

Overview of Polypharmacy & the Older Adult

Education for Health Care Providers

Part 2: Clinical Consequences of Polypharmacy



Copyright © CSAH 2017

1

Disease Contributes to Polypharmacy

- Older adults diagnosed with chronic medical conditions are ordered maintenance medications.
- Clinical practice guidelines provide a step-like approach to the management of many of the frequently diagnosed chronic illnesses.
- The standards recommended in guidelines often include multiple medications; for example, an individual diagnosed with more advanced congestive heart failure may receive medications from four different pharmacological classes. Add a second diagnosis, which may include three different inhaled drugs as well as oral steroids, and we have already achieved polypharmacy.

(Accetta, 2016)



Copyright © CSAH 2017

2

Multiple Providers & Polypharmacy



- Often there are multiple care providers prescribing medications.
- Physicians, nurse practitioners, specialists, and hospitalists are all responsible for completing a thorough assessment of the whole person prior to prescribing.
- However, in practice, prescribers may overlook the complete picture and may be prescribing with only one specific disease in mind.

[\(Accetta, 2016\)](#)

Use of Prescribing Software

- Electronic health record prescribing software has made the task of prescribing safer from the risks associated with poor handwriting.
 - Prescriptions are provided with drug names and strengths, directions for use, and many times include the exact indication.
- Proprietary prescribing software products includes a suite of alerts or drug-related warnings and precaution messaging.
 - "Alert overload" is a phenomenon to which many providers fall susceptible, with so many warnings and "soft stops" to review, many times a prescriber will simply disregard a legitimate precaution.
 - Therapeutic duplication alerts will frequently be triggered regardless of the severity or clinical indication for use.

[\(Accetta, 2016\)](#)

Adverse Drug Events Frequency

Adverse Drug Reactions (ADRs)

- Drug-related hospitalizations account for 2.4 to 6.5 percent of all medical admissions in the general population; the proportion is much higher for older adults.
 - In the United States, it is estimated that annually from 2007 to 2009 there were 99,628 emergency hospitalizations for adverse drug events (ADEs) in individuals 65 years and older, with two-thirds due to unintentional overdoses.
 - A meta-analysis found a fourfold increase in the rate of hospitalization related to ADRs in older adults compared with younger adults (16.6 versus 4.1 percent).
 - It was estimated that 88 percent of the ADE hospitalizations among older adults were preventable, compared with 24 percent among young persons.

[\(Rochon, 2017\)](#)



Copyright © CSAH 2017

5

Pharmacist Interventions at Pharmacies



- “Alert fatigue” can occur when a pharmacist gets desensitized to the safety alerts from the computer systems. They may approve a combination of medications that can increase the risk of adverse drug events secondary to cumulative side effects of multiple medications.
- As well, older individuals become susceptible to increased incidence of nonadherence due to complicated regimens and missed doses.
- The use of multiple pharmacies including community and mail order services complicate matters because a complete singular record of dispensing is not readily available.

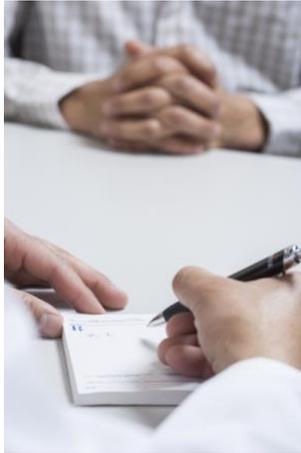
[\(Accetta 2016\)](#)



Copyright © CSAH 2017

6

Pharmacology



- Therapeutic duplications from the same pharmacological class can lead to cumulative effects.
- Drugs from different pharmacological classes may have similar side effect profiles, increasing the risks of adverse side effects.
- The use of herbal supplements used to self-treat common conditions should be avoided together with certain categories of drugs. For example, St. John's Wort for depression should be avoided if a adult is using warfarin because of the risk of reducing the effects of warfarin.