

Navigating the Medication Maze for Older Adults: A Nurse's Guide

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This issue is *critical*.

Medication use can
facilitate
life or mortality
for an older adult.

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- Duncan, Oklahoma
- Poor pain assessment & management
- Medication-induced delirium
- Loss of independence & health decline

Myrtle Mae

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Objectives

- Changes with Aging
- Common Medication-Related Problems
- Safe Medication Management Principles
- Strategies & Case Study
- Innovation Possibilities

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Physiologic Changes in Older Adults

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Pharmacokinetic

Absorption
Distribution

Metabolism
Excretion

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Pharmacodynamic

Increased Sensitivity
Decreased Response

Drug Concentration
Receptor Sensitivity

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Common Medication-Related Problems in Older Adults

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Adverse drug reactions (ADR)

Types: A-F

Recognition: Naranjo Scale

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Table 1 Classifications of adverse drug reactions

Type of reaction	Type of effect	Characteristics	Frequency	Examples	Management
A	Augmented	Dose related Low mortality Predictable	Common	Orthostatic hypotension with anti-hypertensive medications Respiratory depression with opioids Bleeding with warfarin; serotonin Syndrome with SSRIs Digoxin toxicity Anticholinergic effects of tricyclic antidepressants	Dose reduction Withdrawal drug if necessary Evaluation of effects of concomitant therapy and drugs' interaction
B	Bizarre	Non-dose related High mortality Unpredictable	Uncommon	Hypersensitivity reactions such as anaphylaxis to penicillin Idiosyncratic reactions such as malignant hyperthermia with anaesthetics	Mandatory withdrawal of the drug Avoidance of that same drug in the future
C	Chronic	Cumulative Dose related Time related	Uncommon	Hypothalamic–pituitary–adrenal axis suppression by corticosteroids	Dose reduction Withdrawal drug if necessary, often for a prolonged period of time
D	Delayed	Often dose related Time related + +	Uncommon	Tardive dyskinesia Teratogenesis Carcinogenesis	Often non-treatable
E	End-of-treatment	Related to withdrawal time	Uncommon	Myocardial ischaemia after β -blocker discontinuation; Withdrawal syndrome with opiates or benzodiazepines	Slow withdrawal Reintroduction of the drug
F	Unexpected failure of therapy	Dose related Drugs' interactions related	Common	Resistance to antimicrobial agents Inadequate dosage of an oral contraceptive if used with an enzyme inducer	Increase of dosage Evaluation of effects of concomitant therapy and drugs' interaction

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Naranjo Adverse Drug Reaction Probability Scale

Question	Yes	No	Do Not Know	Score
1. Are there previous <i>conclusive</i> reports on this reaction?	+1	0	0	
2. Did the adverse event appear after the suspected drug was administered?	+2	-1	0	
3. Did the adverse reaction improve when the drug was discontinued or a <i>specific</i> antagonist was administered?	+1	0	0	
4. Did the adverse event reappear when the drug was re-administered?	+2	-1	0	
5. Are there alternative causes (other than the drug) that could on their own have caused the reaction?	-1	+2	0	
6. Did the reaction reappear when a placebo was given?	-1	+1	0	
7. Was the drug detected in blood (or other fluids) in concentrations known to be toxic?	+1	0	0	
8. Was the reaction more severe when the dose was increased or less severe when the dose was decreased?	+1	0	0	
9. Did the patient have a similar reaction to the same or similar drugs in <i>any</i> previous exposure?	+1	0	0	
10. Was the adverse event confirmed by any objective evidence?	+1	0	0	
TOTAL SCORE:				

Modified from: Naranjo CA et al. A method for estimating the probability of adverse drug reactions. *Clin Pharmacol Ther* 1981; 30: 239-245.

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Polypharmacy

Defined as

Prevalence is 65% in those 65 years of age and older.

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Drug Interactions

Pharmacokinetic

Pharmacodynamic

Identify

Inform and help manage

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Principles of Safe Medication Management in the Nursing Care of Older Adults

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Principles

Start LOW and Go SLOW



Comorbidities & Contraindicated Meds

Monitor for Adverse Drug Reactions

Review Medications

Review Medications 😊

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Strategies for Medication Safety in Older Adults

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Strategies

Medication reconciliation, optimization with
deprescribing: Beers Criteria.

Patient Education and Consistent
Assessment


Interdisciplinary Collaborations a
team approach

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Beers Criteria

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geriatricpain.org
Resources and tools for quality pain care

GeriatricPain.org is a one-stop website with FREE best-practice tools and resources that support recommendations for quality pain assessment and management in older adults. This long-standing resource has recently undergone a major structural and content update to enhance user-friendliness and access to available tools.

The goal of GeriatricPain.org is to help older adults and family caregivers improve pain and its impact by:

- increasing knowledge on best practices for recognizing, evaluating, and treating pain, including for those with dementia.
- providing ready access to current evidence-based tools and resources specially designed for older adults and family caregivers.
- supporting older adults and family caregivers manage pain and communicate effectively with their healthcare providers about pain.

Access the FREE pain tools and resources at www.GeriatricPain.org

For more information, please contact us at Connary.Center@uiowa.edu

Other resources

- **Geriatricpain.org**
(The University of Iowa)

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Other resources

*US Pain Foundation
American Society for Pain Management Nursing
US Association for the Study of Pain
American Geriatrics Society
Gerontological Society of America*

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Case Study



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- 82 y.o.
- Admitted for hip Fx
- Hx HTN, breast CA, chronic pain, insomnia, anxiety
- Persistent pain (8/10), difficulty falling & staying asleep, daytime grogginess & disorientation

Miriam Thomas

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Potential risks associated with long-term use of her medications?

Any drug-drug and/or drug disease risks you should check?

Non-pharmacological interventions could help manage her pain and improve sleep quality?

What are signs and symptoms of medication-induced delirium? How can we prevent it in older adults?

How can the healthcare team work with Ms. Thomas to develop a personalized and safe medication plan?

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Innovation?

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The Future

Surveillance of Medications

Enhanced Clinical Decision Support

Tools for Patient Education

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Conclusion

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