ORTHOPEDISTS' GUIDE TO AGE FRIENDLY HEALTH SYSTEMS

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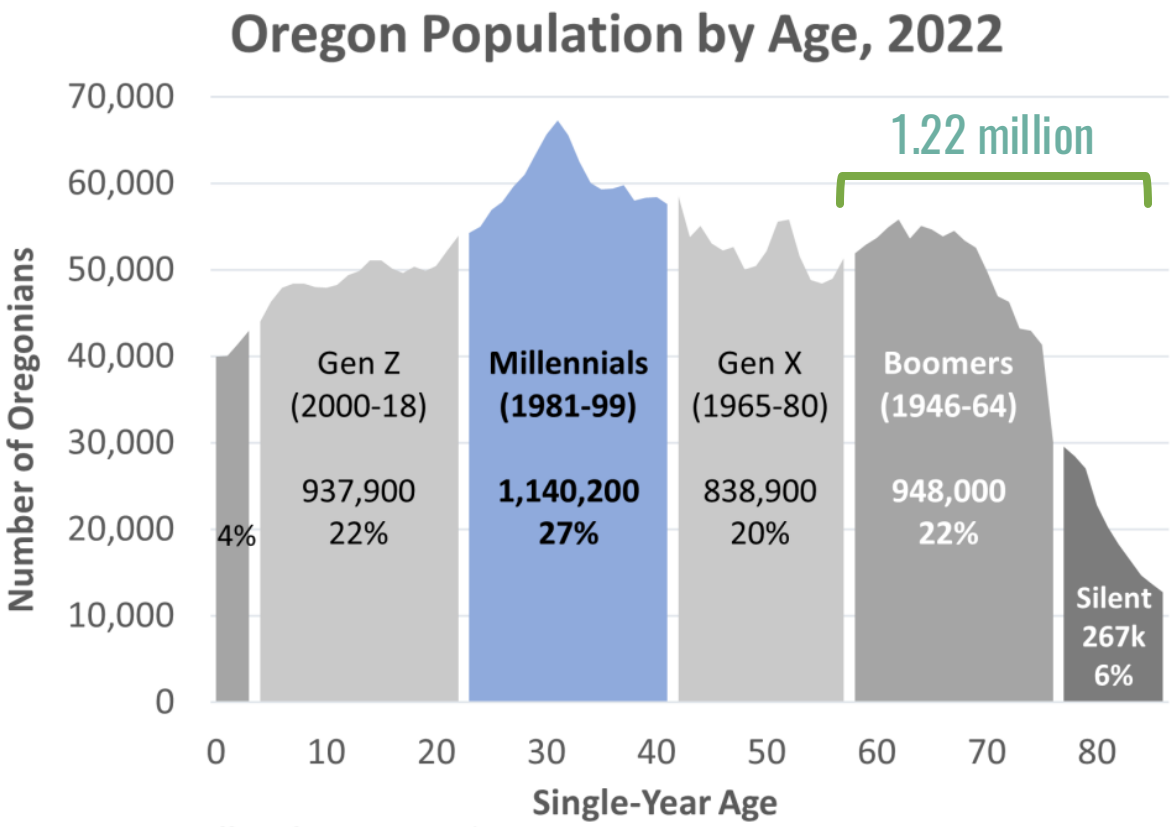
CONFLICTS & DISCLOSURES

- Expert Faculty for the Institute for Healthcare Improvement's Age Friendly Health Systems initiative
- Consultant for the Oregon Geriatrics Workforce Enhancement Program (GWEP) grant and Options for Southern Oregon (OABHI public funded initiative)
- Non-compensated board member of Meals on Wheels People and Housecall Providers

SESSION TOPICS

- Review the Age Friendly Health Systems' 4Ms framework
- Explore how the 4Ms affect Orthopedic care for older adults, including some Dos and Don'ts
- Consider systems-based strategies for embedding the 4Ms into regular Orthopedic care

THE CONSEQUENCES OF SUCCESS

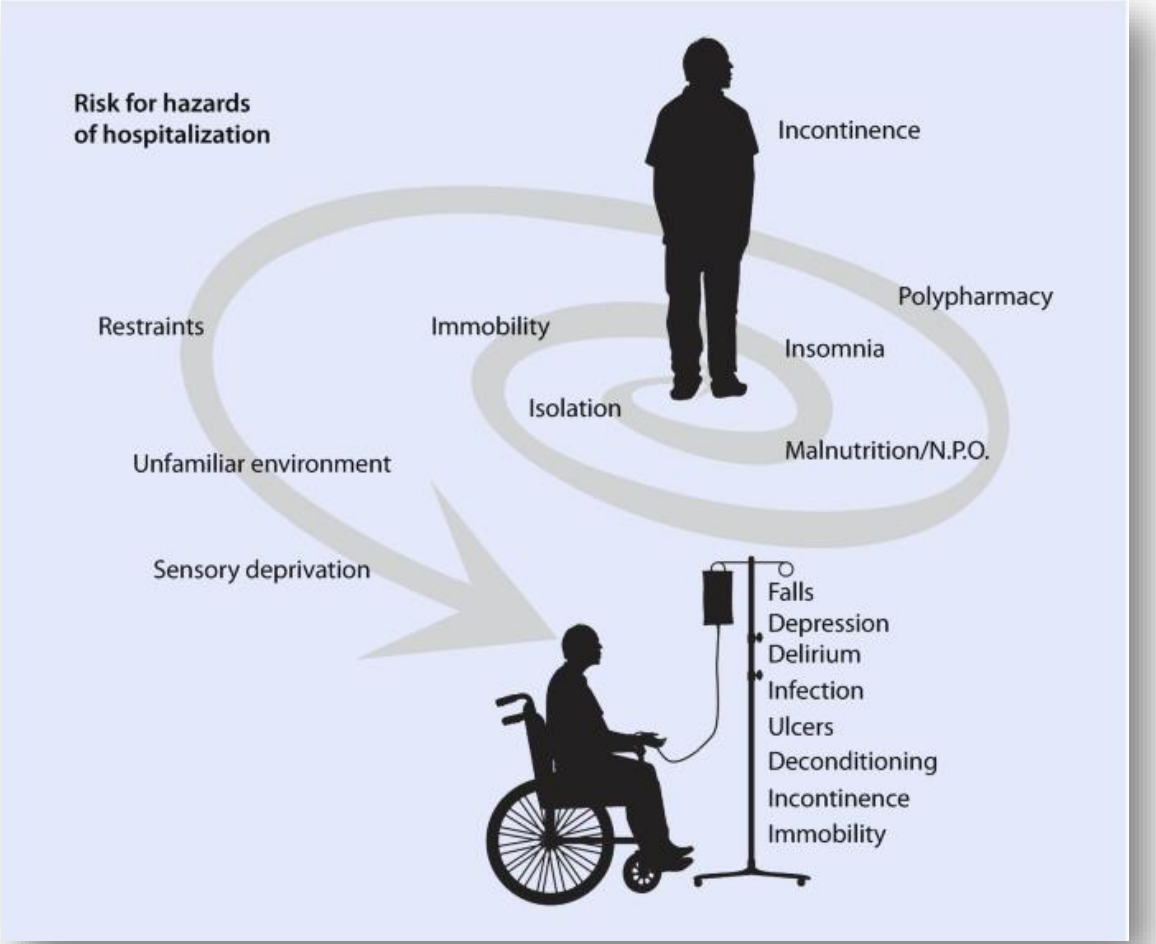


Source: Oregon Office of Economic Analysis

- Living longer, surviving better & longer with chronic illness, more older adults seeking inpatient & surgical care

CURRENT REALITIES OF HOSPITAL CARE

- Systems are not always set up to meet the unique needs of older patients
- Patients are reliant on staff to have enough knowledge and ability to change the environment to adapt standard care to meet their needs



BEST PRACTICES FOR OLDER ADULTS ARE KNOWN BUT ARE RARELY IMPLEMENTED AND SUSTAINED

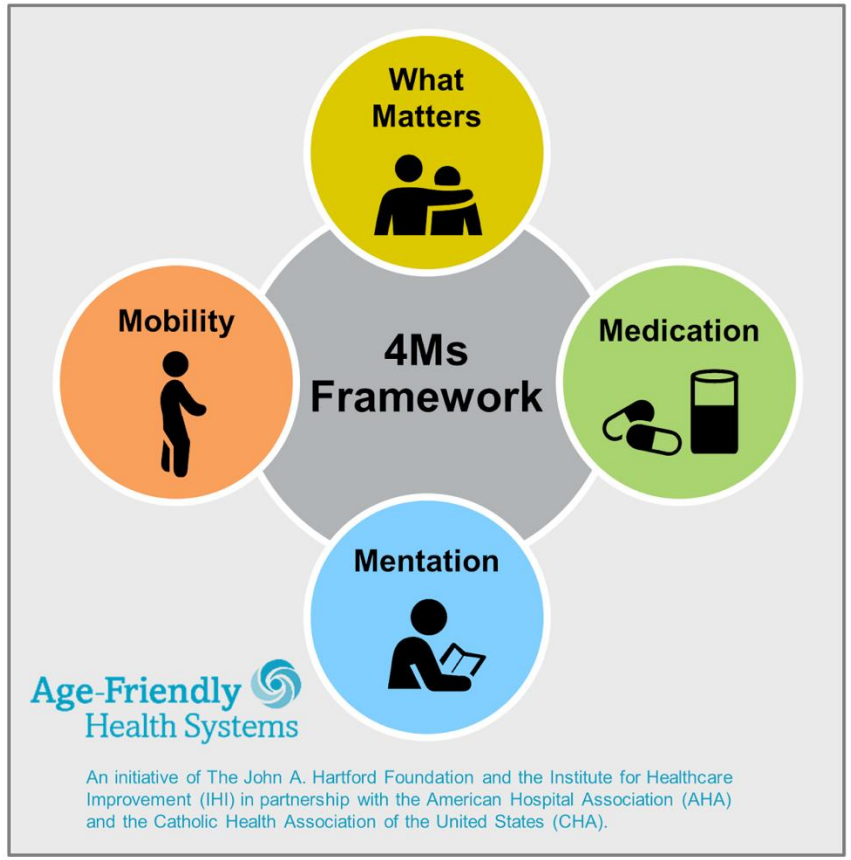
Individualizing standard patient care, considering risks early

- Pre-op older adult specific screening and pre-hab
- Delirium screening & prevention measures
- Proactive mobilization, preservation of function
- Goal-concordant care beyond end-of-life care

AGE FRIENDLY HEALTH SYSTEMS

- Evidence-based set of best practices for geriatric care across ambulatory, inpatient and long-term care settings
  - Areas of geriatric medicine and interventions with solid evidence bases and documented positive impacts on health

- Core framework is the 4Ms → What Matters, Medication, Mentation, Mobility



What Matters

Know and align care with each older adult's specific health outcome goals and care preferences including, but not limited to, end-of-life care, and across settings of care.

Medication

If medication is necessary, use Age-Friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.

Mentation

Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care.

Mobility

Ensure that older adults move safely every day in order to maintain function and do What Matters.

THE 4M FRAMEWORK

Nothing here is new … all Ms are represented in various CMS measures, VBP programs, hospital accreditation, specialty certifications (GEDA, stroke centers, etc)

WHAT AGE FRIENDLY CAN DO FOR YOUR SYSTEM

Outcome	Overall (% Change)	High CMI (% Change)	Low CMI (% Change)
Total Charges	- $18,697.29 (- 20%)	- $41,825.90 (- 27%)	- $8,965.31 (- 16%)
Length of Stay	- 0.31 days (- 6%)	- 1 day (- 15%)	+ 0.2 days (+ 4.4%)
ICU Length of Stay	- 0.3 days (- 12%)	- 0.6 days (- 19%)	- 0.31 days (- 15%)
30-day readmission	NS	- 14%	NS

Most of the benefit is experienced by the more seriously ill inpatients

Attestation Domains	Attestation Statements: Attest "yes" or "no" to each element. (Note: Affirmative attestation of all elements within a domain would be required for the hospital or health system to receive a point for that domain)
Domain 1: Eliciting Patient Healthcare Goals This domain focuses on obtaining patient's health related goals and treatment preferences which will inform shared decision making and goal concordant care.	**(A)** Established protocols are in place to ensure patient goals related to healthcare (health goals, treatment goals, living wills, identification of healthcare proxies, advance care planning) are obtained/reviewed and documented in the medical record. These goals are updated before major procedures and upon significant changes in clinical status.
Domain 2: Responsible Medication Management This domain aims to optimize medication management through monitoring of the pharmacological record for drugs that may be considered inappropriate in older adults due to increased risk of harm.	**(A)** Medications are reviewed for the purpose of identifying potentially inappropriate medications (PIMs) for older adults as defined by standard evidence-based guidelines, criteria, or protocols. Review should be undertaken upon admission, before major procedures, and/or upon significant changes in clinical status. Once identified, PIMS should be considered for discontinuation, and/or dose adjustment as indicated.
Domain 3: Frailty Screening and Intervention This domain aims to screen patients for geriatric issues related to frailty including cognitive impairment/delirium, physical function/mobility, and malnutrition for the purpose of early detection and intervention where appropriate.	**(A)** Patients are screened for risks regarding mentation, mobility, and malnutrition using validated instruments ideally upon admission, before major procedures, and/or upon significant changes in clinical status. **(B)** Positive screens result in management plans including but not limited to minimizing delirium risks, encouraging early mobility, and implementing nutrition plans where appropriate. These plans should be included in discharge instructions and communicated to post-discharge facilities. **(C)** Data are collected on the rate of falls, decubitus ulcers, and 30-day readmission for patients > 65. These data are stratified by demographic and/or social factors. **(D)** Protocols exist to reduce the risk of emergency department delirium by reducing length of emergency department stay with a goal of transferring a targeted percentage of older patients out of the emergency department within 8 hours of arrival and/or within 3 hours of the decision to admit.
Domain 4: Social Vulnerability This domain seeks to ensure that hospitals recognize the importance of social vulnerability screening of older adults and have systems in place to ensure that social issues are identified and addressed as part of the care plan.	**(A)** Older adults are screened for geriatric specific social vulnerability including social isolation, economic insecurity, limited access to healthcare, caregiver stress, and elder abuse to identify those who may benefit from care plan modification. The assessments are performed on admission and again prior to discharge. **(B)** Positive screens for social vulnerability (including those that identify patients at risk of mistreatment) are addressed through intervention strategies. These strategies should include appropriate referrals and resources for patients upon discharge.
Domain 5: Age-Friendly Care Leadership This domain seeks to ensure consistent quality of care for older adults through the identification of an age friendly champion and/or interprofessional committee tasked with ensuring compliance with all components of this measure.	**(A)** Our hospital designates a point person and/or interprofessional committee to specifically ensure age friendly care issues are prioritized, including those within this measure. This individual or committee oversees such things as quality related to older patients, identifies opportunities to provide education to staff, and updates hospital leadership on needs related to providing age friendly care. **(B)** Our hospital compiles quality data related to the Age Friendly Hospital measure. These data are stratified by demographic and/or social factors and should be used to drive improvement cycles.

AGE FRIENDLY CMS MEASURE

Mandatory reporting measure (Yes / No) for all hospitals starting January 2026

SOME 4M "DO"S AND "DON'T"S FOR ORTHOPEDISTS

CARLOS

- 86yo rancher with hypertension complicated by stage 4 CKD and HFpEF, atrial fibrillation and polyarticular OA involving right hip, both knees and lumbar spine
- Increasing back and leg pain for 2-3 years but he has remained able to care for his animals and do some ranch work
- Now having more difficulty doing daily chores despite Tylenol and ibuprofen

WHAT SHOULD WE KNOW ABOUT CARLOS?

- What Matters → Lifelong rancher who raises cattle, goats and sheep. Large family and some of his sons and grandsons work on the ranch. His joy in life is caring for his family and his animals. He can tolerate pain but he is concerned that increasing stiffness and weakness is affecting his ability to do his daily chores. He is already turning over the heavier work to his grandsons but he wants to be able to keep his daily chores for at least a few more years
- Carlos is open to considering surgery but he's concerned about the potential impacts on his work abilities

WHAT MATTERS DRIVES THE PLAN

- Use each person's What Matters to individualize pros and cons of treatment options
  - With new referrals, ask for any Goals / ACP / What Matters documentation
  - Seek out this information in hospital records, from other providers

- "Tell me about yourself", "How would doing / not doing [x] affect your life?"

BACK TO CARLOS

- Taking Tylenol 650mg PRN (usually twice a day) and ibuprofen 400mg when pain is worst … now taking on more days than not
- Has tried his wife's cyclobenzaprine and fell while working on their house due to feeling groggy
- Pain is also interfering with sleep so he's been using Aleve PM on most nights

MEDICATION CONSIDERATIONS

Medication

- Stage 4 CKD and NSAIDs
- Mentation & Mobility consequences of muscle relaxants
- Procedures vs pills

Next Steps

→ Schedule higher dose Tylenol (max 3g/day)

→ Add topical diclofenac

→ Possible low dose opioid instead of NSAID for worst moments?

→ Intra-articular joint injections?

BACK TO CARLOS

- Family & staff have noticed more "senior moments" in the last 9 months or so
- Misplacing equipment, forgetting small steps in his morning chores
- Lost the keys to the range truck and ranch hands found them in the ignition of the tractor

MENTATION CONSIDERATIONS

Mentation

- Lots of things can cause symptoms like this … dementia is only one
- Medication & Mentation concerns from regular use of Benadryl
- Untreated, unrecognized cognitive issues change the risk-benefit balance for major procedures

Next Steps

→ Communicate the risks from OTC sleep remedies like Aleve PM

→ Recommend dedicated cognitive follow up with his PCP and the importance of this to his future Orthopedic management

BACK TO CARLOS

- Known fall after trying cyclobenzaprine but he's also stumbled multiple times while walking on uneven ground
- Balance hasn't been as good and a few times pain caused his leg to buckle

MOBILITY CONSIDERATIONS

Mobility

- Poor balance is NOT a normal part of aging
  - Neuropathy, vitamin deficiencies, etc
- Overlap between Mobility & Medications
- A core part of Carlos's What Matters

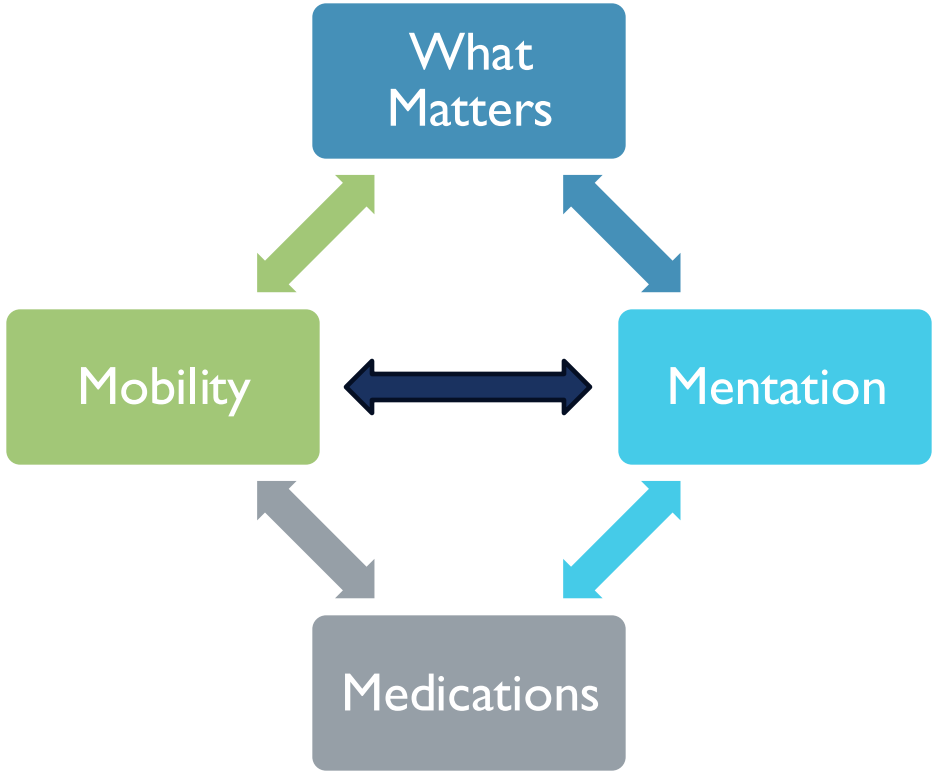
Next Steps

- Ongoing relationship with Physical Therapy
- Yoga, tai chi for pain management AND flexibility
- Are there ways to make his desired activities easier?
  - OT is especially helpful with this!

OLDER ADULTS ARE NOT YOUNGER ADULTS

- As we age, all areas of life start to more heavily inter-connect
- Ripples in one area transfer to another

→ Cast a broader net beyond the chief complaint to find all root causes of an issue



SYSTEMATIZING 4M CARE

MAKE IT EASIER TO DO THE RIGHT THINGS

PEOPLE RELYING ON THEIR OWN DEVICES WILL ULTIMATELY LEAD TO CHAOS & MISSED OPPORTUNITIES

BILL

90 year old retired pastor

Overall healthy, osteoarthritis and hearing loss

Fell outside his home, admitted with a small subdural hematoma

Mild delirium with restlessness

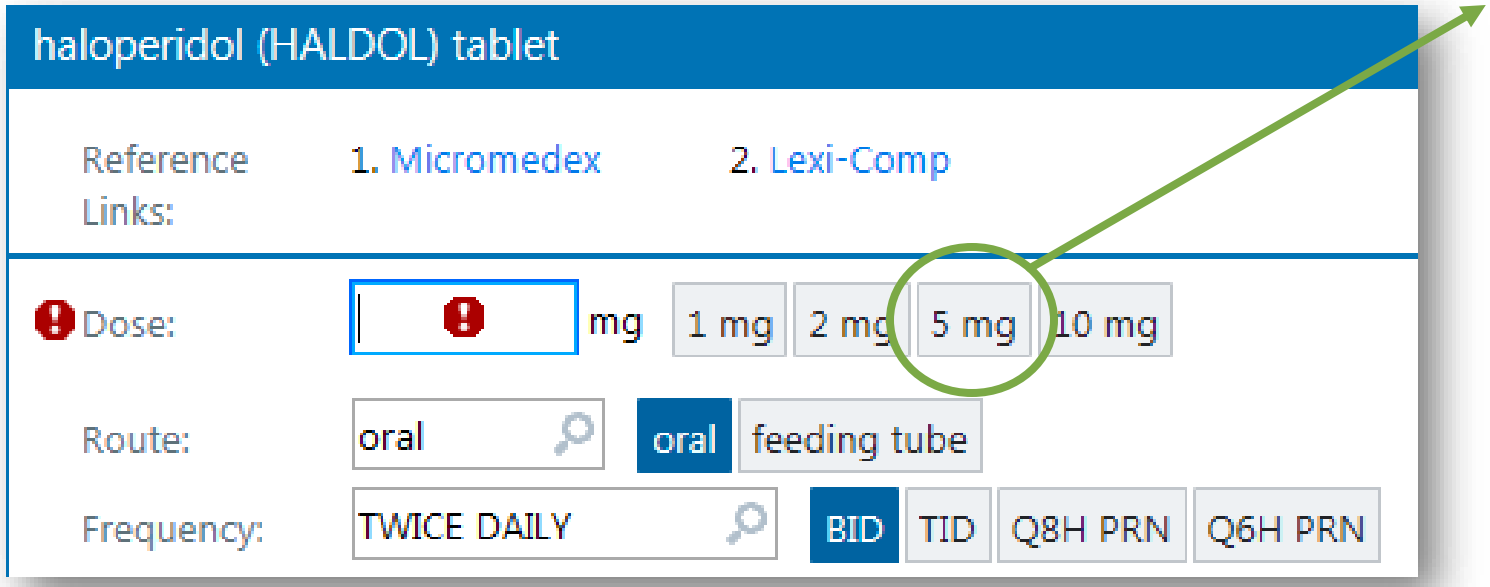
Given IV Haldol 10mg and quetiapine 25mg in a 10-hour overnight period

Developed acute respiratory failure attributed to EPS of diaphragm

Died the next day

INTERPROFESSIONAL ROOT CAUSE ANALYSIS

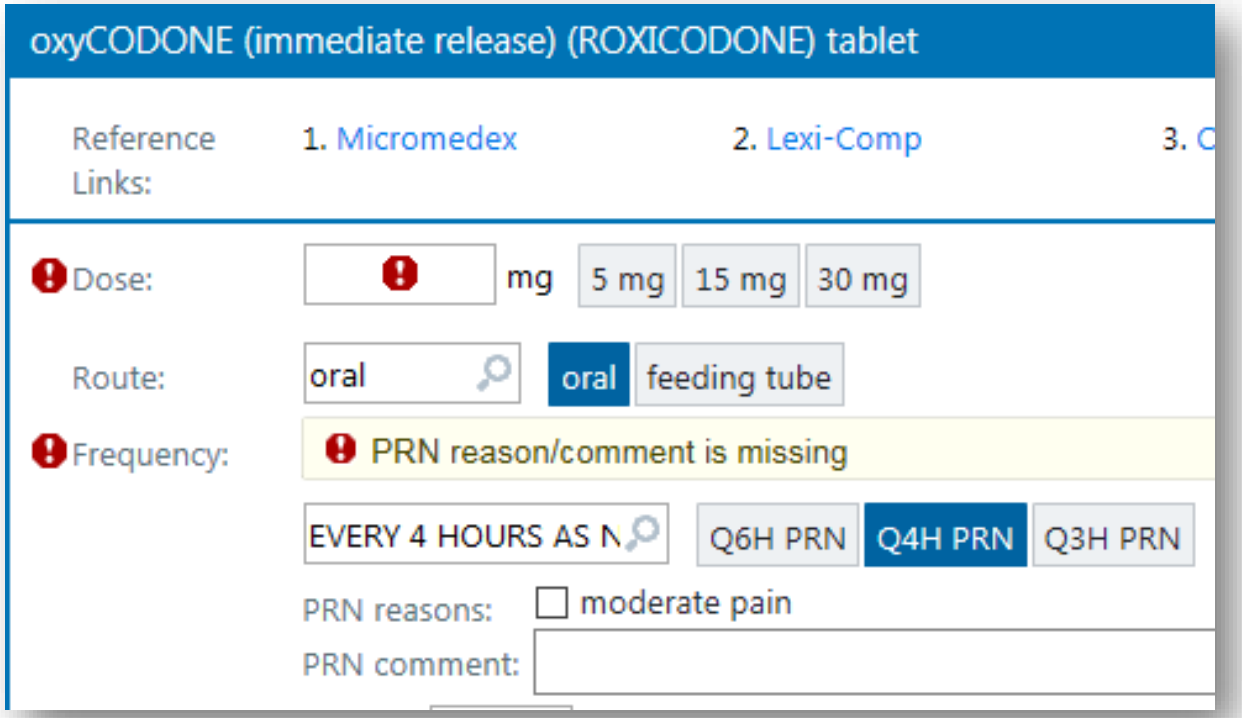
- Process identified contributors and areas for potential improvements
  - Were antipsychotics necessary?
  - **How did the provider decide on those doses?**



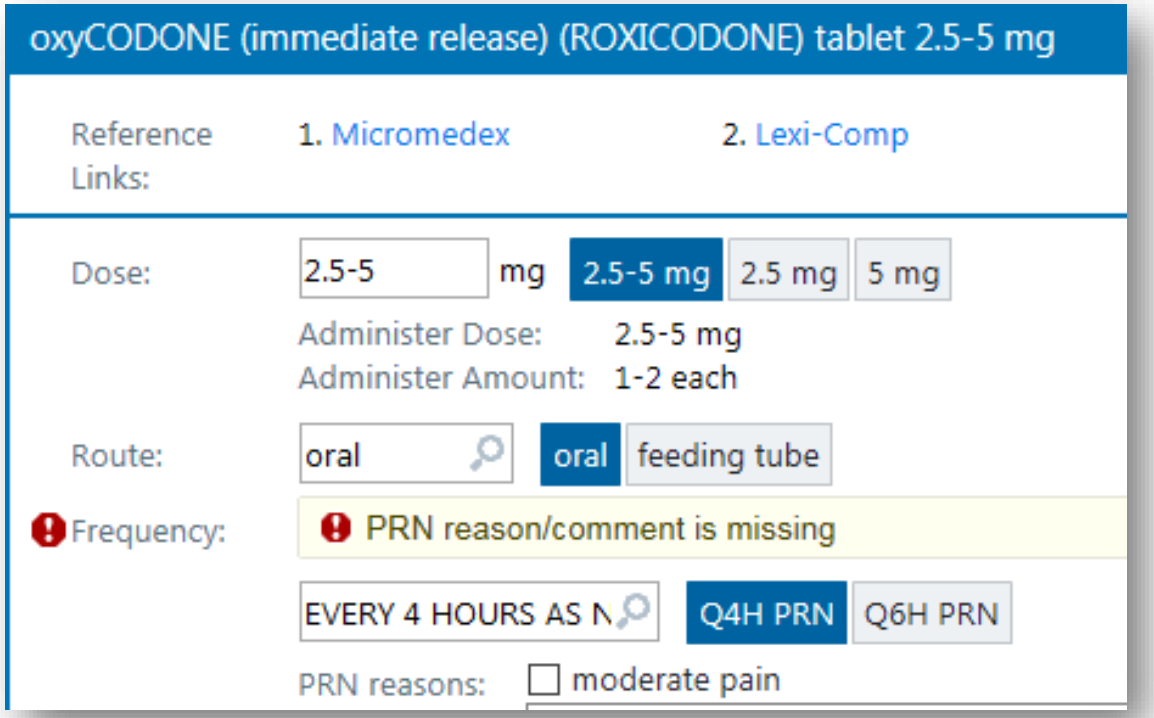
We can fix this!

GERIATRIC PRESCRIBING CONTEXT (GPC)

Under 75 (65)



75 (65) and Over

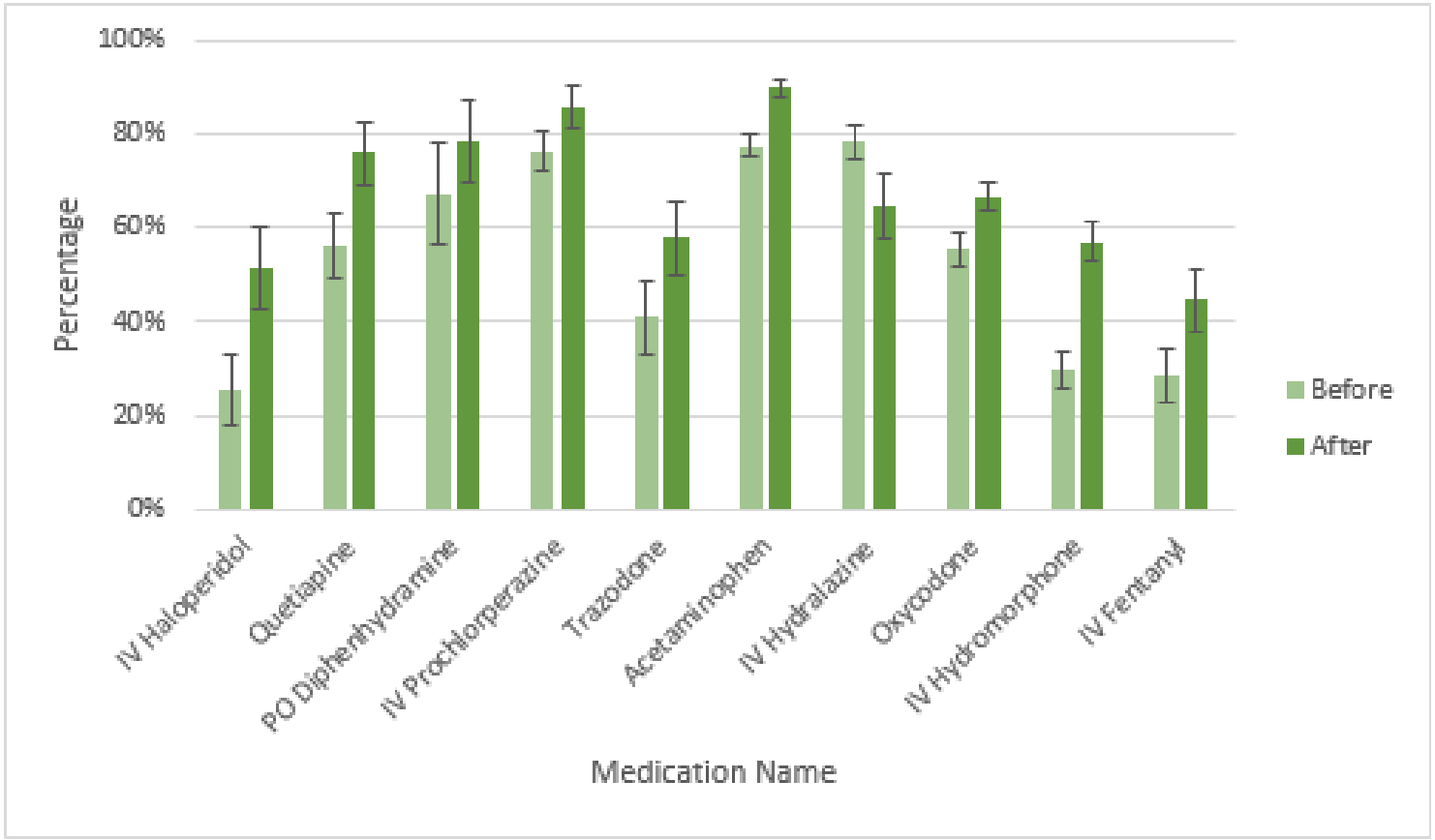


Independent of prescriber action

No hard stops or alerts

ORDERS FOR AGE-FRIENDLY DOSES

~10-30% increase in orders for the GPC defaults in 9 of top 10 commonly ordered medications at 1 year



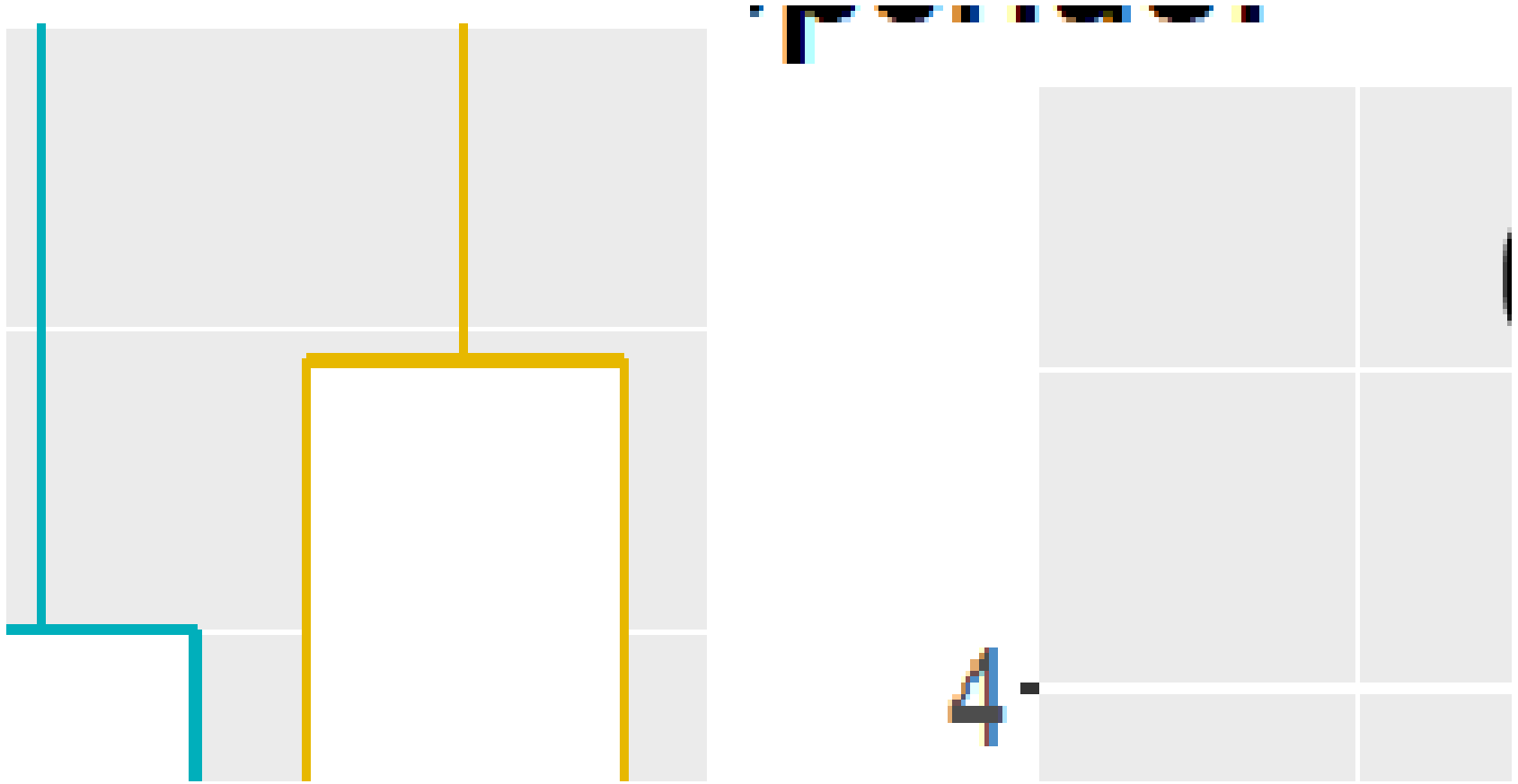
Drago K, Sharpe J, De Lima B, et al. Safer prescribing for Hospitalized Older Adults with an Electronic Health Records-Based Prescribing Context. JAGS 2020. DOI: 10.1111/jgs.16640

TOTAL DAILY DOSE / AVERAGE DOSE

Thick bar = median

Box = 25th to 75th percentiles

Line = 10th to 90th percentiles



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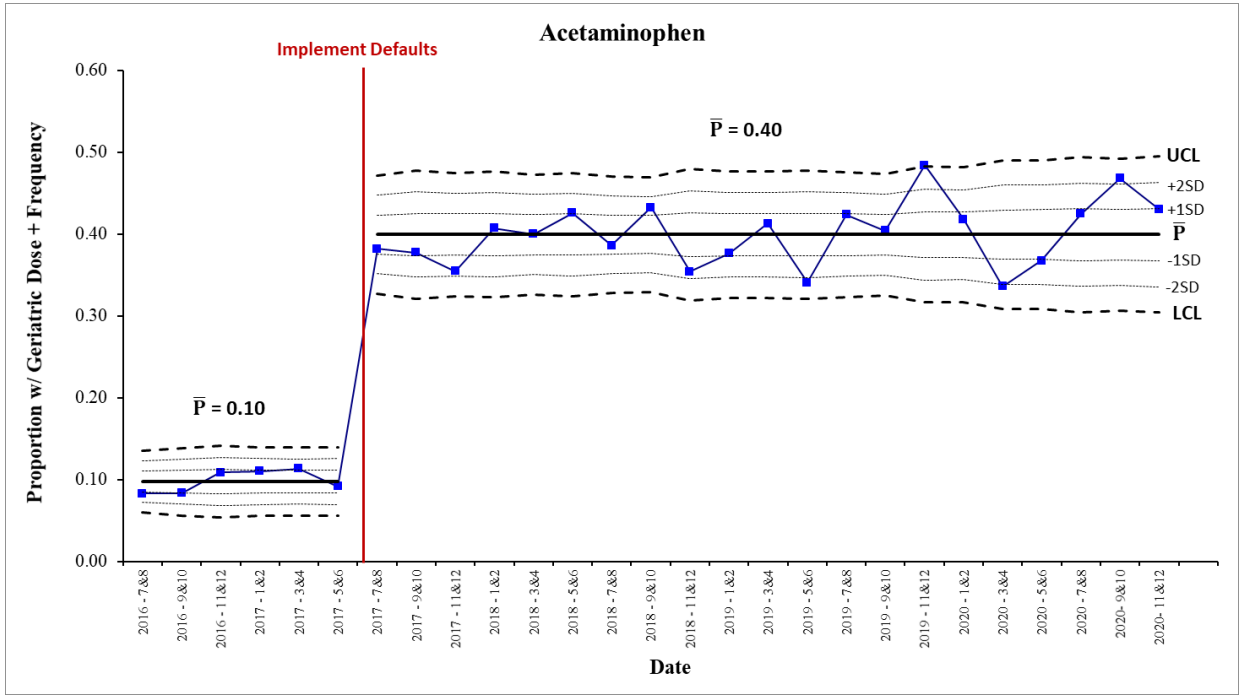
YEARS LATER …



7 of 10 studied medications showed sustained improvement in GPC default use at 47 months from implementation

De Lima B, Devane K and Drago K. Long term impact of a Geriatric Prescribing Context. J Am Geriatr Soc. 2022; 70(8):2291-2297

DOSE RELATED ADVERSE DRUG EVENTS

GPC is associated with > 50% reduction in dose related ADEs for the top 10 most commonly prescribed inpatient medication

Before: 2.5 ADEs per 1000 patient-days

After: 1.1 ADEs per 1000 patient-days

TABLE 3. Adverse drug event outcomes by time.

Outcome	Pre-GPC		Post-GPC		*p*-value
	x	N	x	N	
Admissions with ≥1 dose-related ADE [a]	23	2796	11	2951	0.04
Number of ADEs per patient-days [b]	48	19,055	22	20,326	<0.001
Category of Harm [c]					0.3
E: Error that could have caused temporary harm	26		9		
F: Error that could have caused temporary harm requiring initial or prolonged hospitalization	20		13		
G: Error that could have resulted in permanent harm	0		0		
H: Error that could have necessitated intervention to sustain life	2		0		

De Lima B, Nohner M and Drago K. Improving dose-related adverse drug events among hospitalized older adults using a geriatric prescribing context. J Am Geriatr Soc. 2024;72(5):1501-1507

TAKEAWAYS

- Health care systems can be better designed to meet the needs of our older patients
- The Age Friendly Health Systems' 4Ms are a simple, effective framework for re-designing care
- Take advantage of opportunities to embed the 4Ms into standard work