A Primary Care Age-Friendly Approach to Delirium Prevention

Project ECHO Dementia Carrie Rubenstein, MD Jan 26, 2024

Who am I?

- Family Physician and Geriatrician
- Director, Swedish Geriatrics Fellowship and Faculty, Swedish Family Medicine – First Hill Residency
- Care settings where I practice: Clinic, Hospital, Nursing Home, Adult Family Home, Private Home
- Daughter of a Dementia Care Partner

Objectives

- 1. Review Age-Friendly Health Systems 5M Framework.
- 2. Describe delirium risk from the Primary Care Perspective.
- 3. Use the Age-Friendly Health Systems 5Ms Framework to **prevent delirium** in persons living with dementia.
- Describe the Patient Priorities Care tool and how you can use it in your practice to address complexity and focus on what matters to your patient
- 5. Show one EPIC-based tool Providence has developed to improve Age-Friendly care delivery

Age-Friendly Health Systems



WHAT MATTERS



Know your care preferences and set goals for your health. Establish Advance Directives and Trusted Decision Makers.

MEDICATION



Manage your medications and understand how they may impact your mobility and cognition.

MENTATION



Get the emotional and cognitive support you need. Understand, prevent, and seek treatment for dementia, delirium, and depression

MOBILITY



Keep active and mobile, preventing injuries and falls. Learn how to safely mobilize as you age.

MALNUTRITION



Commit to proper nutrition and assess malnutrition risk regularly.

Providence is a pioneering partner in creating the Age-Friendly Health System initiative with IHI, the John A. Hartford Foundation, and CHA.









Age Friendly Health Systems

How do age friendly health systems (AFHS) improve dementia care?

- Dementia care is whole person care, at the core of which is the person with dementia and their caregiver (the dyad), and What Matters to them.
- Incorporating the 5Ms to guide your care of people living with dementia, all older adults and all people will help you provide consistent and comprehensive care.
- Assessing and acting on the 5Ms can play a key role in delirium prevention





Why do we (Project ECHO Dementia) care?

Each year **40**% of community-dwelling People with dementia (PwD) will visit ED and **30**% will be hospitalized at least once.

Hospital care is 3 times as costly compared to older people w/o dementia

Acute hospitalization in PwD is associated with increased risk of delirium, falls, cognitive and functional decline, 30 day readmission, longer LOS, long-term care admission and death

Shepherd et al, BMC Medicine 2019



Pat

- 80yo person living at home with mid stage mixed-type dementia, recent small stroke, and history of urinary retention
- She left the hospital with plans for home health OT/PT and nursing, an indwelling foley catheter, and a new medication for depression
- She has significant hearing loss
- She has the help of an unpaid caregiver, but she does not have 24-hour care
- She hates her indwelling foley catheter
- After the hospitalization she had several home visits by her PCP
- What MATTERS Most to her is her cat, Leah



Pat

- Hypothyroidism
- Hypertension
- Coronary Artery Disease
- Hx of Splenic Infarct
- Major neurocognitive disorder due to Alzheimer's disease+Vascular (probable mixed)
 - Balance problem
- Urinary retention
- Constipation
- Moderate-Severe Sensorineural Hearing loss (SNHL)



Pat

MEDICATIONS

No current facility-administered medications on file prior to encounter.

•			
Current Outpatient Medications on	File Prior to Enc	ounter	
Medication Sig	Di	spense F	Refill
500 mg tablet mout hours for Pa	1-2 tablets by 60 h every 6 s as needed ain.	tablet 3	
tablet 1 tab	let Daily.	tablet 3	
MG tablet mout	1 tablet by 90 h Daily.	tablet 3	
500 mg chewable tablet 2 tab hours	v and swallow 90 lets every 4 s as needed digestion.) tablet 0	
(CHOLECALCIFEROL) 50 mout	1 tablet by 90 h Daily For itamin D	each 0	
tablet mout	1 tablet by 90 h Daily.	tablet 3	
	1 tablet by 90 h Daily.	tablet 0	
tablet mout	h Daily.	tablet 0	
 donepezil (ARICEPT) 10 MG Take tablet mout 	1 tablet by 90 h daily.	tablet 3	
100 mcg tablet mout thyro Best empt least befor other	h Daily for low id hormone. taken on an y stomach at 30 minutes e food or medicines	tablet 0	
mout	h nightly.	tablet 3	
(MIRALAX) 17 g packet packet Daily	et by mouth as needed.	each 1	
senna (SENOKOT) 8.6 mg Take	1 tablet by 90	tablet 0	



Delirium Risk Factors

Table 1—Mnemonic for Reversible Causes of Delirium

Drugs Any new additions, increased dosages, or interactions

Consider OTC drugs and alcohol

Consider especially high-risk drugs (Table 4)

Electrolyte disturbances Especially dehydration, sodium imbalance

Thyroid abnormalities

Lack of drugs Withdrawals from chronically used sedatives, including alcohol and sleeping

pills

Poorly controlled pain (lack of analgesia)

Infection Especially urinary and respiratory tract infections

Reduced sensory input Poor vision, poor hearing (lack of glasses, hearing aids in the hospital)

Intracranial Infection, hemorrhage, stroke, tumor

Urinary, fecal Urinary retention: "cystocerebral syndrome"

Fecal impaction, constipation

Myocardial, pulmonary Myocardial infarction, arrhythmia, exacerbation of heart failure, exacerbation of

COPD, hypoxia, hypercarbia

Delirium Risk Factors

Table 1—Mnemonic for Reversible Causes of Delirium

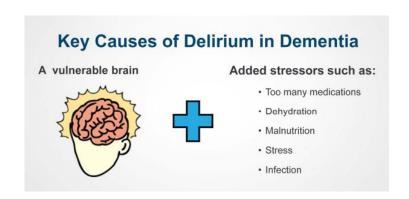
Pat's delirium risk factors

Drugs	Any new additions, increased dosages, or interactions Consider OTC drugs and alcohol Consider especially high-risk drugs (Table 4)
Electrolyte disturbances	Especially dehydration, sodium imbalance Thyroid abnormalities
L ack of drugs	Withdrawals from chronically used sedatives, including alcohol and sleeping pills Poorly controlled pain (lack of analgesia)
Infection	Especially urinary and respiratory tract infections
Reduced sensory input	Poor vision, poor hearing (lack of glasses, hearing aids in the hospital)
Intracranial	Infection, hemorrhage, stroke, tumor
U rinary, fecal	Urinary retention: "cystocerebral syndrome" 🛣 Fecal impaction, constipation
M yocardial, pulmonary	$\label{thm:main} Myocardial\ infarction, arrhythmia, exacerbation\ of\ heart\ failure,\ exacerbation\ of\ COPD,\ hypoxia,\ hypercarbia$

Delirium in Dementia

Major neurocognitive disorder (dementia) is perhaps the strongest predisposing risk factor for delirium

Plug for early detection!



"The literature suggests that delirium superimposed on dementia is less likely to be recognized, is more likely to persist, and is associated with worse long-term outcomes than delirium occurring in cognitively intact individuals" Nitchingham A, et all. Current Challenges in the Recognition and Management of Delirium Superimposed on Dementia. Neuropsychiatr Dis Treat. Published 2021

Prevention of Hospital Delirium: What do we know?

- Avoid anticholinergics, benzodiazepines, opioids, H2 blocker, TCA, steroids
- Fluid management- avoid dehydration
- Early mobilization
- Avoid sleep disturbances
- Minimize perceptual deficits/glasses/aids
- Environmental awareness, nutrition, oxygenation.
- HELP, ABCDE bundle and ACE program multicomponent program
- Pharmacist led medication review in institutional long-term care

Now, let's apply this to our **ambulatory** practice!

Prevention of Delirium in Dementia: What Matters

Providence's **5Ms** for Age-Friendly Health:





Know your care preferences and set goals for your health. Establish Advance Directives and Trusted Decision Makers.





Manage your medications and understand how they may impact your mobility and cognition.

MENTATION



Get the emotional and cognitive support you need. Understand, prevent, and seek treatment for dementia, delirium, and

MOBILITY



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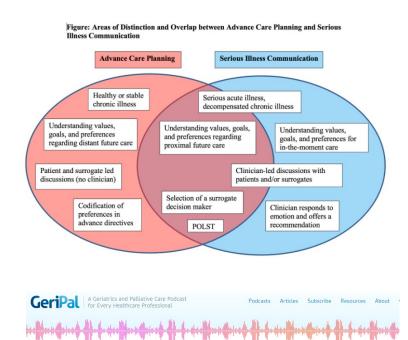




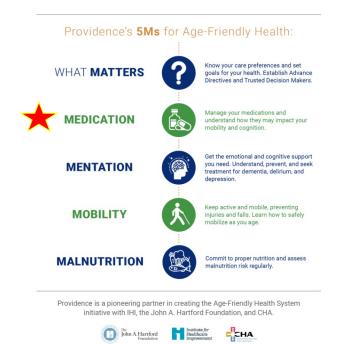
- How do you ASSESS and ACT on WHAT MATTERS to People Living with Dementia and Their Care Partners?
 - What is important to you today?
 - What brings you joy?
 - What concerns you most when you think of your healthcare and your future?
 - What things about your health care do you find too bothersome or difficult?
- Advance Care Planning and Serious Illness Communication
 - Limit excess care that can increase delirium risk
- Care Partner Support
 - Train to identify delirium

Prevention of Delirium in Dementia: What Matters

- Know that Advance care planning (ACP) is a PROCESS where there will be areas of overlap with Serious illness communication and sometimes a lot of uncertainty!
- As a PROCESS we should try to adopt a guiding FRAMEWORK for ACP:
 - Ask about illness understanding
 - Give a patient-centered prognosis
 - Discuss values/goals
 - Make a recommendation



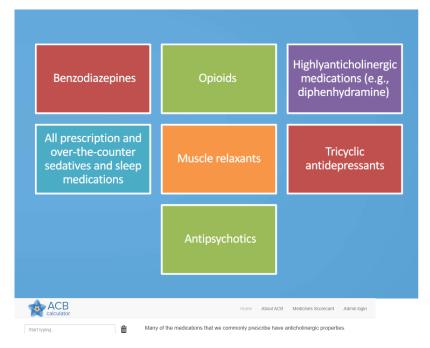
Should We Shift from Advance Care Planning to Serious Illness Communication?



- Assess and Act on Medications that can cause Delirium
- If a medication is needed:
 - Choose one that does not interfere with
 - Mobility
 - Mentation
 - Matters Most



Identify High-Risk Meds





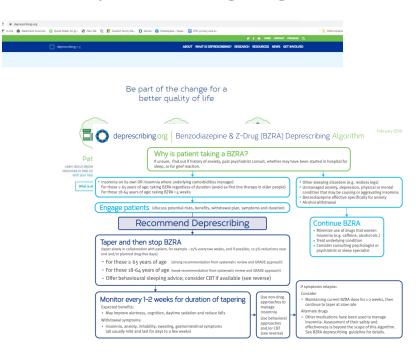
Identify High-Risk Meds

- Pay special attention to anticholinergic burden
 - Cumulative Use of Strong Anticholinergic Medications and Incident Dementia (JAMA int med 2015)
 - Anticholinergic Drug Burden and Delirium: A Systematic Review (JAMDA 2021)
- Use the ACB calculator
- Reduce anticholinergic burden and EDUCATE about anticholinergic risk everywhere you go ©





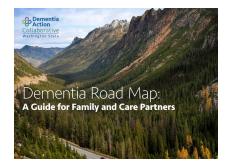
deprescribing.org/



Prevention of Delirium in Dementia: Mentation

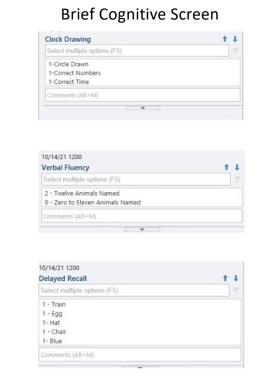


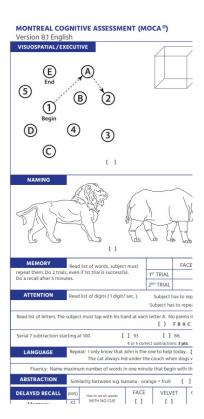
- Preaching to the choir ©
- Early detection of dementia!
- Screen for depression and treat
- Address social isolation and loneliness
- Care Partner Well-Being



Prevention of Delirium in Dementia: Early Detection, Know the Baseline!







Prevention of Delirium in Dementia: Mobility

Providence's **5Ms** for Age-Friendly Health:

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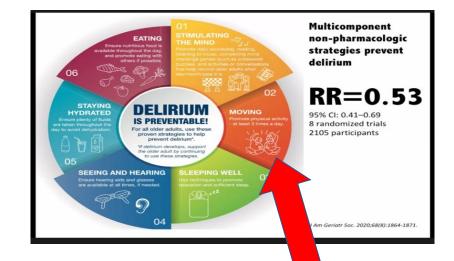
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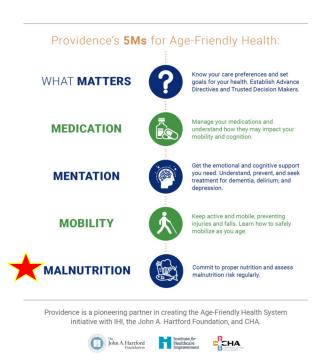








Prevention of Delirium in Dementia: Malnutrition/Dehydration

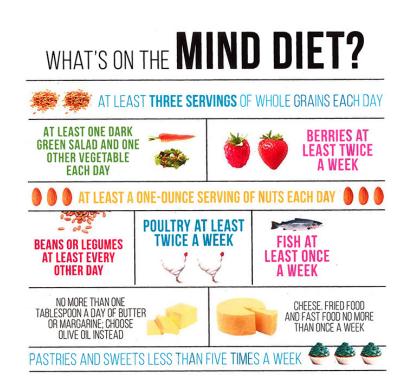


- Nutrition/Hydration
 - Dehydration can lead to decreased brain perfusion
 - With aging and dementia: decreased thirst response, inattention (may not sit and complete a full serving of fluids), swallowing difficulties
 - Malnutrition has been correlated with delirium risk
 - Coach people and care partners on how to prevent this

Prevention of Delirium in Dementia: Dehydration

- 1.Keep water close.
- 2.Set hydration reminders.
- 3. Invest in adapted drinking aids.
- 4. Stay hydrated with tasty, nutritious snacks.
- 5.Use mirroring to encourage hydration.
- 6. Make drinking breaks part of routine activities.
- 7.Stay comfortable and cool.
- 8. Provide their favorite drinks.

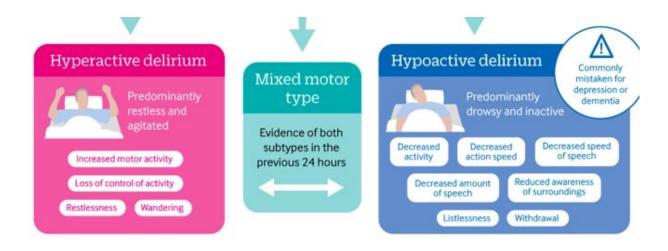
Prevention of Delirium in Dementia: Malnutrition/MIND



- Nutritional deficiencies can put people at risk for delirium
- MIND stands for Mediterranean-DASH
 Intervention for Neurodegenerative Delay. It
 is similar to two other healthy meal plans:
 DASH and the Mediterranean diet.
- Trial of the MIND Diet for Prevention of Cognitive Decline in Older Persons (NEJM 2023) did not prevent dementia, but...

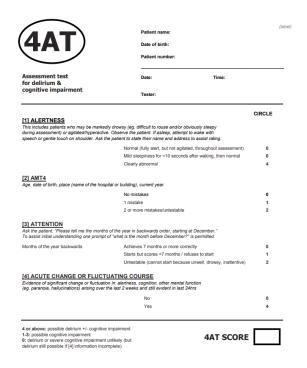
Delirium in Dementia: What Does it Look Like?

• Train teams and care partners



Delirium in Dementia:

What Does it Look Like and How Do you Screen for it?



Confusion Assessment Method (CAM) Short form

CAM Confusion Assessment Method	A. Acute onset and Fluctuating course	Is there evidence of an acute cha status from patient baseline? Does the abnormal behavior: - come and go? - fluctuate during the day? - increase/decrease in sever			
	B. Inattention	Does the patient: have difficulty focusing atte become easily distracted? have difficulty keeping track			
	AND the presence of EITHER feature C				
	C. Disorganized thinking	Is the patient's thinking disorganized incoherent For example does the patient ha rambling speech/irrelevant unpredictable switching of unclear or illogical flow of ic			
	D. Altered level of consciousness	Overall, what is the patient's leve consciousness: alert (normal) vigilant (hyper-alert) lethargic (drowsy but easily stuporous (difficult to rouse comatose (unrousable)			

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

ORDING 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

Delirium in Dementia: Train our care partners!

Family Confusion Assessment Method (FAM-CAM)

For Research and Clinical Staff

Evaluator:				9. Disease tell up more about the above	any of th	a habaui	n in #4 7	abau-		
Caregiver/Informant: Date:		8. Please tell us more about the changes you noticed in Record as much detail as possible	Please tell us more about the changes you noticed in any of the behaviors in #1-7 above. Record as much detail as possible							
Patient:	Time:									
[Screening for an appropriate caregiver is recommen		ions]								
Circle the answer to each question										
These questions are intended to identify changes to [fai concentration, and alertness during recent days. Pleas understand the questions.	mily member's n e stop me at any	ame] think y time if yo	king, u do not							
. I'd like you to think about the past [month/week/day]* During this [month/week/day]*, have you noticed any changes in his/her thinking or concentration, such as being less attentive, appearing confused or disorient (not knowing where he/she was), behaving inappropriately, or being extremely sleepy all day?		No	Don't Know	9. Were any of the changes (#1-7) present all the time, or did they come and go from day to day?	All the time	Com and (n't knov		
Adjust time frame as appropriate for your purposes				10. When did these changes first begin? Would you say they began:	Within the last week					
2. Did he/she have difficulty focusing attention, for example, being easily distracted or having trouble keeping track of what you were saying at any time?	Yes	No	Don't Know		Between 1 and up to 2 weeks ago Between 2 and up to 4 weeks ago More than 4 weeks ago					
Was his/her speech disorganized, incoherent, rambli unclear, or illogical at any time?	ng, Yes	No	Don't Know	11. Overall, have these changes been getting better,	Better	Worse	About	Don't		
Did he/she seem excessively drowsy or sleepy during the daytime at any time?	g Yes	No	Don't Know	worse, or staying about the same?	Detter	Worse	the Same	Know		
5. Was he/she disoriented, for example, thinking he/she was somewhere other than where he/she was, or misjudging the time of day at any time?	e Yes	No	Don't Know	© Copyright 1988, 2011. Hospital Elder Life Program permission	© Copyright 1988, 2011. Hospital Elder Life Program. Not to be reproduced without permission					
6. Did he/she seem to see or hear things which weren't actually present, or seem to mistake what he/she sav or heard for something else at any time?		No	Don't Know							
7. Did he/she behave inappropriately, such as wandering yelling out, or being combative or agitated at any time		No	Don't Know							

Delirium in Dementia: Perioperative Considerations

- Risk stratify people pre-operatively
 - Understand risks
 - surgery and anesthesia are potent stimuli to the development of delirium
 - surgery can trigger neuroinflammation
 - Update cognitive evaluation
 - Identify and try to deprescribe high risk meds
 - Discuss what matters most
 - discuss risks and optimize them and understand/balance benefits



Neurovascular and immune mechanisms that regulate postoperative delirium superimposed on dementia, April 2020

Choosing What Matters, Doing What Works

Patient Priorities Care – M. Tinetti, MD

- https://patientprioritiescare.org/patient-facing-materials/
- https://patientprioritiescare.org/what-is-patient-priorities-care-and-why-is-it-important/

Patient's Health Priorities are identified

- Values (What Matters Most)
- Actionable, specific and realistic health outcome goals
- Healthcare preferences (care that is helpful or burdensome) and tradeoffs
- "One Thing" patient most wants to address

Aligning Care With Patient's Priorities

Clinicians consider whether current or potential interventions* are consistent with patient's health priorities and health trajectory.



*Medications, selfmanagement tasks, supportive services, testing, procedures, etc.



- as focus of communication and decision-making,
- as target of serial trials to start, stop or continue interventions, and
- to reconcile decisions among clinicians when different perspectives or recommendations exist.

Clinicians, patients and care partners work together

Patient Priorities Care: Health Priorities Template

What Matters most (Values):

Spend time with family, Volunteering - link to community, Mobility/Activity - handling books

Most Important Health Goals: Health goals are specific and realistic activities or outcomes that show you are doing what matters most in your life. These health goals are what you want to achieve with your healthcare.

- 1. Watch grandchildren after school 2-3 times weekly
- 2. Volunteer in library, handling books, two times weekly

Most Bothersome Symptoms or Problems interfering with your health goals:

- Fatigue
- 2. Hand pain

Health care preferences (Helpful and burdensome care and medications)

Helpful care: self-management tasks, clinical visits, tests, or procedures, that you think are helping most with your health goals and you can do them without too much difficulty

- 1. Exercise, physical therapy
- 2. Bloodwork and imaging

Helpful medications: Medications you think are helping most with your health goals and you can take without too much difficulty

1. Acetaminophen for arthritis pain

Burdensome care: self-management tasks, clinical visits, tests, or procedures that don't think are helping your goals and are burdensome or too difficult. You should talk with your doctor about whether these are helping your goals. If not, can you stop them or cut back? If they are helping, is there a way to make them less burdensome or less difficult?

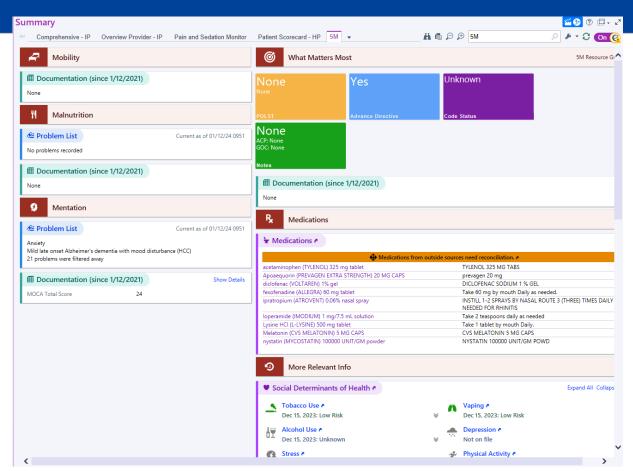
- 1. CPAI
- 2. Being in the hospital

Burdensome medications: Medications you don't think are helping your goals and are too burdensome. You should talk with your doctor about whether these are helping your goals. If not, can you stop or decrease? If they are helping, is there a way to make them less burdensome?

1. Taking multiple medications daily

The One Thing: Your most important health goal is being less tired, having less pain in my hands so that I can continue to watch my grandchildren and volunteer in the library handling books more often or more easily.

EPIC: 5M SnapShot



Inpatient Delirium Prevention Pilot





Objectives: Reprise

- 1. We've reviewed Age-Friendly Health Systems 5M Framework.
- 2. We understand better delirium risks from the Primary Care perspective.
- 3. We can use the Age-Friendly Health Systems 5Ms Framework to actively prevent delirium in persons living with dementia.
- 4. We have learned about a tool called Patient Priorities Care and how you can use it in your practice
- 5. I have showed you one Epic-based tool Providence has developed to improve Age-Friendly care delivery

Thank you and Resources for Your Practice!

- GeriPal ACP&Serious Illness Communication
- Dementia Roadmap
- https://deprescribing.org/
- Age-Friendly Health Systems
- https://patientprioritiescare.org/patient-facing-materials/
- https://www.vitaltalk.org/
- http://www.acbcalc.com/
- FAM-CAM tool

