Polypharmacy And Deprescribing

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Disclosure :

I have no actual or potential conflict of interest in relation to any product or service mentioned in this program or presentation.

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Objectives

- Define Polypharmacy
- Discuss risk factors
- Discuss tools for polypharmacy screening
- Define Deprescribing
- Discuss techniques for deprescribing and reduce polypharmacy
- Conclusion/Questions

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Polypharmacy

- Defined as regular use of at least five medications, is common in older adults and younger at-risk populations and increases the risk of adverse medical outcomes.

Halli-Tierney, A., Scarbrough, C., & Carroll, D. G. (2019, July 1). *Polypharmacy: Evaluating Risks and Deprescribing*. American Family Physician. https://www.aafp.org/afp/2019/0701/p32.html.

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Why is Polypharmacy an important topic to discuss?

- According to *JAMA(Journal of American Medical Association) Internal Medicine* study , the number of older people taking five or more prescription drugs, over-the-counter medications, and supplements is about 67% — a figure that is increasing.

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Why Polypharmacy is an important topic ?

- The Lown Institute, in an April 2019 report, estimated that polypharmacy — which Lown essentially refers to as "medication overload" — would result in 150,000 premature American deaths and more than 4.6 million hospitalizations over the next decade. "[Medication overload] will reduce the quality of life for millions more. Strong, coordinated, and immediate action is needed to stem the tide of this epidemic, which harms people of all ages, but especially older generations."
- In a study, polypharmacy was shown to increase the risk of adverse drug events from 13%, which is associated with taking two medications, to 58%, which is associated with five drugs. When patients are taking seven or more medications, the risk of ADEs surpasses 80%.
- The Lown Institute notes that the risk of an ADE(Adverse Drug Effects/reactions) increases by 7–10% with each medication.

*Drug-drug and drug-disease interactions in the ED: analysis of a high-risk population

R M Goldberg[1], J Mabee, L Chan, S Wong

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Patients at risk

- Age older than 62 years
- Cognitive impairment
- Developmental disability
- Frailty
- Lack of a primary care physician
- Mental health conditions
- Multiple chronic conditions (e.g., pain conditions, diabetes mellitus, coronary artery disease, cerebrovascular disease, cancer)
- Residing in a long-term care facility
- Seeing multiple subspecialists

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Risk factors in health care system

- Poor medical record keeping
- Poor transitions of care
- Prescribing to meet disease-specific quality metrics
- Use of automated refill systems, health care cost

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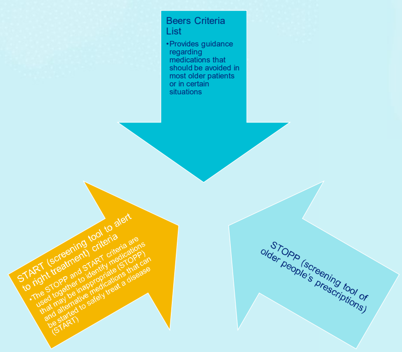
Assessing polypharmacy



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Negative Impact for patients

- Decreased quality of life
- Increased mobility issues
- Increased mortality
- Increased risk of
  - Adverse drug events
  - Disability Falls Frailty
  - Inappropriate medication use
  - Long-term care placement
  - Medication nonadherence
- Increased use of the health care system (clinic visits, emergency department visits, hospitalizations)

Halli-Tierney, A., Scarbrough, C., & Carroll, D. G. (2019, July 1). *Polypharmacy: Evaluating Risks and Deprescribing*. American Family Physician. https://www.aafp.org/afp/2019/0701/p32.html

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Deprescribing

- Systematic process to identify and discontinue medications in instances in which existing or potential harms outweigh potential benefits within the context of an individual patient's care goals, current level of functioning, life expectancy, values, and preferences

- Deprescribing discontinues medications, decreases medication dosages, and changes medications to optimize clinical outcomes

Halli-Tierney, A., Scarbrough, C., & Carroll, D. G. (2019, July 1). *Polypharmacy: Evaluating Risks and Deprescribing*. American Family Physician. https://www.aafp.org/afp/2019/0701/p32.html

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Best Practices to consider

American Geriatrics Society

- Do not prescribe a medication without conducting a drug regimen review.

American Society of Health-System Pharmacists

- Do not prescribe medications for patients currently on 5 or 5+ medications, or continue medications indefinitely, without a comprehensive review of their existing medications, including OTC medications and dietary supplements, to determine whether any of the medications or supplements should or can be discontinued.

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Best Practices for Polypharmacy

- Member education about bringing all medications to their providers at each doctor's appointment and to ask for active med list to ensure patients are taking active/ most current medications
- Offer /assist the members to discuss concerns related to medications with the providers.

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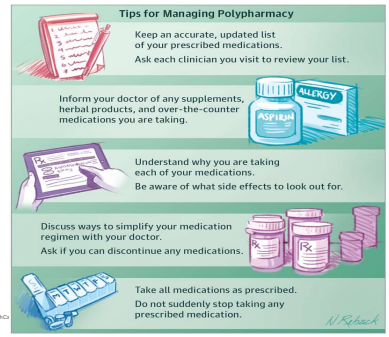
Tips for Managing Polypharmacy



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Resources for Deprescribing

Resource	Comments
Beer's Criteria	List of medications that pose the highest risk to older adults, as well as alternatives
Bruyère Research Institute and the Canadian Deprescribing Network	Guidelines, shared decision-making aids, up-to-date research, and algorithms for discontinuing proton pump inhibitors, antihyperglycemics, antipsychotics, benzodiazepines, cholinesterase inhibitors, and memantine (Namenda)
Electronic health records, such as Epic or NextGen	Auto discontinuation of expired medications, which may help reduce polypharmacy
Epocrates, Micromedex	Check for drug-drug or drug-herbal interactions
MedStopper	Allows users to enter a medication list and receive recommendations regarding which medications might be discontinued or switched

- Halli-Tierney, A., Scarbrough, C., & Carroll, D. G. (2019, July 1). *Polypharmacy: Evaluating Risks and Deprescribing*. American Family Physician. https://www.aafp.org/afp/2019/0701/p32.html.

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Case Study : Ms. Linda

- Linda is aged 64 years and has multiple health problems, struggling daily with mobility and pain. She lives at home with her husband, who assists her with daily tasks, and enjoys looking after her grandchildren.
- Linda is attending the pharmacist-led polypharmacy clinic at her GP surgery in Fife for the first time and the systematic approach outlined in Box 1 is used during the consultation with her.
- Presuming that she is taking her medicines as listed on the patient medical history should be avoided. In advance, ask her to bring her medicines to her appointment. Before the consultation, you could also post her a copy of the 'Me and my Medicines' charter — a way of encouraging conversation around medicines between the patient and healthcare professional — to support shared discussions[1].

- The Pharmaceutical Journal. Medicines optimization , 2019

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Table 1: Summary of the patient's history and baseline laboratory values

Past medical history	Drug history	Baseline values
•Hypertension •Osteoarthritis of the knee •Acne rosacea •Depression •Cervical spondylosis	•Aspirin 75mg, once daily •Doxazosin 6mg (2mg plus 4mg), once daily •Co-codamol 30/500mg, two tablets as required •Venlafaxine 37.5mg, twice daily •Bumetanide 1mg, twice daily •Nefopam 30mg, three times per day •Tramadol 50mg, take two three times per day •Fluticasone propionate nasal spray, two sprays as required •Ramipril 10mg, once daily •Lymecycline 408mg, once daily	•Body mass index: 32 •Estimated glomerular filtration rate: 47mL/min/1.73 m² •Creatinine clearance based on ideal body weight: 38mL/min •Most recent blood pressure reading: 115/84 (sitting) •Electrolytes normal •Electrocardiogram normal sinus rhythm •Urinary albumin: creatinine ratio normal

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Medication List after her medicine review

Table 3: Linda's medicines before and after her medicine review

Aspirin 75mg, once daily	—	Stopped
Nefopam 30mg, twice daily	—	Stopped
Venlafaxine 37.5mg, twice daily	—	Stopped
Fluticasone propionate nasal spray, two sprays, as required	—	Stopped
Doxazosin 6mg (2mg and 4mg), once per day	Doxazosin 4mg, once daily	Dose reduced
Bumetanide 1mg, twice daily	Bumetanide 1mg, daily	Dose reduced
Tramadol 50mg, two twice daily	Tramadol 50mg, four times per day	Dose reduced
Co-codamol 30/500, two tablets as required	Paracetamol 1g, four times per day	Replaced
Lymecycline 408mg, once daily	Topical metronidazole gel	Replaced
Ramipril 10mg, once daily	Ramipril 10mg, once daily	Unchanged

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Summary

- The following changes to Linda's prescriptions have been made:
- Reduction in venlafaxine to 37.5mg once daily at night;
- Removal of co-codamol and fluticasone propionate from her repeat list as she is no longer taking them;
- Stop aspirin 75mg once daily;
- Change in tramadol dosing from 100mg three times daily to 50mg four times daily;
- Addition of regular paracetamol.
- It is important to check that Linda has understood this plan. 'Teach-back' is a useful tool for this — ask her to explain her understanding of what has been agreed and what will happen next[12].

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Challenges to Deprescribing

- Time constraints
- Lack of communication between patients and providers
- Lack of systematic support hinder acceptance of deprescribing as routine medical care
- Patients with multiple prescribers may be reluctant for one physician to stop medications prescribed by another.

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Polypharmacy and chronic conditions

Diabetes

- High risk for hypoglycemia (major concern in elderly) and falls
- Begin with a provider-patient discussion on the possibility of reducing medications after lifestyle changes
  - Diet
  - Exercise
  - Medication adherence
  - Glucose monitoring

COPD

- Association between polypharmacy (prior to admission) and COPD exacerbations leading to hospitalized patients
- Polypharmacy should be assessed in COPD patients and deprescribing should be considered

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Conclusion

- Polypharmacy continues to be an overlooked issue that is rising in especially in elderly populations
- Collaborating with physicians and other health care professionals to understand the deprescribing process could improve polypharmacy
  - Multidisciplinary involvement (physicians, pharmacists, specialists, caregivers, case maagers, etc.)
- Polypharmacy affects the population in a negative way, especially those with chronic conditions
- Considering and effectively evaluating risk factors for polypharmacy and using tools available to assess who is at risk or determine polypharmacy
- Provider and patient/caregiver goals
- Patient engagement and shared decision making in deprescribing is essential

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References

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Questions/Comments

Thank You!

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