MODULE #2: POLYPHARMACY RELATED TO GERIATRIC FALLS

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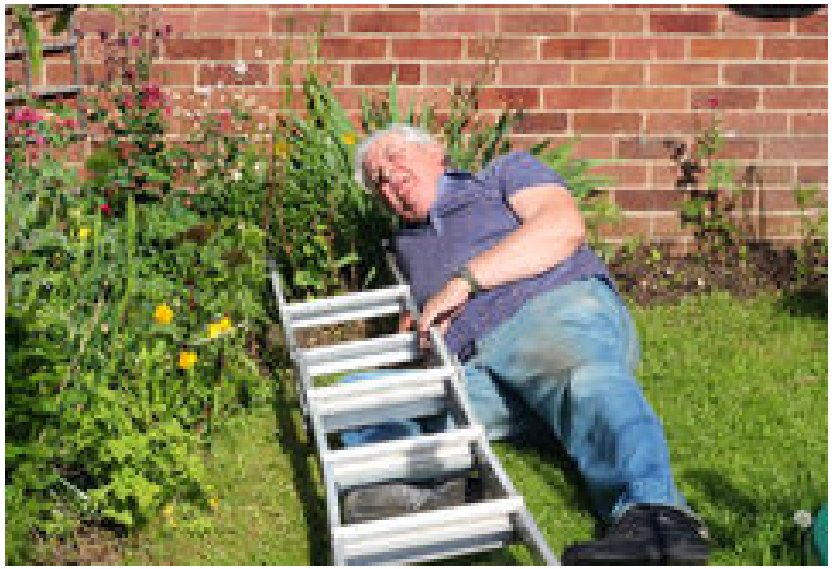
Leaning Objectives…

- State one reason why polypharmacy contributes to geriatric falls.
- Recognize two classifications of medications that are associated with geriatric falls.



Medications and the elderly….

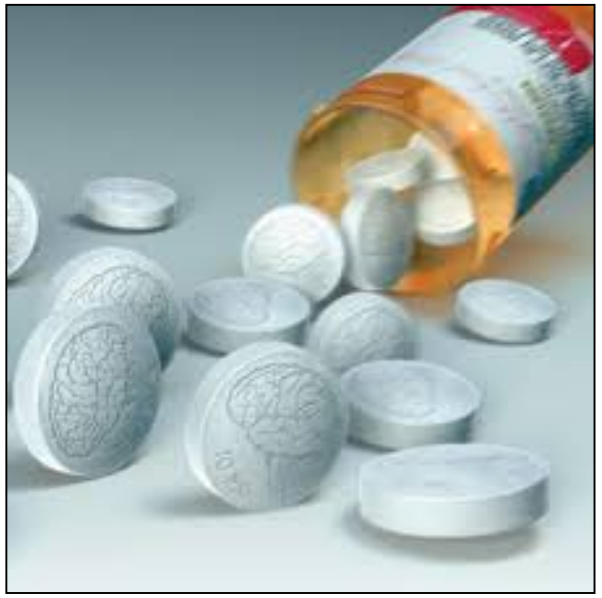
- Currently 44% of men and 57% of women >65 years old are taking 5 different medications per week and 12% are taking >10 medications per week (Woodruff, 2015).
- According to Quach et al. (2013), geriatric patients >65 years old are having between 3.4 to 17.6 prescriptions filled each year.
- Think about this – a 76 year old woman with a dx of osteoporosis, osteoarthritis, tye-2 DM, HTN, and COPD, could be taking up to 12 different medication in 19 daily doses.
- Polypharmacy is defined as the use of more than three or four medications (Ziere et al. 2005).

Medications and the elderly….

- Reasons for polypharmacy: longer life expectancy, and an increased prevalence of chronic disease, and implementing practice guidelines (Sergi, DeRi, Sarti, & Manzato, 2011).
- Polypharmacy is often associated with excessive prescriptions that can cause: confusion, sedation, balance disorders, and complications caused by pharmacological interactions (Baranzini et al., 2009).
- Age related changes alter pharmacodynamics of drugs.
- By age 75 – renal clearance of drugs decreases by 50%.
- Hepatic blood flow and enzymes responsible for drug metabolism both decrease.
- Lewis, Dirksen Heitkemper, & Bucher, 2014.

Medications & the elderly…

- Accidental overdose or omission d/t forgetfulness.
- In addition, medication errors are common d/t health literacy, decreased vision, frequent use of OTC meds, financial constraints, and refusal to adhere to medication regime d/t undesirable side-effects.
- Lewis, Dirksen Heitkemper, & Bucher, 2014.



Medications & the elderly….

- Another issue - inappropriate medication prescribing.
- Suboptimal prescribing has been defined as overuse (polypharmacy).
- Inappropriate prescribing (drugs whose risk are greater that the benefits in older adults).
- And underuse of indicated medications (omission of drug therapy).
- Woodruff, 2016; & Blanco-Reina et al., 2015.

Don’t forget about herbal preparations….

- Because most herbal preparations are OTC, seniors frequently forget to report these medications to physicians.
- Common herbals: Ginkgo Biloba, St. John’s Wort, Echinacea, Ginseng, KVA, AND Valerian Root (Woodruff, 2010).
- Herbal preparations can interact with prescribed medications and lead to serious adverse effects….so assess for all preparations during admission (Richardson, Bennett, & Kenny, 2014).

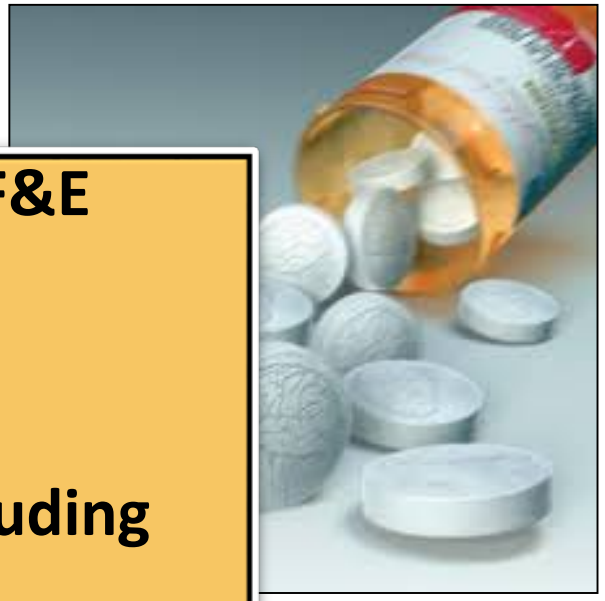
Polypharmacy and falls….

- Risk factors for falls is complicated d/t many intrinsic & extrinsic factors. Medications are considered a modifiable extrinsic risk factor.
- Polypharmacy is regarded as an important risk factor for falling in several studies and meta-analyses have shown an increased fall risk in the following: diuretics, antiarrhythmics, psychotropic agents, antihypertensives, benzodiazepines, & antidepressants.
- Baranzini et al., 2009.

Classification of medications….

- Barbiturates – high incidence of side-effects when compared to sedative-hypnotics. Can be addictive.
- Opioid analgesics – deterioration in mobility, diminished concentration, prolonged reaction time, impaired balance, & orthostatic hypotension.
- Antidepressants – attributed to sedation and postural hypotension.
- Benzodiazepines – attributes to dizziness, sedation, impaired motor coordination, and postural disturbances.
- Buckwalter, K. C. (2003).

Classification of medications….



- Anithypertensives – orthostatic hypotension, weakness, F&E imbalances, dizziness, & fainting.
- Diuretics – hypotension, weakness, & confusion.
- Antipsychotics – Haldol, Risperdal, Zyprexa, & Seroquel; sedation, hypotension, & extrapyramidal side effects, including tardive dyskinesia.
- Anticonvulsants – side effects involve the CNS, so diplopia, drowsiness, ataxia, and mental slowness.
- Anticoagulants – potential increased bleeding (hypotension, tachycardia), herbal supplements can interact, & mental status changes if intracranial bleed, monitor labs.
- Buckwalter, K. C. (2003).

Keep it Simple…..

- Complete a ‘brown-bag’ check with admission…have patient’s or family members bring all medications with them upon admission.
- Explore nonpharmacologic alternatives to drugs (dietary, change sleeping patterns, etc.).
- Work with the physician and pharmacist to consistently evaluate medication lists and medications taking during the hospitalization. Complete a medication-reconciliation upon discharge (mustforseniors.org; 2016).

What's my role….

- Use data when considering what medications to possibly discontinue from a long medication list.
- When examining medications lists, consider those lists containing >5 meds and those >10 meds.
- Report drug inconsistencies to the physician/pharmacist and monitor for patient compliance.
- Dig deeper! When completing admission assessment questions, ask open-ended questions. Realize that 'no' answers surrounding fall prevention could be inaccurate.
- Geriatric patients may fear many of the stigmas associated with a fall.

QUESTIONS….

❖Thank you for participating….Greg Shannon, RN.

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