From Polypharmacy to Deprescribing: A Wise Choice

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Objectives

- Define polypharmacy, how it can negatively affect the older population, including potential harms
- Detect health issues that may be caused by multiple prescribed and over the counter medications; address these issues appropriately
- Enumerate deprescribing opportunities including alternative therapies to medications to provide optimal prescribing

Choosing Wisely

An initiative of the ABIM Foundation

Choosing Wisely

2

- Don’t use antipsychotics as the first choice to treat behavioral and psychological symptoms of dementia.

3

- Avoid using medications other than metformin to achieve hemoglobin A1c <7.5% in most older adults; moderate control is generally better.

4

- Don’t use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium.

6

- Don’t prescribe cholinesterase inhibitors for dementia without periodic assessment for perceived cognitive benefits and adverse gastrointestinal effects.

9

- Don’t prescribe a medication without conducting a drug regimen review.

Polypharmacy

Multiple medications

Multiple prescribers

Over the counter medications

Supplements and herbals

Multiple pharmacies

Add in a hospitalization

Polypharmacy

- Definition:
- Multiple medications (4, 5, 6, 7, 8…)

- Administration of unnecessary medications

- *Hutchinson, Sleeper 2010.*

Polypharmacy

Risk Factors:

- Demographics
  - Increased age, White, Educated
- Health status
  - Poorer health, depression, HTN, anemia, asthma, angina, diabetes, gout, osteoarthritis
- Access to healthcare
  - Number of healthcare visits, insurance, multiple providers

Hajjar/Hanlon 2007.

Polypharmacy Risks

- Drug Interactions/Duplication
- Adherence/Compliance Issues
- Timing/Daily Drug Regimen
- Appropriate Indication
- Financial Difficulties
- Geriatric Syndromes
- Morbidity/Mortality

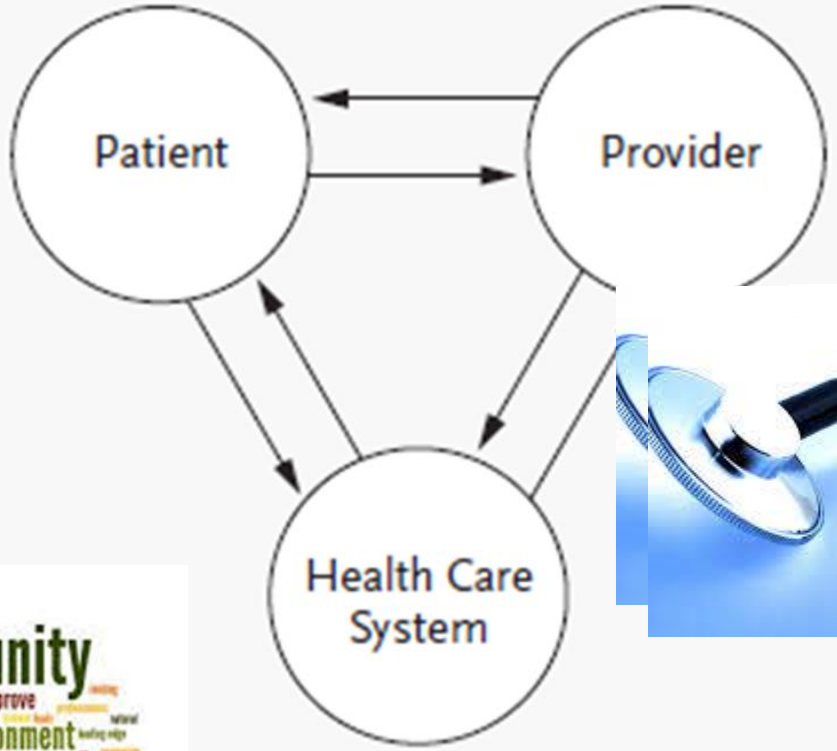
Hajjar/Hanlon 2007.

Suboptimal Dosing

- Polypharmacy
- Prescribing Cascade
- Overuse
- Underuse
- Misuse
- Questionable benefit
- Complex regimens

Hajjar ER, Hanlon JT. Polypharmacy in elderly patients. The American Journal of geriatric Pharmacotherapy. 2007;5(4):345-351.

Who is Responsible for Adherence and Suboptimal Dosing?



Medication Appropriateness Index

- Indication for medication?
- Medication effective for condition?
- Correct dosage?
- Correct directions are they practical?
- Drug/drug interactions?
- Drug/disease interactions?
- Duplication of therapy?
- Duration of therapy appropriate?
- Least expensive alternative for similar outcomes?

Hutchinson LC, Sleeper RB. Polypharmacy and other forms of suboptimal drug use in older patients. In: Fundamentals of Geriatric Pharmacotherapy. ASHP. Bethesda, MD.2010:p.109-120.

- *If **Polypharmacy** is the disease/condition then **Deprescribing** is the treatment/cure.*

- Andrew Whitman, PharmD

- *D'Arrigo T. APhA Deprescribing is the cure for 'disease' of polypharmacy. November 27, 2018. https://www.pharmacist.com/article/deprescribing-cure-disease-polypharmacy .*

Deprescribing Description

- Stopping of medication
- Decreased dose of medication
- Changing a medication to a safer alternative
- De-escalation of medication

Discontinuing Medications

- Beers Criteria
- STOPP and START
  - Screening Tool of Older People's Prescriptions (STOPP) and Screening Tool to Alert to Right Treatment (START)
- Alternative meds
- Taper or not?
- All at once or one at a time?

TJ, 71yo male

- Medication List:

  Rosuvastatin 20mg one tablet daily

  Niacin ER 500mg one tablet daily

  Ezetimibe 10mg one tablet daily

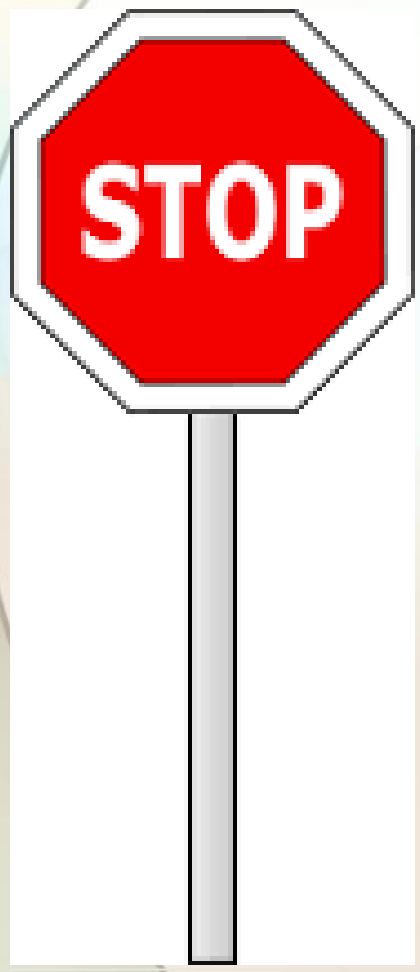
  Aspirin 81mg one tablet daily

  Lisinopril 10mg one tablet daily

  Pantoprazole 40mg one tablet daily

Is TJ a candidate for deprescribing?

Deciding when to stop meds



- Review all medications
- Identify risk of medications
- Estimate life expectancy
- Define care goals
- Verify current indications
- Determine need for preventative care
- Determine benefit-harm of meds
- Review/rank the meds according to need/usefulness
- Identify drugs to target for discontinuation
- Implement plan for discontinuation

Scott IA, Gray LC, Martin JH, et al. Deciding when to stop: towards evidence-based deprescribing of drugs in older populations. Evid Based Med 2013;18:121-124.

Determine Drug Utility

- **Strength of indication**
  - Provides immediate relief
  - Effective for an acute condition
  - Effective for a chronic condition
  - Has potential to prevent serious disease
  - Unlikely useful in short or long term use
  - A non-drug therapy could be used
- **Likelihood of misuse, toxicity, non-adherence**
  - Little benefit with high risk of toxicity
  - Duplicate therapy
  - Prescribed for adverse drug reaction (prescribing cascade)
  - Risk of drug-drug or drug-disease interactions
  - Multiple doses per day
  - Could be provided as a combined medication
  - Causing adherence issues

Scott IA, Gray LC, Martin JH, et al. Deciding when to stop: towards evidence-based deprescribing of drugs in older populations. Evid Based Med 2013;18:121-124.

Deciding when to stop meds

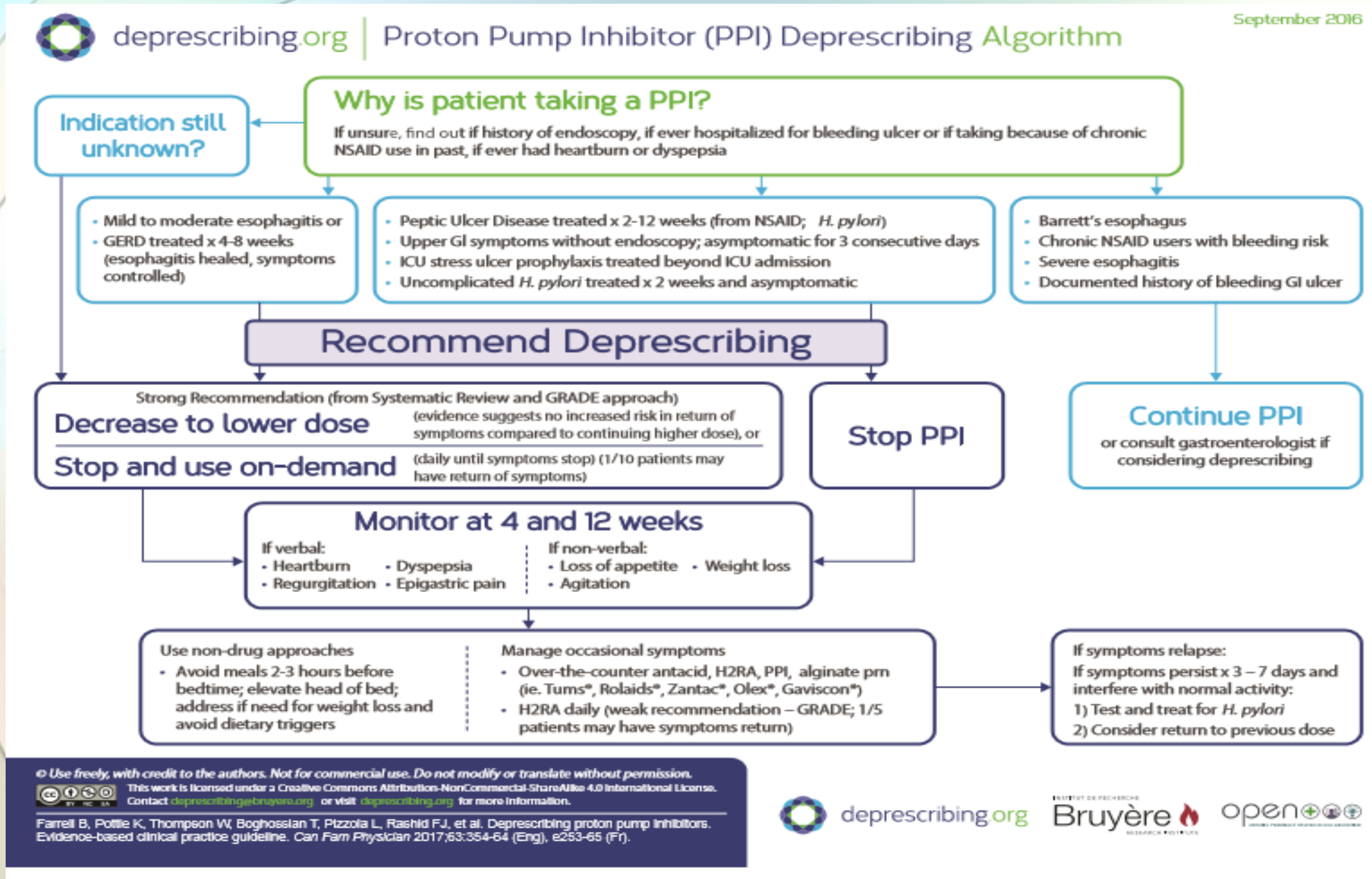
- **Meds that require slow discontinuation**
  - Cardiovascular
  - Anticonvulsants
  - Antidepressants
  - Antipsychotics
  - Anticholinergics
  - Benzodiazepines
  - Corticosteroids
  - Digoxin
  - Diuretics
  - Narcotics
  - NSAIDS
  - (and….PPIs)

Scott IA, Gray LC, Martin JH, et al. Deciding when to stop: towards evidence-based deprescribing of drugs in older populations. Evid Based Med 2013;18:121-124.

PPI Deprescribing

- Continuation of use despite indication
- Inappropriate initiation
- No clear indication for continuation post-hospital discharge
- Concerns to stop medications others have prescribed

- Concerns of long-term use:
  - Chronic and acute kidney disease
  - C. diff
  - Pneumonia
  - Hypomagnesaemia
  - Fracture risk



Farrell B, Pottie K, Thompson W, Boghossian T, Pizzola L, Rashid FJ, et al. Deprescribing proton pump inhibitors. Evidence-based clinical practice guideline. *Can Fam Physician* 2017;63:354-64 (Eng), e253-65 (Fr).

deprescribing.org Bruyère open

deprescribing.org | Proton Pump Inhibitor (PPI) Deprescribing Notes

September 2016

PPI Availability

PPI	Standard dose (healing) (once daily)*	Low dose (maintenance) (once daily)
Omeprazole (Losec®) - Capsule	20 mg+	10 mg+
Esomeprazole (Nexium®) - Tablet	20[a] or 40[b] mg	20 mg
Lansoprazole (Prevacid®) - Capsule	30 mg+	15 mg+
Dexlansoprazole (Dexilant®) - Tablet	30[c] or 60[d] mg	30 mg
Pantoprazole (Tecta®, Pantoloc®) - Tablet	40 mg	20 mg
Rabeprazole (Pariet®) - Tablet	20 mg	10 mg

Legend

a Non-erosive reflux disease

b Reflux esophagitis

c Symptomatic non-erosive gastroesophageal reflux disease

d Healing of erosive esophagitis

+ Can be sprinkled on food

* Standard dose PPI taken BID only indicated in treatment of peptic ulcer caused by *H. pylori*; PPI should generally be stopped once eradication therapy is complete unless risk factors warrant continuing PPI (see guideline for details)

Key

GERD = gastroesophageal reflux disease

NSAID = nonsteroidal anti-inflammatory drugs

H2RA = H2 receptor antagonist

SR = systematic review

GRADE = Grading of Recommendations Assessment, Development and Evaluation

Engaging patients and caregivers

Patients and/or caregivers may be more likely to engage if they understand the rationale for deprescribing (risks of continued PPI use; long-term therapy may not be necessary), and the deprescribing process

PPI side effects

- When an ongoing indication is unclear, the risk of side effects may outweigh the chance of benefit
- PPIs are associated with higher risk of fractures, *C. difficile* infections and diarrhea, community-acquired pneumonia, vitamin B12 deficiency and hypomagnesemia
- Common side effects include headache, nausea, diarrhea and rash

Tapering doses

- No evidence that one tapering approach is better than another
- Lowering the PPI dose (for example, from twice daily to once daily, or halving the dose, or taking every second day) OR stopping the PPI and using it on-demand are equally recommended strong options
- Choose what is most convenient and acceptable to the patient

On-demand definition

Daily intake of a PPI for a period sufficient to achieve resolution of the individual's reflux-related symptoms; following symptom resolution, the medication is discontinued until the individual's symptoms recur, at which point, medication is again taken daily until the symptoms resolve

Farrell B, Pottie K, Thompson W, Boghossian T, Pizzola L, Rashid FJ, et al. Deprescribing proton pump inhibitors. Evidence-based clinical practice guideline. *Can Fam Physician* 2017;63:354-64 (Eng), e253-65 (Fr).

deprescribing.org | Bruyère Research Institute | OPEN

Mindful Deprescribing

M	Medical History
I	Identify Potentially Inappropriate Medications
N	Negate PIMs through evidence and patient criteria
D	Document decision and rationale
F	Follow up with the patient
U	Understanding of changes by the patient
L	List current medications on a new medication list for the patient

Jetha S. Polypharmacy, the elderly, and deprescribing. The Consultant Pharmacist. 2015;30(9):527-532.

TJ

- You decide he is a candidate for deprescribing.
- What medications, how would you deprescribe using the MINDFUL approach?
- Medication List:

  Rosuvastatin 20mg one tablet daily

  Niacin ER 500mg one tablet daily

  Ezetimibe 10mg one tablet daily

  Aspirin 81mg one tablet daily

  Lisinopril 10mg one tablet daily

  Pantoprazole 40mg one tablet daily

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

2017

STEADI Stopping Elderly Accidents, Deaths & Injuries

Medications Linked to Falls

S **SCREEN**
for medications that may increase fall risk.

A **ASSESS**
the patient to best manage health conditions.

F **FORMULATE**
the patient's medication action plan.

E **EDUCATE**
the patient and caregiver about medication changes and fall prevention strategies.

Review medications with all patients 65 and older. Medication management can reduce interactions and side effects that may lead to falls.

STOP medications when possible.
SWITCH to safer alternatives.
REDUCE medications to the lowest effective dose.

Check for psychoactive medications, such as:

- Anticonvulsants
- Antidepressants*
- Antipsychotics
- Benzodiazepines
- Opioids
- Sedatives-hypnotics*

https://www.cdc.gov/steadi/pdf/STEADI-FactSheet-SAFEMedReview-508.pdf

EMPOWER

- Eliminating Medications Through Patient Ownership of End Results
- 50% MDs continue to prescribe benzodiazepines due to patient dependence and benefit
- Direct to consumer patient education and empowerment including visual diminishing schedule
- Watch what is being substituted
- 27% of intervention group vs 5% of control group

Tannenbaum C, Martin P, Tamblyn R. Reduction of inappropriate benzodiazepine prescriptions among older adults through direct patient education The EMPOWER cluster randomized trial. JAMA Intern Med. 2014;174(6):890-898.

EMPOWER Tapering Schedule

TAPERING-OFF PROGRAM

We recommend that you follow this schedule under the supervision of your doctor or your pharmacist.

WEEKS	TAPERING SCHEDULE							✓
	MO	TU	WE	TH	FR	SA	SU	
1 and 2	◓	●	●	●	◓	●	●	
3 and 4	◓	●	◓	◓	●	◓	◓	
5 and 6	◓	◓	◓	◓	◓	◓	◓	
7 and 8	◓	◔	◓	◓	◔	◓	◓	
9 and 10	◓	◔	◓	◔	◓	◔	◓	
11 and 12	◔	◔	◓	◔	◔	◓	◔	
13 and 14	◔	◔	◔	◔	◔	◔	◔	
15 and 16	✕	◔	✕	✕	◔	✕	◔	
17 and 18	✕	✕	✕	✕	✕	✕	✕	

EXPLANATIONS

● Full dose ◓ Half dose ◔ Quarter of a dose ✕ No dose

http://www.criugm.qc.ca/fichier/pdf/BENZOeng.pdf

PATD Questionnaire

- People's Attitudes Towards Deprescribing
- 15 questions including:
  - I am taking a large amount of meds
  - I am comfortable with the number of meds
  - I think my meds are necessary
  - If MD approved, I would stop one or more meds
  - I would like to reduce my meds
  - I think I am taking meds that are no longer necessary
  - I think I need more meds
  - I would like to pay less for meds by reducing the number
  - I think I have side effects due to my med(s)
  - **How many is too many?**
  - **What is the max you would like to take (pictorial)***
  - Would you like a pharmacist to work with you
  - What follow-up would you like if you stopped a med

Reeve E, Wiese MD, Hendrix I, et al, People's attitudes, beliefs, and experiences regarding polypharmacy and willingness to deprescribe. Journal of American Geriatrics Society. 2013;1(9):1508-1514.

PATD (cont.)

- High percentage: 90% were willing to try stopping a medication if appropriate
- This high percentage varied when looking at other studies that were targeting certain medications
- Example: antihypertensive (80%) versus benzodiazepine (33%) depends upon true acceptance if left to a patient's final decision to stop medication

Reeve E, Wiese MD, Hendrix I, et al, People's attitudes, beliefs, and experiences regarding polypharmacy and willingness to deprescribe. Journal of American Geriatric Society. 2013;1(9):1508-1514.

Deprescribing in the hospital setting

Table 3 Regularly prescribed medication classes most frequently ceased

Medication class	Patients in whom medication ceased/patients receiving medication on admission (%)	Patients receiving medication on admission/all patients (%)
Statin	21/37 (57%)	37/50 (74%)
Gastric acid suppression	19/40 (48%)	40/50 (80%)
ACE inhibitor/ ARA	15/31 (48%)	31/50 (62%)
Inhaled bronchodilators	14/20 (70%)	20/50 (40%)
Diuretic	12/23 (52%)	23/50 (46%)
Other antihypertensives	10/17 (59%)	17/50 (34%)
Antiplatelet	10/35 (29%)	35/50 (70%)
SSRI/SNRI	10/22 (45%)	22/50 (44%)
Opioid analgesic	9/22 (41%)	22/50 (44%)
Oral hypoglycaemic	9/15 (60%)	15/50 (30%)
Nitrate	8/11 (73%)	11/50 (22%)
Benzodiazepine	8/15 (53%)	15/50 (30%)

ACE, angiotensin converting enzyme; ARA, angiotensin receptor antagonist; SNRI, serotonin-noradrenaline reuptake inhibitor; SSRI, selective serotonin reuptake inhibitor.

Reasons for Discontinuation:

- No valid indication
- Time of life expectancy less than benefit of medication
- Risk of harm
- No symptom relief
- Symptoms resolved
- Unacceptable treatment burden

McKean M, Pillans P, Scott IA. A medication review and deprescribing method for hospitalised older patients receiving multiple medications. Internal Medicine Journal. 2016;46(1):35-42.

Medications to Consider

- Benzodiazepines
- PPI
- SSRI –fluoxetine, paroxetine, citalopram
- Gabapentin
- Anticholinergic agents
- NSAIDs
- Bisphosphonates
- Supplements and Vitamins

IA

- IA 63 year old Caucasian female
- On admission: Recurrent falls, depression, fatigue, poor sleep, QT prolongation
- Medications
  - Fluoxetine 40mg daily- Patient increased to 80mg daily
  - Levothyroxine 100mcg daily – sub-therapeutic (TSH 17uIU/mL)
  - Albuterol HFA 90mcg with spacer 2 puffs as needed for wheezing
  - Budesonide-formoterol inhaler 160-4.5mcg 2 puffs bid
  - Omeprazole 20mg daily for > 1 year for GERD
  - Levetiracetam 500mg bid
  - Quetiapine 50mg evening

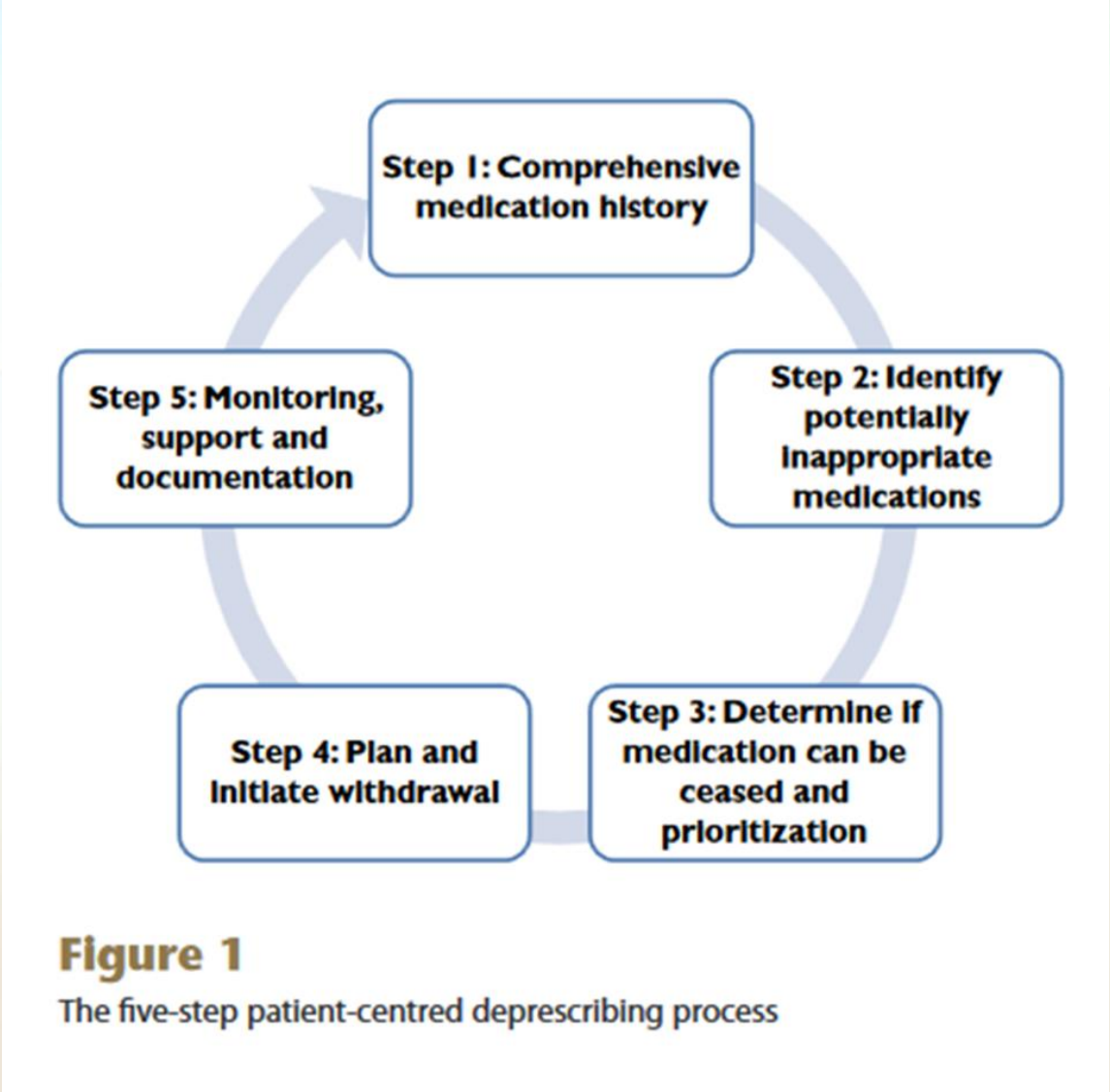


Figure 1

The five-step patient-centred deprescribing process

- *Reeve E, Shakib, S, Hendrix I, et al. Review of deprescribing processes and development of an evidence-based, patient-centred deprescribing process. Br J Clin Pharmacol. 2014 Oct;78(4):738-47.*

IA Medications

- **Deprescribed:**
  - Quetiapine 50mg –**discontinued due to QT Prolongation**
  - Fluoxetine-**reduced** to 40mg daily
- **Added:**
  - Melatonin 3mg take 2 every evening-**in hospital**
  - Magnesium oxide 400mg daily-**hypomagnesemia**
- **Unchanged:**
  - Albuterol HFA 90mcg with spacer 2 puffs as needed for wheezing
  - Budesonide-formoterol inhaler 160-4.5mcg 2 puffs bid
  - Omeprazole 20mg daily for > 1 year for GERD-**potential inappropriate continued use**
  - Levetiracetam 500mg bid-**neurology follow-up for myoclonus**
- **Changed**:
  - Levothyroxine 125mg daily **(increase)**

Deprescribing is a PROCESS

- Patient care goals
- Level of function
- Life expectancy
- Values
- Preferences

McGrath K, Hajjar ER, Kumar C, Hwang C, Salzman B. Deprescribing: A simple method for reducing polypharmacy. The Journal of Family Practice.2017;66(7):436-445.

Question 1

- How many times over the past month have you deprescribed a medication?
  - Too many to count
  - At least once a week
  - Once or twice
  - Not at all this month but have in the past
  - None

Thought: Opportunities to deprescribe can happen at every encounter.

McGrath K, Hajjar ER, Kumar C, Hwang C, Salzman B. Deprescribing: A simple method for reducing polypharmacy. The Journal of Family Practice.2017;66(7):436-445.

Patient Barriers to Deprescribing

- Fear that condition may worsen
- Lack of suitable alternative if needed
- How will the condition be managed
- Previous poor experience of medication stopped
- Caregivers do not agree
- Hoping for effectiveness or change in condition
- Feelings of being “given-up on”

McGrath K, Hajjar ER, Kumar C, Hwang C, Salzman B. Deprescribing: A simple method for reducing polypharmacy. The Journal of Family Practice.2017;66(7):436-445.

Discussion with Patients

- Some medications you take may be having **an additive effect**
- Because our bodies change as we age (just like when we are children) we may need to **adjust some medications**
- Some medications you take may be contributing to ….
  - Falls
  - Memory loss
  - Incontinence

Farrell B, Mangin D. Deprescribing is an essential part of good prescribing. American Family Physician. 2019;99(1).

Discussion with Patients

- You may have tried stopping this medication before, but it needs to be tapered slowly, **lets try to reduce the dose and see**
- Let's do this **slowly and follow up**
- Because you no longer need this medication, you will no longer need to take the…(prescribing cascade medication)

  Diuretic and potassium

  Diuretic and incontinence medication

- This will **lessen the amount of medications** you are taking and having to **pay** for

Farrell B, Mangin D. Deprescribing is an essential part of good prescribing. American Family Physician. 2019;99(1).

Question 2

- How likely are you to consider a recommendation, from a pharmacist, to deprescribe a medication for your patient?
  - Very likely
  - Possibly likely
  - Would need to see the patient first
  - Unlikely

Question 3

- How likely are you to consider deprescribing a medication, initiated by another provider?
  - Very likely
  - Possibly likely
  - Would call the provider first
  - Unlikely
  - Definitely would not

Prescriber Barriers to Deprescribing

- Contradicting other prescribers (specialists)
- Fear of withdrawal symptoms or relapse
- Unclear benefits versus risk
- Difficult to approach life-expectancy conversations
- Patient thoughts that care is being “downgraded”
- Time to deprescribe
- “Easier” to continue

McGrath K, Hajjar ER, Kumar C, Hwang C, Salzman B. Deprescribing: A simple method for reducing polypharmacy. The Journal of Family Practice.2017;66(7):436-445.

Deprescribing is Good Prescribing

- Allows for **patient education**
  - Changes of ADME
  - Additive adverse effects
  - Update treatment goals
- Allows for **patient-centered approach to care**
- Good review of **"legacy prescribing"** –medications not necessarily meant to be continued indefinitely
- Take a **"Pause and monitor"** approach
- Document outcomes

Farrell B, Mangin D. Deprescribing is an essential part of good prescribing. American Family Physician. 2019;99(1).

Question 4

- How would you approach someone who asked you about deprescribing?
  - Initiate a conversation immediately
  - Schedule another appointment
  - Ask a pin-point question about which medication they wanted to know about
  - Or state, “If you are not having any issues then there is no need to review”

Question 5

- Do you currently have a method/step-by-step approach to deprescribing that you use in your practice?
  - Yes
  - Kind of, maybe
  - No, not really

  - *If so, how well is this communicated during transitions of care?*
  - *Know, there is no "Gold Standard" to deprescribe.*

    McGrath K, Hajjar ER, Kumar C, Hwang C, Salzman B. Deprescribing: A simple method for reducing polypharmacy. The Journal of Family Practice.2017;66(7):436-445.

Potential Benefits of Deprescribing

- Fewer falls
- Improved cognition
- Improved quality of life
- No adverse drug reactions
- Decrease in health care costs
- Reduced drug interactions
- Increased patient satisfaction

McGrath K, Hajjar ER, Kumar C, Hwang C, Salzman B. Deprescribing: A simple method for reducing polypharmacy. The Journal of Family Practice.2017;66(7):436-445.

Wise Challenge

Choosing Wisely #9:

Don’t prescribe a medication without conducting a drug regimen review.

Challenge:

Don’t *CONTINUE* a medication without conducting a drug regimen review.

Wrap Up

- Review polypharmacy in an older adult, consider employing the Medication Appropriateness Index and deprescribing as a potential treatment/cure

- Apply a step-by-step process and rationale to the discontinuation of medications based on falls risk, suboptimal dosing, and polypharmacy concerns; include follow-up and document changes.

- Promote optimal medication use and appropriate deprescribing while considering the patient's attitude and empowerment, and

- Favorite article if you want to read further:
  - Steinman MA, Hanlon JT. Managing medications in clinically complex elders "There's got to be a happy medium". JAMA. 2010;304(14):1592-1601.

Thank you!

Questions?

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