated 3-12mg Also comes as IM injection Mainly renal excretion | Adjust for renal impairment |
| Lurasidone (Latuda) | Low risk of metabolic changes or hypotension | Somnolence, EPS |
| Iloperidone (Fanapt) | Low anticholinergic, low EPS, low prolactin | Dizziness, Orthostatic hypotension, Tachycardia, QTC prolongation |

CATIE-AD Trial

- Antipsychotic (mean) doses:
 - Risperdal 1 mg
 - Zyprexa 5.5. mg
 - Seroquel 56.5 mg
- Side effects > efficacy
- Most help for suspicious thoughts, paranoid delusions, hostile/aggressive behavior
- No benefit for function, quality of life or caregiving time

Antipsychotics in Dementia

- FDA Warnings
 - Increased risk cerebrovascular
 - 1.9 – 2.2 % with antipsychotics
 - 0.8 – 0.9% with placebo
 - Increased risk of mortality
 - 3.5 – 4.5 % with antipsychotics
 - 2.3 – 2.6% with placebo

Alternatives to Antipsychotic

- Memantine, cholinesterase inhibitors
- Antidepressants
 - CitAD study: Celexa reduces anxiety, irritability, delusions despite worsening sleep
 - Trazodone
- Anti-epileptics
 - Lamotrigine
- Prazosin

Withdrawing Antipsychotics

- Australian HALT project
 - 23 long term care facilities
 - N=140, mean age 85
 - 75% remain off antipsychotics 6 months following initial reduction, no relapse in agitation, aggression, delusions, hallucinations
- ADAD study
 - 180 patients with agitation/aggression, mean age 79
 - Relapse rates 35-37% when risperidone discontinued
 - 78% relapse rate with severe auditory hallucinations

Psychosocial Approaches to Agitation

- Routines
 - Rituals/repetitions, concrete tasks, sleep schedule
- Redirection
 - Food, music, old movies
- Reassurance
 - Comforting words, weighted blankets, rocking, social interactions, animal therapies
- Reorganization
 - Low noise, calming and simplified environments

Caregivers

- 2013: 17 billion hours of unpaid care (\$220 billion value)
- Average time spent 22 hrs/week
- Worse caregiver health/burden predicts institutionalization
- Caregivers of hospitalized dementia patients report higher depressive symptoms (63% vs 43% non-hospitalized)
- Spousal caregivers have 63% higher mortality rate than noncaregivers

Resources

- Housing Options
 - Assisted Living (average cost \$41, 724/year)
 - Independent Living
 - Skilled Nursing Facility (average cost \$87, 235/year)
- Home Care
 - Non-medical aides, visiting nurses
- Community Services
 - Adult Day Care programs (average cost \$70/day)
 - Elder Law Attorneys
 - Geriatric Care Managers
 - Meal Delivery, Transportation

Alzheimer's Association

- Education, support groups, social engagement programs
- www.alz.org
- 24/7 Helpline 1-800-272-3900