

# **Dementia with Behavioral Disturbance: Evaluation & Management**

Maureen C. Nash, MD, MS, FAPA, FACP

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**Maureen C. Nash, MD, MS, FAPA, FACP  
Fellow, American Psychiatric Association  
Fellow, American College of Physicians**

**Medical Director, Providence ElderPlace Oregon**

**APA Council on Geriatric Psychiatry  
Board Certified: Internal Medicine & Psychiatry**

# Disclosures

No Financial Conflict of Interest  
Off-label use of medications will be discussed

**\*Off-label  
does NOT mean or imply  
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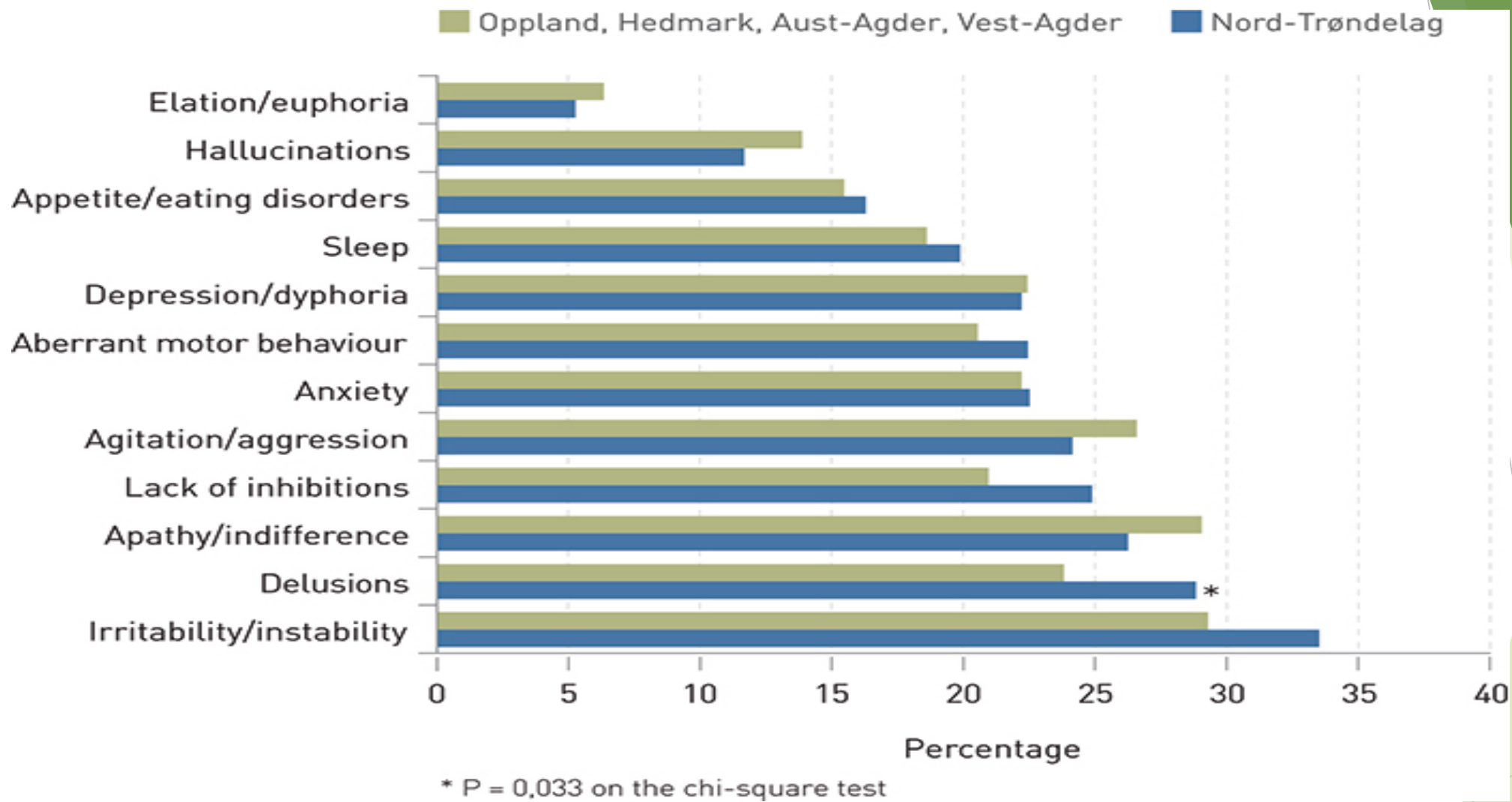
# Behavior as communication - telling us about people's basic needs



# Bergh S et al **Dementia and neuropsychiatric (NP) symptoms in nursing-home patients in Nord-Trøndelag County**

September 2012 Tidsskr Nor Legeforen 2012; 132:1956-9

- ▶ 704 nursing-home pts using Norwegian versions of the Clinical Dementia Rating scale (CDR) and the neuropsychiatric inventory (NPI)
- ▶ 575 patients (82 %) had dementia
- ▶ 75 % had at least one significant NP syndrome
- ▶ Most common: delusions, apathy or irritability
- ▶ NP symptoms grouped into four categories:
  - ▶ psychosis, apathy, affective symptoms and agitation



Bergh S et al **Dementia and neuropsychiatric symptoms in nursing-home patients in Nord-Trøndelag County.** Nr. 17 – 18. september 2012 Tidsskr Nor Legeforen 2012; 132:1956-9. [doi: 10.4045/tidsskr.12.0194](https://doi.org/10.4045/tidsskr.12.0194)

# Not on the NPI:

## Inappropriate sexual behavior

### Originally conceptualized based on actions

- ▶ sexualized language
- ▶ sexual acting out
- ▶ socially inappropriate with sexual suggestiveness

### More recently behavior defined motivationally

- ▶ intimacy seeking
- ▶ disinhibited

Medeiros K, Rosenberg PB, Baker SA, Onyike CU. Improper Sexual Behaviors in Elders with Dementia Living in Residential Care *Dement Geriatr Cogn Disord* 2008;26:370-377

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# Clinical Pearls Symptom vs Syndrome

- ▶ Depression and Anxiety are symptoms
- ▶ They can appear in depressive and anxiety disorders or syndromes or by themselves
  
- ▶ In older adults, anxiety and depressive symptoms are very common but new onset depressive and anxiety disorders are less common



# Clinical Pearl-etiology of aggression

- ▶ Aggression in those with dementia occurs primarily at 2 times:
  - ▶ Person is denied something or something is taken away
  - ▶ With personal cares
- ▶ 2 NH and 2 geriatric psychiatry units. 32/82 “violent.” Norway. Majority of incidents by minority of residents. Injury to anyone rare.
- ▶ Most frequent intervention to defuse situation:
  - ▶ Talking with person

Almvik R; Rasmussen K, Woods P. Challenging behaviour in the elderly—monitoring violent incidents. *Int J Geriatr Psychiatry* 2006; 21: 368-374.

What do  
these mean?

Sadness, Crying

Pacing

Clenched fists

Hitting

Pushing away

Calling out/Screaming

Inconsolable

# PAIN - AD scale

Items	0	1	2
A) Breathing independent of vocalization	Normal	Occasional labored breathing.	Noisy labored breathing.
B) Negative vocalization	None	Occ. moaning. Speech w/ negative or disapproving quality.	Repeated calling out. Loud moaning or groaning. Crying
C) Facial expression	Smiling or inexpressive	Sad. Frightened. Frowning.	Facial grimacing.
D) Body language	Relaxed	Tense. Distressed. Pacing. Fidget	Rigid. Fists clenched. Pull/push away. Hitting
E) Consolability	No need to console	Distracted or reassured by voice or touch.	Unable to console, distract or reassure.

# Therapeutic Approach

Identify/ Assess Causes of Behavior

Identify unmet physical & psychological Needs

Identify environmental causes

Recognize psychiatric symptoms

**Key stage for assessments of Cognitive and Functional Abilities**

Utilize behavioral rating scales

Select Interventions based on assessments

Apply Interventions

Caregiving Approaches

Adapt Environment

Evidence - based interventions

(sensory, activity, communication)

Staff Training

Monitor Outcomes

Beh rating scales

Staff training

Individualize interventions

Use preferences and positive outcomes

Quality of life scales

Caregiver report

Reevaluate Needs

## Annie- Acute Care

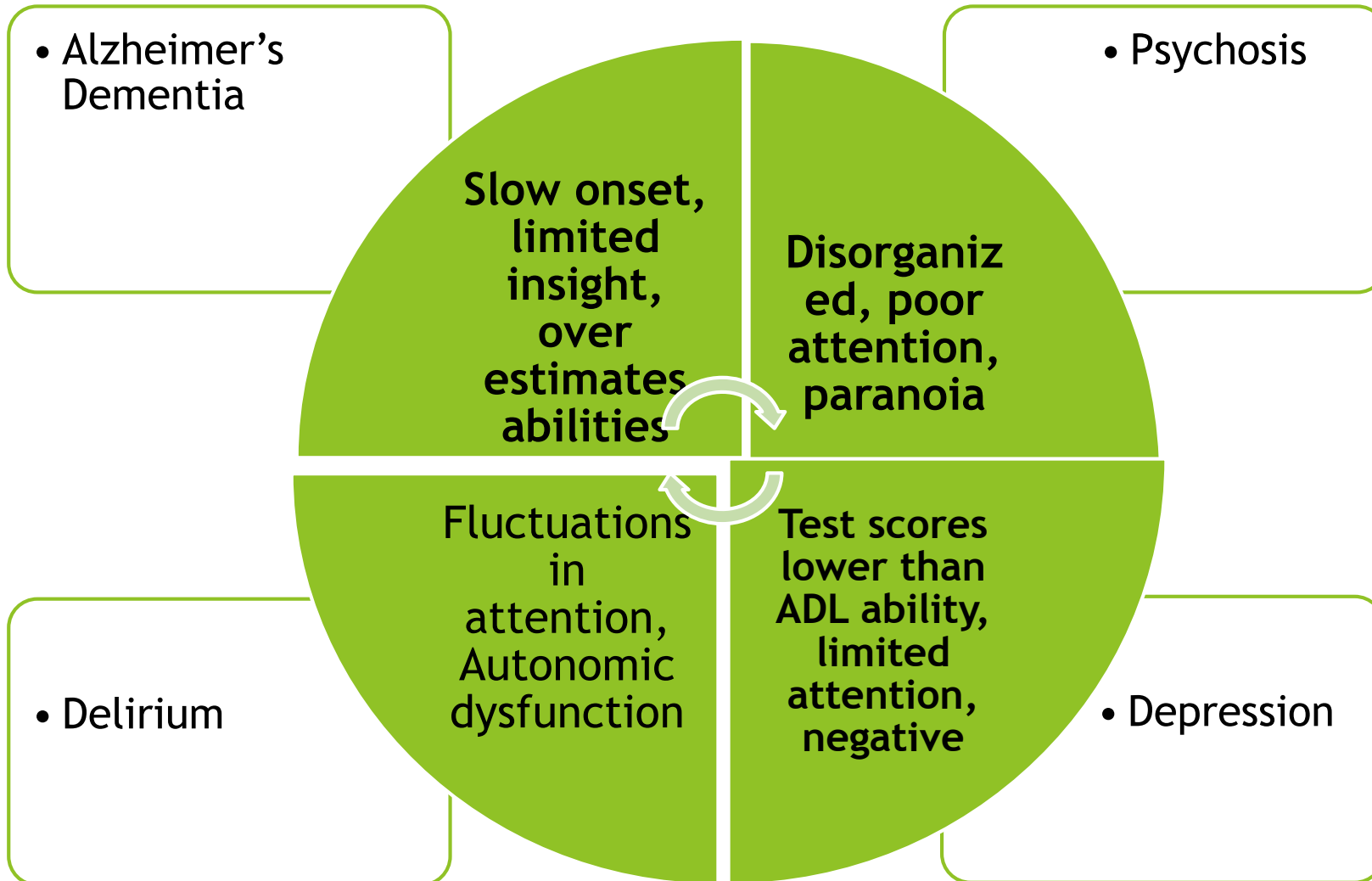
82 yo F admitted w CVA and decreased ability to complete self care. She was confused in the hospital, and was unable to return home.

Pt unwilling to participate in therapy and spends all day in bed.

Reports that she wants to die and varies in level of orientation throughout the day.

Receives a Rule/Out dementia diagnosis. MMSE 5/30. SLUMS 7/30. ACL screening score 3.6.

# Assessment & what do low scores mean?



# Bottom Line

- ▶ Know what the tests you use actually test
  - ▶ what a score means
- ▶ Low score does not always mean dementia
- ▶ Older adults are very vulnerable to misdiagnosis in acute care
- ▶ Always repeat tests when stable (usually after DC)
- ▶ Always balance functional observations with standardized assessments

# Neurocognitive Domains DSM V

## Complex Attention

Divided  
Sustained  
selective

## Executive Function

Planning  
Decision Making  
Working Memory  
Inhibition  
Error Correction  
Flexibility

## Learning and Memory

Working Memory  
Short Term Memory  
Explicit and Implicit Memory  
Semantic

## Social Cognition

Theory of Mind  
Perspective Taking  
Emotional Recognition

## Perceptual-Motor

Construction  
Visual Perceptual  
Gnosia  
Praxis

## Language

Expressive  
Grammar  
Syntax  
Receptive



# Treatment Planning

- Recognize and correctly “label” behaviors
- Adapt environment to promote ADL completion
- Assist in providing information to clarify diagnosis
- Recognize memory and orientation may be more intact than social/language skills
- Identify appropriate communication techniques  
(reality orientation vs. validation/ distraction)
- Educate family and caregivers
- Set realistic goals

# Summary for Treatment of Behavior Disturbance

- ▶ Assess for type of dementia
  - ▶ DAT/VD
  - ▶ LBD/PDD
  - ▶ FTLD
  - ▶ Other
- ▶ Assess for functional status
  - ▶ Mild, moderate, severe
- ▶ Always use behavioral strategies –
  - teach caregivers and adapt the environment
- ▶ Memantine and Cholinesterase Inhibitors as first line agents: minimal risk, moderate efficacy

# Summary continued

- ▶ Monitor for delirium, even “sub” deliriums such as constipation, dehydration and pain, treat delirium aggressively
  - ▶ Treat pain!
  - ▶ Eating! Drinking fluids!
  - ▶ Urinating, defacating!
- ▶ Discontinue or lower harmful medications
  - look for meds that cause confusion (Anticholinergics, BZD)
  - evaluate for Drug-Drug Interactions
  - dose appropriately for renal function
  - Based on life expectancy, do they need statin etc?
  - Do not over treat blood sugars or blood pressure

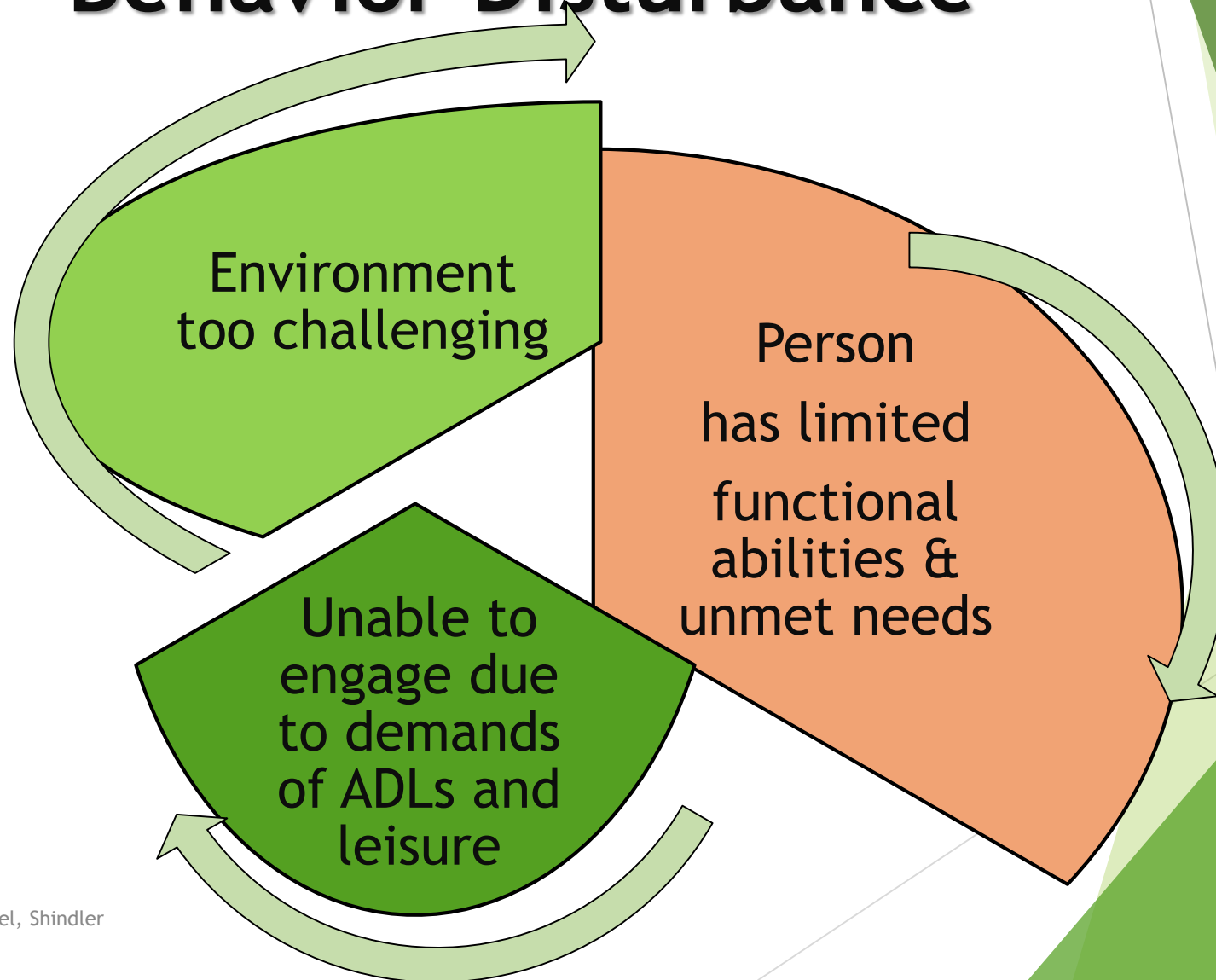
# Summary continued

- If depressed, trial supportive measures then consider antidepressants
- If manic-like, trial mood stabilizer
- If paranoid, delusional or fearful, trial antipsychotic medications
- If aggressive
  - antipsychotic medication
  - consider trial of scheduled pain medication
  - avoid dehydration and constipation
  - carbamazepine or valproic acid?

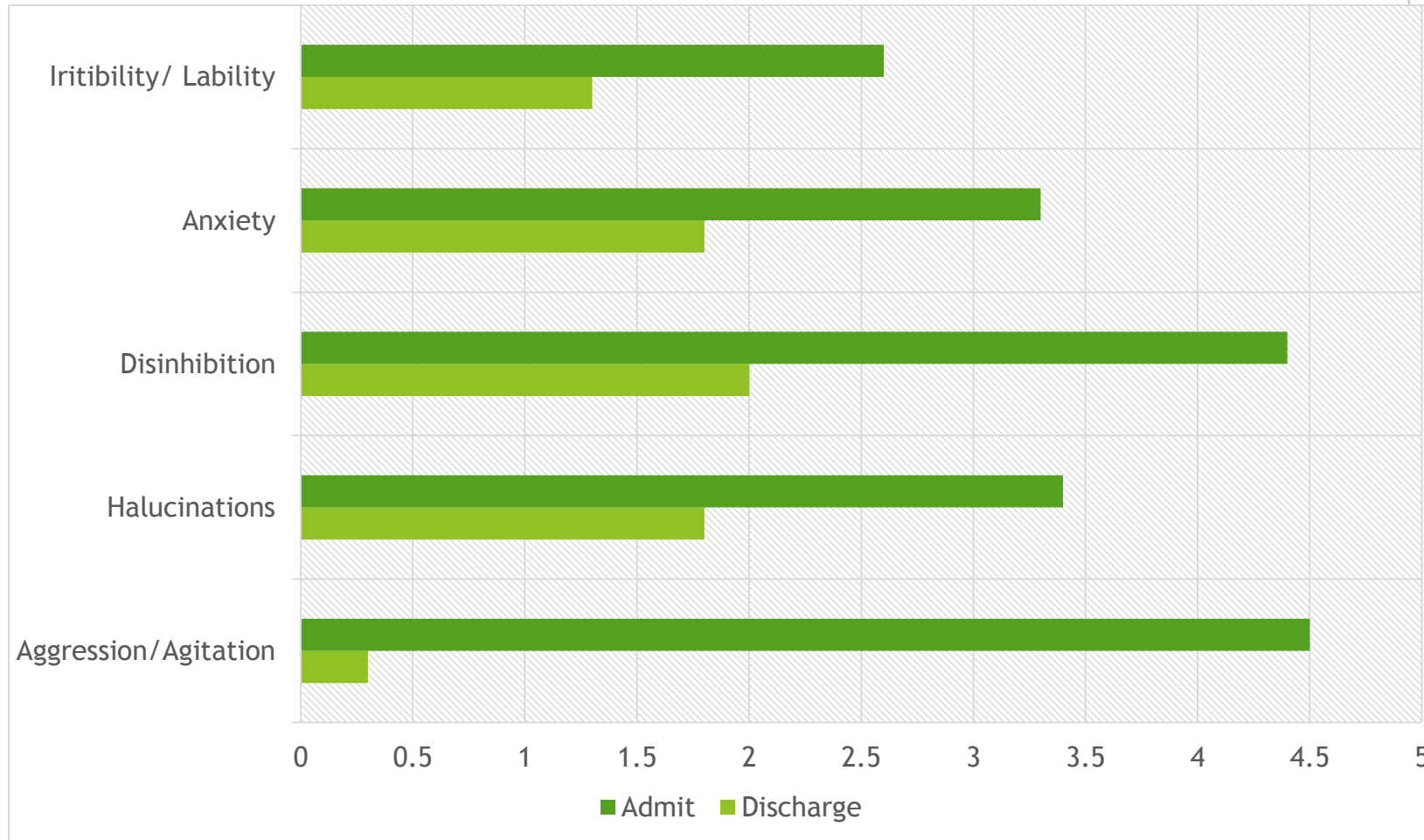
# Summary continued

- If restless, consider akathisia (antipsychotics, antidepressants) or pain or constipation or urinary retention. Find a safe place for the person to walk.
- If calling out and moaning, consider pain
- If repetitive questions, use behavioral interventions
- If wandering, secure the environment
- If up at night, feed the person, find a spot and provide an activity that they enjoy. Encourage early morning bright light and increased exercise early in day.

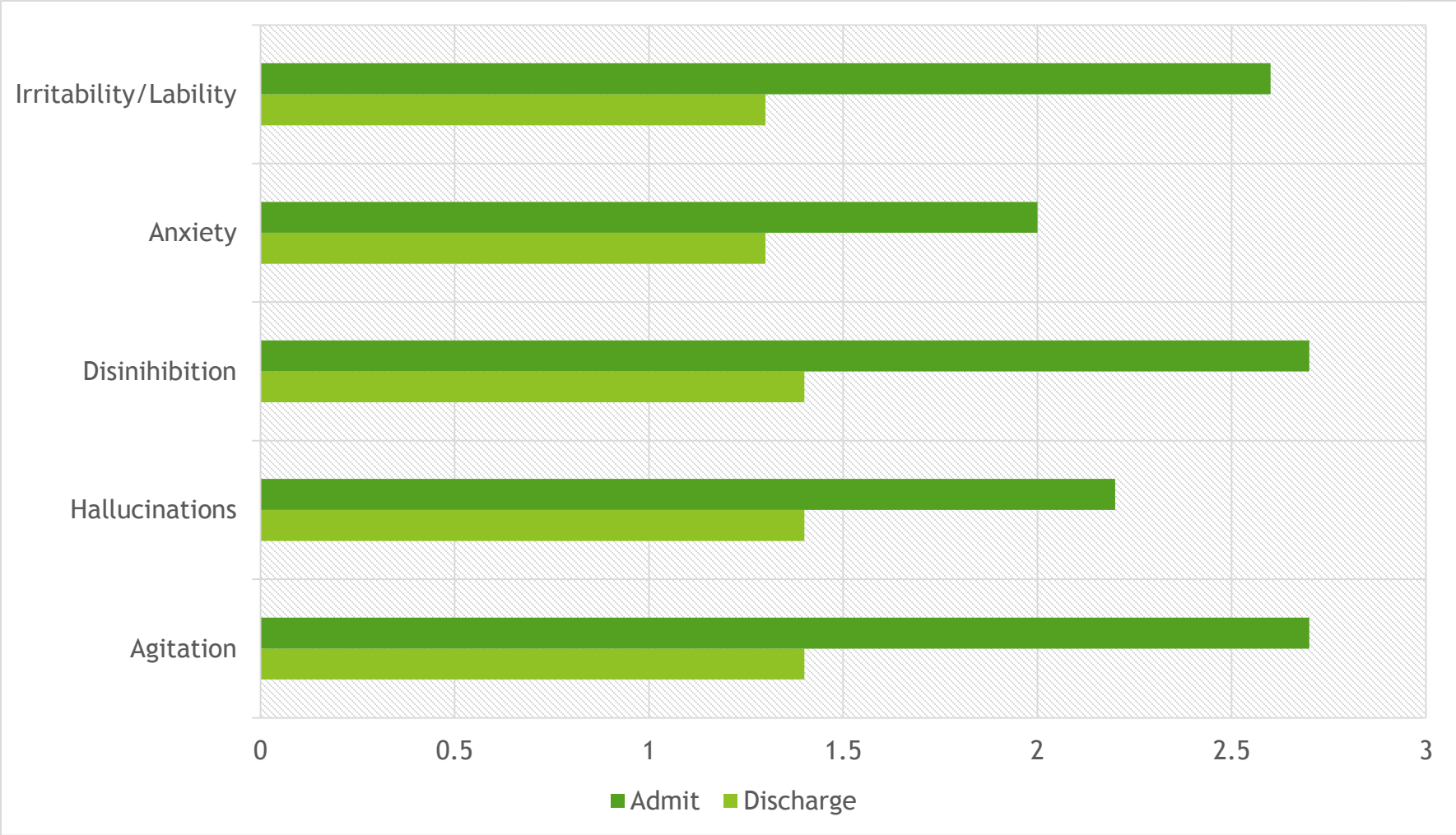
# Person Environment Mismatch => Behavior Disturbance



# AVERAGE CAREGIVER BURDEN FROM NPI OF 390 PATIENTS DURING INPATIENT GEROPYSCH TREATMENT- UNPUBLISHED DATA



# AVERAGE SYMPTOM SEVERITY FROM NPI OF 390 PATIENTS DURING INPATIENT GERIPYSCH TREATMENT - UNPUBLISHED DATA





# Communication challenges

- ▶ Decreased ability to understand language
- ▶ Decreased ability to use expressive language
- ▶ Intact social speech misleading others to underestimate deficits
  - ▶ Especially in Alzheimer's Disease

# The approaches include:

- ▶ Using nonverbal communication such as cheerful greeting
- ▶ Responding to the emotions underlying speech
- ▶ Recognizing behaviors as communication of challenges or success

# Categories of Interventions

- ▶ Sensory Oriented
- ▶ Emotion Oriented
- ▶ Behavior Oriented
- ▶ Cognitive Oriented
- ▶ Environment Oriented



Kverno, K. S., Black, B. S., Nolan, M. T., & Rabins, P. V. (2009)

# Example Plan of Care with Sensory and Emotion Oriented interventions

The story of Grace

76 year woman with advanced Alzheimer's, in a secure memory-care. Once an avid gardener Grace now spends her days in a wheelchair watching reruns of old television shows. Her daughter is concerned about her lack of activity, poor ability to sleep, and anxious, tearful behavior. When brought outside to the garden, Grace does not seem at all interested in the garden.

# What is caregiver education?

- Providing direct caregivers with the tools to provide appropriate interventions
- Caregiver Support Groups
  - Research shows it decrease stress and improves quality of life
- Designing and providing stage specific treatment plans
  - Uses current evidence
  - Based on clinical expertise

# Evidence Review

## Summary of what works

- ▶ Caregiver training
- ▶ Specific treatment plans
- ▶ Client centered techniques
- ▶ Meeting basic needs
- ▶ Pain control

# Psychiatric Symptoms amenable to treatment with medications

- ▶ Paranoia and delusions
- ▶ Hallucinations
- ▶ Depression
- ▶ Sometimes anxiety
- ▶ Pain
- ▶ ?agitation?

## Symptoms not usually amenable to medications

- ▶ Wandering
- ▶ Calling out (not related to pain)
- ▶ Repetitive questions
- ▶ Anxiety related to having memory loss
- ▶ Psychomotor agitation
- ▶ Sleep problems
- ▶ ?agitation?



## HTA-SADD trial: Depression in DAT

- ▶ Decreased depression, equally, in all 3 groups, including placebo
- ▶ Adverse effects
  - ▶ 111 people, 26% of those on placebo
  - ▶ 107 people, 43% of those on sertraline (goal dose 150mg)
  - ▶ 107 people, 41% of those on mirtazapine (goal dose 45mg)
- ▶ **5 people in each treatment arm (including placebo) died by week 39**

The Lancet Volume 378 (9789), Pages 403 - 411, 30 July 2011

# HTA-SADD trial: Depression in DAT

- ▶ Conclusions?? Here from the authors:
- ▶ "Analysis of the data **suggests clearly** that antidepressants ... **are not clinically effective...for depression in dementia**"
- ▶ **Antidepressants are not FDA approved to treat depression in dementia.**
- ▶ Roughly 5% died no matter medications or placebo.  
**What if what people are labeling as depression is part of the dying process?**

The Lancet Volume 378 (9789), Pages 403 - 411, 30 July 2011

# Discontinuing SSRI can Worsen Depressive Symptoms in those with Dementia: the DESEP trial

- ▶ Double blind, randomized, parallel group,
  - ▶ 128 patients with dementia but no MDD, treated with SSRIs,
  - ▶ 50% stopped and 50% continued treatment
- ▶ After 25 weeks
  - Depression scores worsened more than 30%
    - ▶ 54% of discontinuers, 29% of continuers
  - Low levels of symptoms increased to severe symptoms
    - ▶ 14% of discontinuers, 3% of continuers
  - # who dropped out due to increased NP symptoms
    - ▶ 21% of discontinuers, 6% of continuers

# Treatment Planning for those with Alzheimer's Disease

- People respond positively to structure and simple routine
- ADL independence may be encouraged and maintained by simplifying tasks, providing setup, and problem solving routine
- Validation - communicate with emotions
- Distraction - decreases false ideas
- Provide Long Term Memory based activities
- Positive response to social norms, “familiar life patterns”
- Develop client-centered interventions
- Educate family and caregivers

# “Algorithm” for treating those with Alz /Vasc with significant behaviors

- 1<sup>st</sup> line: Memantine dosed by renal function + Cholinesterase Inhibitor (donepezil or rivastigmine patch)
- Agitation/Aggression: 2<sup>nd</sup> line: Atypical antipsychotic
  - Risperidone 1-2mg per 24 hours, dosed bid
  - Ziprasidone 20-100mg po bid with meals, increase dose slowly
  - Consider aripiprazole, olanzepine (at < 10mg/24 hours)
- 3<sup>rd</sup> line: VPA for anxiety or impulse control
- 3<sup>rd</sup> line: SSRI for depressive symptoms
  - Citalopram 10-20mg qday
  - Avoid fluoxetine due to half life and drug-drug interactions
- Simultaneously: opiates for pain, recognizing and treating constipation and urinary retention, etc

# Dementia Types: LBD/PDD

- Lewy body Disease/ Parkinson's Disease Dementia
  - Slowed retrieval of memories and words
  - Perseveration or getting stuck on one thought or topic
  - Fluctuating status and symptoms throughout the day
  - Hallucinations as side effect of Parkinsons medications or as natural part of the disease
  - Quite sensitive to psychoactive medications

# Treatment Planning for those with Lewy Body Dementia

- Varies greatly person to person
- Plan for “the safest” when looking at level of care
- Monitor side effects of medications
- Caregiver Education
- Home safety evaluation
- Do not over react to hallucinations
- Provide a variety of activities to accommodate for cognitive fluctuations, grade appropriately
- Structure, support, and predictable environment

# Psychosis +/- Behavior Disturbance in LBD and PDD

- Quetiapine has been shown to be effective, lower dose better
- Side effects include somnolence, dizziness, postural hypotension and worsening Parkinsonian motor symptoms
- Clozapine is also used in these illnesses for the same symptoms with fewer motor side effects, but intrusive lab testing required



# “Algorithm” for treating those with PDD/LBD with significant behaviors

- 1<sup>st</sup> line: Memantine dosed by renal function + Cholinesterase Inhibitor (donepezil or rivastigmine patch)
- Depression:
  - Bupropion SR 100mg qday, NTP 25-75 qhs
- Restless Leg Syndrome:
  - Dopaminergic agents, consider clonazepam
- REM sleep disorder:
- Agitation/Aggression:
- 3<sup>rd</sup> line: VPA for anxiety or impulse control
- 3<sup>rd</sup> line: for depressive symptoms
- Simultaneously: opiates for pain, recognizing and treating constipation and urinary retention, etc

# Treatment Planning for those with Frontal Temporal Dementia

- Recognize and correctly “label” behaviors
- Adapt environment to promote ADL completion
- Assist in providing information to clarify diagnosis
- Recognize memory and orientation may be more intact than social/ language skills
- Identify appropriate communication techniques (reality orientation vs. validation/ distraction)
- Educate family and caregivers
- Set realistic goals

# Treatment for FTLD

- ▶ Discontinuing all medications that are possible
- ▶ For paranoia and delusions
  - scheduled risperidone or ziprasidone
  - 2<sup>nd</sup> line perphenazine
- ▶ If pt develops disinhibited behavior
  - ▶ Use scheduled VPA
  - ▶ titrate dose for low or no side effects and efficacy, not a blood level

# “Algorithm” for treating those with Inappropriate Sexual Behaviors

- Attempt to classify behavior appropriately
  - Is it even sexual?
  - Is it intimacy seeking or predatory?
- Trial non-pharmacological interventions
  - Ex. One-piece outfit
- Lowering or discontinuing dopaminergic agents (carbidopa/levodopa, ropinarole etc)
- Tapering off of benzodiazepines

# Treating inappropriate sexual behavior

- If manic-type behavior: discontinue all antidepressants
- If behavior is impulsive or disinhibited: mood stabilizer
- If behavior is related to libido and guardian or health care power of attorney give informed consent,
  - consider anti-androgen treatment (medroxyprogesterone)
- Discharge patient to a single gender facility or unit

# Inappropriate Sexual Behavior

- ▶ No Randomized Controlled Trials exist
- ▶ Case reports/case series
  - ▶ haloperidol, olanzapine, quetiapine, zuclopenthixol
  - ▶ memantine
  - ▶ clomipramine, paroxetine, citalopram \*watch for manic like exacerbation
  - ▶ lithium
  - ▶ rivastigmine
  - ▶ carbamazepine, gabapentin
  - ▶ **medroxyprogesterone**, cyproterone acetate, leuprolide and estrogen
  - ▶ Non-hormonal anti-androgens (cimetidine, spironolactone and ketoconazole)

Tucker I. Int Psychoger, 22: 683-692, 2010.

# Communication

- Nonverbal vs. Verbal
- Listen
- Positive eye contact, greet, get at person's level
- Supportive Communication
  - Listen for the message, not the content
  - Watch for emotions, not words
  - Validate feelings
  - Redirect with purposeful activity
  - Do not ask questions, provide simple information

An 88 year old lady is pacing at nurse's station...

**"I left my purse with my Mom and I want to go home."**

# Person Centered

- Identify the world in which they live, avoid reality orientation
- **People with dementia cannot change, you can**
- Respect personality, dislikes, interests
- Retain composure, non reactive responses

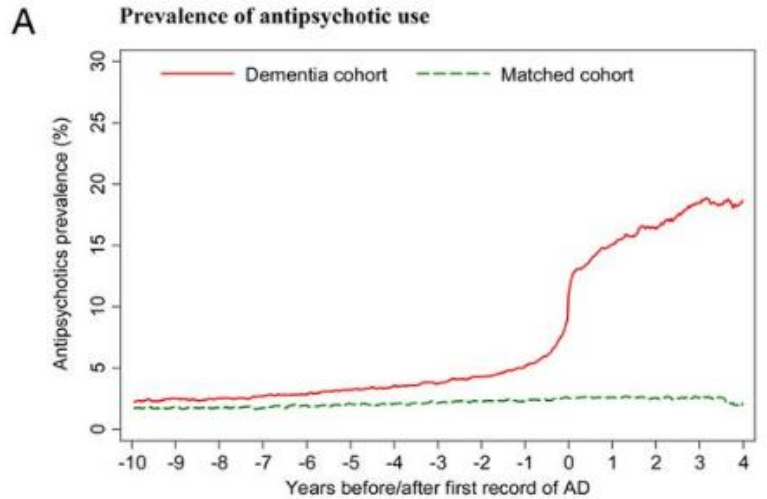
Example: 84 year old man with dementia spends the day washing floors with his hands and taking the molding off walls. He says he “has to work”



# Touch/Physical Direction

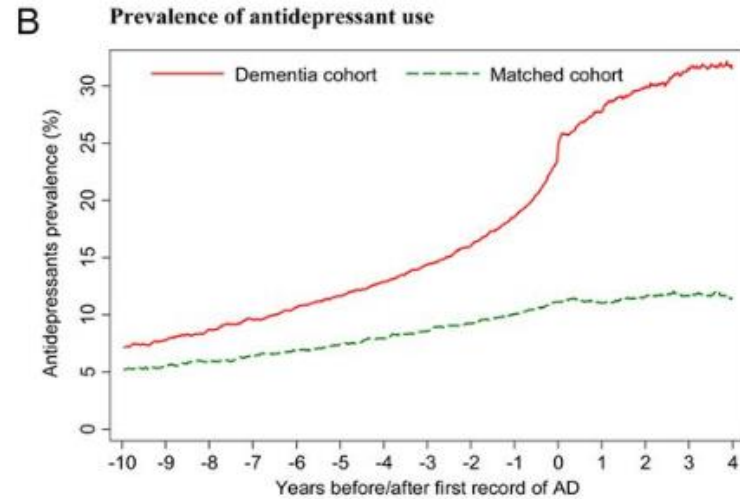
- Clarity of purpose- why are you touching?
- Safety- supportive not confrontational
- Do not create a power struggle
- Awareness of sensory loss in the older adult, provide warning before touch
- Appropriate assessment of abilities to determine need for physical intervention
- Maintain appropriate social space, and then allow the person with dementia to approach.

# Use of antidepressants and antipsychotics precede diagnosis of dementia



Dem:	15619	20777	25476	29113	30803	30803	11073	3252
Ref:	16371	21347	25914	29333	30803	30803	15998	6721

Antipsychotics: typical antipsychotics (phenothiazines, butyrophenones, diphenylbutylpiperidines, thioxanthenes and substituted benzamides), and atypical antipsychotics (amisulpride, aripiprazole, clozapine, olanzapine, quetiapine, risperidone and zotepine).



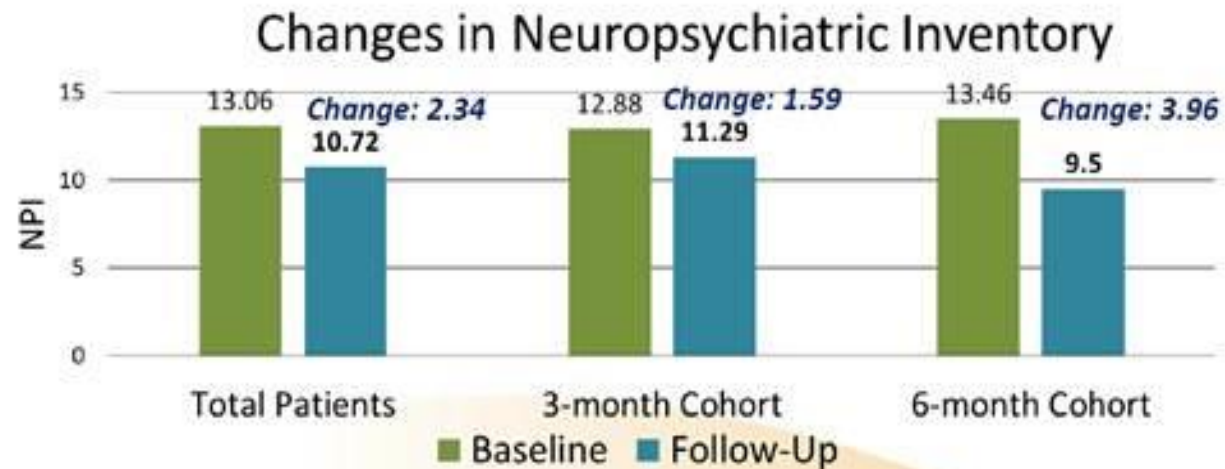
Dem:	15619	20777	25476	29113	30803	30803	11073	3252
Ref:	16371	21347	25914	29333	30803	30803	15998	6721

Antidepressants: tricyclic and related antidepressants, selective serotonin re-uptake inhibitors (SSRI), and other antidepressants

Martinez C, Jones RW, Rietbrock S. Trends in the prevalence of antipsychotic drug use among patients with Alzheimer's disease and other dementias including those treated with antidementia drugs in the community in the UK: a cohort study. *BMJ Open* 2013;3:e002080.

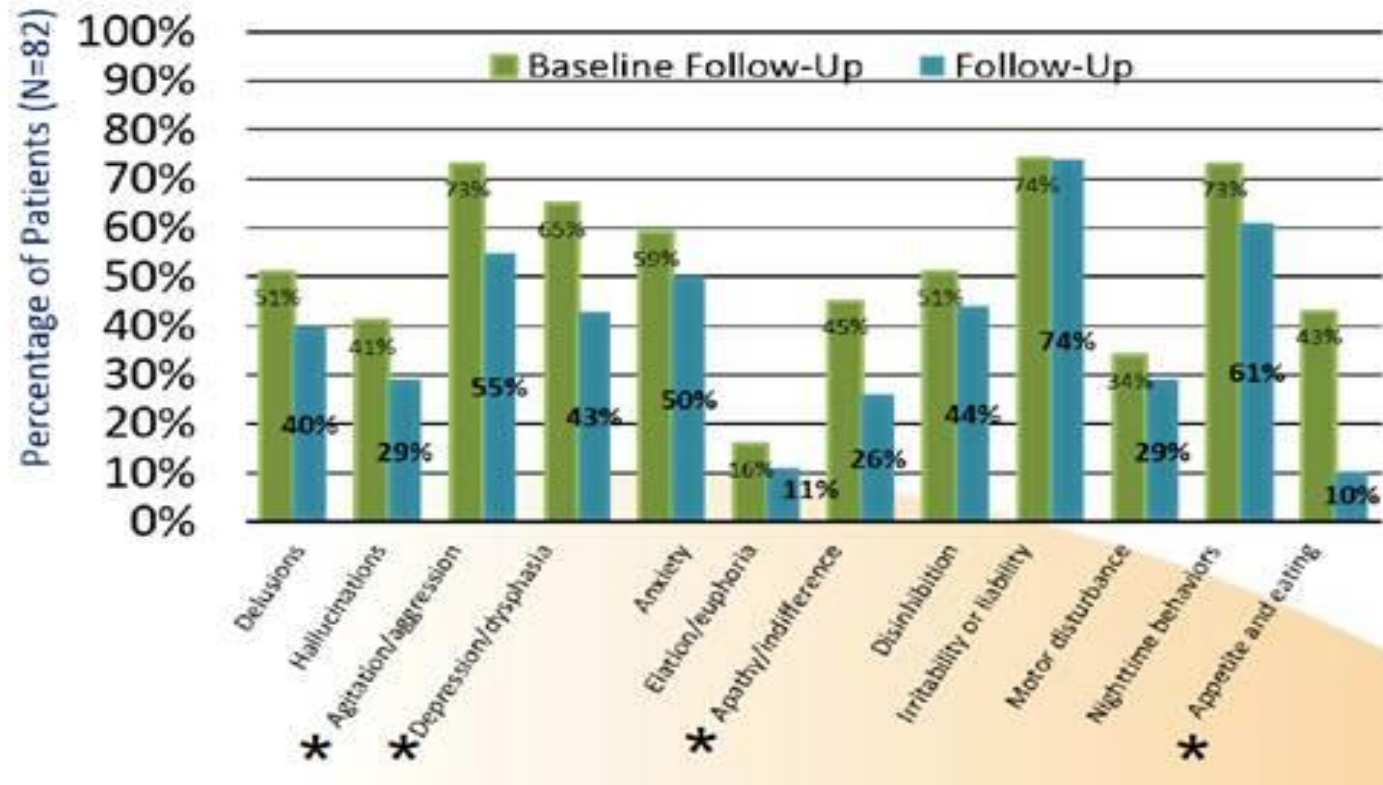
# Providence ElderPlace Data - using dementia specific medications

## Results

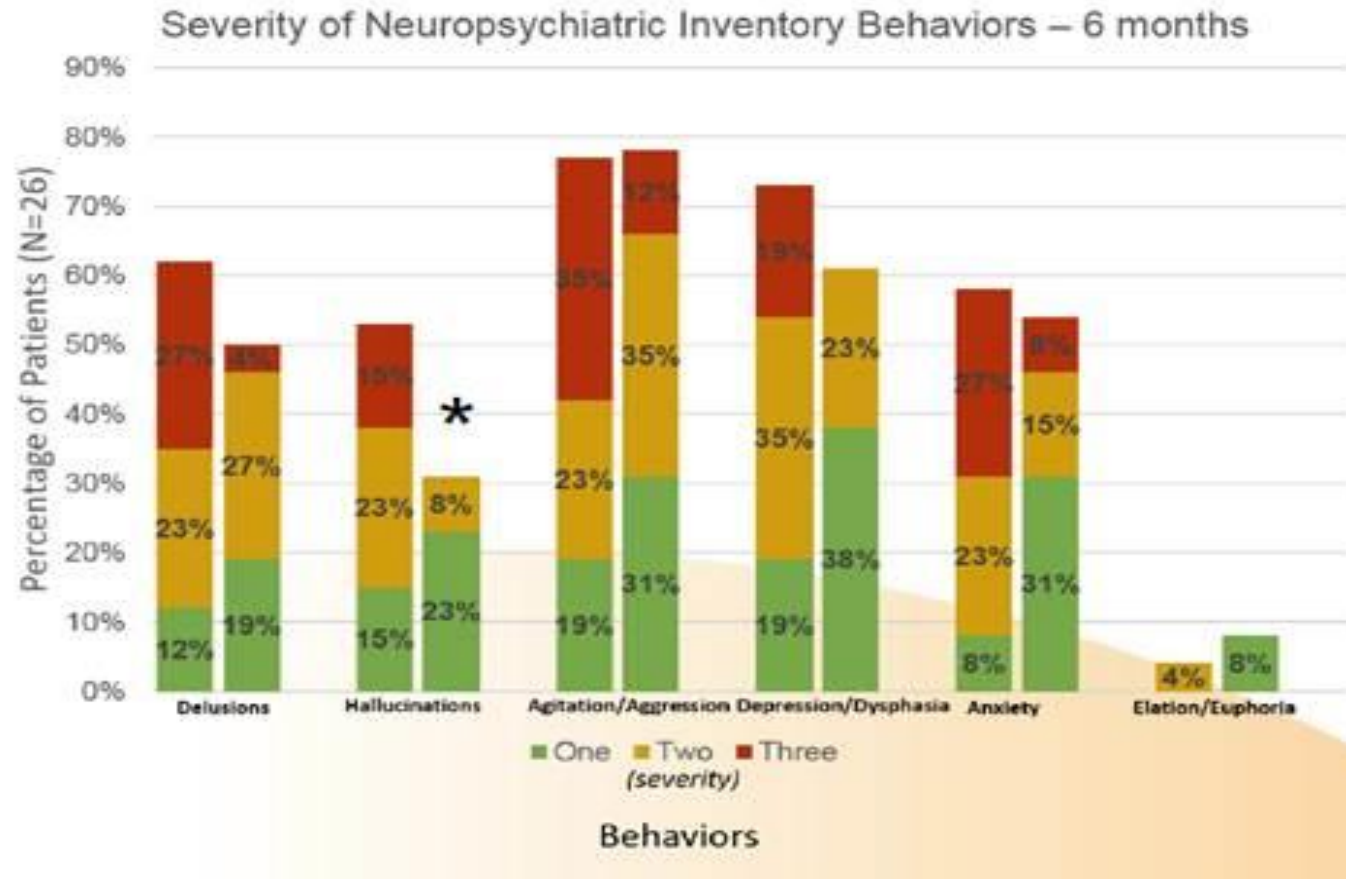


# Results

## Changes in Neuropsychiatric Inventory Behaviors



# Results



# Donna:

69 year old woman

history of schizoaffective disorder

admitted for increased psychosis, possible catatonia  
decreased level of ADL function, screaming,  
uncooperative with care

lives dementia specific care facility due to an  
unspecified cognitive disorder.

Care facility complains she has stopped walking but  
knows she gets up and moves things in her room when  
they are not watching.



# Mary - severe anxiety

- 84 year old living alone in an apartment.
- Independent in basic ADLS. Not driving due to legal blindness.
- A man named Jack was coming into her apartment at night, moving things around. She has seen him a number of times at night at her window or in her apartment. He does not speak to her.
- “I don’t know what he’ll do to me!”



# Frank

- ▶ 79 yo M retired carpenter
- ▶ Large man with somewhat imposing presence
- ▶ Comes up to the nursing station insisting that he his car had been in the parking lot but has been stolen
- ▶ Becomes increasingly upset, starts to yell and make a fist



# Millie

Millie has lived in an assisted living for years.

Recently Millie has become verbally hostile, including scratching and biting with care. She is referred to the hospital.

At the hospital, Millie screams every time someone enters room for care. She refuses all interaction, medication, and care.

She looked terrified



# Millie

- ▶ Noticed that patient looked scared all the time.
- ▶ She would claw, growl, bite, hit or posture to hit with every interaction.
- ▶ In analysis of the interactions, every single staff member including physicians started every encounter (possibly after a greeting) with a question.

# Millie

- ▶ Intervention: Used only statements to speak with patient. Even questions as benign as “How are you?” Terrified her (because she did not know the answer?)
- ▶ Put signs all around her room and did education with all staff not to ask her any questions.
- ▶ Slowly she became calmer
- ▶ Left finger foods in her room for her and she began to eat a little
- ▶ Reoriented with each contact: “Hi. I am Dr Nash, You are Millie and you are in the hospital. I am glad to see you today.”
- ▶ Gave simple direct commands: Come with me, eat this, drink this, we are going to the bathroom now

# Shelby

Shelby, a 64 year old female, frantically pacing the halls, periodically screaming.

Talked to self and would state “he beat me up”. Emotionally labile, poor attention span, frowning expression, and poor self care were seen throughout the day.

Shelly spent 68 days on our unit...