Deprescribing: An eLearning Module for Medical Students and Primary Care Residents

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Objectives

- By the end of this module you will be able to:
  - Describe how deprescribing is an extension of the continuum of good prescribing practice
  - Identify common barriers to deprescribing
  - Understand the importance of deprescribing potentially inappropriate medications
  - Apply a systematic approach to identifying and deprescribing potentially inappropriate medications
  - Be familiar with helpful resources to facilitate and improve deprescribing

Background

- This eLearning module was developed as part of a resident academic project at the University of Toronto

- It is intended to fill a perceived gap in undergraduate and postgraduate medical training, i.e., the provision of explicit educational materials for training medical students and residents in the art and science of deprescribing

- Although many resources are presented in this module the overall approach to deprescribing presented in the module was largely adapted from the contents of two recent review articles: 1) Jansen et al., BMJ 2016;353, and 2) Scott et al., JAMA Intern Med 2015; 175.

Deprescribing:
Active Clinical Management

- Defining Deprescribing:
  - *The systematic process of identifying and discontinuing drugs in instances in which existing or potential harms outweigh existing or potential benefits within the context of an individual patient's care goals, current level of functioning, life expectancy, values and preferences*
- A fundamental component of patient-centered good prescribing continuum, spanning therapy initiation, dose titration, monitoring and or adjusting therapy according to nuanced understanding of patient context and medical evidence

Deprescribing:
Active Clinical Management

- Active clinical management:
  - Diagnosing a problem: *use of potentially inappropriate medication*
  - Making a therapeutic decision: *withdrawing it with close follow up*
  - Altering natural history: *reduce drug-related adverse events, improve function and reduce morbidity and mortality*

Deprescribing is…

- Not about denying effective treatment to eligible patients

- Not motivated by reducing drug spending (but can have benefit of saving patient money)

- Not a matter of blame or identifying a medication as wrongly prescribed in the first place (remember: clinical circumstances change and with them indications for pharmacotherapy)

Wrong Approach to Deprescribing

"I feel a lot better since I ran out of those pills you gave me."

Why this Matters

- It matters because too many people are being prescribed too many potentially inappropriate medications and this is causing too much harm:
  - In Canada, in 2014 two-thirds of seniors took 5 or more prescription medications and 27.2% had claims for 10+ medications
  - In Canada, in 2012, 24% of seniors - more than a million people - had been prescribed a potentially inappropriate medication
  - 50% of nursing home patients are on at least 1 inappropriate medication
  - 25% of community-dwelling elderly will be hospitalized for medication related problem over a 5 year period
  - Up to 30% of admissions for patients over 75 years old are medication-related and up to three quarters are potentially preventable

Why this Matters

- Polypharmacy (definition = the use of ≥ 5 medications) associated harms include:
  - delirium
  - cognitive decline
  - non-compliance, errors
  - drug-drug interactions
  - falls
  - fractures (hip #)
  - hospitalizations
  - death

- Systematic reviews of deprescribing demonstrate it can be done safely, may reduced adverse events and improve quality of life!

Barriers to Deprescribing

- Intrinsic factors:
  - Lack of awareness: a failure to appreciate the scale and impact of polypharmacy
  - Cognitive bias: 1) clinician inertia: failure to act despite awareness, 2) status quo bias: preference to continue with the status quo, and 3) omission bias: greater willingness to risk harms arising from inaction than from action
  - Lack of self-efficacy: knowledge/skill gaps
- External factors:
  - Concerns re: patient perception and acceptance (i.e., physician giving up)
  - Concerns re: professional judgement and/or coordination (i.e., specialists, pharmacists and colleagues)
  - Lack of data and guidelines for safe deprescribing

Deprescribing: Creating Awareness and Opportunity

- Decision to start a new medication often flows directly from a new diagnosis, symptom or investigation

- Unlike starting a new medication is not always clear *when* to start a discussion about deprescribing

- Options include both planned (e.g., yearly medication review at preventative health visits or periodic pharmacist-led reviews) and/or triggered discussions (e.g., hospital admission/discharge, new diagnosis, increasing frailty or seeing new health care provider)

Deprescribing: Creating Awareness and Opportunity

- Fundamentally, awareness and opportunity for deprescribing can (and should) flow as a natural extension of the good prescribing continuum
- Discussing the treatment duration and potential reasons for discontinuing a medication *at the time the medication is started and subsequently when prescriptions are renewed* will facilitate later discussions around deprescribing

A step-wise approach to deprescribing

1. Medication Review: ascertain all drugs the patient is taking (including non prescription) and the indications for each one

2. Risk Assessment: consider overall risk of drug-induced harm in individual patients in determining the required intensity of deprescribing

3. Identify Target Drugs: list drugs for discontinuation based on assessment of eligibility for discontinuation

4. Prioritize: rank list of drugs to discontinue

5. Initiate: implementation and monitoring of discontinuation regime

Step 1: Medication Review

- Ask patient/caregiver to bring all drugs and drug delivery aids to consultation or home visit (list is not good enough!)

- Crucial step to identify *all* drugs (prescribed, complementary/alternative, and over the counter) a patient is taking

- Ask patient about any regularly prescribed drugs not being taken and, if so, why not (cost? side effects?)

Step 2: Risk Assessment

- Ascertain and assess risk of drug-related adverse events in the patient in front of you

- Drug factors: number of medications (most important predictor of adverse events), use of “high-risk” drugs, past or current toxicity

- Patient factors: age, cognitive impairment, comorbidities, substance use, multiple prescribers, past or current non adherence

Step 2: Risk Assessment

- Many resources exist to help identify “high-risk” medications
- Take a few minutes to explore the following:
  - http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0122246
  - http://www.tawa.ca/Documents/STOPP%20START%20Toolkit.pdf
  - www.medstopper.com

Step 3: Identify Target Drugs

- Assess for the following:
  - No valid indication
  - Part of prescribing cascade
  - Actual or potential harm of a drug clearly outweighs any potential benefit
  - Ineffective disease/symptom control or resolution of underlying problem or original indication
  - Preventative medication unlikely to confer benefit given patients predicted lifespan (resource alert: eprognosis.ucsf.edu)
  - Drugs that are unacceptable or burdensome to the patient

Step 4: Prioritize Interventions

- In deciding the order of discontinuation, consider these criteria:
  - those with the greatest harm and least benefit
  - those easiest to discontinue, i.e., lowest likelihood of withdrawal reactions/rebounds
  - those the patient is most willing to discontinue
  - Resource alert: for helpful guidance see www.medstopper.com
  - Resource alert: use your allied health experts, consultation with pharmacist is very helpful here!

Step 5: Initiate Drug Withdrawal

- Explain and agree with patient on management plan:

- Stop one drug at a time: permits identification of harms (withdrawal reactions or disease/symptom recurrence) and benefits (resolution of adverse events)

- Wean patient off drugs more likely to cause adverse events, educate patients/caregivers on what to watch out for and what to do should adverse events arise

- Document and communicate with allied health professionals involved in your patients care (i.e., pharmacy, home care etc.)

The Case of Mr. Pantoprazapam

ID: 73M

Reason for visit: seen today in clinic for yearly check-up

No current questions, concerns or complaints. Feels well overall. Just wants bp check, bloodwork requisition and medication refill

Past Medical History: hypertension, dyslipidemia, benign prostatic hypertrophy, Rt knee replacement, GERD

Medications: perindopril 4mg po daily, hydrochlorothiazide 12.5mg po daily, atorvastatin 20mg po daily, lorazepam 1mg po qhs, pantoprazole 40mg po daily

BP today 130/84
Medications renewed

Missed Opportunity?

"You clean him up! You're the one who gave him sleeping tablets and a laxative!"

The Case of Mr. Pantoprazapam

- Let’s try using the step-wise approach to deprescribing:
  - Step 1: Medication Review
  - Q. What additional information do we need?
  - A. Other non-prescription meds? Compliance?

The Case of Mr. Pantoprazapam

- Step 2: Risk Assessment
- Q. What “high-risk” medications is Mr. Pantoprazapam taking? What are the associated harms?

- A. Benzodiazepine

The Case of Mr. Pantoprazapam

- Benzodiazepines are prescribed in 5-35% of community-dwelling elders and are estimate to account for 20-25% of inappropriate medication prescriptions in all elderly

- Choosing Wisely Canada: “Don’t use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium

- Number Needed to Treat = 13, Number Needed to Harm = 6 (for insomnia)

- Use > 1 month = risk of dependence and withdrawal, esp if personal or family history of substance abuse

- Use associated with following risks: cognitive decline (?), psychomotor impairment, falls and hip #, hospitalization and mortality

- Can be safely deprescribed: http://deprescribing.org/news/empower-trial-empowering-older-adults-to-reduce-benzodiazepine-use/

The Case of Mr. Pantoprazapam

- Step 3: Identify Target Drugs
  - Q. What medications can you identify as being potentially inappropriate in this patient?
  - A. pantoprazole, lorazepam and atorvastatin(?)
  - Exercise: access www.medstopper.com and input Mr. Pantoprazam's medications… what do you think about the recommendations? This illustrates importance of clinical context!

The Case of Mr. Pantoprazapam

- Step 4: Prioritize Intervention

- Remember in deciding the order of discontinuation, consider these criteria:

  - those with the greatest harm and least benefit (Resource alert: www.theNNT.com)

  - those easiest to discontinue, i.e., lowest likelihood of withdrawal reactions/rebounds

  - those the patient is most willing to discontinue

  - Exercise: access www.theNNT.com and find the NNT and NNH for Mr. Pantoprazam's antihypertensive medications… are you surprised?

The Case of Mr. Pantoprazapam

- Step 4: Prioritize Intervention
  - Generate a priority list of medications to deprescribe
  - Thought experiment: how you would respond if Mr. Pantoprazapam insisted he needed all of his medications

The Case of Mr. Pantoprazapam

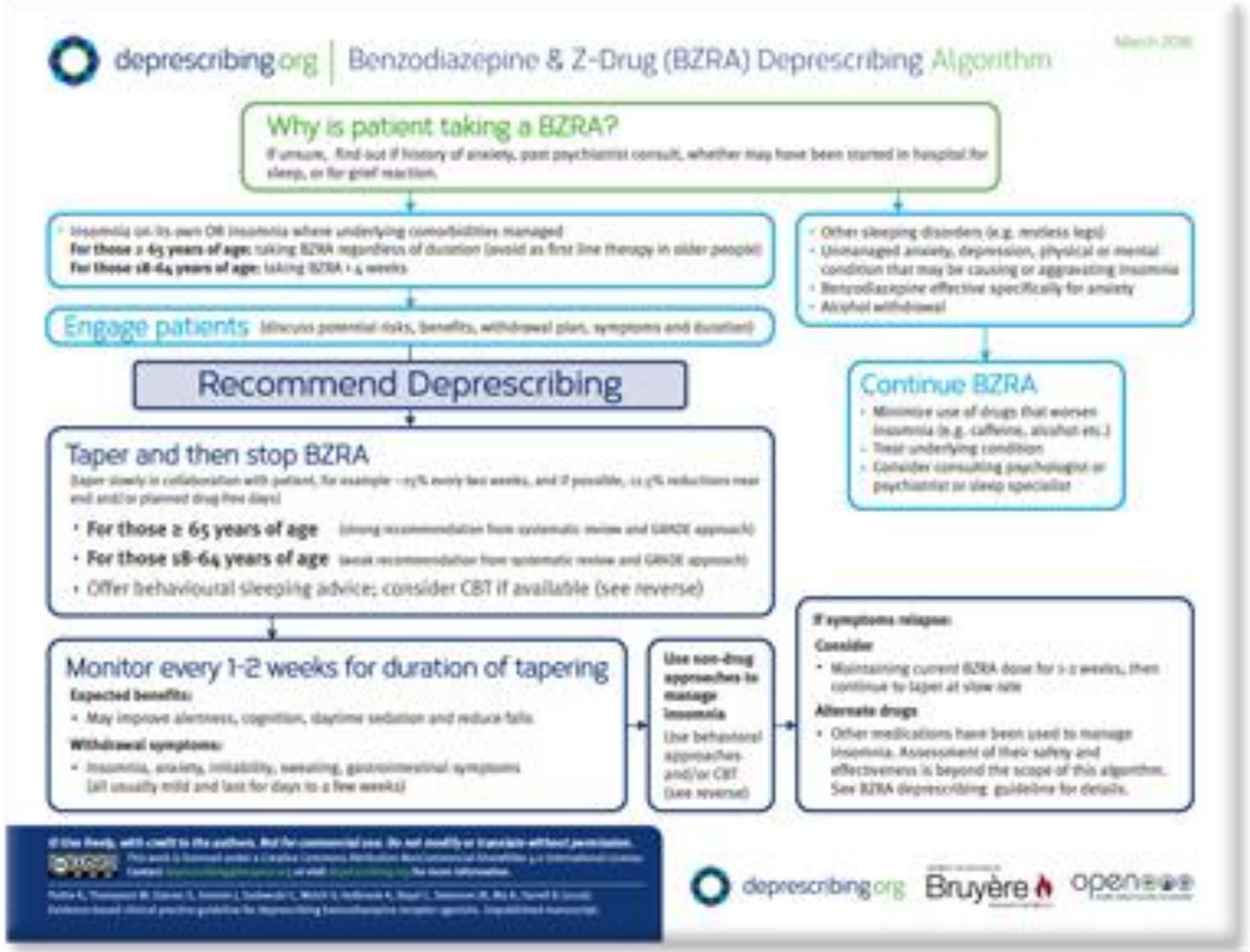
- Step 5: Implementation
  - After a discussion of the medication risks and benefits Mr. Pantoprazapam, somewhat reluctantly, agrees to try to stop his lorazepam.
  - “Okay doctor, how am I supposed to do this because if I even miss one day I feel crappy”
  - Resource alert: www.deprescribing.org

The Case of Mr. Pantoprazapam

- Published guidelines exist for tapering benzodiazepines:

Take a few minutes to review these guidelines:

http://www.open-pharmacy-research.ca/evidence-based-deprescribing-algorithm-for-benzodiazepines



The Case of Mr. Pantoprazapam

- You review the guidelines with Mr. Pantoprazapam
- Decide on gradual taper with 25% dose reduction qWeekly
- Additionally, you provide counseling on sleep hygiene and sleep CBT (resource alert: www.sleepwellns.ca)
- You book regular follow up q2 weeks and advise Mr. P on the possible withdrawal effects including: rebound insomnia, tremor, anxiety, as well as more serious but rare possibilities including seizure and hallucinations and delirium
- He leaves feeling cautiously optimistic “after all doc, I don’t want to fall or end up in hospital because of a pill I’m taking!”

The Case of Mr. Pantoprazapam

- Three months later Mr. Pantoprazapam returns to your office
  - “I really liked getting off that medication. Are there any others I can stop taking. Ideally, I wouldn’t be taking any”
  - In consultation, you determine guidelines support a trial discontinuation of his proton pump inhibitor, which he has been taking for 3 years for uncomplicated GERD
  - “Funny, I remember when I started that it was only supposed to be for a few weeks, but it just kept getting renewed”

The Case of Mr. Pantoprazapam

- Proton Pump Inhibitors:
  - Among the most widely prescribed classes of medications worldwide
  - Est. 50% of the use of these medications is inappropriate
  - Choosing Wisely Canada: “Don’t maintain long term PPI therapy for GI symptoms without an attempt to stop/reduce PPI at least once/year in most patient (long-term therapy = > 8 weeks)
  - Risks associated with long-term PPI use: C.difficile infection, pneumonia, hip #, vitamin and mineral deficiencies (calcium, magnesium and vit B12)

The Case of Mr. Pantoprazapam

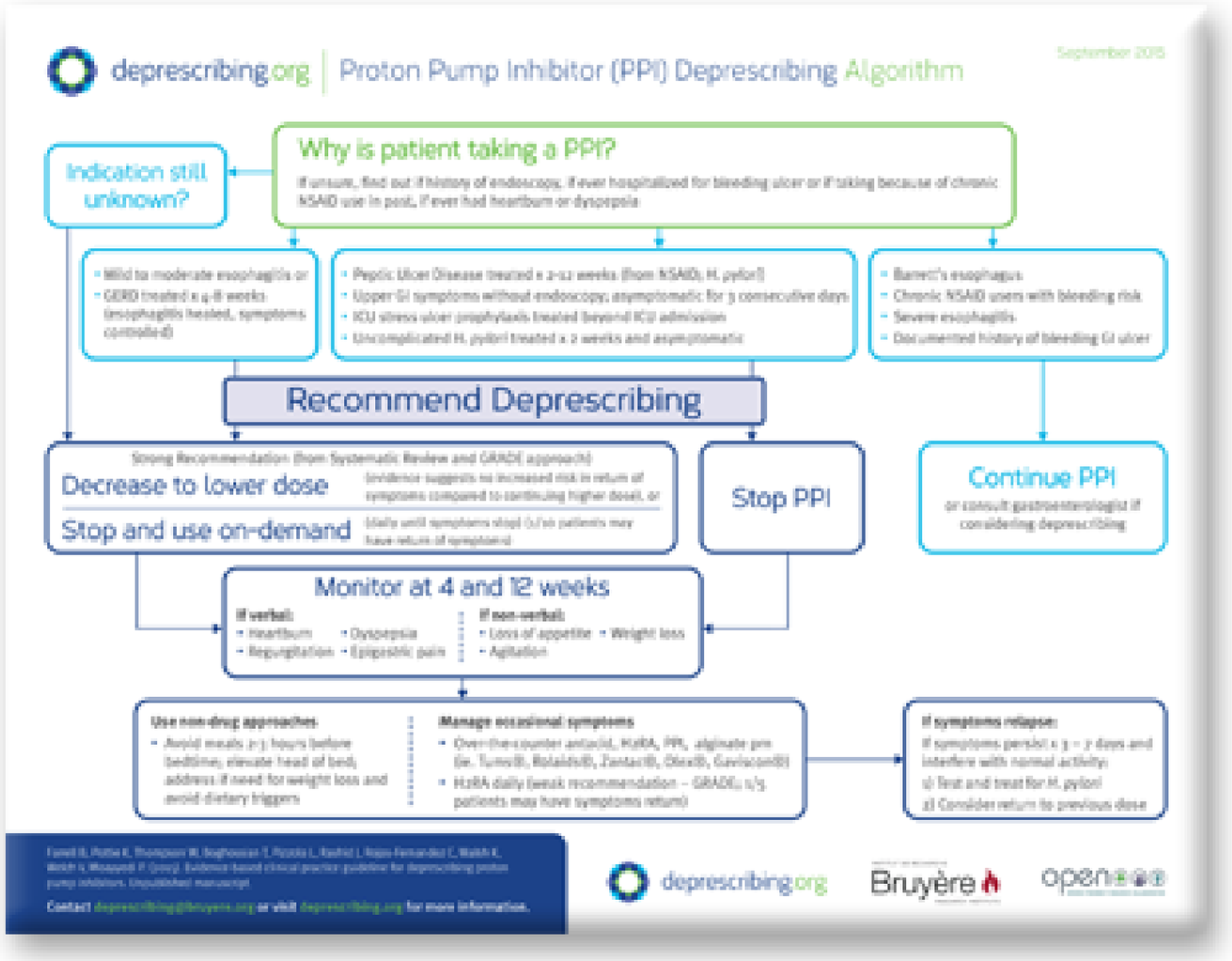
- Indications for Chronic PPI Therapy:
  - Complicated GERD (severe symptoms, erosive esophagitis, Barrett's esophagus)
  - Prevention of NSAID-induced ulcers in high risk patients (hx ulcer/GI bleed)
  - Age > 65 + use of the following medications: corticosteroids, ASA, heparin and/or clopidogrel
  - Secondary prevention of peptic ulcer disease
  - Zollinger-Ellison syndrome

The Case of Mr. Pantoprazapam

- Proton Pump Inhibitor Deprescribing Guidelines:

Take a few minutes to review these guidelines:

http://www.open-pharmacy-research.ca/evidence-based-ppi-deprescribing-algorithm



The Case of Mr. Pantoprazapam

- Mr. Pantoprazapam returns to clinic the following year:
  - "Doc, I really like that we got rid of those medications. It wasn't easy at first, but because I knew what to expect I felt supported and prepared to get it done."
  - Together, you agree on having his pharmacist conduct yearly medication reviews and alert you about medications he could/should stop and whether there are meds he isn't taking that could benefit him (resource alert: http://www.health.gov.on.ca/en/public/programs/drugs/medscheck/)

Summary and Review

- Deprescribing is a relatively new term in the medical lexicon but it is really just a component of good prescribing practices!

- Evidence shows deprescribing can be done safely and effectively and is associated with improved patient outcomes

- Many resources exist to help practitioners apply and implement a safe, systematic and step-wise approach to deprescribing

Selected References and Resources Used in Preparation of this Module

- American Geriatrics Society: http://www.americangeriatrics.org
- Choosing Wisely Canada: http://www.choosingwiselycanada.org
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