



GERIATRIC DEPRESSION AND DEMENTIA

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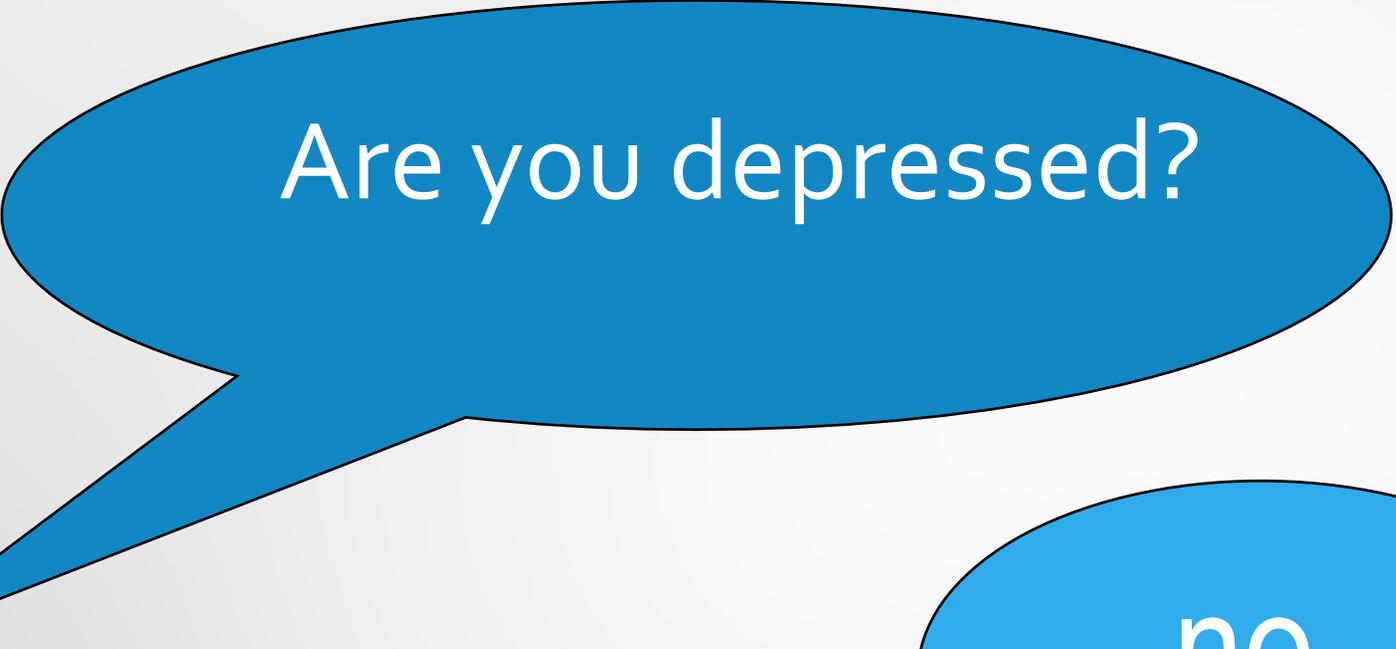
Learning Objectives:

At the end of the presentations, the participant will be able to:

- Recognize the challenges in the diagnosis of depression in the elderly.
- Understand how dementia impacts the presentation and treatment of depression.
- Develop comprehensive strategies for the treatment of depression in the elderly

Mrs. K

- Mrs. K is an 80 year old Japanese female. She has been having persistent fatigue and shortness of breath x several months and has been presenting to the ED with increasing frequency, at least 6-7 times in the last 2 months. She sleeps poorly. She used to be quite independent, including driving, and had traveled to Japan about 10 months ago with her daughter. But since then, she has lost about 20 lbs in the past year, feels very weak, and now doesn't leave the house (except to go to doctor's appointments and the ED). Her daughter now brings her in for evaluation.



Are you depressed?



no.

Clinical Presentation in the Elderly

- Depression Symptoms
 - Mood changes less pronounced with less subjective depression, **more irritability**
 - Low energy, insomnia, low appetite, anxiety, **cognitive changes and somatic complaints are more frequent**

Confounded...by Dementia

- Overlap with dementia symptoms
 - Impaired concentration
 - Forgetfulness
 - Lack of motivation, Apathy
 - Dropping many activities and interests
 - Self-neglect
 - Psychomotor retardation
 - Sleep disturbance
- Persons with dementia cannot self-report symptoms accurately.

Confounded... by Medical Illness

- Symptoms of depressive and physical disorders often overlap
 - Fatigue
 - Disturbed sleep
 - Diminished appetite
- Seriously ill or disabled persons may focus on thoughts of death or worthlessness, but not suicide
- Side effects of drugs (e.g. Beta-blockers, Ciprofloxacin) for other illnesses (e.g. thyroid disease) may be confused with depression, dementia or delirium.

...and not to be Confused with Grief Reactions

- Elderly may experience multiple stressors and losses
 - Medical burden
 - Some loss of independence
 - Loss of roles/ community/ friends or family
- Bereavement is different because:
 - Most disturbing symptoms resolve in 2 months
 - Not associated with marked functional impairment

Clues to depression in outpatient primary care

- Persistent pain, headache, fatigue, insomnia, GI symptoms, arthritis, multiple diffuse symptoms, or weight loss
- Frequent calls and visits
- High utilization of services

Clues in hospitalized patients

- MI, CABG, hip fracture, or stroke
- Delayed recovery
- Treatment refusal
- Discharge problem
- Readmission (Increased rates of hospital readmissions)

Clues in the nursing home

- Apathy, withdrawal, or isolation
- Failure to thrive
- Agitation
- Delayed rehabilitation
- Especially high rates of depression in cognitively intact nursing home patients

Early vs. Late Onset Depression

- Early Onset is more associated with family history of depression
- Late-Life Depression associated with illness, mortality, neuroimaging changes (e.g. white matter changes)

Screening Strategy

- Initial Screening

- Mini-cog → MMSE or SLUMS

- PHQ-2

(anhedonia and feeling “down”)

Mild-Moderate Dementia

- Geriatric Depression Scale
- PHQ-9

Advanced Dementia

- Cornell Scale for Depression in Dementia
- PHQ-9 OV (nursing home)

PHQ-9

- Over the last 2 weeks, how often have you been bothered by the following problems?
 - Feeling tired or having little energy?
 - Poor appetite or overeating?
 - Trouble falling asleep, staying asleep or sleeping too much?
 - Feeling bad about yourself- that you are a failure or have let yourself or your family down?
 - Trouble concentrating on things?
 - Moving or speaking so slowly that others noticed? Or being so fidgety or restless that you have been moving around more than usual?
 - Thoughts that you would be better off dead or of hurting yourself?
- IS USEFUL for MONITORING RESPONSE.

Geriatric Depression Scale (15 Item)

- YES/NO responses
- Asks more questions about **feelings**
- Free of Somatic and Sleep Queries
- Does not ask about suicidal or death ideation
- NOT useful for assessing treatment response

Table 39.4—The Geriatric Depression Scale (GDS, 15-item)

Choose the best answer for how you felt over the past week.

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

Moderate to Advanced Dementia

- Nursing Home PHQ-9 Observation Version
 - For those unable to complete PHQ-9 interview
 - Validated against Cornell Depression Scale
 - includes caregiver report, patient report, observations of behavior and medical record review.
- Over the last 2 weeks, did the resident have any of the following problems or behaviors?
 - Same PHQ-9 items,
 - Additional item: “Being short-tempered, easily annoyed”
(from Cornell Scale- “irritability:)
 - Yes/No → Symptom frequency

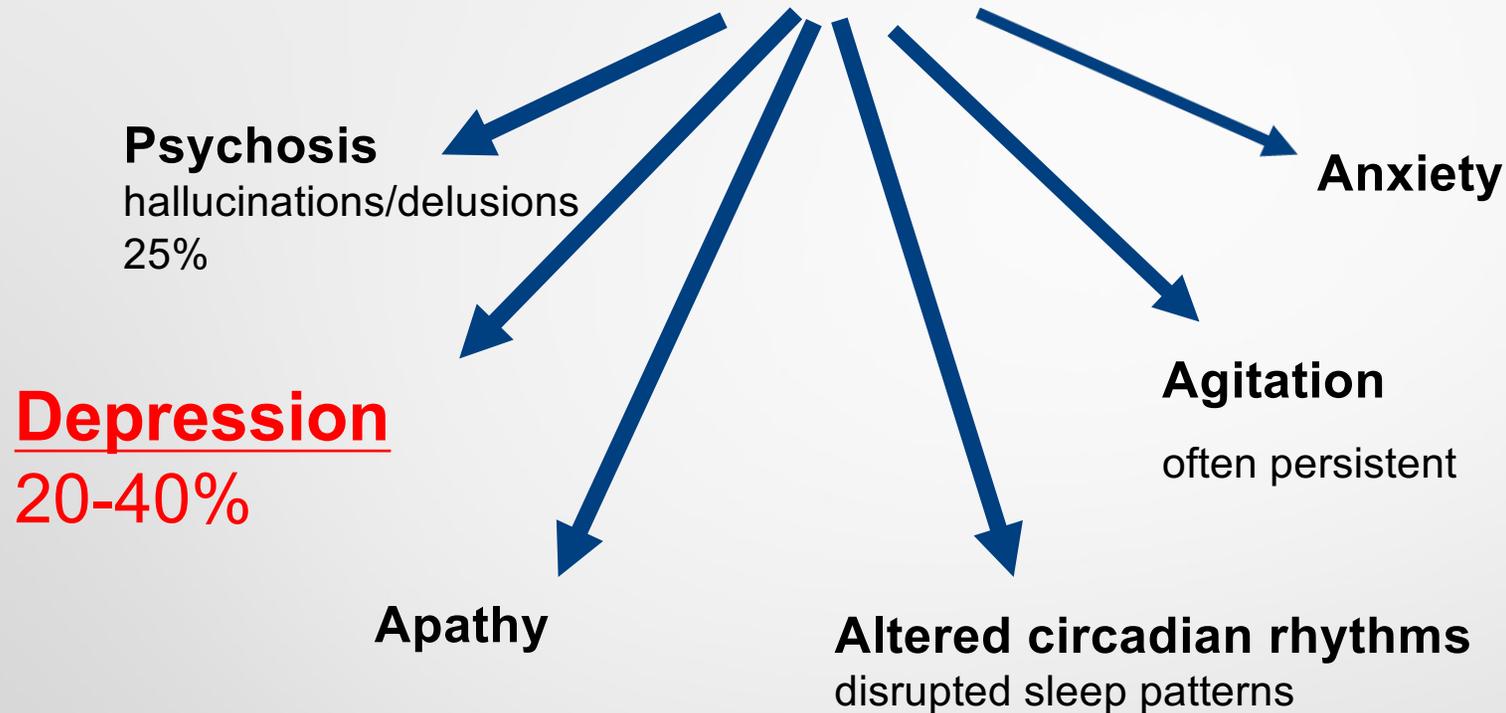
Dementia Behaviors

- Restless
- Repetitive actions
- Repetitive calling out
- Wanting to go home
- Screaming, noises
- Pacing and wandering
- Stealing
- Hallucinations, paranoia
- Resistive to Care
- Angry behaviors
- Aggressive
- Abusive



Depression?

Behavioral and Psychological Symptoms of Dementia (BPSD)



A clear description of symptoms helps to facilitate specific and effective treatment

Dementia & Depression

- Higher prevalence of depression among patients with Dementia (20-40%)
 - Vascular Dementia (44.1%)
 - Diffuse Lewy Body Dementia (30%)
 - Alzheimer's (18.5%)
 - Mild Cognitive Impairment (20%)
 - No Dementia (8.6%)

Enache, et al. Depression in Dementia: Epidemiology, Mechanisms, and Treatment. *Curr Opin Psychiatry*. 2011; 24(6):461-472

Dementia or Depression?

Depression → Dementia

- Depressive Dementia = A syndrome seen in older adults in which they exhibit symptoms consistent with dementia but the cause is actually Depression.
- “Pseudodementia”
- Short and abrupt onset
- REVERSIBLE

Early Dementia → Depression

- Depression is a risk factor for Dementia
- A dx of depression may be an early prodrome that uncovers the expression of early stage dementia
- Even if sx improve, some cognitive impairment remains and Dementia should be followed.
- PROGRESSION

Mixed anxiety/depression is common

- Not recognized as a distinct entity in DSM IV or V
- Common in elderly and medically ill
- Insomnia common
- Probably **accounts for overuse of benzodiazepines** and underutilization of antidepressants
- **Responds to antidepressant treatment**



Treatment approach

Non-Pharmacologic

Non-pharmacologic treatment

- Try to address:
 - Improving medical status
 - Family issues
 - Caregiver support (especially for dementia patients)
 - Maximize function (e.g. hearing aid, PT/OT)
 - Exercise
 - Nutritional needs
 - Substance abuse rehab
 - Cognitive Behavioral Therapy
 - Behavioral Activation

Cognitive Behavioral Therapy

- May be valuable for cognitively intact residents who are willing:
 - Group or Individual
- Some residents may not be amenable to “therapy.”
 - Cultural or Generational
- Cognitive behavioral therapy is comparable to antidepressants in response
- Memory and attentional difficulties may impair effectiveness

Behavioral Activation (BA) for those with Dementia

- “Outside in” approach that focuses on **engaging the patient** in behaviors that improve mood and counter depressive tendencies to isolate and be inactive.
- Similar results to Cognitive/Behavioral Therapy and medication in the research.
 - Dimidjian et al (2006): BA comparable with antidepressant (paroxetine) in reducing distress and lower attrition rate
 - Cuijpers et al (2007): BA superior to other psychological treatments
 - Mazzucchelli et al (2009): BA decreased depression symptoms

Core Principles of BA

- Change how people feel by **changing what they do**. Motivation is not necessary.
- Structure & schedule activities that follow a plan, not a mood.
- Emphasize activities that are naturally reinforcing.
 - # 1: Goal setting: Patient chooses pleasant activities/ personally important goals
 - # 2: Encouragement: Help patient to make a detailed plan to achieve goal
 - # 3: Goal achievement: Patient completes activity and tracks activities and mood
 - # 4: Reinforcement: Praise success/ goal achievement

From Behavioral Activation for Depression: A Clinician's Guide. Martell, Dimidjian, and Herman-Dunn



Treatment approach

Pharmacologic

Symptom-based Medication Options for BPSD

Paranoia

mild

citalopram, prazosin, *sertraline, escitalopram*

severe

risperidone, olanzapine, aripiprazole, *quetiapine*

Depression

antidepressants

Apathy

cholinesterase inhibitors (ChEI), methylphenidate
bupropion

Anxiety/Agitation

mild

citalopram, trazodone, prazosin, *ChEI/memantine*

severe

risperidone, olanzapine

quetiapine, benzos, valproate, gabapentin, buspirone

Sexual Aggression

citalopram, risperidone

Insomnia

melatonin, doxepin, trazodone, *mirtazepine*

PRNs

mild behaviors

trazodone

emergency

IM haloperidol, IM olanzapine

Second line options in italics

Desai 2012

Symptom-based Medication Options for BPSD

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mild

citalopram, prazosin, sertraline, escitalopram

severe

risperidone, olanzapine, aripiprazole, *quetiapine*

Depression

antidepressants

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citalopram, trazodone, prazosin, *ChEI/memantine*

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risperidone, olanzapine

quetiapine, benzos, valproate, gabapentin, buspirone

Sexual Aggression

citalopram, risperidone

Insomnia

melatonin, doxepin, trazodone, *mirtazepine*

PRNs

mild behaviors

trazodone

emergency

IM haloperidol, IM olanzapine

Second line options in italics

Desai 2012

First, Do No Harm: Beer's Criteria, STOPP Criteria

AVOID:

- Tertiary TCA: e.g. Amitriptyline, doxepin, imipramine
 - highly anticholinergic
- Antipsychotics: 1st and 2nd generation
 - Risk for CVA, mortality
- Benzodiazepines: Short and long acting
 - slower metabolism, risk for falls
- Non-bzd hypnotics: e.g. eszopiclone, zolpidem
 - Delirium, falls, fx
- SSRI's
 - Beware history of clinically significant hyponatremia

First, Do No Harm: Other Common Errors

- Ignoring side effects and drug interactions
- Follow up on side effects (hyponatremia, urinary retention, unsteady gait common)
- Not following up on adherence
- Underdosing
- Stopping too soon (minimum 6-9 months)

The Usual Strategy for Geriatric Patients

- Individualized selection of antidepressants based on patient characteristics and side effect profile (e.g. insomnia, anorexia, anxiety)
- Start low: half the younger adult dose
- Go slow: Titrate after 2-4 weeks as needed.
- Change treatment if min/no response in 4-8 weeks
 - Switch the Class of Antidepressant

2001 US Expert Consensus Guidelines

2006 Canadian Guidelines

Types of antidepressants

CLASS	EXAMPLES
SSRI	Escitalopram, citalopram, sertraline, paroxetine
SNRI	Duloxetine, venlafaxine, desvenlafaxine
MAOI	Phenelzine, selegiline, tranylcypromine
TCA	Nortriptyline, desipramine
Dopamine/norepinephrine	Bupropion
Alpha-1 adrenergic & 5HT ₂	Trazodone
Alpha-2 adrenergic & 5-HT ₂	Mirtazapine

All with similar efficacy and lag periods



Algorithm for Stepped Care Approach

Outcomes in Two Randomized Studies Comparing an Stepped—Care Approach vs. Treatment-As-Usual for the Treatment of Late-Life Depression

Study	N	Treatment algorithm	Outcomes
IMPACT (Unutzer et al, 2001; Unutzer et al, 2002)	1801	<p>Step 1: AD (typically a SSRI) or PST (8-12 weeks)</p> <p>Step 2:</p> <ul style="list-style-type: none"> -Non-response: Switch to other AD or PST -Partial response: Combine with other AD or PST <p>Step 3:</p> <ul style="list-style-type: none"> -Combine AD and PST -Consider ECT or other specialty services 	<p>Rate of response (50% reduction in depression score) after 12 months:</p> <ul style="list-style-type: none"> Intervention: 45% Usual care: 19%
PROSPECT (Mulsant et al, 2001; Bruce et al, 2004; Alexopoulos et al, 2005; Alexopoulos et al, 2009)	599	<p>Step 1: Optimize current AD (if applicable) Non-response - Switch to:</p> <p>Step 2: citalopram 30 mg once a day</p> <p>Step 3: bupropion SR 100-200 mg twice a day</p> <p>Step 4: venlafaxine XR 150-300 mg once in AM</p> <p>Step 5: nortriptyline (target 80-120 ng/ml)</p> <p>Step 6: mirtazapine 30-45 mg in the evening Partial response – Add:</p> <p>Step 2: bupropion SR 100-200 mg twice a day</p> <p>Step 3: nortriptyline (target 80-120 ng/ml)</p> <p>Step 4: lithium (target 0.60-0.80 mEq/l)</p> <p>Then, steps 2, 4, 6 for non-responders</p> <p>Also, IPT can be used as an alternative to AD or as an augmentation to AD.</p>	<p>Rate of response (HDRS score of 10 or below)</p> <ul style="list-style-type: none"> - After 4 months: Intervention: 33% Usual care: 16% - After 12 months: Intervention: 54% Usual care: 45%

AD: antidepressant; ECT: electro-convulsive therapy; IPT: interpersonal therapy; HDRS: Hamilton depression rating scale; PST: problem-solving therapy; SSRI: selective-serotonin reuptake inhibitor

Mulsant et al. A systematic approach to pharmacotherapy for geriatric major depression. [Clin Geriatr Med.](#) 2014 Aug;30(3):517-34. doi: 10.1016/j.cger.2014.05.002. Epub 2014 Jun

Proposed Antidepressant Algorithm

Updated Pharmacotherapy Algorithm for the Treatment of Late-Life Depression

	Majority consensus and minority alternative
Step 1	Escitalopram Alternatives: sertraline, duloxetine
Step 2 for minimal or non-response)	Switch to duloxetine Alternatives: venlafaxine, desvenlafaxine
Step 3 for minimal or non-response	Switch to nortriptyline Alternative: bupropion
Step 2-3 for partial response	Augment antidepressant with lithium or an atypical antipsychotic Alternatives: combine SSRI or SNRI with mirtazapine or bupropion
Duration of each step	6 weeks Alternatives: 4 weeks; 8 weeks

SSRI: selective-serotonin reuptake inhibitor; SNRI: serotonin-norepinephrine reuptake inhibitor

Mulsant et al. A systematic approach to pharmacotherapy for geriatric major depression. [Clin Geriatr Med.](#) 2014 Aug;30(3):517-34. doi: 10.1016/j.cger.2014.05.002. Epub 2014 Jun 14.

Summary of Pearls

- Ask about the course, nature, and precipitating factors
- Evaluate for Dementia (+/- delirium)
- Evaluate for Depression
- Evaluate Medications
- Evaluate Medical Conditions/ Labs
- Maximize Non-pharmacologic strategies
- Support the Caregiver
- Adjust the environment
- Try Pharmacologic strategies
- TEAMWORK!



Case Discussion

Mrs. K

- Mrs. K is an 80 year old Japanese female. She has been having persistent fatigue and shortness of breath x several months and has been presenting to the ED with increasing frequency, at least 6-7 times in the last 2 months. She sleeps poorly. She used to be quite independent, including driving, and had traveled to Japan about 10 months ago with her daughter. But since then, she has lost about 20 lbs in the past year, feels very weak, and now doesn't leave the house (except to go to doctor's appointments and the ED). Her daughter now brings her in for evaluation.

PMH

- HTN
- Hypercholesterolemia
- Osteoporosis
- Hypothyroidism
- After her return from Japan, her cough and fatigue were worked up, and she was diagnosed with MAI pneumonitis, and has been on Clarithromycin and Albuterol Nebulizers for at least 3 months.

PMH...already worked-up

- What she doesn't have:
 - No previous psych history.
 - Normal thyroid function
 - Extensive workup ruled out cancer (mammography, colonoscopy, bronchoscopy, including total body CT)
 - Extensive workup ruled out cardiac disease, arrhythmias, valvular disease, or CHF.
 - Pulmonary workup without mildly impaired PFTs, no significant compromise, with normal O₂ sats.
 - Sent home from ED visits each time with negative work-up, increased dose of benzodiazepines, and follow-up with PCP

Medications

- Colestid 1gm po daily
- Miacalcin nasal spray in alt nostrils daily
- Albuterol MDI
- Albuterol Nebulizer
- Pulmicort Nebulizer
- Lorazepam 0.25 mg po QID prn anxiety
- Atenolol 25 mg mg daily
- Clarithromycin 500 mg po BID x3 months
- Levothyroxine 50 mcg daily

Social History

- Habits
 - Tobacco x5 years, no etoh, no drugs
- Education
 - High school
- Hobbies/ Interests
 - Previously enjoyed shopping, yardwork
- Support System
 - Husband died 8 yrs ago. 2 daughter, 1 son. The daughters take shifts. Alone after dinner.
 - Tired from taking her to ER frequently

Functional Status

- IADLS
 - Now dependent in all iADLs
 - Daughter took over meal prep, shopping, finances, medications, household, transportation
- ADLS
 - Independent in all ADLs
 - No falls

EXAM

- Awake, well groomed, NAD, but tired and almost fell asleep during exam
- Heent, Cardiac, Abd exam WNL
- Lungs-no crx, wheezing, poor inspir effort
- Neuro- unable to arise from chair without assist, gait slow but steady, good arm swings, good turns, DTR intact, sensation ok, strength 5/5 symmetrical
- MMSE 23/30 (missing date, floor, 2/5 spelling World backwards,
- Clock Drawing: Intact
- Word list Generation: 12 words
- GDS 4/15

ASSESSMENT & PLAN

1. Fatigue-
 - due to depression, chronic infection, benzodiazepine, beta-blocker,
2. Dyspnea-
 - due to MAI pneumonitis, continue Antibiotics and Pulmicort neb.
3. Anxiety-
 - episodes of panic- cyclical, due to nebs—trial d/c of albuterol nebs. , exacerbated by benzodiazepine rebound anxiety—switch to long acting Clonazepam 0.25 mg qd
4. Weight Loss-
 - anorexia due to meds? Depression?

PLAN

NON-PHARMACHOLOGICAL INTERVENTION

- Increased support and environment change- Care Home trial x1-2 months during med adjustment.
- Also increased “prophylactic” exams by physicians.

PHARMACOLOGIC

- Discontinue albuterol nebs
- Taper benzodiazepine and replace with SSRI
- Treat depression and anxiety with SSRI (escitalopram).
 - Preferences based on side effect profile:
 - First Line Choices = Escitalopram, Sertraline
- If not improved after 4 weeks, consider adding/switching to another agent
 - If pain- consider duloxetine
 - If insomnia, anxiety, and anorexia consider mirtazapine
 - If apathetic- consider bupropion
- Would avoid Aricept (anorexia), might consider Exelon Patch.
- Replace B-blockers with Lisinopril.

Follow-up

After weaning OFF Benzodiazepines and titrating up her antidepressant:

- Repeat MMSE= 26/30, better able to concentrate (world backwards)
- GDS=0/15,
- Weight gain of 20 lbs over next 6 months.
- Mood brighter, smiling affect, more energy
- Decided to stay at the care home!