# Age Friendly Care and Potentially Inappropiate Medications in Older Adults

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- No disclosures, conflicts of interest

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# Objectives

- Name the 4 Ms of an Age Friendly Health System
- Describe why it is important to understand medication risks in older adults
- List at least 3 commonly used medications that are potentially inappropriate in older adults
- Explain the Prescribing Cascade
- Name resources to determine medication risks for older adults
- Describe methods for managing symptoms in older adults without adding a medication.

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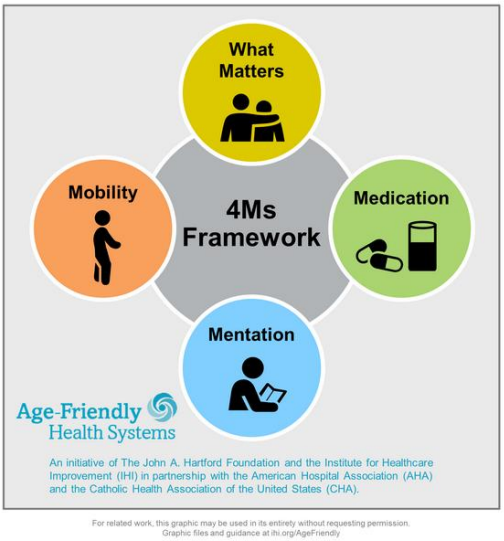
# Objective 1

- Name the 4 Ms of an Age Friendly Health Care System

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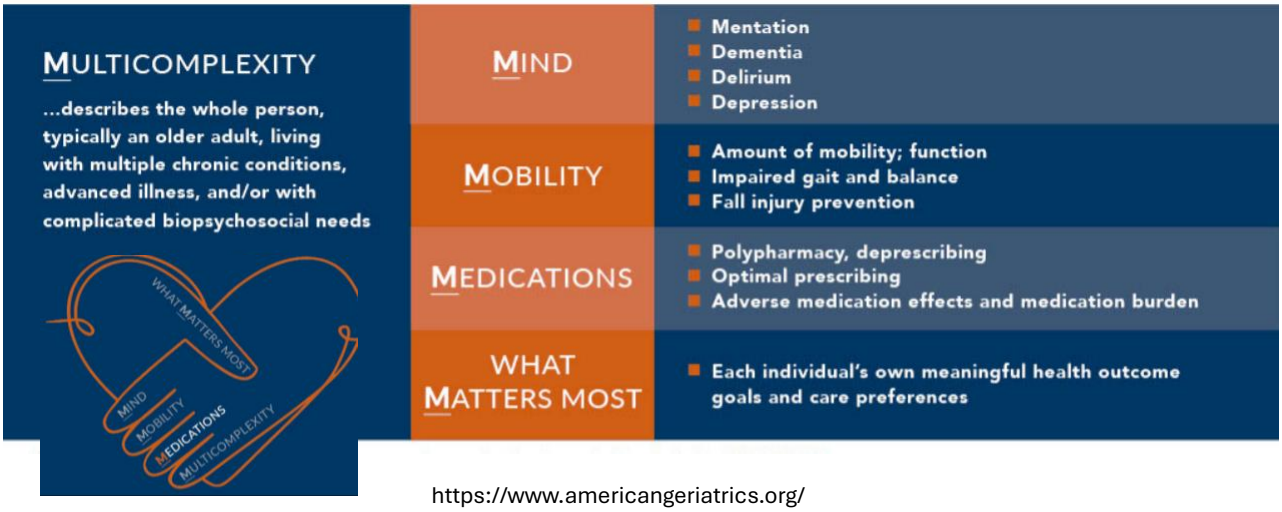


https://www.americangeriatrics.org/

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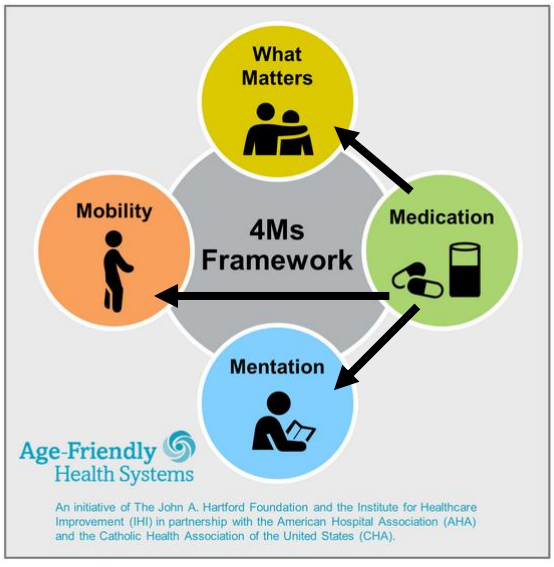
# Objective 2

- Describe why it is important to understand medication risks in older adults

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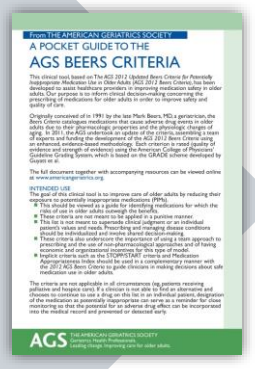
# HOW AGING CHANGES MEDICATION MANAGEMENT

Physiologic changes of aging
+
Accumulation of Chronic diseases

→ The body handles medications differently after age 65

→ Some medications are less safe in the Older Adults

→ 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# Less is more; fewer is better

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EXPERT OPINION ON DRUG SAFETY
2018, VOL. 17, NO. 12, 1185–1196
https://doi.org/10.1080/14740338.2018.1546841

Taylor & Francis

REVIEW

OPEN ACCESS

# An update on the clinical consequences of polypharmacy in older adults: a narrative review

Jonas W. Wastesson[a], Lucas Morin[a], Edwin C.K. Tan[a,b] and Kristina Johnell[a]

https://www.tandfonline.com/doi/epdf/10.1080/14740338.2018.1546841?needAccess=true&role=button

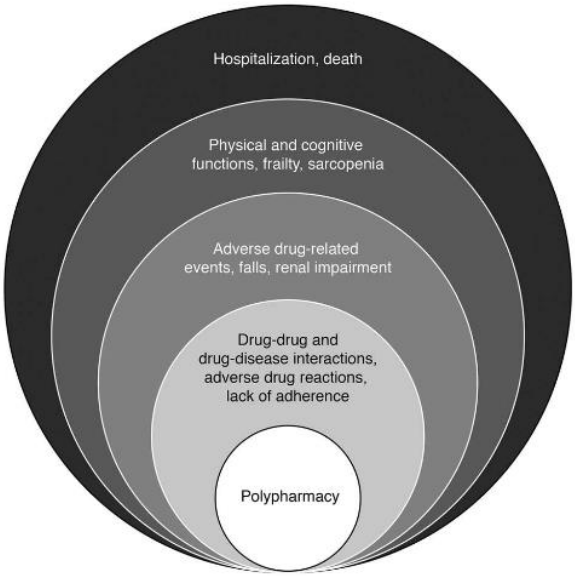


Figure 2. Framework for polypharmacy and conceptual classification of outcomes.

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# Objective 3

- List at least 3 commonly used medications that are potentially inappropriate in older adults

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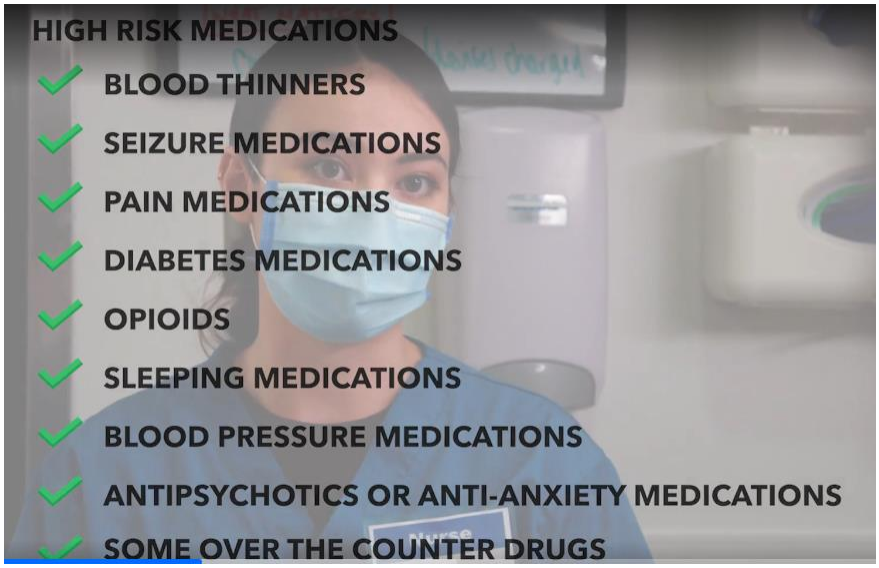
AJN American Journal of Nursing
The Leading Voice of Nursing Since 1900




http://links.lww.com/AJN/A213

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| Medication Type | Examples |
|---|---|
| Antipsychotic medications | Quetiapine |
| Benzodiazepines | Lorazepam, alprazolam |
| Sleeping Medications | Diphenhydramine, hydroxyzine, trazodone, z-drugs |
| Some urinary incontinence medications | Oxybutynin, Tolterodine |
| Some pain medications | Narcotics, long term use of NSAIDS |
| Overuse of Blood Pressure Medications, Diuretics | Furosemide, excess beta blockers |
| Overuse of Diabetes Medications | Insulins, sulfonylureas—such as glipizide |
| Excess Anti-platelets, Blood thinners | Warfarin, Anti-coagulant + Aspirin |
| | |

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# Objective 4

- Explain the Prescribing cascade

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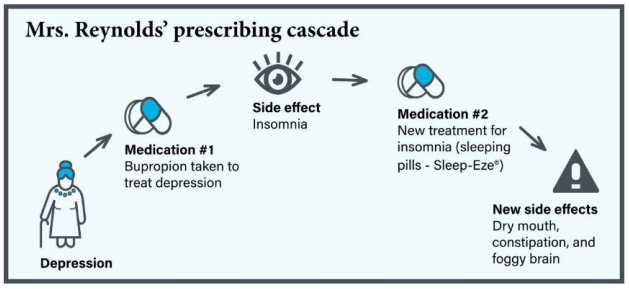
## Prescribing cascade




https://www.deprescribingnetwork.ca/blog/prescribing-cascade

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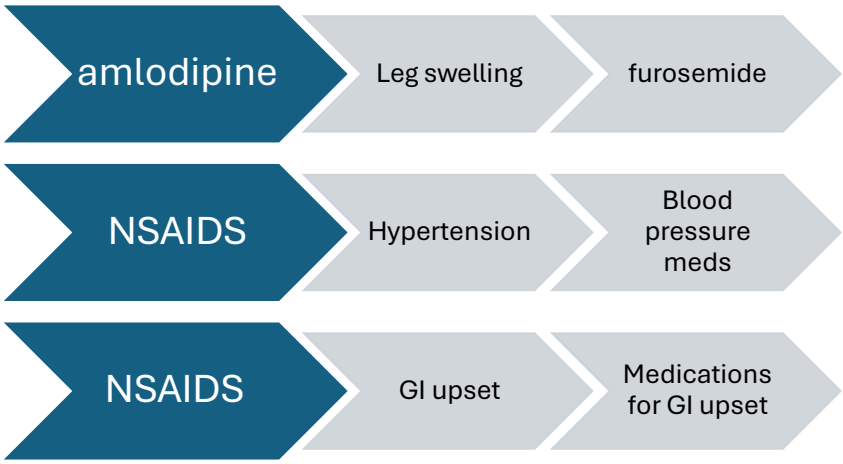
# Prescribing cascade examples

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# Objective 5

- Name resources to determine medication risks for older adults

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AGS BEERS CRITERIA® 2023

**STOPP START Toolkit Supporting Medication Review**

**STOPP:**

Screening Tool of Older People's potentially inappropriate Prescriptions

**START:**

Screening Tool to Alert doctors to Right Treatments

https://www.valeofyorkccg.nhs.uk/seecmsfile/?id=3035&inline=1

deprescribing.org

deprescribingresearch.org/resources-2/resources-for-clinicians/

US Deprescribing Research Network

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Choosing Wisely
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**Ten Things Physicians and Patients Should Question**

1. **Don't recommend percutaneous feeding tubes in patients with advanced dementia; instead offer oral assisted feeding.**
Careful hand-feeding for patients with severe dementia is at least as good as tube-feeding for the outcomes of death, aspiration pneumonia, functional status and patient comfort. Food is the preferred nutrient. Tube-feeding is associated with agitation, increased use of physical and chemical restraints and worsening pressure ulcers.

2. **Don't use antipsychotics as first choice to treat behavioral and psychological symptoms of dementia.**
People with dementia often exhibit aggression, resistance to care and other challenging or disruptive behaviors. In such instances, antipsychotic medicines are often prescribed, but they provide limited benefit and can cause serious harm, including stroke and premature death. Use of these drugs should be limited to cases where non-pharmacologic measures have failed and patients pose an imminent threat to themselves or others. Identifying and addressing causes of behavior change can make drug treatment unnecessary.

3. **Avoid using medications to achieve hemoglobin A1c <7.5% in most adults age 65 and older; moderate control is generally better.**
There is no evidence that using medications to achieve tight glycemic control in older adults with type 2 diabetes is beneficial. Among non-older adults, except for long-term reductions in myocardial infarction and mortality with metformin, using medications to achieve glycated hemoglobin levels less than 7% is associated with harms, including higher mortality rates. Tight control has been consistently shown to produce higher rates of hypoglycemia in older adults. Given the long timeframe to achieve theorized microvascular benefits of tight control, glycemic targets should reflect patient goals, health status, and life expectancy. Reasonable glycemic targets would be 7.0 – 7.5% in healthy older adults with long life expectancy, 7.5 – 8.0% in those with moderate comorbidity and a life expectancy < 10 years, and 8.0 – 9.0% in those with multiple morbidities and shorter life expectancy.

4. **Don't use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium.**
Large scale studies consistently show that the risk of motor vehicle accidents, falls and hip fractures leading to hospitalization and death can more than double in older adults taking benzodiazepines and other sedative-hypnotics. Older patients, their caregivers and their providers should recognize these potential harms when considering treatment strategies for insomnia, agitation or delirium. Use of benzodiazepines should be reserved for alcohol withdrawal symptoms/delirium tremens or severe generalized anxiety disorder unresponsive to other therapies.

5. **Don't use antimicrobials to treat bacteriuria in older adults unless specific urinary tract symptoms are present.**
Cohort studies have found no adverse outcomes for older men or women associated with asymptomatic bacteriuria. Antimicrobial treatment studies for asymptomatic bacteriuria in older adults demonstrate no benefits and show increased adverse antimicrobial effects. Consensus criteria has been developed to characterize the specific clinical symptoms that, when associated with bacteriuria, define urinary tract infection. Screening for and treatment of asymptomatic bacteriuria is recommended before urologic procedures for which mucosal bleeding is anticipated.

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## Ten Things Physicians and Patients Should Question

**6 Don't prescribe cholinesterase inhibitors for dementia without periodic assessment for perceived cognitive benefits and adverse gastrointestinal effects.**

In randomized controlled trials, some patients with mild-to-moderate and moderate-to-severe Alzheimer's disease (AD) achieve modest benefits in delaying cognitive and functional decline and decreasing neuropsychiatric symptoms. The impact of cholinesterase inhibitors on institutionalization, quality of life and caregiver burden are less well established. Clinicians, caregivers and patients should discuss cognitive, functional and behavioral goals of treatment prior to beginning a trial of cholinesterase inhibitors. Advance care planning, patient and caregiver education about dementia, diet and exercise and non-pharmacologic approaches to behavioral issues are integral to the care of patients with dementia, and should be included in the treatment plan in addition to any consideration of a trial of cholinesterase inhibitors. If goals of treatment are not attained after a reasonable trial (e.g., 12 weeks), then consider discontinuing the medication. Benefits beyond a year have not been investigated and the risks and benefits of long-term therapy have not been well-established.

**7 Don't recommend screening for breast or colorectal cancer, nor prostate cancer (with the PSA test) without considering life expectancy and the risks of testing, overdiagnosis and overtreatment.**

Cancer screening is associated with short-term risks, including complications from testing, overdiagnosis and treatment of tumors that would not have led to symptoms. For prostate cancer, 1,055 men would need to be screened and 37 would need to be treated to avoid one death in 11 years. For breast and colorectal cancer, 1,000 patients would need to be screened to prevent one death in 10 years. For patients with a life expectancy under 10 years, screening for these three cancers exposes them to immediate harms with little chance of benefit.

**8 Avoid using prescription appetite stimulants or high-calorie supplements for treatment of anorexia or cachexia in older adults; instead, optimize social supports, provide feeding assistance and clarify patient goals and expectations.**

Unintentional weight loss is a common problem for medically ill or frail elderly. Although high-calorie supplements increase weight in older people, there is no evidence that they affect other important clinical outcomes, such as quality of life, mood, functional status or survival. Use of megestrol acetate results in minimal improvements in appetite and weight gain, no improvement in quality of life or survival, and increased risk of thrombotic events, fluid retention and death. In patients who take megestrol acetate, one in 12 will have an increase in weight and one in 23 will die. The 2012 AGS Beers criteria lists megestrol acetate and cyproheptadine as medications to avoid in older adults. Systematic reviews of cannabinoids, dietary polyunsaturated fatty acids (DHA and EPA), thalidomide and anabolic steroids, have not identified adequate evidence for the efficacy and safety of these agents for weight gain. Mirtazapine is likely to cause weight gain or increased appetite when used to treat depression, but there is little evidence to support its use to promote appetite and weight gain in the absence of depression.

**9 Don't prescribe a medication without conducting a drug regimen review.**

Older patients disproportionately use more prescription and non-prescription drugs than other populations, increasing the risk for side effects and inappropriate prescribing. Polypharmacy may lead to diminished adherence, adverse drug reactions and increased risk of cognitive impairment, falls and functional decline. Medication review identifies high-risk medications, drug interactions and those continued beyond their indication. Additionally, medication review elucidates unnecessary medications and underuse of medications, and may reduce medication burden. Annual review of medications is an indicator for quality prescribing in vulnerable elderly.

**10 Avoid physical restraints to manage behavioral symptoms of hospitalized older adults with delirium.**

Persons with delirium may display behaviors that risk injury or interference with treatment. There is little evidence to support the effectiveness of physical restraints in these situations. Physical restraints can lead to serious injury or death and may worsen agitation and delirium. Effective alternatives include strategies to prevent and treat delirium, identification and management of conditions causing patient discomfort, environmental modifications to promote orientation and effective sleep-wake cycles, frequent family contact and supportive interaction with staff. Nursing educational initiatives and innovative models of practice have been shown to be effective in implementing a restraint-free approach to patients with delirium. This approach includes continuous observation; trying re-orientation once, and if not effective, not continuing; observing behavior to obtain clues about patients' needs; discontinuing and/or hiding unnecessary medical monitoring devices or IVs; and avoiding short-term memory questions to limit patient agitation. Pharmacological interventions are occasionally utilized after evaluation by a medical provider at the bedside, if a patient presents harm to him or herself or others. Physical restraints should only be used as a very last resort and should be discontinued at the earliest possible time.

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May 18, 2023 Alex Smith All Posts, Geriatrics, Medications

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deprescribing.org ABOUT WHAT IS DEPRESCRIBING? RESEARCH EDUCATION RESOURCES NEWS GET INVOLVED

## Guidelines and Algorithms

Guidelines and Algorithms Evidence-based deprescribing guidelines have been developed by or in collaboration with the deprescribing.org team for five classes of medications. Each guideline is accompanied by a decision-support algorithm, patient pamphlet, infographic and for some, a whiteboard video on how to use the algorithm.

Interested in using algorithms at the bedside? Check out our app! Download for Android. Download for iOS.

https://www.deprescribingnetwork.ca/algorithms

- Proton Pump Inhibitor (PPI)
- Antihyperglycemic
- Antipsychotic
- Benzodiazepine Receptor Agonist (BZRA)
- Cholinesterase Inhibitors (ChEIs) and Memantine

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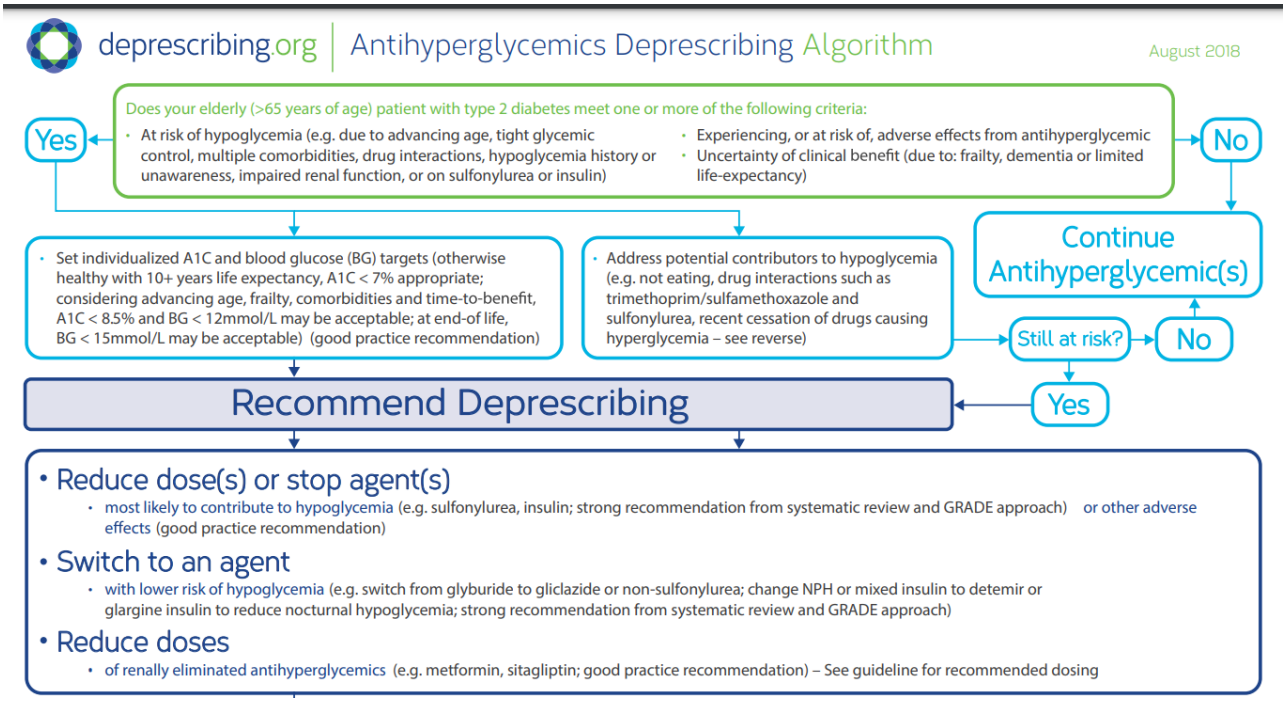


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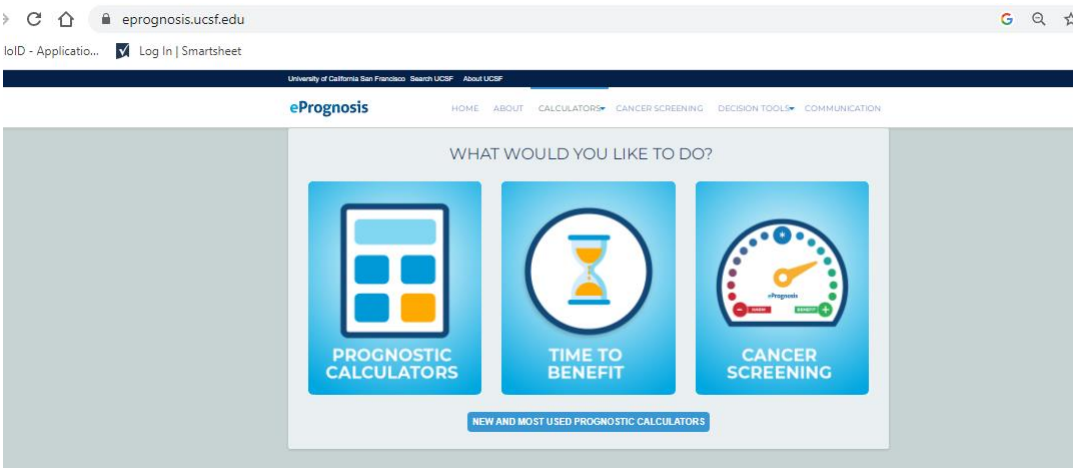
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Generally not recommended
Time to benefit
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Life Expectancy
Cancer
Colorectal Cancer Screening
Mammography
Mammography after breast cancer
Endocrine
Finasteride for benign prostatic hypertrophy
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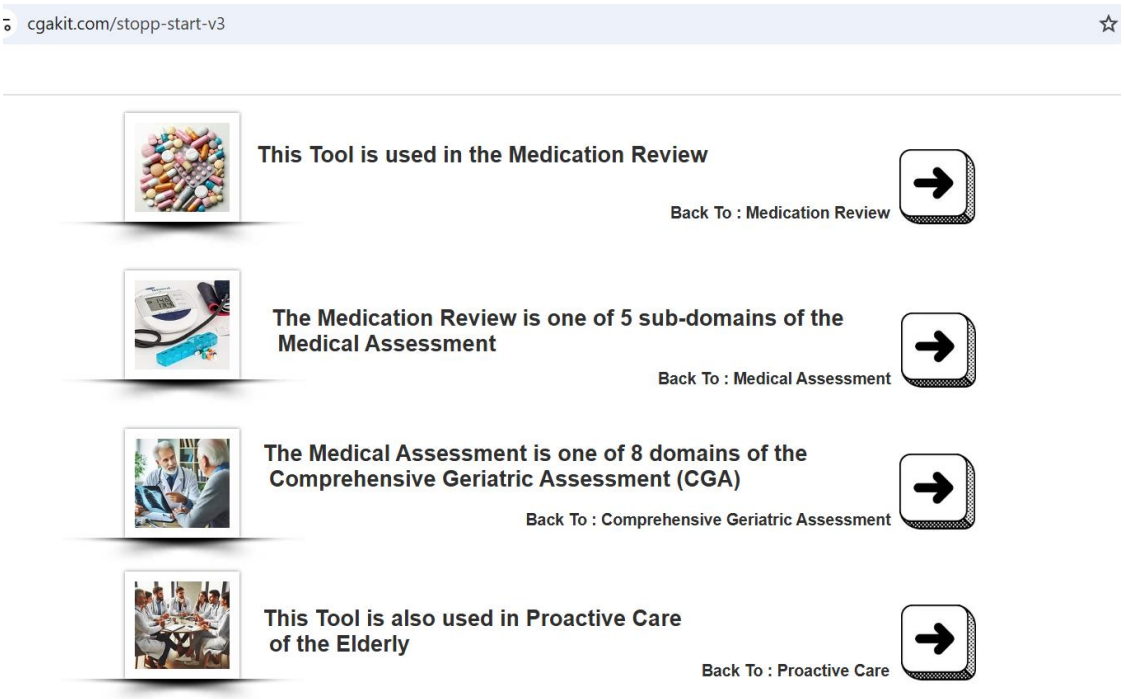
Statins for Primary Prevention
Services
Hospice admission
Methylphenidate for Depression

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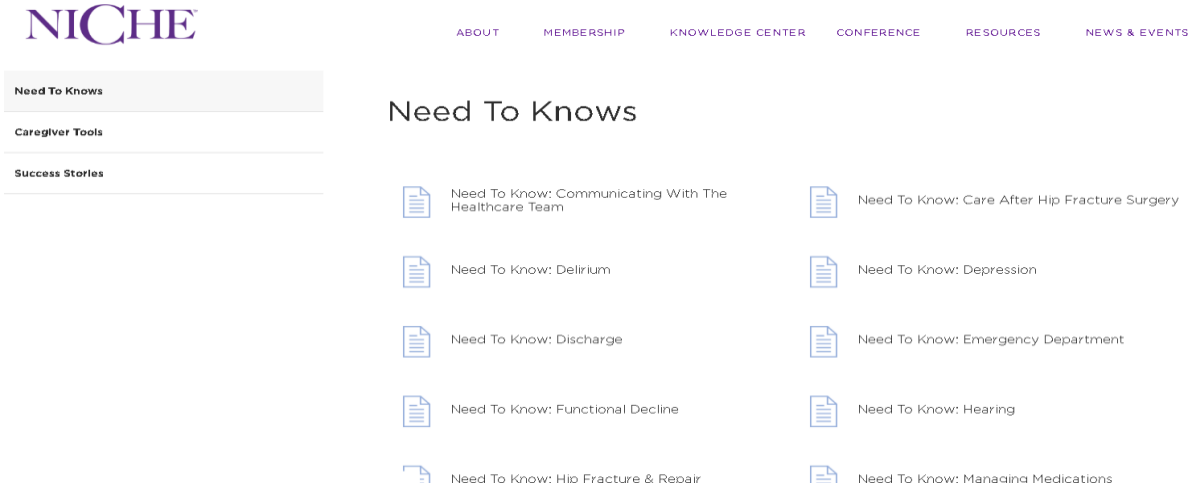
# NICHE




- https://nicheprogram.org/resources/need-to-knows

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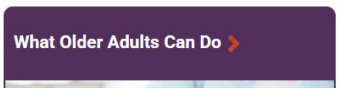
illnesses. This section provides important information on medication safety for us all as we age.

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# Objective 6

- Describe methods for managing symptoms in older adults without adding a medication.

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# Case 1

*Mrs. W. is an 82-year-old woman who has had six emergency department visits in the past 8 months due to falls. Her past medical history includes dementia, diabetes, hypertension, congestive heart failure (CHF), and osteoporosis.*

*Mrs. W. sees three different providers and is taking several medications, including acetaminophen, duloxetine, docusate sodium, glyburide, amlodipine, losartan and hydrochlorothiazide. Her physical function has been declining for some time, and there are questions about her safety because she lives alone and has been falling. Mrs. W. can perform all her activities of daily living (ADLs), but a daughter who lives nearby assists her with most of the instrumental ADLs. Her daughter handles all finances because she feels her mother cannot.*

*Mrs. W. was recently hospitalized for an exacerbation of her CHF. While in the hospital her functioning declined; she became hypoalert with new-onset incontinence and was resisting care. She was given lorazepam 1 mg in the emergency department, and once transferred to an inpatient unit was continued on lorazepam 0.5 mg as-needed every 6 hours. Mrs. W. is adamant that she wants to go home and that she can do so independently*

2012 Beers Criteria Update: How Should Practicing Nurses Use the Criteria?
Donna M. Fick, PhD, RN, FGSA, FAAN; Barbara Resnick, PhD, CRNP, FAAN, FAANP
Journal of Gerontological Nursing2012;38(6):3-5 https://doi.org/10.3928/00989134-20120517-01

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# What's the first thing you should do before passing a medication or reaching for a prn…

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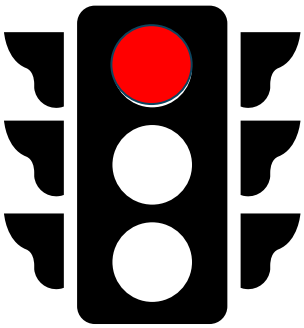
# Stop and think about underlying causes and nonpharmacologic management



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## Things to consider

- Is the symptom
  - A side effect of a current med
  - A side effect of an OTC medication or supplement
  - Alcohol or drugs
  - An undiagnosed problem (e.g. sleep apnea)
  - An unmet need
    - Tired, hungry, thirsty, annoyed, overstimulation, under-stimulation, abuse, constipation

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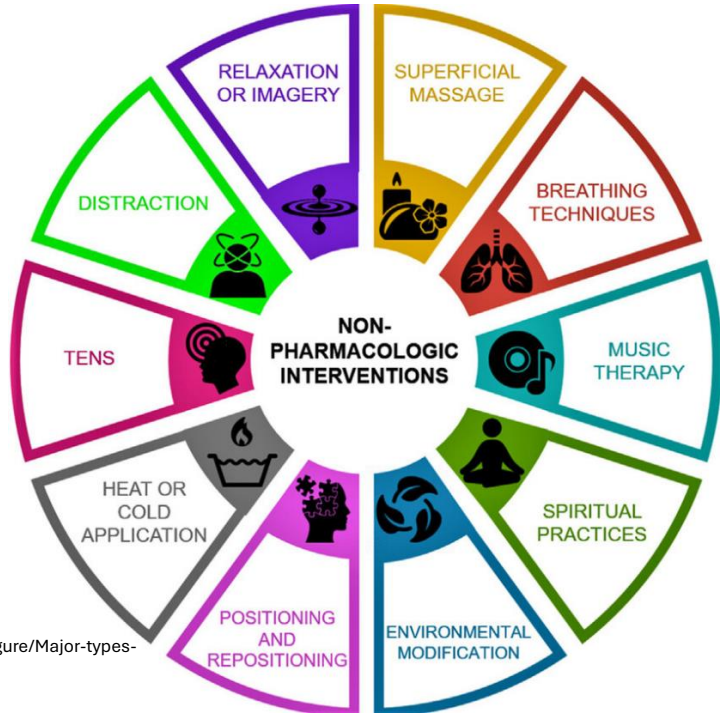


https://www.researchgate.net/figure/Major-types-of-non-pharmacologic-interventions_fig1_351237891

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# NON-DRUG SLEEP PROTOCOL


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## National Sleep Foundation Sleep Tips
10 Tips for a Better Night's Sleep

- Go to sleep and wake up at the same time every day, including weekends. It's important for your body to have a regular sleeping schedule.
- Set a relaxing bedtime routine, such as listening to calming music, reading a book or taking a warm bath.
- Make sure your bedroom is cool. Your body temperature naturally decreases to initiate sleep. A bedroom temperature between 60 and 67 degrees Fahrenheit helps promote sleep.
- Make sure your bedroom is quiet. Turn off noisy distractions such as a TV. Silence unwanted noise with earplugs or use "white noise," such as from a fan, sound machine or an app.
- Make sure your bedroom is dark. Use blackout shade to block out unwanted light and dim the lights on your digital clock.
- Sleep on a mattress and pillows that are comfortable and supportive.
- Finish eating meals 2-3 hours before bedtime.
- Exercise regularly. A low-impact fitness program, like walking, swimming or yoga, is helpful for managing pain and stiffness and improving sleep.
- Try to limit how many caffeinated products you consume in the afternoon.
- Alcohol and nicotine in your body can disrupt sleep and can cause nighttime waking. For optimal sleep, skip them close to bedtime or altogether.

https://www.thensf.org/sleep-tips/

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## Behavioral and Psychological Symptoms of Dementia

# ABC

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# QUESTIONS?

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