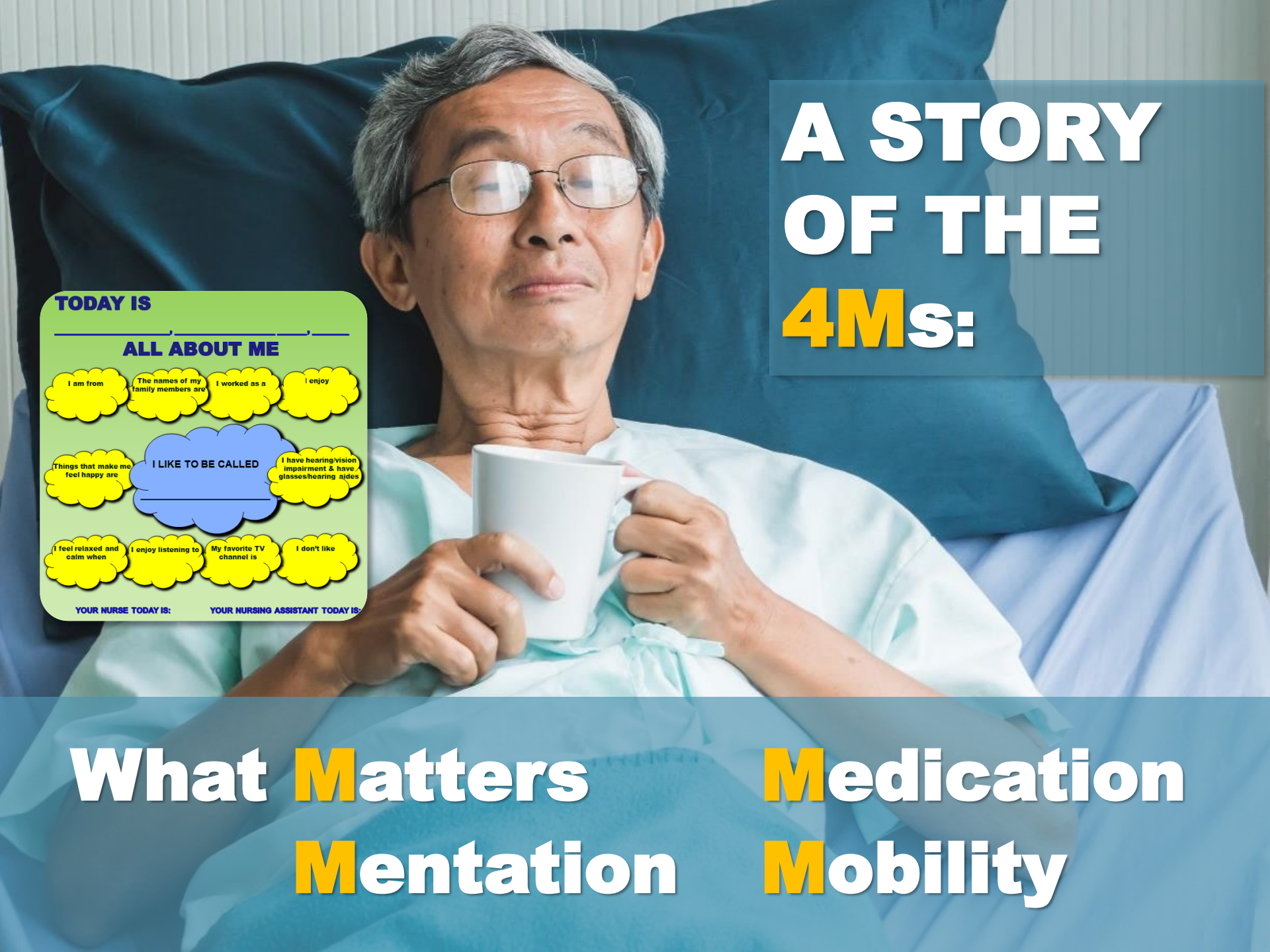
PennState
College of Nursing

Incorporating the Age-friendly 4Ms Into Your Care

Donna Fick, RN, PhD, FGSA, FAAN[1,2]

Distinguished Professor
Elouise Eberly Ross Endowed Professor
Director, Center of Geriatric Nursing Excellence
Editor, Journal of Gerontological Nursing

[1]Penn State College of Nursing
[2]Penn State College of Medicine


TODAY IS
_____, _____ ___, ____
ALL ABOUT ME
I am from
The names of my family members are
I worked as a
I enjoy
Things that make me feel happy are
I LIKE TO BE CALLED
I have hearing/vision impairment & have glasses/hearing aides
I feel relaxed and calm when
I enjoy listening to
My favorite TV channel is
I don't like
YOUR NURSE TODAY IS:
YOUR NURSING ASSISTANT TODAY IS:
A STORY OF THE 4Ms:
What Matters
Mentation
Medication
Mobility

MY (Formal) OBJECTIVES

Describe and discuss the local and national business case and human case for creating age-friendly care in their health system.

Discuss delirium assessment and prevention integrated within the 4Ms of Age-Friendly Care and a person-centered approach.

Identify how to assess and act on the 4Ms of Age-Friendly Care national initiative

- What Matters
- Medication
- Mentation
- Mobility

Identify barriers and facilitators to translating age-friendly care into bedside clinical practice.

MY MAIN MESSAGE

Costs and burden of poor non-age friendly care are high (strong evidence for excess economic costs, human suffering and staff and caregiver burden)

There is both a **HUMAN** case and **BUSINESS** case for AGE-FRIENDLY CARE

Good **DELIRIUM CARE** is integrated into overall good care of older adults/assessing and acting on the **4Ms** in **EVERY** encounter for **EVERY** older adult

Goal of Age-Friendly Health Systems Movement

Build a social movement so all care with older adults is age-friendly care:

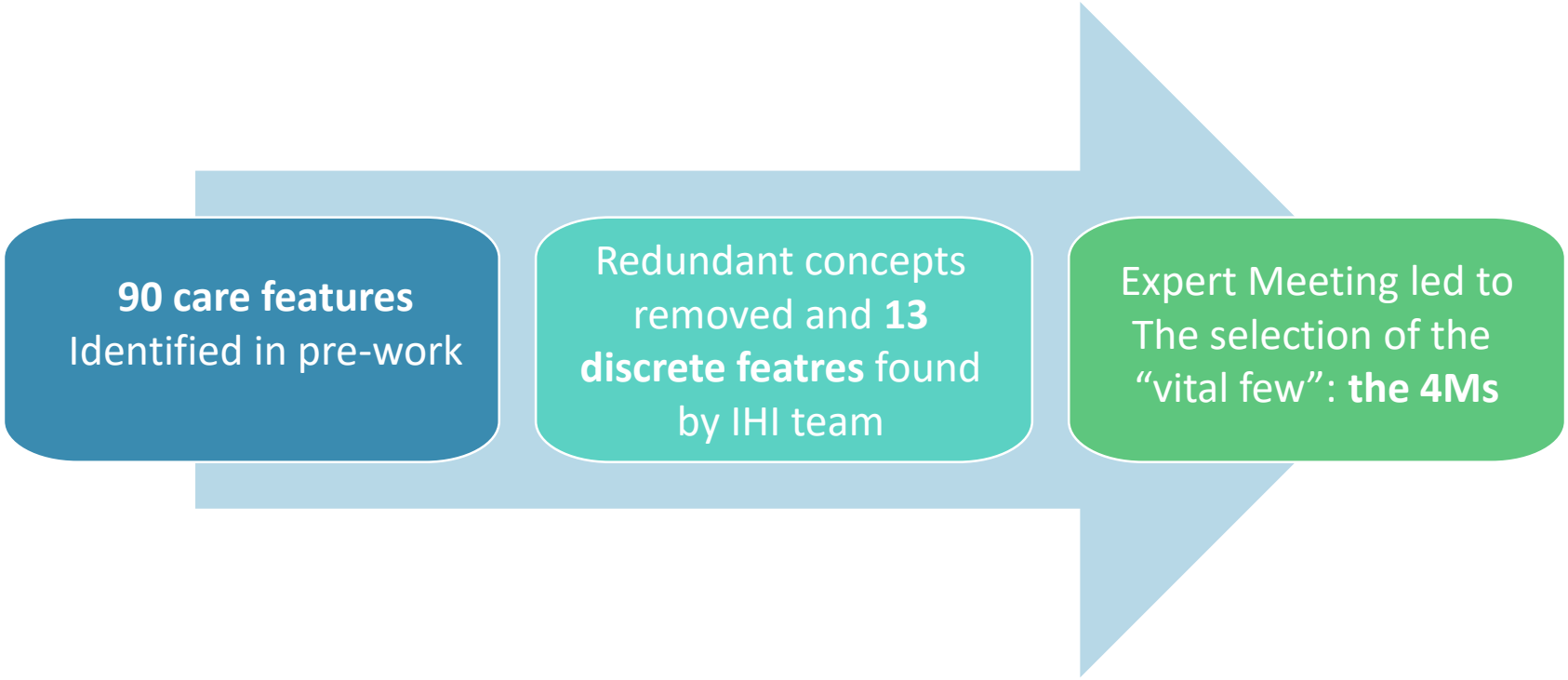
- Guided by an essential set of evidence-based practices (4Ms)
- Causes no harms; and
- Is consistent with What Matters to the older adult and their family

GOALS AFHS:

- By end of 2020: Reach 20% of US healthcare ~1000 hospitals & practices
- By end of 2023: Reach 50% of US healthcare ~2500 hospitals & practices

Evidence-based Practice Changes

METHODS: Reviewed 17 care models with level 1 or 2a evidence of impact for model features



The 4Ms Framework - every older adult

Age-Friendly care is the reliable implementation of a set of evidence-based geriatric best practice interventions across four core elements, knows as the 4Ms, to all older adults in your system. EVERY older adult, EVERY encounter.

4Ms	
What **M**atters	Aligns care with the older adults specific health outcome goals and care preferences, including, but not limited to end-of-life care
Medication	Deprescribe or avoid high-risk medications and if necessary, use age-friendly medications that do not interfere with What Matters to the older adult, mobility, or mentation
Mentation	Prevent, identify, treat and manage dementia, depression and delirium
Mobility	Ensure that older adults move safely every day in order to maintain function and do What Matters

Why These 4Ms?

- A strong evidence-base
- Feasible to integrate into bedside care
- Have a strong impact
- Provide better care at a lower cost

Evidence-base for 4Ms

WHAT MATTERS:

2019 Yale study in JAMA Int Medicine of 366 older adults found asking and aligning care to what matters in PRIMARY CARE persons were more likely to stop high risk medications and have fewer diagnostic tests and feel their health care was less of a burden and a 2013 AHRQ study found it increased satisfaction with care.

WHAT MATTERS QUESTIONS:

What are your healthcare goals? What concerns you most when you think about your health and health care in the future? What would make tomorrow a really great day for you?

Evidence-base for **4Ms** (cont'd)

MENTATION

- Depression in ambulatory care doubles cost of care across the board (Unutzer 2009)
- 16:1 ROI on delirium detection and treatment programs (Rubin 2013)
- Many persons with dementia are over medicated, experience functional decline from poor care, and over half experience delirium in acute care (Fick et al., 2013)

MOBILITY

- Older adults who sustain a serious fall-related injury required an additional $13,316 in hospital operating cost and had an increased LOS of 6.3 days compared to controls (Wong 2011)
- 30+% reduction in direct, indirect, and total hospital costs among patients who receive care to improve mobility (Klein 2015)

Impact of delirium

Hospital costs (> $8 billion/year)

Post-hospital costs (>$100 billion/year)

- Institutionalization
- Rehabilitation
- Home care
- Caregiver burden

Aging of U.S. population

Suffering (human case)

Ref: Leslie DL, et al. *Arch Intern Med* 2008;168:27-32

LOWN Report on Medication Overload – 2019 & 2020 with Recommendations

https://lowninstitute.org/medication-overload-how-the-drive-to-prescribe-is-harming-older-americans/

How the drive to prescribe is harming older Americans

The United States is in the grips of an unseen epidemic of harm from the excessive prescribing of medications. If nothing is done to change current practices, **medication overload will contribute to the premature deaths of 150,000 older Americans** over the next decade and reduce the quality of life for millions more.

Focusing on **reducing inappropriate or unnecessary medications could save as much as $62 billion** over the next decade in unnecessary hospitalization for older adults alone.

Scope of Medication Overload

Every day, 750 older people living in the United States (age 65 and older) are hospitalized due to serious side effects from one or more medications. Over the last decade, older people sought medical treatment more than 35 million times for adverse drug events, and there were **more than 2 million hospital admissions**.

The prescribing of multiple medications to individual patients (called "polypharmacy" in the scientific literature) has reached epidemic proportions. More than four in ten older adults take five or more prescription medications a day, tripling over the past two decades. **Nearly 20 percent take ten drugs or more**.

The 4Ms are also areas where we can make an impact-cost & quality

JAMA and Dementia Study 2019:

Nested case control, N=58,769, age 55 and > taking anticholinergic meds 49% more likely to develop dementia

We have evidence-based lists of drugs to avoid and guides/help for deprescribing

AGS BEERS CRITERIA® 2019

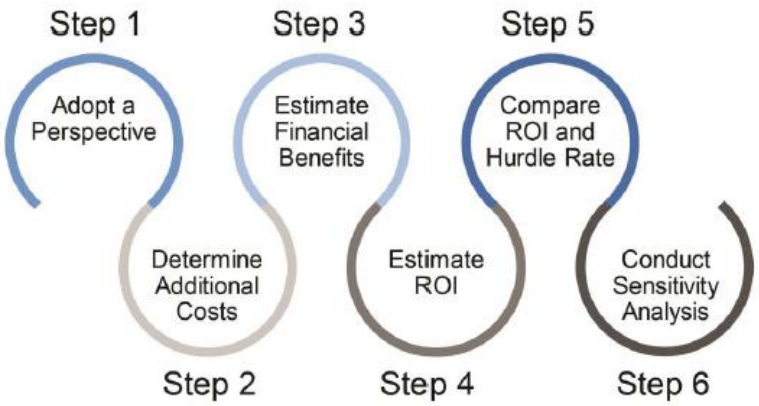
IHI Business Case for AF-Care

Victor Tabbush, PhD: *Adjunct Professor Emeritus, UCLA Anderson School of Management*
Leslie Pelton, MPA: *Senior Director*
IHI Kedar Mate, MD: *Chief Innovation and Education Officer, IHI*
Tam Duong, MSPH: *Senior Project Manager and Research Associate, IHI*

Steps in Making the Business Case for Becoming an Age-Friendly Health System

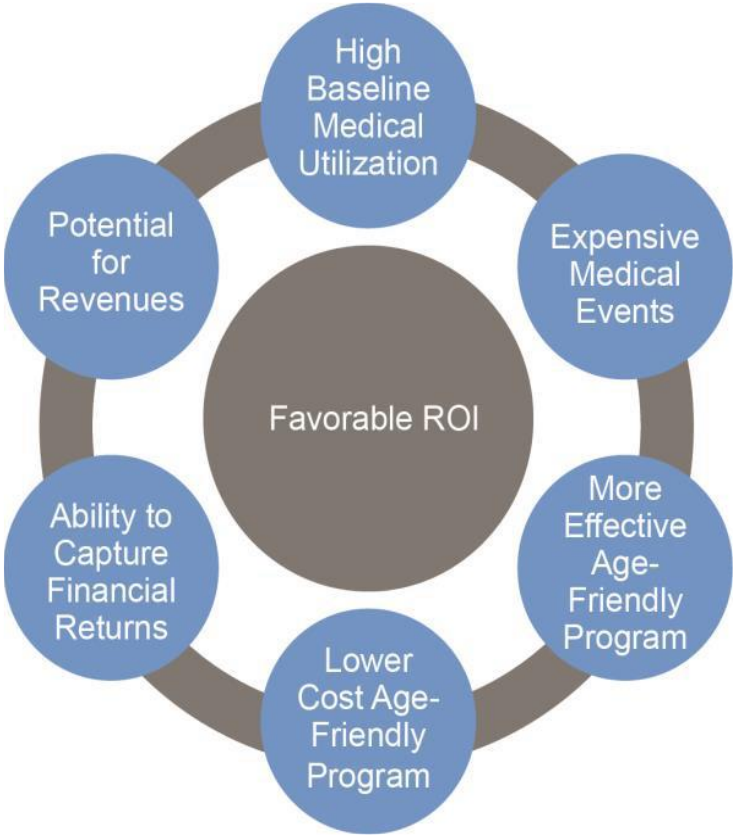
Making the business case consists of six steps that are identical across care settings — inpatient, outpatient, or in the home (see Figure 2).

Figure 2. Steps in Making the Business Case for Becoming an Age-Friendly Health System



Step 1: Adopt a Perspective

The first step is to determine whose costs and whose financial benefits to consider. While the 4Ms may generate financial gains for a variety of stakeholders, only the financial consequences for the investing party (i.e., the health care organization making the investment) count in this analysis.



Recognition from IHI: Health systems and practices can achieve two levels

231*

116

Hospitals and practices have described how they are putting the 4Ms into practices (4Ms Description Survey)

Hospitals and practices have shared the count of older adults reached described how they are putting the 4Ms into practices

**Age-Friendly Health System-Participants* count is inclusive of hospitals and practices that went on to be recognized as *Age-Friendly Health Systems-Committed to Care Excellence as of November 19, 2019*

What Is Delirium?

"AN ACUTE (*sudden*), USUALLY TEMPORARY CONFUSIONAL STATE WITH AN UNDERLYING REVERSIBLE (*and preventable*) CAUSE"

See also: Delirium Definition DSM-5 (APA, 2013)—disturbed attention and awareness, tends to fluctuate, disturbed in at least one other cognitive domain, not better explained by preexisting dementia, not in face of severely reduced arousal or coma, evidence of underlying cause

4 Key Features of Delirium Measured by the **C**onfusion **A**ssessment **M**ethod (CAM)

Positive = Features 1 & 2, and either 3 or 4

1) Acute onset and/or fluctuating course

2) Inattention

3) Disorganized thinking

4) Altered level of consciousness

Should be performed AFTER cognitive testing

(Inouye et al., 1990)

How COMMON is delirium?

Occurs in about 15-56% of older adults in the general hospital setting, but varies among units and populations

HIGHER RATES in the ICU (70-90%), in persons with cardiac disease or COPD, palliative,
post-surgical patients, persons with dementia…

Delirium Superimposed on Dementia (DSD)

DEMENTIA
CHRONIC
changes
in mental
status

+

DELIRIUM
ACUTE
change
in mental
status

=

Over Half of Hospitalized Older Adults with Dementia Will Develop Delirium—over 80% Subsyndromal Delirium

DEMENTIA IS THE MOST COMMON RISK FACTOR FOR DELIRIUM

Why Care About Delirium?

Poor Outcomes with Delirium and DSD:

- ↑ rates of long-term **cognitive impairment**
- ↑ LOS & rates of **re-hospitalization** within 30 days
- ↑ risk of permanent admission to **LTC** facilities
- higher **mortality and functional decline**
- **Cost as much as diabetes and CHF-$164 billion**
- **DSD HIGHEST COST—higher than delirium alone and dementia alone** (Journal of Gerontology, 2005)

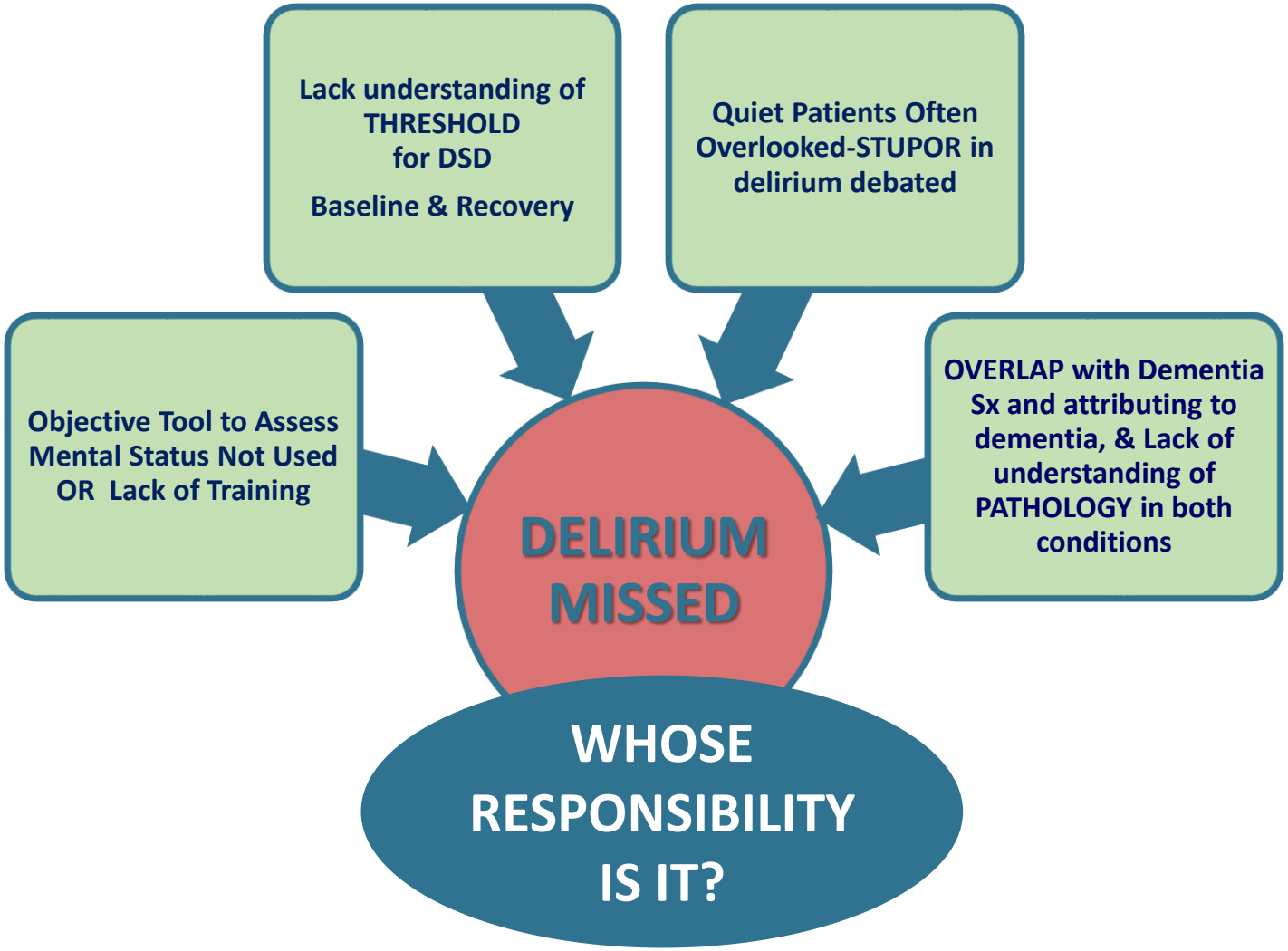
(Fick, Steis, Waller, Inouye, 2013; Marcantonio, 2012; Fick, Agostini, & Inouye, 2002;2005; Voyer 2007;2010; Leslie, et al., 2008;2011)

Table 4

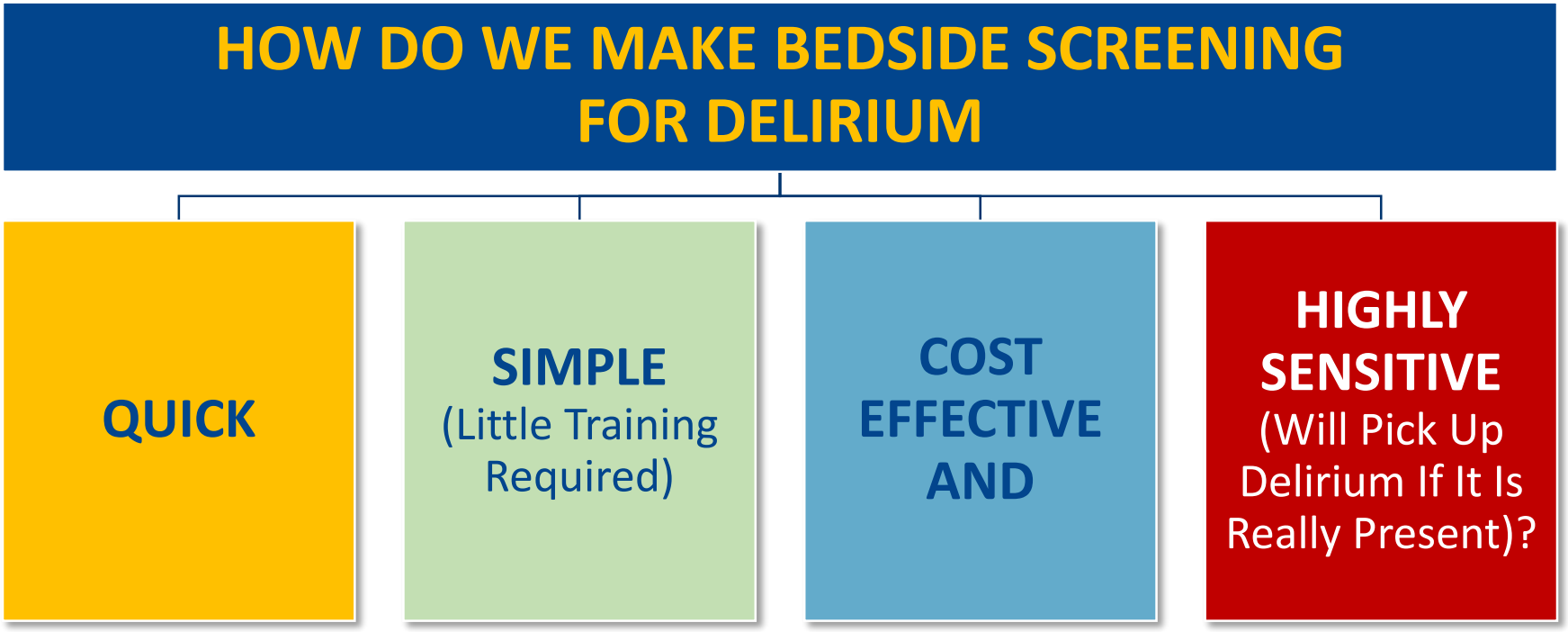
Key aspects of the delirium experience as reported by patients after delirium resolution (n = 30). 50% had delirium and over a third mod to severe dementia

Category	Subcodes "I was just so afraid of every one around me."
Emotions	Concern, anxiety, fear, anger, threat, shame
Cognitive impairment	Confusion, disorientation, difficulties in comprehension, altered perception of time
Psychosis	Disturbing and rambling thoughts, hallucinations, delusions, nightmares, depersonalization, feeling confined
Memories	Memories of parents, delightful memories
Awareness of change	Sudden change, change back to reality, loss
Physical symptoms	Restrained, falls, constraint, drowsiness

Why Is It Hard to Recognize AND MEASURE Delirium?



Most Recent Work Bedside Assessment



DELIRIUM ULTRA-BRIEF 2-ITEM QUESTION: (UB-2) 36 second screen!

IT HAS 93% SENSITIVITY TO DETECT DELIRIUM 96% SENSITIVITY TO DETECT DSD

01 Please tell me the day of the week?

02 Please Tell Me The Months of the Year Backwards

LINK TO Delirium and UB-2 VIDEO
www.nursing.psu.edu/readi

Fick et al., Journal of Hospital Medicine, September, 2015

2-ITEM ULTRA-BRIEF (UB-2) DELIRIUM SCREEN Quick Guide ©

POSITION	Try to sit at eye level
SENSORY	Be sure sensory aides (glasses, hearing) are in place
WORDING	Please read the script exactly as written

1: Please tell me the day of the week

The participant can check anywhere (e.g., white board, newspaper, etc.), but cannot ask anyone else in the room.

2: Please tell me the months of the year backward, say December as your first month

MISSED MONTH	If participant finished reciting months but missed one or more, it is incorrect and no prompting is allowed.
STUCK	Prompt only with: *"what month comes before* _____ (last month they said)?" Prompt up to two times; if after 2 prompts participant is frustrated, confused, or taking a long time, mark it incorrect and offer them an exit such as, "*that's a tough one, you're doing well… let's try the next question.*"
WRONG TYPE OF ANSWER	If the participant begins at November, starts forward, or begins spelling, assume they don't understand the question and re-read the instructions **once**. If the participant is incorrect again, mark it as incorrect but let them finish.

If incorrect on either question, use an additional screening tool to further assess, such as the CAM or 3D-CAM https://www.hospitalelderlifeprogram.org/request-access/delirium-instruments/

Remember to avoid correcting or cuing the older adult; it's okay if they're incorrect. Inquiries to: Donna Fick dmf21@psu.edu. (Please cite Fick et al, Journal of Hospital Medicine, 2015)

3D-CAM Contents-10 Questions, 90 sec

CAM Feature	Cognitive testing and Patient Interview Items	Interviewer Observations
Feature 1: Acute Change/ Fluctuating Course	1. Self-report: confusion 2. Self-report: disorientation 3. Self-report: hallucinations	1. Fluctuation: consciousness 2. Fluctuation: attention 3. Fluctuation: speech/thinking
Feature 2: Inattention	4. Digit span: 3 backwards 5. Digit span: 4 backwards 6. Days of the week backwards 7. Months of the year backwards	4. Trouble keeping track of interview 5. Inappropriately distracted
Feature 3: Disorganized Thinking	8. Orientation: year 9. Orientation: day of the week 10. Orientation: hospital	6. Flow of ideas unclear, illogical 7. Conversation rambling, off-target 8. Conversation limited, sparse
Feature 4: Altered Level of Consciousness	None	9. Sleepy, stuporous, or comatose 10. Hypervigilant

Sensitivity & Specificity

	2 Item Ultra-Brief Screener		2-Step Delirium Identification Protocol	
Clinician Type	Sensitivity	Specificity	Sensitivity	Specificity
Physicians (n=7)	80%	56%	80%	78%
Nurses (n=13)	100%	67%	100%	89%
CNA's (n=7)	100%	61%	N/A	N/A

Researching Efficient Approaches for Delirium Identification (READI) N=934 (535 older adults and 399 clinicians)

Although clinicians valued the quick tools to detect delirium, they described skepticism and challenges.

One physician noted:
"Many times I think healthcare providers, whether it's a doctor, a nurse, whatever, we just chalk up behavior in the hospital, *'Oh, they're demented. They have dementia. You expect this [confusion]... People who are confused, they get up and they fall' "*.

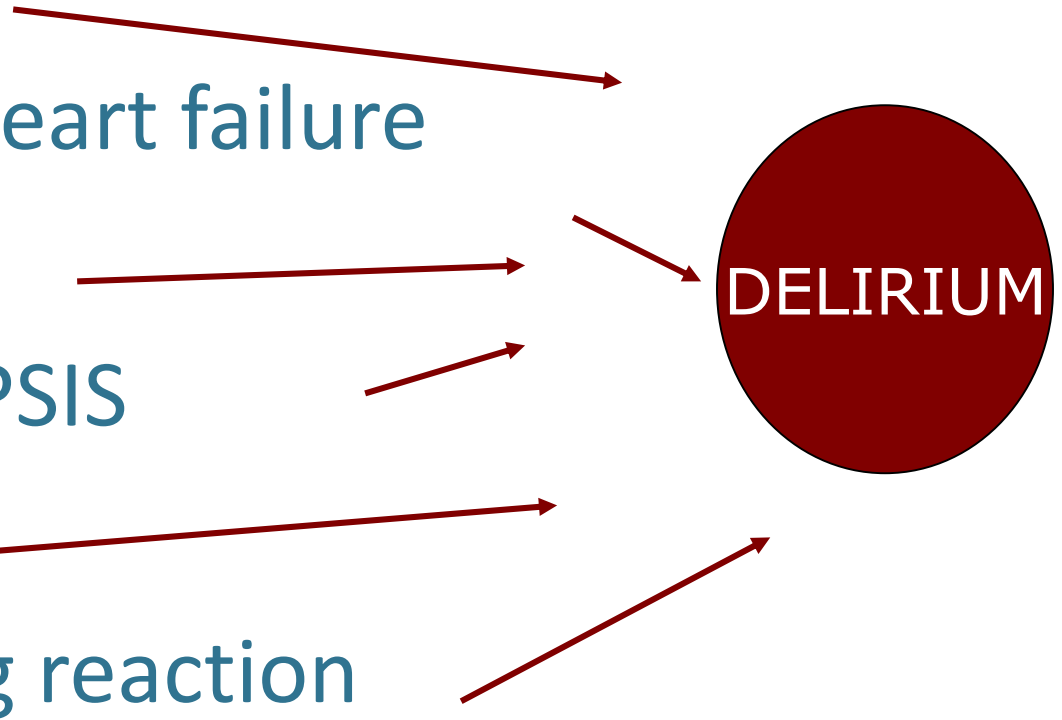
DELIRIUM AS A MEDICAL EMERGENCY

- DELIRIUM CAN BE A MEDICAL EMERGENCY SO HAVE TO FIND AND TREAT THE UNDERLYING CAUSE-while preventing injury & functional decline
- SEPSIS, MI, PE, ACUTE BRAIN INJURY
- Real case examples OF POST-OP DELIRIUM AND MI AND ER CASE WITH DSD AND INFECTED THORACIC ANEURYSM

This Is the Real Story of Delirium

"THINK DELIRIUM"/Assess Delirium
ATYPICAL PRESENTATIONS in older adults

- Pneumonia
- Congestive Heart failure
- Heart Attack
- Infection/SEPSIS
- Depression
- Adverse Drug reaction
- Dehydration



ASSESS: Know About the 4Ms for Each Older Adult in Your Care [Inpatient]

KEY CHANGES	GETTING STARTED
Ask the older adult What Matters most	This change focuses clinical encounters, decision-making, and care planning for persons with complex care needs on What Matters most to them. If you do not have existing questions to start this conversation, try the following, and adapt as needed. ▪ *"What do you most want to focus on while you are in the hospital/emergency department_____ (fill in health problem) so that you can do_____ (fill in desired activity) more often or more easily?"* ▪ For older adults with advanced or serious illness, consider: *"What are your most important goals if your health situation worsens?"*
Document What Matters	Documentation can be on paper, on a whiteboard, or in the electronic health record where it is accessible to the whole care team across settings
Review high-risk medication use	**Specifically, look for:** ▪ **Benzodiazepines** ▪ **Opioids** ▪ **Highly-anticholinergic medications, especially diphenhydramine** ▪ **All prescription and over-the-counter sedatives and sleep medications** ▪ **Muscle relaxants** ▪ **Tricyclic antidepressants** ▪ **Antipsychotics**
Screen for delirium at least every 12 hours	If you do not have an existing tool, try using the 2-Item Ultra-Brief (UB-2) Delirium Screen
Screen for mobility	If you do not have an existing tool, try using the Timed Up & Go (TUG)

What Approaches Are Likely to Be Effective?

MULTI-PRONGED APPROACH

1. Remove or treat underlying cause(s)
2. Manage & understand delirium behaviors
3. Prevent or remediate complications
4. Restore cognitive and physical function
5. NO FDA approved drug for delirium-2019 AHRQ (Neufeld, et al., 2019) analysis recommends NO antipsychotics for prevention or tx. CNS-active drugs WORSEN or cause delirium.

EDITORIAL

Annals of Internal Medicine

Old Habits Die Hard: Antipsychotics for Treatment of Delirium

Thirty years ago, during my internal medicine residency, I was taught that it was "normal" for hospitalized patients, particularly older adults, to get confused. This confusion had little significance and no impact on outcomes but could be a nuisance. If so, 10 mg of haloperidol ("vitamin H") would take care of the problem.

Where have we come in the past 30 years? We now know acute confusion is delirium and that it is never "normal" (1). We have standardized methods to identify delirium (1, 2), though over one half of cases still go unrecognized. We also know that delirium is common, affecting one third of hospitalized elders and three quarters of all adults in the intensive care unit (ICU) and in palliative care (1). Far from being of little consequence, delirium is a powerful predictor of short- and long-term adverse outcomes, including in-hospital complications, such as falls, functional decline, cognition (3–7). In this issue, Nikooie and colleagues (8) rigorously and systematically review this literature. This review has several meritorious features. First, the authors used rigorous standards advocated by the Agency of Healthcare Research and Quality (9). Second, they cast a wide net, including both randomized trials—some placebo-controlled, others comparing 2 active drugs—and observational studies. Third, they convened a panel of experts to define "critical outcomes" because, as stated above, these are not obvious for delirium treatment. The panel selected cognitive functioning, delirium severity, hospital length of stay, inappropriate continuation of antipsychotics, and sedation. (I would have included delirium duration and mortality, but these are included as "other outcomes.") Finally, when possible, they pooled data to perform meta-analyses, to quantify a summary effect.

Marcantonio, ER. Ann Intern Med. 2019;171:516-517.
https://doi.org/10.7326/M19-2624

JAMA Intern Med. 2015;175(4):512-520

https:/doi.org/10.1001/jamainternmed.2014.7779

MAIN OUTCOMES AND MEASURES We identified 14 interventional studies. The results for outcomes of delirium incidence, falls, length of stay, and institutionalization were pooled for the meta-analysis, but heterogeneity limited our meta-analysis of the results for change in functional or cognitive status. Overall, 11 studies demonstrated significant reductions in delirium incidence (odds ratio [OR], 0.47; 95% CI, 0.38-0.58). Four randomized or matched trials reduced delirium incidence by 44% (OR, 0.56; 95% CI, 0.42-0.76). The rate of falls decreased significantly among intervention patients in 4 studies (OR, 0.38; 95% CI, 0.25-0.60); in 2 randomized or matched trials, the rate of falls was reduced by 64% (OR,

- **11/14 Studies Decreased Delirium Incidence (OR 0.47)**
- **2 RCTs**
- **FALLS 64%**
- **EVIDENCE CASE FOR PREVENTION!**

Most Common Causes to Consider

- Medications (Anticholinergic)
- Infections (UTI, respiratory, skin)
- Dehydration
- Electrolyte imbalance
- Impaired oxygenation
- Severe pain
- Sleep deprivation

ACT ON: Incorporate the 4Ms into the Plan of Care in the Hospital

KEY CHANGES	GETTING STARTED
Align the Care Plan with What Matters	Capture What Matters and the health care agent/proxy in the goal-oriented plan of care and align the care plan with the older adult's goals and preferences* (i.e., What Matters)
Do not prescribe or deprescribe high-risk medications	Specifically avoid or deprescribe the medications listed below that may interfere with What Matters and the Mentation and Mobility of older adults, especially delirium and falls: ▪ **Benzodiazepines** ▪ **Opioids** ▪ **Highly-anticholinergic medications especially diphenhydramine** ▪ **All prescription and over-the-counter sedatives and sleep medications** ▪ **Muscle relaxants** ▪ **Tricyclic antidepressants** ▪ **Antipsychotics**
Ensure sufficient oral hydration	
Orient older adults to time, place, and situation	For older adults with dementia, consider gentle re-orientation or use of orienting cues; avoid repeated testing about the orientation.**
Ensure older adults have their personal sensory adaptive equipment	This includes equipment such as glasses, hearing aids, and dentures
Prevent sleep interruptions; use non-pharmacologica interventions to support sleep	Have sleep kits available
Ensure early and safe mobility	▪ Manage impairments that reduce mobility (e.g., pain; impairments in strength, balance, or gait; remove catheters, IV lines, telemetry, and other tethers as soon as possible) ▪ Set and meet a daily mobility goal with each older adult

Yale Delirium Prevention Program

Multicomponent intervention strategy targeted at 6 delirium risk factors

RISK FACTOR	INTERVENTION
Cognitive Impairment	Reality orientation Therapeutic activities protocol
Sleep Deprivation	Non-pharmacological sleep protocol Sleep enhancement protocol
Immobilization	Early mobilization protocol Minimizing immobilizing equipment
Vision Impairment	Vision aids Adaptive equipment
Hearing Impairment	Amplifying devices Adaptive equipment and techniques
Dehydration	Adaptive equipment and techniques Early recognition and volume repletion

Inouye SK. *N Engl J Med* 1999;340:669-676

DO THIS TO PREVENT DELIRIUM

PREVENTION IS MORE EFFECTIVE THAN TREATMENT

Table 4. Multicomponent Nonpharmacologic Approaches to Delirium Prevention **Esther Oh et al., 2017 JAMA**

Approach	Description
Orientation and therapeutic activities	Provide lighting, signs, calendars, clocks Reorient the patient to time, place, person, your role Introduce cognitively stimulating activities (eg, reminiscing) Facilitate regular visits from family, friends
Fluid repletion	Encourage patients to drink; consider parenteral fluids if necessary Seek advice regarding fluid balance in patients with comorbidities (heart failure, renal disease)
Early mobilization	Encourage early postoperative mobilization, regular ambulation Keep walking aids (canes, walkers) nearby at all times Encourage all patients to engage in active, range-of-motion exercises
Feeding assistance	Follow general nutrition guidelines and seek advice from dietician as needed Ensure proper fit of dentures
Vision and hearing	Resolve reversible cause of the impairment Ensure working hearing and visual aids are available and used by patients who need them
Sleep enhancement	Avoid medical or nursing procedures during sleep if possible Schedule medications to avoid disturbing sleep Reduce noise at night
Infection prevention	Look for and treat infections Avoid unnecessary catheterization Implement infection-control procedures
Pain management	Assess for pain, especially in patients with communication difficulties Begin and monitor pain management in patients with known or suspected pain
Hypoxia protocol	Assess for hypoxia and oxygen saturation
Psychoactive medication protocol	Review medication list for both types and number of medications

TODAY IS

_____, _____ ____, _____

ALL ABOUT ME

I am from

The names of my family members are

I worked as a

I enjoy

Things that make me feel happy are

I LIKE TO BE CALLED

_____

I have hearing/vision impairment & have glasses/hearing aides

I feel relaxed and calm when

I enjoy listening to

My favorite TV channel is

I don't like

YOUR NURSE TODAY IS:

_____

YOUR NURSING ASSISTANT TODAY IS:

_____

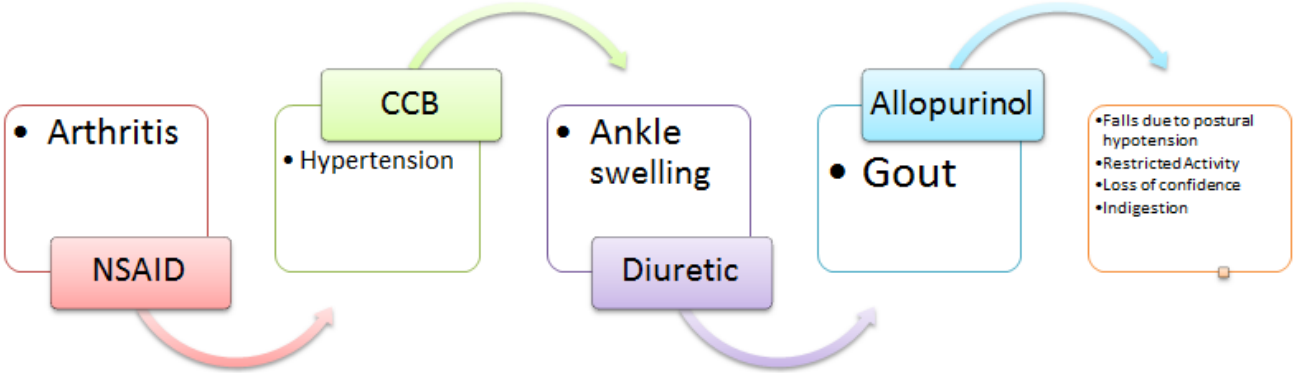
Discontinuing Medications

DEPRESCRIBING:

"Use of some medication, especially as people get older or more ill, can cause more harm than good. Optimizing medication through targeted deprescribing is a vital part of managing chronic conditions, avoiding adverse effects and improving outcomes."

- **Refer to the AGS Beers criteria, STOPP/START and other lists**
- **Target medications:**
  - Without indication
  - Have not had the intended response
  - No longer needed
  - Duplicate effects – benefit and harm
  - Not being taken and adherence is not critical

Prescribing Cascade



"Any new symptom in an older adult should be considered a drug side effect until proven otherwise."

Ref: Antimisiaris D, 2017 Update: Module 7. Polypharmacy and MTM. Accessed at: https://www.powerpak.com/course/content/115779

2019 Beers Criteria Drugs to Avoid in Persons with Dementia

(never stop a drug JUST because it is on a list!)

Dementia or cognitive impairment	**Anticholinergics (see Table 7 in full criteria available on *www.geriatricscareonline.org*)**	**Avoid because of adverse CNS effects**	**Avoid**	**Moderate**	**Strong**
	Benzodiazepines Nonbenzodiazepine, benzodiazepine receptor agonist hypnotics ○ Eszopiclone ○ Zaleplon ○ Zolpidem Antipsychotics, chronic and as-needed use[a]	Avoid antipsychotics for behavioral problems of dementia and/or delirium unless nonpharmacologic options (e.g., behavioral interventions) have failed or are not possible and the older adult is threatening substantial harm to self or others. Antipsychotics are associated with greater risk of cerebrovascular accident (stroke) and mortality in persons with dementia.			

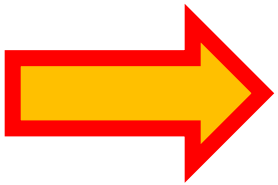
Canadian site Deprescribing.org

Free, useful resource

Algorithms for deprescribing antipsychotics, antidiabetic agents, benzodiazepines, and PPIs

Brochures, videos, & materials to help prescribers and individuals decide if and how to stop a medication

Algorithm to deprescribe benzos



Why is patient taking a BZRA?

If unsure, find out if history of anxiety, past psychiatrist consult, whether may have been started in hospital for sleep, or for grief reaction.

- Insomnia on its own OR insomnia where underlying comorbidities managed
  For those ≥ 65 years of age: taking BZRA regardless of duration (avoid as first line therapy in older people)
  For those 18-64 years of age: taking BZRA > 4 weeks

- Other sleeping disorders (e.g. restless legs)
- Unmanaged anxiety, depression, physical or mental condition that may be causing or aggravating insomnia
- Benzodiazepine effective specifically for anxiety
- Alcohol withdrawal

Engage patients (discuss potential risks, benefits, withdrawal plan, symptoms and duration)

Recommend Deprescribing

Continue BZRA

- Minimize use of drugs that worsen insomnia (e.g. caffeine, alcohol etc.)
- Treat underlying condition
- Consider consulting psychologist or psychiatrist or sleep specialist

Engaging patients and caregivers

Patients should understand:

- The rationale for deprescribing (associated risks of continued BZRA use, reduced long-term efficacy)
- Withdrawal symptoms (insomnia, anxiety) may occur but are usually mild, transient and short-term (days to a few weeks)
- They are part of the tapering plan, and can control tapering rate and duration

Provide and discuss non-drug alternatives, i.e., sleep hygiene, mindfulness, anxiety management

Ref: https://deprescribing.org/wp-content/uploads/2019/03/deprescribing_algorithms2019_BZRA_vflocked.pdf

Sleep Protocol for Hospitalized Older Adults & Pocketcards Sleep tips

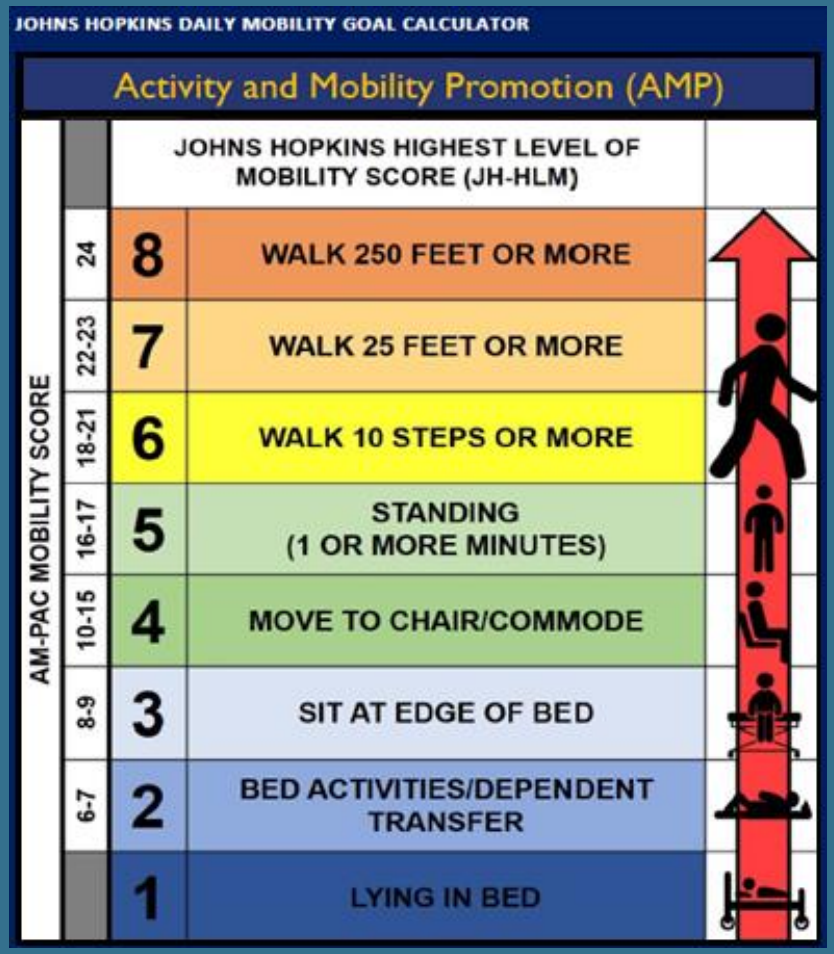
- Limit caffeine after 11am
- Exposure to sunlight
- Minimize daytime napping
- Noise level
- Nighttime routine: Backrub, warm drink, music, warm milk or decaf tea
- Help older adult understand normal aging changes with sleep architecture
- Mobilize

[*McDowell, et al., 1998*]

Safe Mobility

- ON THE WAY OUT, alerts, signs, slippers, focus on falls…
- DOES WORK—PT with supervised exercises, daily or frequent mobility, remove devices which just further restrict mobility, minimize sedating medications
- ENGAGE patient and family— DAILY MOBILITY GOALS, unless contraindicated—"*My Johnson will be ambulated down both halls every shift and will be in a chair for all meals*"
- Identify 3 tasks that can be replaced with mobility (What can you stop doing)

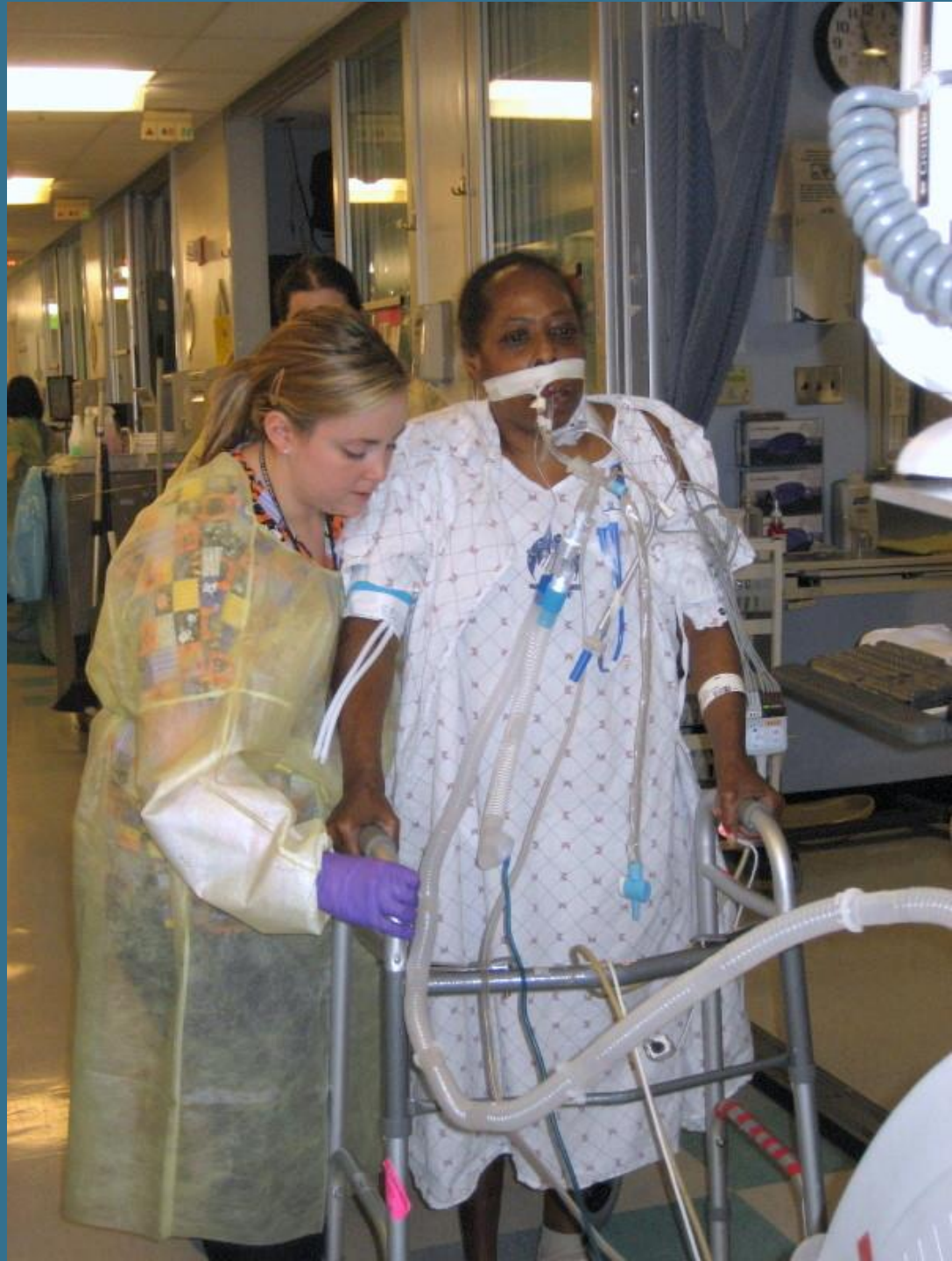
ACTIVITY AND MOBILITY PROMOTION



FOR THE LOVE OF MARY:
https://vimeo.com/273611679

SAFE MOBILITY

In Any Setting or Age



THE 4MS ARE CONNECTED & INTERACTIVE:

What Matters guided Meds, Mentation & Mobility for Mr. Johnson!

ASSESS	ACT ON
Ask older adults "What Matters to you?" http://www.ihi.org/Topics/WhatMatters/Pages/default.aspx "*What are you concerned about today*?"	• Document What Matters to the older adult in their chart. Align the older adults care plan with What Matters and **ALL 4Ms.**
Mr. Johnson	
Staff: The nurses mentioned that you have been restless and wanting to get out of bed frequently so we wanted to know what is most important to you and your life at this time. Mr J. - "*We had a routine at home of walking everyday and I wants to be able to resume this at home*." Wife- "*The medicine last night made him worse. This is not his normal*".	How can better tailor the care to Mr. Johnson and his caregiver? In partnership with Mr. J and his wife they came up with a --Daily mobility plan, deprescribed the lorazepam, did discharge teaching on delirium prevention (hydration, mobility, signs), and asked for follow-up in clinic for further assessment of his mentation and gave information for resources from AD Association and AAA for socialization & support/safety for Mr. J and his wife.

NIH Delirium Trials at Penn State

http://Clinicaltrials.Gov/

RESERVE

- Focus on DSD
- RCT Intervention
- SINGLE Component
- Post-acute Care
- Patient Centered

END-DSD

- Focus on DSD
- C-RCT Intervention
- MULTI-Dimensional
- Acute Hospitalization
- Nurse & Pt Centered

Multi-dimensional Approach: 4 Components/Bundle

"ADAPTIVE VERSUS TECHNICAL FIX"

- **Education**—initial/ongoing-staff nurse driven—> **300 nurses—100%**
- **Electronic Health Record**—3 Screens—different sites and systems but same content
- Weekly **Rounds** on every shift with **Unit Champions** who are direct care nurses
- **Feedback** loop to UCs and nurses on CAM use, delirium—**ADAPTIVE versus TECHNICAL** fix

Understanding Delirium & Dementia Behaviors In the Lens of Person-Centered Care

- Focus on UNMET NEEDS--needs and response based behaviors (NOT behavior as "problematic") www.nursinghometoolkit.com
- Understanding (NOT LABELING) Agitation
- Non-Drug strategies 1st: behavioral interventions, family participation, person-centered approach
- KNOW the person—understand goals & emotion
- Pharmacologic approaches as a LAST RESORT-- for severe agitation: beware of vicious cycles of medications and worsening delirium

Important Take Home's for Delirium

- Prevention Works (Treatment Is Harder)
- Screening Should Always, Always Be Done With Prevention Plan In Place!
- Ask, "Are they different today?" (talk to family)
- Use a non-drug approach to delirium
- All Together— "Delirium is Everybody's Business"

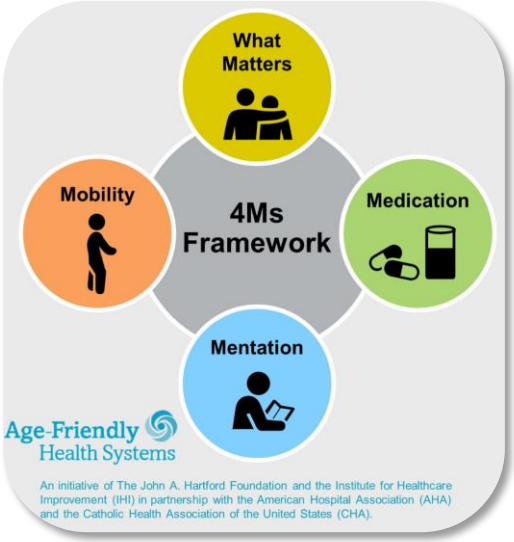
Levers to make it easy to become an Age-Friendly Health System- ALL Teach, Learn

PAYMENT AND REGULATORY:
CMS, Medicare Advantage plans, HRSA

LARGE SYSTEMS:
VA, HCA, Ascension, Common Spirit, UHS, CHS

EDUCATION:
Geriatric Workforce Enhancement Program; Rush Medical School; IHI Open School

INFORMATION TECHNOLOGY:
Cerner, Epic, PatientWisdom



ALIGN IMPROVEMENT OPPORTUNITIES:
AFHS, Geri-ED, Geriatric Surgery Verification Program

DEMAND FROM OLDER ADULTS:
AARP, National Area Agencies on Aging

CERTIFICATION:
The Joint Commission, NCQA

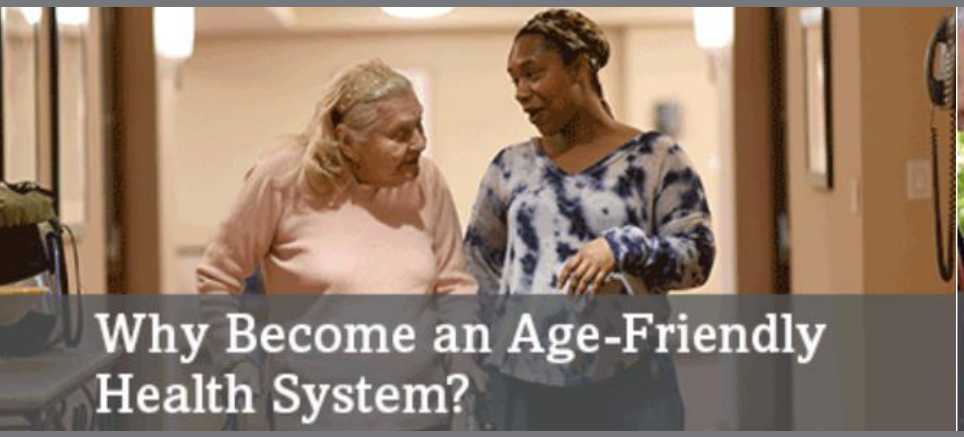
Must also have CULTURAL CHANGE TO DO ALL THIS—reflect on ageism, biases, own feelings about growing older…

"At the very least, we are losing an opportunity to look at the final third of life with the same concern, curiosity, creativity, and rigor as we view the first two thirds"

(Louise Aronson, MD from Elderhood: Redefining Aging, Transforming Medicine, Reimagining Life, Bloomsbury Publishing, 2019)

Join the Movement

www.ihi.org/AgeFriendly



Delirium Resources to Check Out!

- iDelirium: idelirium.org
- World Delirium 2nd Wednesday in March (3/11/2020)
  - Commit to using the word “delirium”
  - Screen for delirium
  - Educate about Prevention of delirium
- NIDUS https://deliriumnetwork.org/ Delirium Boot Camp October 27-29, 2019 at Penn State, Webinars, Grants
- Nursing Home Toolkit to promote positive behavioral health in persons with dementia http://www.nursinghometoolkit.com/


World Delirium Awareness Day
14 March 2018
I Am
DELIRIUM
Aware
I Am
DELIRIUM AWA
World Delirium
Awareness Day 2018
#WDAW2018

Resources & References for Age-Friendly Care

- IHI site for Age-Friendly Care *www.ihi.org/AgeFriendly*
- *Resources for Age-friendly care including a BUSINESS case* *http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/Resources.aspx*
- LOWN Institute. (2019). *Report – Medication overload: How the drive to prescribe is harming older Americans.* *lowninstitute.org*
- Middleton, L. E., Barnes, D. E., Lui, L. Y.,& Yaff e, K. (2010). Physical activity over the life course and its association with cognitive performance and impairment in old age. *Journal of the American Geriatrics Society, 58*(7), 1322–1326.
- Horton, K., & Perkins, S. (Directors). (2018). *For the love of Mary* [short film]. United States: Sharptail Media.

Resources & References for Age-Friendly Care

- Mobility report how to stay mobile at HOME *https://www.cdc.gov/features/older-adults-mobility/index.html*
- *Link to Article on Age-friendly care Health Progress from CHA Jan 2020*
- *Link to Editorial JGN on medication, mobility and age friendly care*
- Tinetti et al., 2019. Association of Patient Priorities-Aligned Decision Making with Patient Outcomes…JAMA IM https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2752365
- *Geriatrics At Your Fingertips® (GAYF)* is an annually updated reference that provides quick, easy access to the specific information clinicians need to make decisions about the care of older adults https://geriatricscareonline.org/ProductAbstract/geriatrics-at-your-fingertips-2019/B048/
- LINK below to VIDEO on delirium study and UB-2 http://www.nursing.psu.edu/readi

2019 AGS Beers Criteria Resources

AVAILABLE AT: *GeriatricsCareOnline.org*

- **CRITERIA**
  - AGS Updated Beers Criteria
  - How-to-Use Article
  - Alternative Medications List
- **EASY CLINICAL USE**
  - Updated Beers Criteria Pocket Card
  - https://geriatricscareonline.org/ProductAbstract/beers-criteria-pocketcard-2018-pre-sale/PC007
  - Updated Beers Criteria section in iGeriatrics App
- **PUBLIC EDUCATION RESOURCES FOR INDIVIDUALS & CAREGIVERS**
  - 10 Medications Older Adults Should Avoid
  - Avoiding Overmedication and Harmful Drug Reactions
    - What to Do and What to Ask Your Healthcare Provider if a Medication You Take is Listed in the Beers Criteria
    - My Medication Diary - Printable Download
    - Caregiver Tips: Using Medicines Safely - Illustrated PowerPoint Presentation

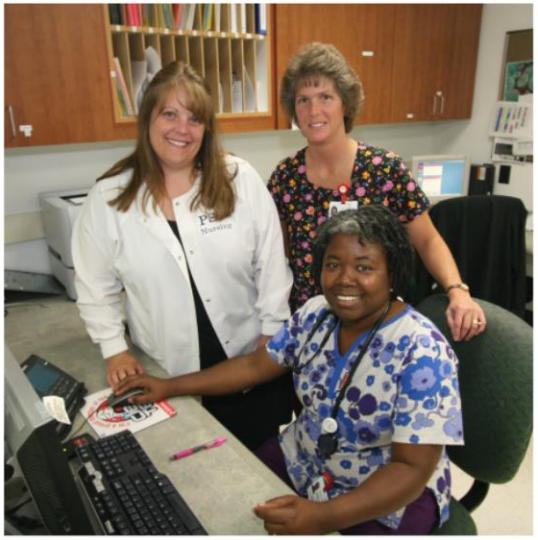
Gratitude & Acknowledgements

Our sites, patients, investigators, study team and hospital staff

- Vanderbilt Medical Center
- Mount Nittany Health System
- Altoona Regional Health System
- Harvard, Aging Brain Center, Hebrew Senior Life
- RESERVE & READI—study staff and participants
- **Institute for Healthcare Improvement and Hartford Foundation**
- **Age-Friendly Pioneer Health Systems**

INVESTIGATORS:

- Drs. Lorraine Mion,
- Sharon Inouye
- Ann Kolanowski
- Ed Marcantonio
- Ngo Long
- Doug Leslie
- Marie Boltz
- Janice Penrod
- & team



VANDERBILT UNIVERSITY

MOUNT NITTANY HEALTH

Altoona Regional Health System

VE RI TAS HARVARD

DISCLOSURES

- **Conflicts of interest:** NONE
- **Current funding:** **MPI,** Donna M. Fick: National Institute of Health (NIH) Researching Efficient Approaches to Delirium Identification (READI), R01 **MPI** with Edward Marcantonio, MD, Harvard. NIDUS R24, Co-I HRSA grant.
- **Other financial relationships:** I am a paid consultant and Editor for SLACK, Inc. and a consultant and the American Geriatrics Society /AGS Beers Criteria, and AGS Postoperative Delirium Guideline, Consultant for IHI, & Precision Health Economics.