



MEDICATIONS & FALLS

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CONFLICTS & DISCLOSURES

- I have no financial relationships with any entity other than OHSU and receive no other financial support beyond my salary

LEARNING OBJECTIVES

Build an illness script including medications & drug classes to watch for in patients presenting with falls

Advocate for the primary nurse's role in elevating high risk prescribing and common clinical consequences to other interdisciplinary team members



NOBODY FALLS FOR ONE REASON

- Falls are a Geriatric Syndrome
 - Conditions of aging that blossom at the intersection of patient risk factors and situation specific stressors
- Successful comprehensive falls risk assessment addresses multiple different domains



FALL RISK INDUCING MEDICATIONS

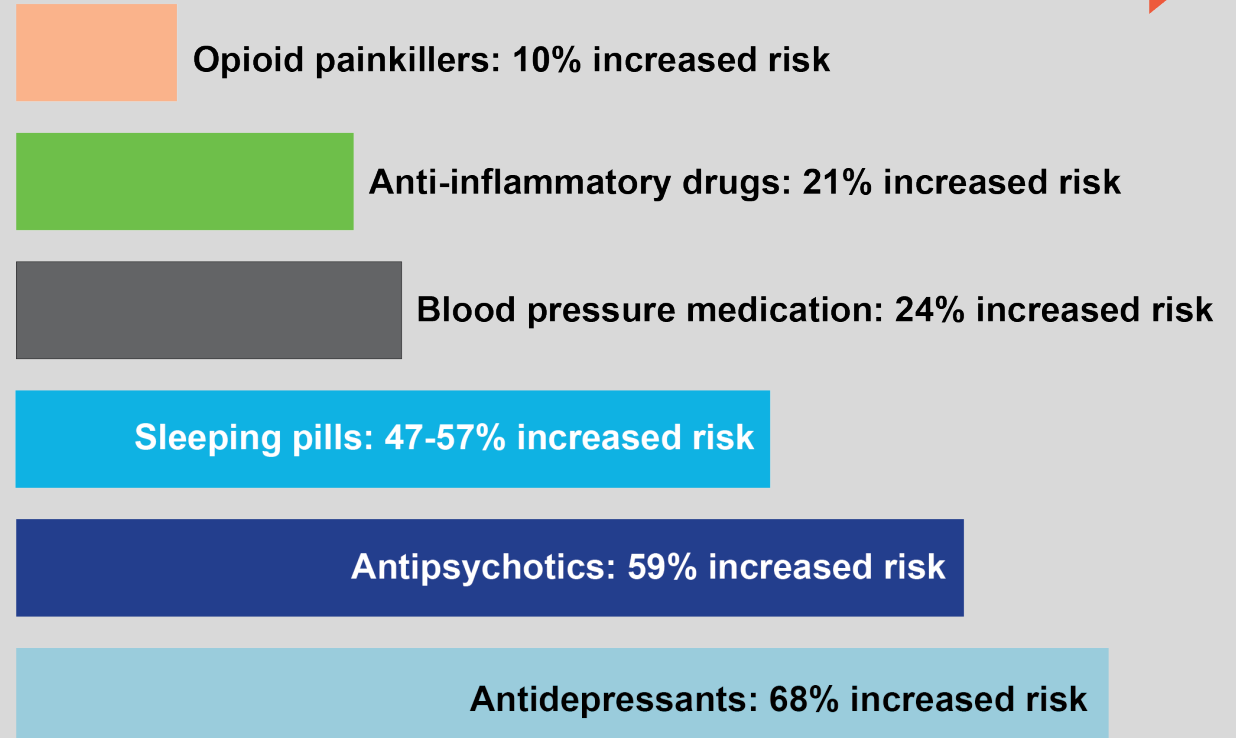
- Medications increase falls risk by 20-70% depending on drug class¹
 - Effect is additive when people take multiple medications
- Cardiovascular, sedatives, antipsychotics, antidepressants, anti-cholinergic
- Lots of other medications can affect balance, gait, strength, stability

FALL RISK INDUCING MEDICATIONS

2 Big Buckets → drugs affecting blood pressure & heart rate, drugs affecting nervous system (gait, balance, alertness, stability)

Always caveats ... undertreated pain vs opioids, depression vs anti-depressants

Which medications increase the risk of falls?



Canadian Deprescribing Network
<https://www.deprescribingnetwork.ca/blog/2017/11/21/hips-dont-lie-medications-and-falls>

FALL RISK INDUCING MEDICATIONS

Agency for Healthcare Research and Quality Fall Risk Table

POINT VALUE	MEDICINE CLASS	POTENTIAL SIDE EFFECTS
3 (High)	Analgesics/opiates, antipsychotics, anticonvulsants, benzodiazepines, nonbenzodiazepine sedatives*, hypoglycemics*	Sedation, dizziness, postural disturbances, altered gait and balance, impaired cognition
2 (Medium)	Antihypertensives, cardiac drugs/antiarrhythmics, antidepressants	Induced orthostasis, confusion, poor health status
1 (Low)	Diuretics	Increased ambulation, induced orthostasis
Score >6	Higher risk for fall, medication fall risk evaluation	

* While Z-hypnotics and hypoglycemics are not included on the original AHRQ scoring system, sufficient data exist supporting the inclusion of these agents as having a high risk for falls.

Resource

STEADI materials for healthcare providers. Centers for Disease Control and Prevention website. <https://www.cdc.gov/steady/materials.html>. Updated March 24, 2017.

FALL RISK INDUCING MEDICATIONS

- Lots of others can contribute to falls depending on the circumstances
- Even classically high risk agents can be well tolerated
- Important to gather information and assess as a team!

MEDICATIONS, FALLS & HOSPITALIZATION

- Large, prospective cohort study from England
- Direct relationship between medication number and risk for hospitalization from a fall
- Risk increases **1.8-3.2x** as medication number rises
- We confront the real life consequences every day!

DOES DEPRESCRIBING WORK ALONE?

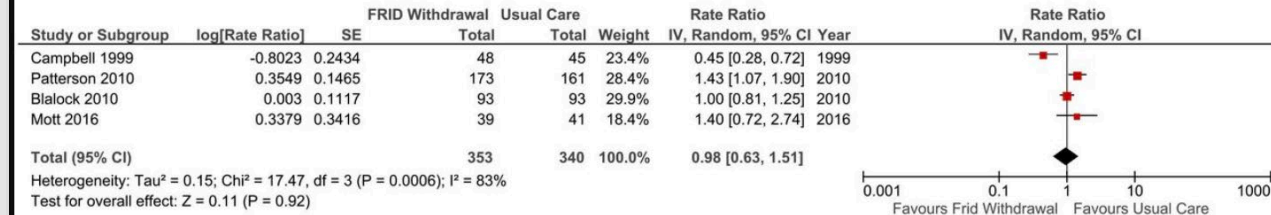
Deprescribing as a sole intervention does not reduce falls or injuries

It must be part of a comprehensive falls risk reduction package (ie. Gait & balance training, home safety adaptations, addressing uncontrolled medical issues, etc)

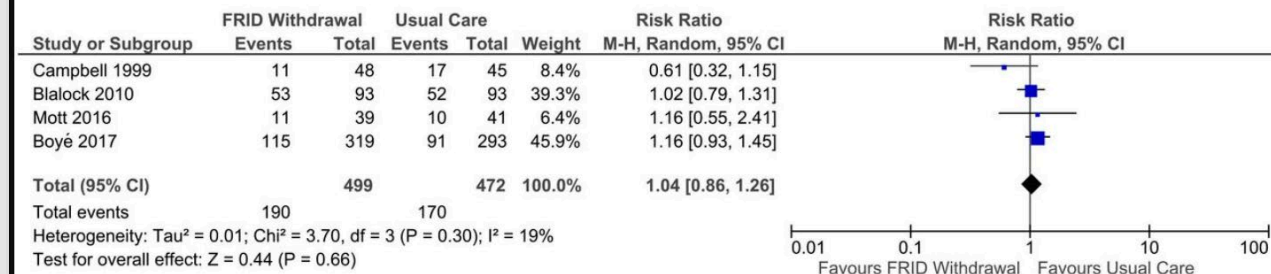
Lee J, Negm A, Peters R, et al

Deprescribing fall-risk increasing drugs (FRIDs) for the prevention of falls and fall-related complications: a systematic review and meta-analysis
BMJ Open 2021;11:e035978. doi: 10.1136/bmjopen-2019-035978

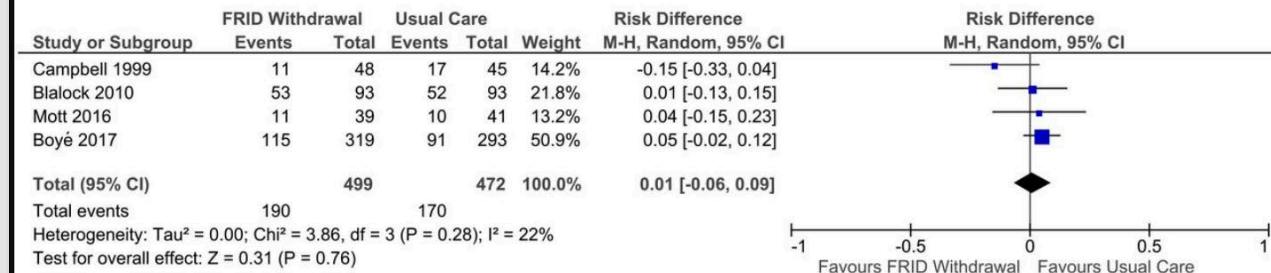
1.1 Falls Rate



2.1 Falls Incidence – Risk Ratio



2.2 Falls Incidence – Risk Difference



3.1 Fall-Related Injuries

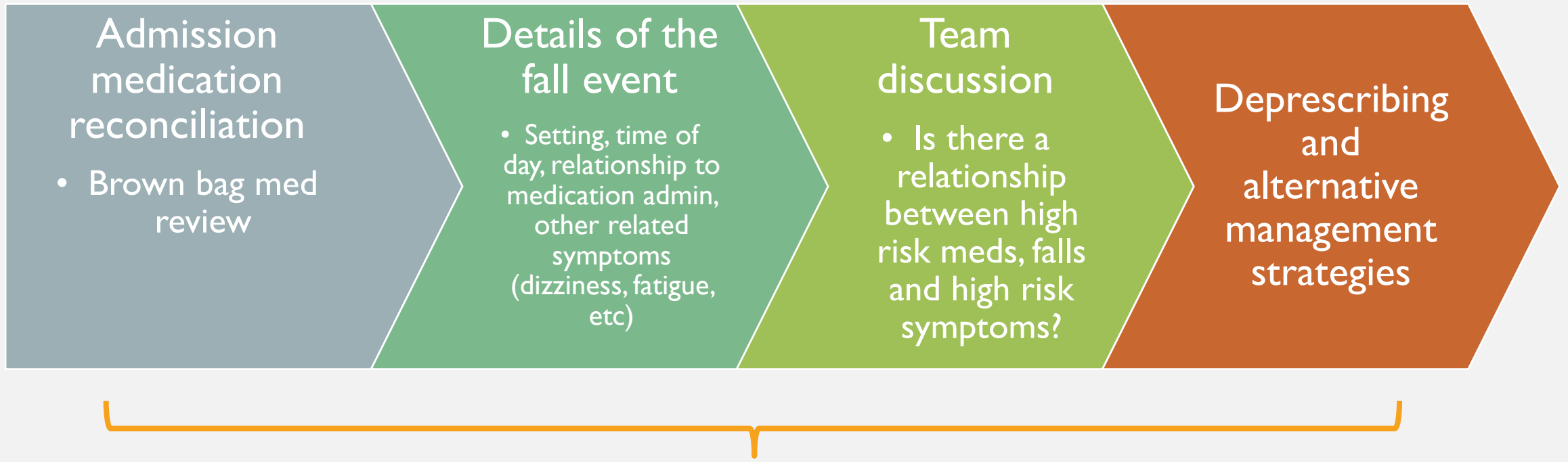


The background of the slide features a photograph of a person's leg in a black sock and white shoe, stepping on a brown paper bag. The scene is set on a wooden floor. The text is overlaid on this image in two white boxes with black borders.

TRAUMA ADMISSION IS AN OPPORTUNITY TO DEPRESCRIBE

Fall risk is at its peak in the months after a fall
Deprescribing can reduce this secondary risk as part
of a comprehensive risk reduction package

INPATIENT DEPRESCRIBING PROCESS



RNs play an important role at each step!

BROWN BAG MED REVIEW

Patient / family bring in all of their
regular medications in the classic
“brown bag” for staff to inventory

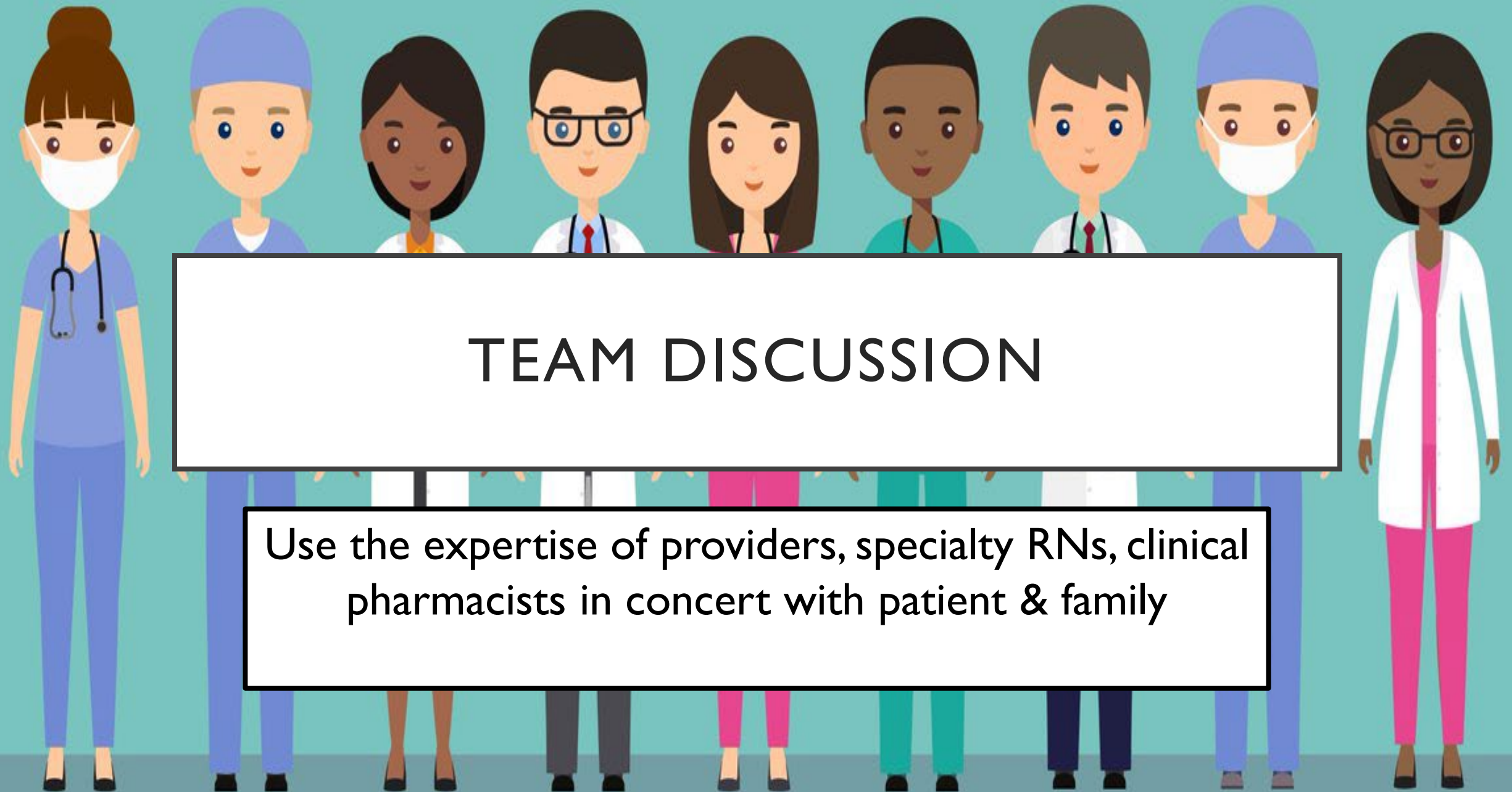
“High tech brown bag” –
medication lists / MARs on apps

Facility MARs



UNDERSTANDING THE FALL ITSELF

- More to the story than just “fell while walking”
- Use this as a starting point to gather more context
 - Other falls? Setting? How had the patient been feeling prior?
 - New medications or recent changes?
 - Uncontrolled symptoms?



TEAM DISCUSSION

Use the expertise of providers, specialty RNs, clinical pharmacists in concert with patient & family

DEPRESCRIBING & ALTERNATIVE MANAGEMENT STRATEGIES

- Hospitalization is an opportune time to stop or taper high risk medications
 - Careful watching for recurrent symptoms and opportunity to try alternatives → heavily informed by RN practice!
 - Coaching for patients on safer non-medication alternatives
- Ex. Replacing Ambien with non-medication sleep measures, tapering antihypertensives for orthostatic hypotension

RN ROLE IN DEPRESCRIBING

- Critical roles in gathering information, recognizing risks and advocating for safe deprescribing & alternative management
- Help patients and families know that this is common and can help restore good health

RN AS CHECKPOINT

Nurses are an important “check”
in the system to ensure that
medications are offering more
benefits than harms

Sun W, Tahsin F, Lam A, et al. Raising awareness about the critical importance of the nursing role in deprescribing medication for older adults. Canadian Gerontological Nursing Association: Perspectives. 2019;40(4):19-22



RESOURCES

- CDC STEADI (Stopping Elderly Accidents, Deaths and Injuries) Initiative - <https://www.cdc.gov/steady/index.html>
 - Comprehensive information on falls risk reduction with lots of patient education materials in multiple languages
- STEADI Medication Resources - <https://www.cdc.gov/steady/materials.html>
 - PDFs attached to these slides