Tapering Medications – The Who, What, When, Where, Why, and How

September 30, 2017

Fredericton, New Brunswick

Zack Dumont

Clinical Support Pharmacist – RQHR Department of Pharmacy Services

Clinical Pharmacist – RxFiles Academic Detailing Program

Medication Consultant – medSask Medication Information Service

Faculty/Presenter Disclosure

- Faculty: Zack Dumont

- Current or past relationships with commercial interests
  - Advisory Board/Speakers Bureau: nil
  - Funding (Grants/Honoraria): nil
  - Research/Clinical Trials: nil
  - Speaker/Consulting Fees: nil
  - Other: nil
- Speaking Fees for current program
  - I have received no speaker's fee for this learning activity

Disclosure of Commercial Support

- This presentation has not received financial support from any organization
- This presentation has not received in-kind support from any organization

Mitigating Potential Bias

- Not applicable


Rx
FILES

Geri-RxFiles

2nd Edition

Geri-RxFiles

Assessing Medications in Older Adults

Alternatives to explore, when less may be more

www.RxFiles.ca November 2015 2nd Edition

Geri-RxFiles 2nd Edition

- A tool to support health care professionals in optimizing medication use in older adults by
  - Identifying medications that ***may be causing more harm than benefit***
  - Providing ***an approach*** to assessment of various conditions and associated medications
  - Comparing the various ***alternatives*** in order to ensure patients/residents are receiving the most appropriate treatment possible

Geri-RxFiles Development

- Critically evaluated the literature and (limited) available evidence
- Synthesized information from Beers Criteria & STOPP tools (and beyond!)
- Considered Canadian guideline recommendations
- Consulted with ***geriatricians***, ***family physicians***, ***nurses***, and ***pharmacists*** in sorting through potentially preferred options – practical experience

Geri-RxFiles 2nd Edition

- Covers 22 conditions
    - Eg, Constipation, COPD, Depression, Drug Interactions, Electrolyte Imbalance, Falls Prevention, Nutrition/Supplements, Medication Administration Challenges: “Crush List” (pg, 143)
- Other great tools
  - Eg, COPD Inhaler Technique (pg, 128)
- Incorporated the updated 2015 Beers Criteria and the updated 2014 STOPP/START Criteria

Geri-RxFiles 2nd Edition

- Table of Contents
- Therapeutic Topics

  First Section:
  - Step-wise approach to assessing a disease, including potential contributors such as other medical conditions or medications
  - Non-pharmacological options
  - Medication treatment options

  Second Section:
  - Table of potentially problematic medication used in the treatment of disease/condition
  - Indication of whether medication appears on either the Beers or STOPP Criteria, in who the medications are problematic, and other clinical concerns
- Tapering Medications

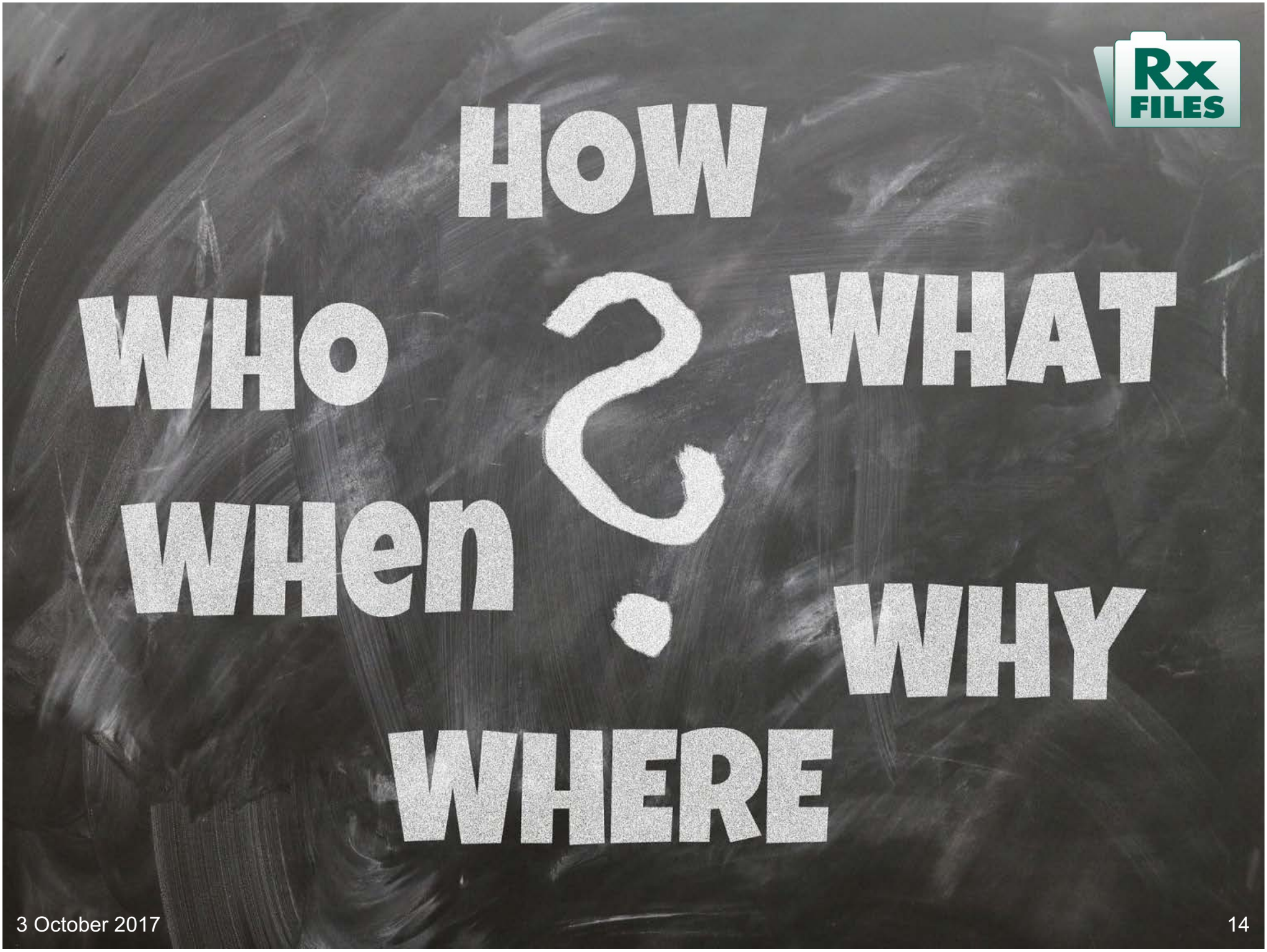
Learning Objectives

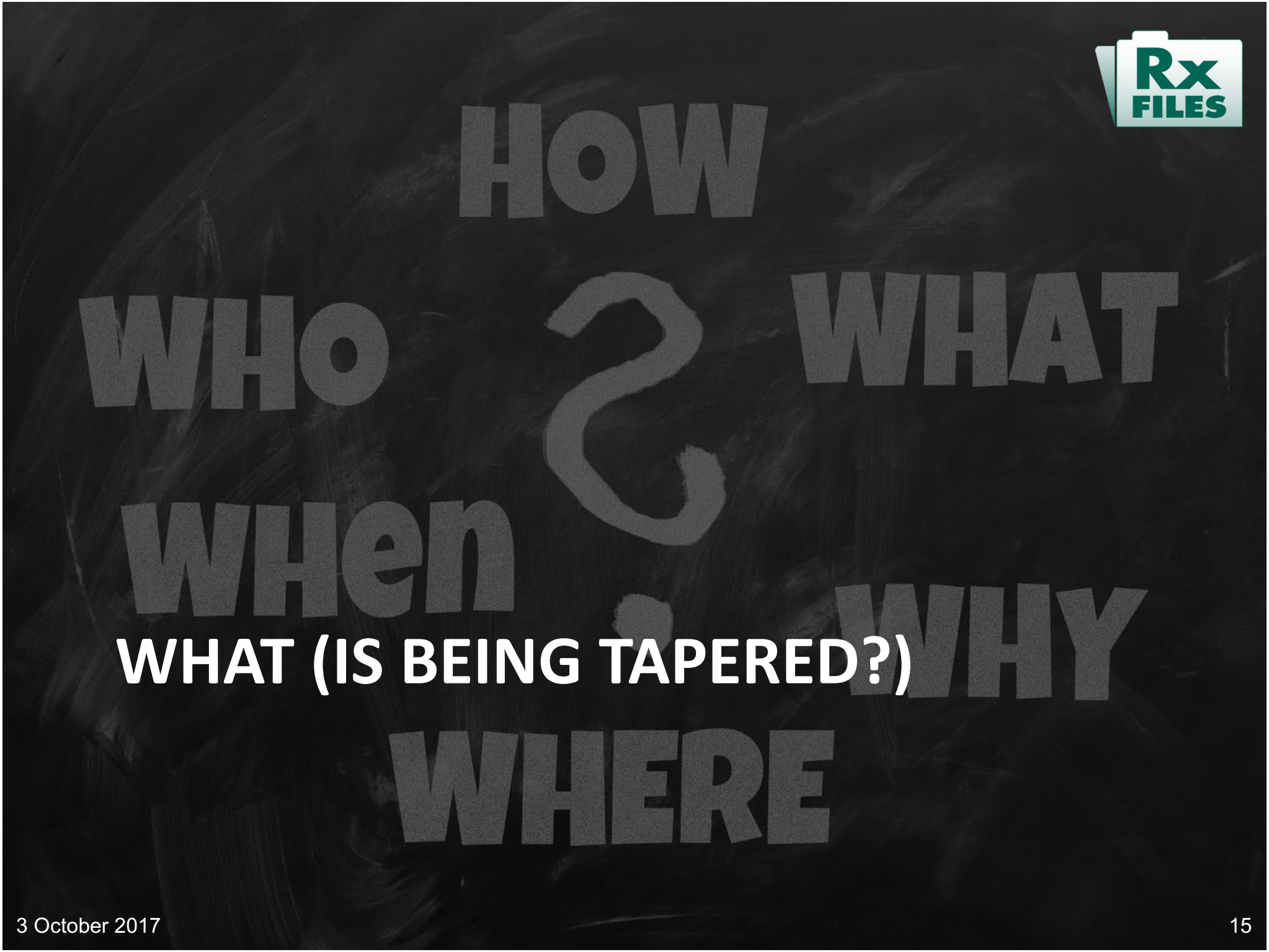
- Participants will be able to:
  - Use ***available resources*** for tapering and deprescribing medications
  - Describe situations when tapering medications is supported by ***evidence and literature***
  - Construct a plan when evidence or guidance for tapering medications is less clear

Where are we going?

- “It is an art of no little importance to administer medicines properly; but it is an art of much greater and more difficult acquisition to know when to suspend or altogether omit them.”
  - Dr Philippe Pinel
    - » 1745 to 1826

OUR GUIDE?


HOW
WHO
WHAT
WHEN
WHY
WHERE



WHAT (IS BEING TAPERED?)

What is being considered for tapering?

- Medications
  - …but not just *any* medications. Medications that…
    - …the patient has been on a ***long time***
    - …were started because the benefits outweighed the risks
    - …were probably ***started by someone else***
    - …all work in different ways, pharmacokinetically and pharmacodynamically
    - …may or may not require ***tapering***

The problem(s) with tapering

- It's hard…
  - …to know in whom, and how they will tolerate it
  - …to know why we may need to
  - …to know when
  - …to know where to start
  - …to know how

Presentation Outline

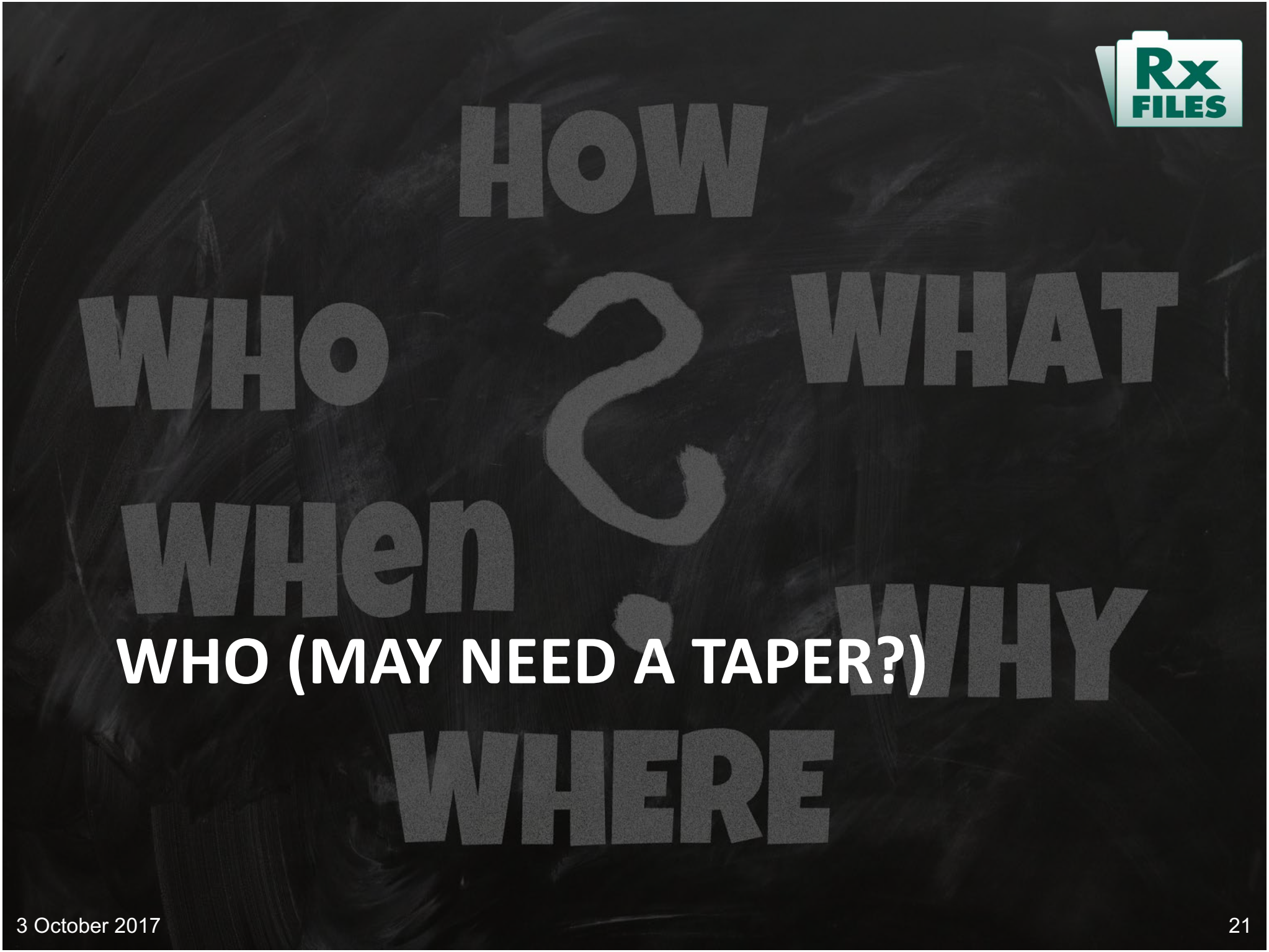
- So let's learn…
  - …to know in **whom**, and how they will tolerate it
  - …to know **why** we may need to
  - …to know **when**
  - …to know **where** to start
  - …to know **how**

- “We’ve mastered addition, now it’s time to move on to subtraction”

  – Loren Regier

Some obstacles we'll encounter

- Individuals may have an emotional attachment to their medications and ***gaining buy-in*** may be difficult
- Certain medications will ***take a long time*** to taper down
- Most (all?) prescribing tools only provide information on how ***start*** medications
- ***Evidence*** on how to taper is lacking and is largely anecdotal
  - As a result, it is considered more an ***art*** than a ***science***…



WHO (MAY NEED A TAPER?)

Who may need a taper?

- Anyone
  - Most contemporary focus is on older adults (warranted!), but many younger patients are not without need

Who may need a taper?

- Many competing priorities, so who is most likely?
  - Those with multiple comorbidities
    - Which is most likely in older adults, but is not exclusive
  - Those on many medications
  - Those who have ***not enough interaction with*** the health care system (ie, not enough follow-up or reassessment)
  - Those who have ***too much contact with*** the health care system (ie, inviting too many cooks into the kitchen)

Who may need a taper?

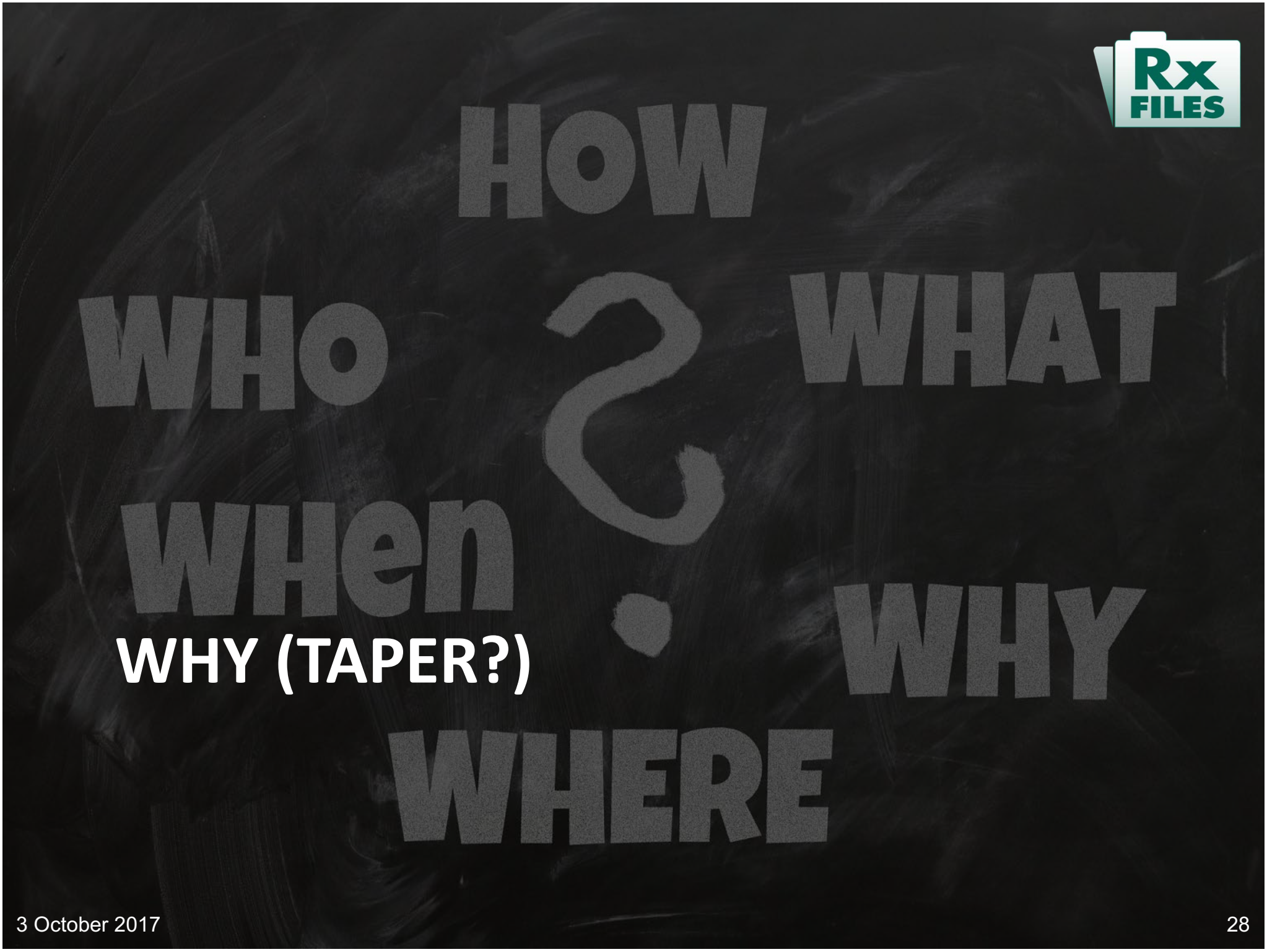
- Anyone…
  - …that is on more medications than clinically indicated, or using inappropriate medications
- Do we recognize this definition?

Who may need a taper?

- Anyone…
  - …that has, or is experiencing, ***polypharmacy***

- Definition of polypharmacy:
  - Many definitions (ie, not one standard definition)
    - Eg, Use of “multiple” medications by a patient
      - Depending on reference, “multiple” = 5 to 10
    - Eg, More medications than clinically indicated, or use of inappropriate medications

- Polypharmacy usually means…
  - …we're going to have to get rid of some drugs



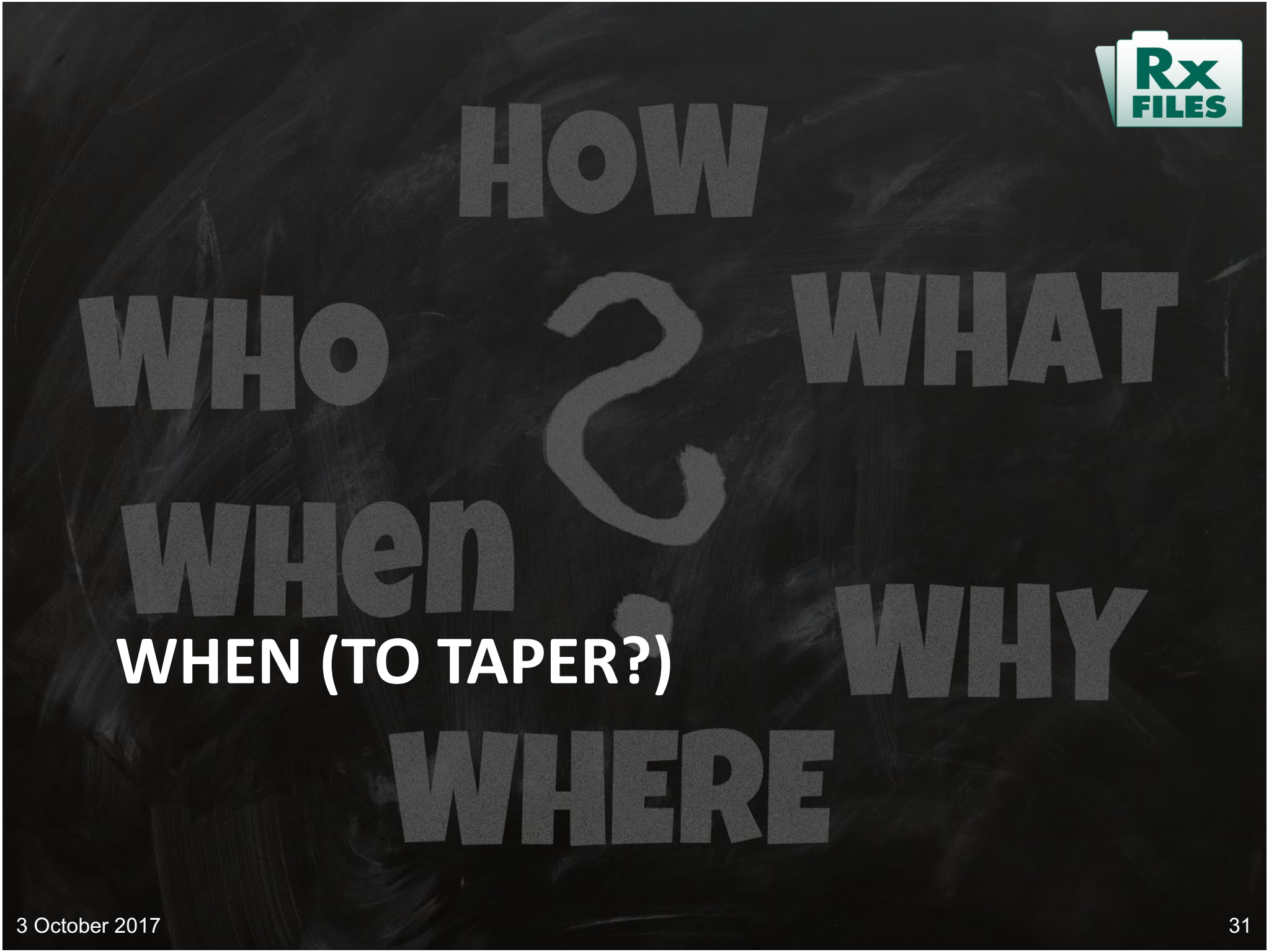
WHY (TAPER?)

Why taper?

- Many medications are associated with abrupt withdrawal reactions
  - Should be withdrawn gradually to minimize the potential of these adverse effects, unless safety concerns require a more rapid discontinuation
    - In rapid discontinuation situations, be aware of probable withdrawal effects
- The goal of tapering medications is to minimize disease ***re-occurrence*** or ***re-emergence***
  - Eg, depression when tapering an SSRI

Why taper?

- Is it to ***stop*** all potentially unnecessary medications?
  - Not necessarily…
- If the medication being tapered cannot be discontinued completely, a ***decrease in dose*** may still be considered a win!
  - One might not always be successful in completely discontinuing a medication, and that's okay



WHEN (TO TAPER?)

When to consider a taper?

- As mentioned, when stopping medications
  - …those that are ***overused***
  - …those in which the ***risks outweigh the benefits***
  - …those where ***safer alternatives*** are available

- In other words…
  - …any time you plan on *de*prescribing (or supporting another in their deprescribing efforts), you need to consider whether a taper is needed
    - Rule ***out*** a taper

When to consider a taper?

- Refresher:
  - Deprescribing is the ***planned process*** (supervised) of reducing or stopping medications that may no longer be of benefit or may be causing harm
    - The goal is to reduce medication burden or harm while improving quality of life (credit: deprescribing.org)
  - It's more than just stopping meds… it's a plan within a (care) plan

When to consider a taper?

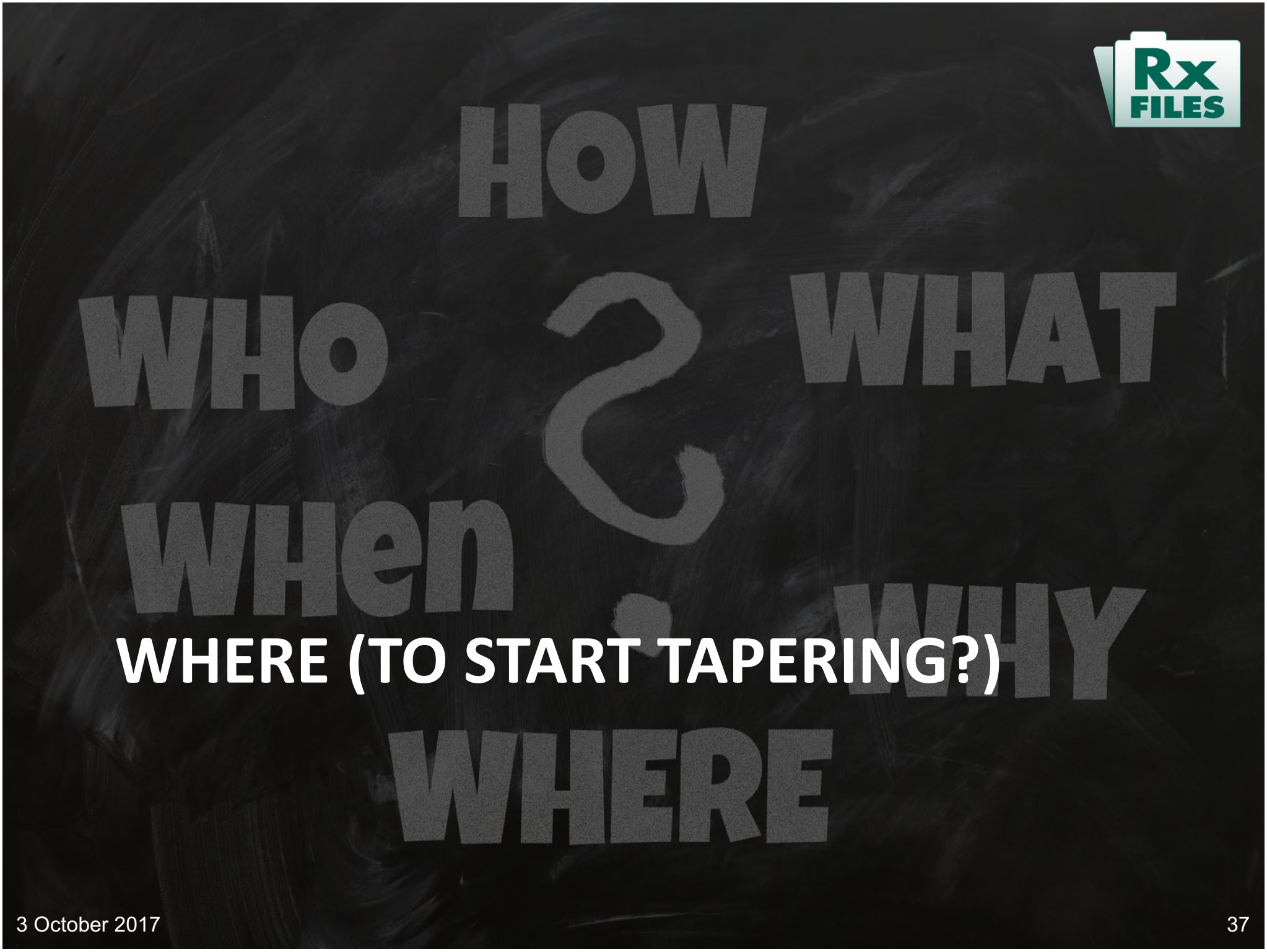
- *Overly-simplified, but still somewhat useful* rule of thumb for deciding to taper or not:
  - If a gradual dose increase (ie, titration) was required when the medication was initiated, it is reasonable to assume that the dose should be gradually decreased upon discontinuation
    - Need for titration probably correlates to a need for tapering

When to consider a taper?

- Another barrier:
  - ***Disease reconciliation***
    - Determining if a medication is still indicated = difficult when a complete medical history is not available
      - Eg, on admission to a long-term care home
  - Often, the only way to determine whether a medication is still needed or whether the dose remains appropriate is to try a taper
    - Lower the dose and monitor for improvement, stabilization, or decline
- "If in doubt, a taper is safer"
  - A practical guide to stopping medications (BPJ; Issue 27; bpac.org.nz)

When to ***NOT*** taper?

- Drug-induced toxicity
  - Just ***stop***, then make a plan
    - Questions to ask
      - Can we monitor levels?
      - Will they get withdrawal once on the ***subtherapeutic side*** of the therapeutic window?



WHERE (TO START TAPERING?)

Where to start tapering?

- Look for ***easy wins***
  - Medications with limited benefits and/or high risks of harm
    - *Eg, antipsychotics used for the behaviours of dementia, some beta-blockers, benzodiazepines, and proton pump inhibitors*
  - Medications that your patients are asking about
    - "5 Questions to ask about your medications" campaign
      - Are there any supporting tools or strategies out there for those drugs? What resources might you check? More on this shortly…

5 QUESTIONS TO ASK ABOUT YOUR MEDICATIONS

when you see your doctor, nurse, or pharmacist.

Rx FILES

1. CHANGES?

Have any medications been added, stopped or changed, and why?

2. CONTINUE?

What medications do I need to keep taking, and why?

3. PROPER USE?

How do I take my medications, and for how long?

4. MONITOR?

How will I know if my medication is working, and what side effects do I watch for?

5. FOLLOW-UP?

Do I need any tests and when do I book my next visit?

Keep your medication record up to date.

Remember to include:

- ✓ drug allergies
- ✓ vitamins and minerals
- ✓ herbal/natural products
- ✓ all medications including non-prescription products

Ask your doctor, nurse or pharmacist to review all your medications to see if any can be stopped or reduced.

ismp CANADA
Institute for Safe Medication Practices Canada
Institut pour la sécurité des médicaments aux patients du Canada

cpsi icsp
Canadian Patient Safety Institute
Institut canadien pour la sécurité des patients

Visit safemedicationuse.ca for more information.

Canadian Society of Hospital Pharmacists
Société canadienne des pharmaciens d'hôpitaux

Canadian Pharmacists Association
Association des pharmaciens du Canada

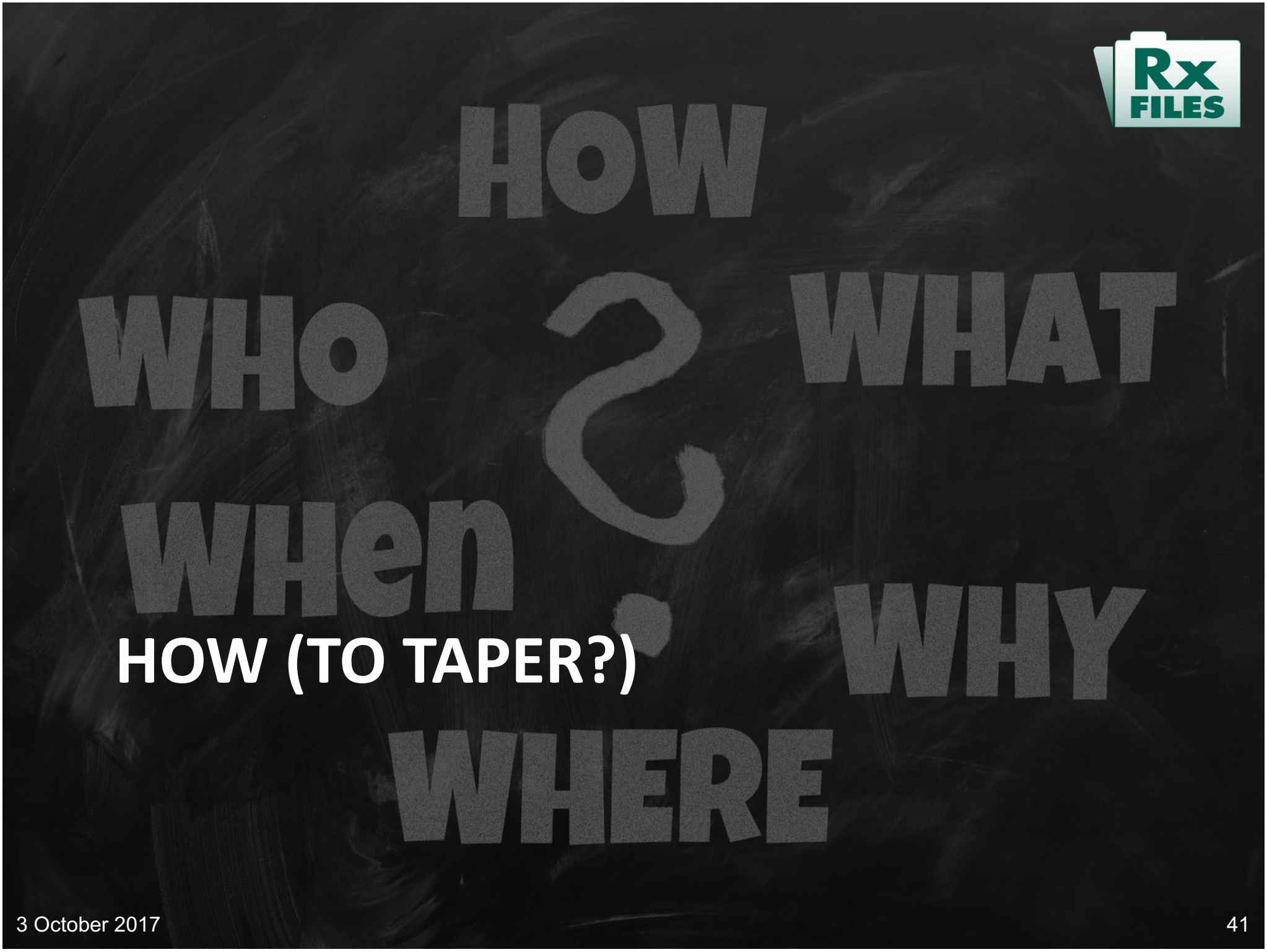
SafeMedicationUse.ca

Patients for Patient Safety Canada
Patients pour la sécurité des patients du Canada

Where to start tapering?

- Look for ***easy wins***
  - Where there is literature to support the tapering process

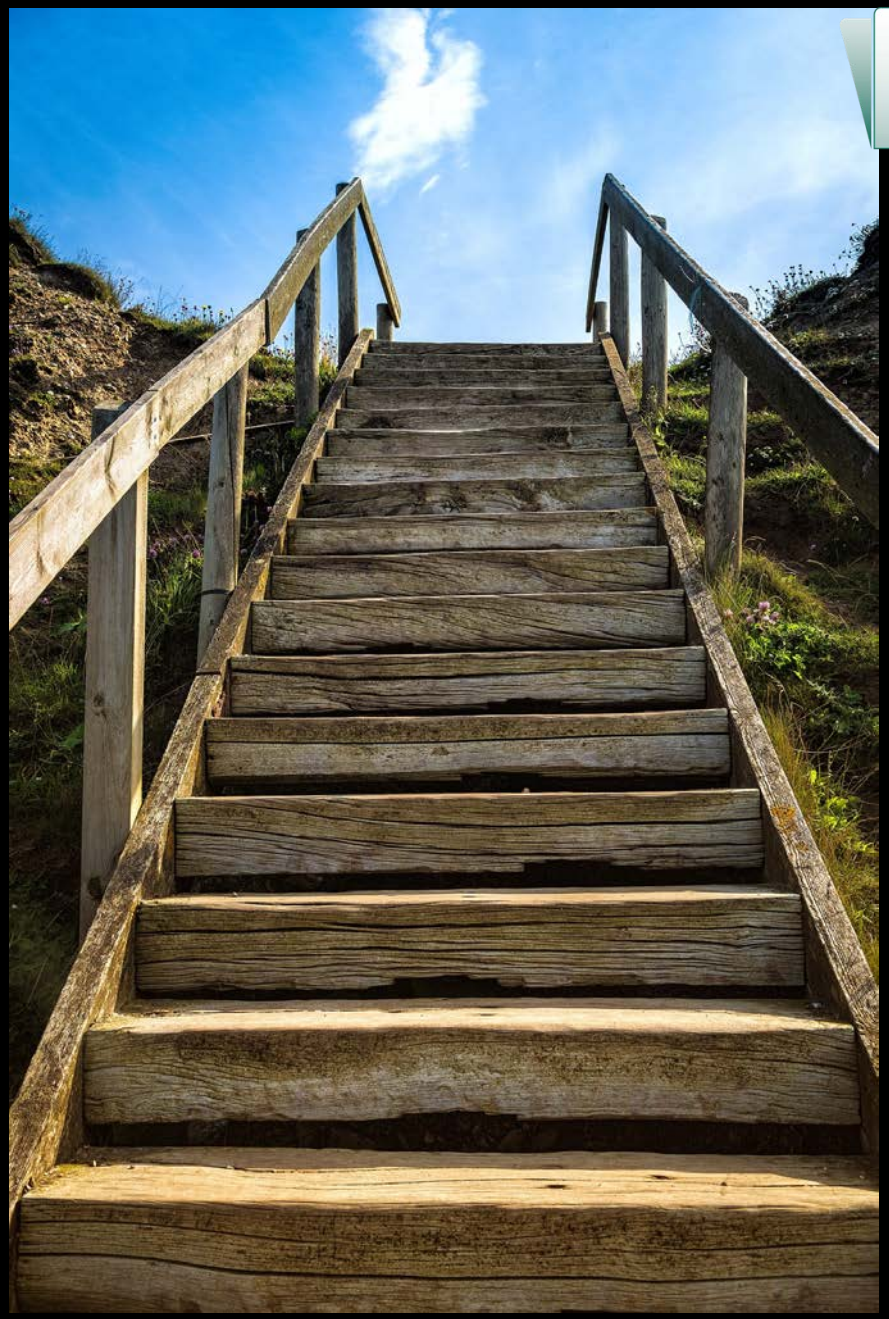
- But it's not always easy… the hard cases will come… they always do
  - We need a plan (*we're getting there… thank you for your patience*)



HOW (TO TAPER?)

How to taper?

Step 1 – identify medication(s) to be discontinued



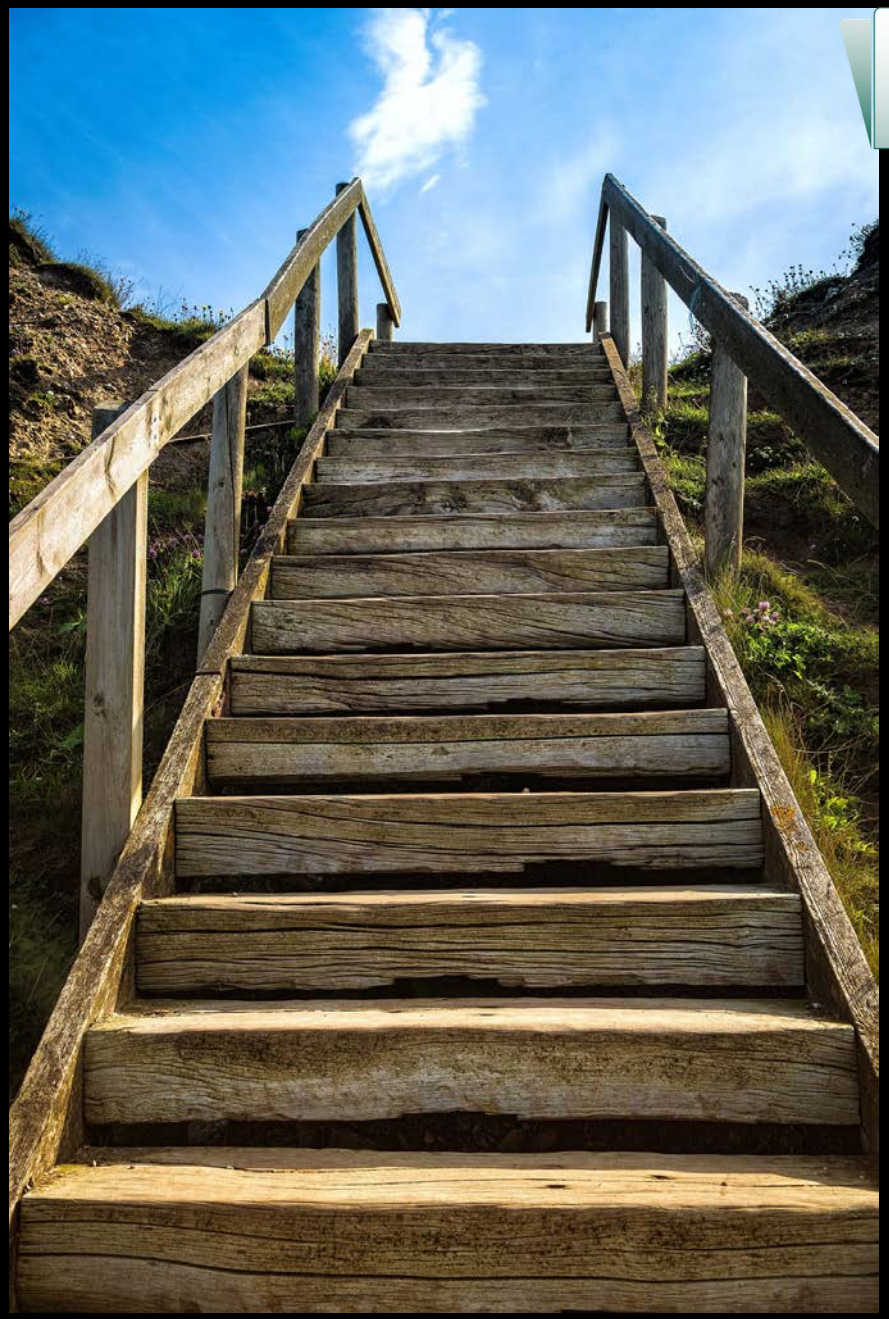
How to taper?

- As discussed, to identify the drugs to be tapered consider above (ie, what, who, when, where)
- Also consider:
  - What is this specific medication doing for this specific individual – clinically and personally?
  - Is it ***keeping the individual well*** and improving day-to-day quality of life, or is it being used for the ***prevention of illness*** in the future?

How to taper?

Step 2 – create a deprescribing plan

- *Key question:* Does the medication(s) need to be tapered? (***must rule out***)



How to taper?

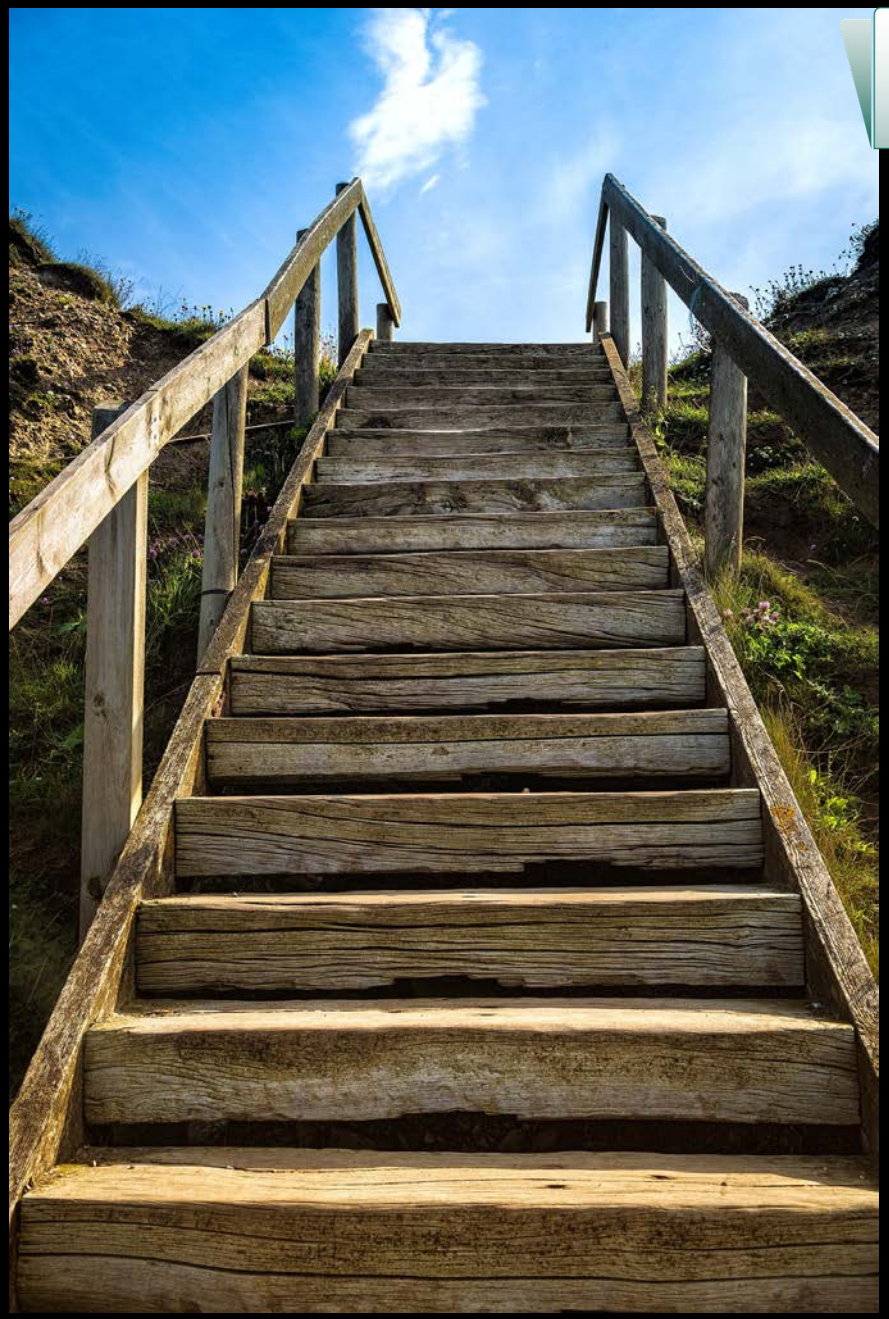
- So many factors to consider
  - The medication's half-life
  - The medication's mechanism of action
    - Are receptors involved? Could there be up-regulation/down-regulation?
    - Are biochemical pathways involved? Could compensatory mechanisms be activated? Negative feedback loops activated?
  - The (?)condition's pathophysiology
  - The (?)condition's consequence(s)
  - The patient's fragility/strength
  - The patient's goals and wishes

How to taper?

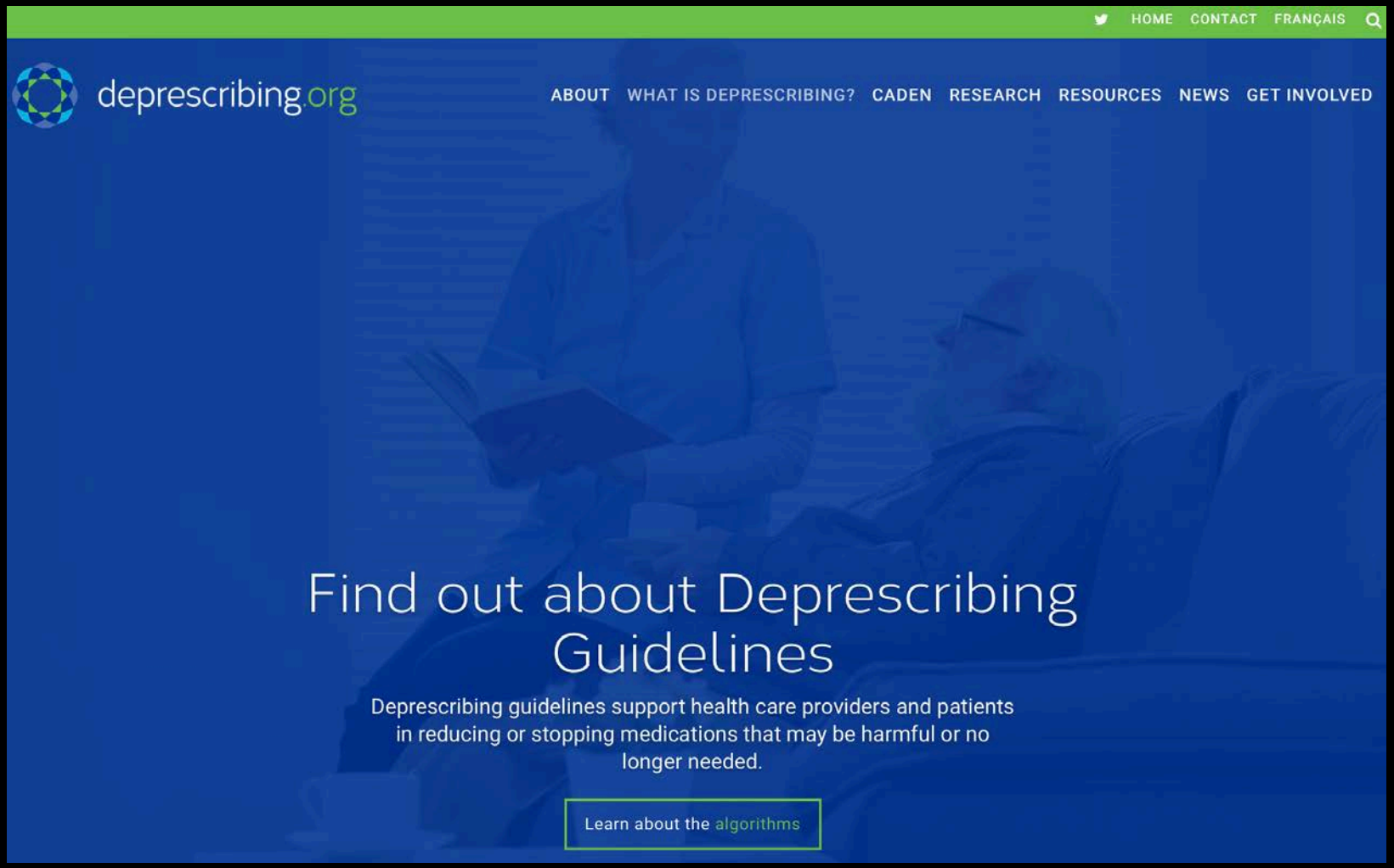
- Other factors to consider
  - Before we go creating our own plan, let's check for existing evidence/literature to support the taper
    - Deprescribing.org algorithms
    - Geri-RxFiles
    - Primary literature (potentially time-consuming)
    - (ie, step 3)

How to taper?

Step 3 – check available resources for a tapering regimen



Deprescribing.org



deprescribing.org

ABOUT WHAT IS DEPRESCRIBING? CADEN RESEARCH RESOURCES NEWS GET INVOLVED

WHAT IS DEPRESCRIBING?

Get all the facts about deprescribing

Deprescribing is the planned process of reducing or stopping medications that may no longer be of benefit or may be causing harm. The goal is to reduce medication burden or harm while improving quality of life.

Learn more

OPINIONS & FACTS

As the population ages, older Canadians are living with multiple chronic conditions. In 2012, 66% of community seniors had claims for 5 or more drug classes.

Canadian Institute for Health Information. Drug use among seniors on public drug programs, 2012. Ottawa, Ontario. May 2014.

Deprescribing.org

- Currently available deprescribing algorithms and whiteboards
  - **Proton Pump Inhibitor**
  - **Benzodiazepine** receptor agonist
  - **Antipsychotic**
  - **Antihyperglycemic**
  - *More coming*

deprescribing.org | Antihyperglycemics Deprescribing Algorithm

September 2016

Does your elderly (>65 years of age) patient with type 2 diabetes meet one or more of the following criteria:

- At risk of hypoglycemia (e.g. due to advancing age, tight glycemic control, multiple comorbidities, drug interactions, hypoglycemia history or unawareness, impaired renal function, or on sulfonylurea or insulin)
- Experiencing, or at risk of, adverse effects from antihyperglycemic
- Uncertainty of clinical benefit (due to: frailty, dementia or limited life-expectancy)

Yes → Set individualized A1C and blood glucose (BG) targets (otherwise healthy with 10+ years life expectancy, A1C < 7% appropriate; considering advancing age, frailty, comorbidities and time-to-benefit, A1C < 8.5% and BG < 12mmol/L may be acceptable; at end-of life, BG < 15mmol/L may be acceptable) (good practice recommendation)

Yes → Address potential contributors to hypoglycemia (e.g. not eating, drug interactions such as trimethoprim/sulfamethoxazole and sulfonylurea, recent cessation of drugs causing hyperglycemia – see reverse)

No → Continue Antihyperglycemic(s)

Still at risk? → **No** → Continue Antihyperglycemic(s)

Still at risk? → **Yes** → Recommend Deprescribing

Recommend Deprescribing

- **Reduce dose(s) or stop agent(s)**
  - most likely to contribute to hypoglycemia (e.g. sulfonylurea, insulin; strong recommendation from systematic review and GRADE approach) or other adverse effects (good practice recommendation)
- **Switch to an agent**
  - with lower risk of hypoglycemia (e.g. switch from glyburide to gliclazide or non-sulfonylurea; change NPH or mixed insulin to detemir or glargine insulin to reduce nocturnal hypoglycemia; strong recommendation from systematic review and GRADE approach)
- **Reduce doses**
  - of renally eliminated antihyperglycemics (e.g. metformin, sitagliptin; good practice recommendation) – See guideline for recommended dosing

Monitor daily for 1-2 weeks after each change (TZD – up to 12 weeks):

- For signs of hyperglycemia (excessive thirst or urination, fatigue)
- For signs of hypoglycemia and/or resolution of adverse effects related to antihyperglycemic(s)

Increase frequency of blood glucose monitoring if needed
A1C changes may not be seen for several months

If hypoglycemia continues and/or adverse effects do not resolve:
- Reduce dose further or try another deprescribing strategy

If symptomatic hyperglycemia or blood glucose exceeds individual target:
- Return to previous dose or consider alternate drug with lower risk of hypoglycemia

Farrell B, Black CD, Thompson W, McCarthy L, Rojas-Fernandez C, Lochnan H, Shamji S, Welch V, Bouchard M, Upshur R. 2016. Evidence-based clinical practice guideline for deprescribing antihyperglycemics. Unpublished manuscript.

deprescribing.org | Bruyère Research Institute | CIHR IRSC

3 October 2017

Geri-RxFiles

Geri-RxFiles 2nd Edition

- Table of Contents
- Therapeutic Topics

  First Section:
  - Step-wise approach to assessing a disease, including potential contributors such as other medical conditions or medications
  - Non-pharmacological options
  - Medication treatment options

  Second Section:
  - Table of potentially problematic medication used in the treatment of disease/condition
  - Indication of whether medication appears on either the Beers or STOPP Criteria, in who the medications are problematic, and other clinical concerns
- ***Tapering Medications***

Geri-RxFiles 2nd Edition

- Specific medication tapering section
  - Anticholinergics
  - Anticonvulsants
  - Antidepressants
  - Antihistamines
  - Anti-Parkinson's
  - Antipsychotics
  - Beta-blockers, clonidine
  - Benzodiazepines and 'z' drugs
  - Corticosteroids
  - Nitrates
  - Opioids
  - Proton pump inhibitors
  - *And more*

Primary Literature

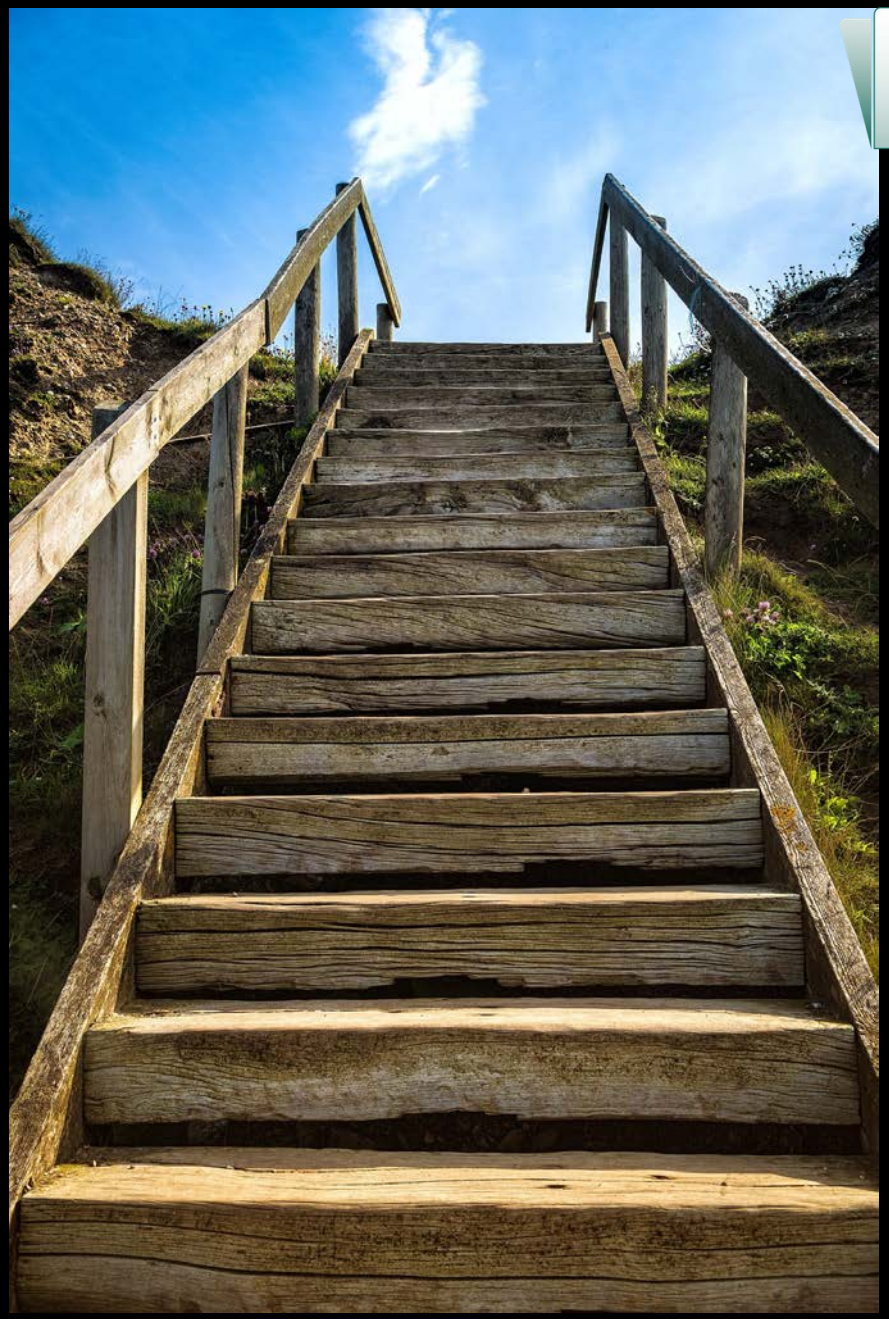
- Some does exist
  - Eg, Thompson W, Hogel M, Li Y, Thavorn K, O'Donnell D, McCarthy L, Dolovich L, Black C, Farrell B. Effect of a proton pump inhibitor deprescribing guideline on drug usage and costs in long-term care. JAMDA, 2016; 17(7), 673.e1 – 673.e4
- Can be challenging to track down for busy clinicians
  - Time permitting (ie, if no rush for the patient…), use your team
    - Eg, drug info services, librarians, etc

How to taper?

Step 4 –

if no resources exist, create a tapering regimen

(…simple, right?)



Inspirational Quote

- “The code is more what you call guidelines, than actual rules”

  -Captain Barbossa

How to taper?

- A reasonable approach to gradually discontinuing a medication = decrease the dose by 25% at weekly (or longer) intervals with close monitoring
  - A more cautious approach may be warranted in certain circumstances (eg, high dose, severe disease, long-term use, interference with the hormonal system)
  - Adjust the rate of taper based on individual factors
  - Be prepared to adjust the rate again, based on response

How to taper?

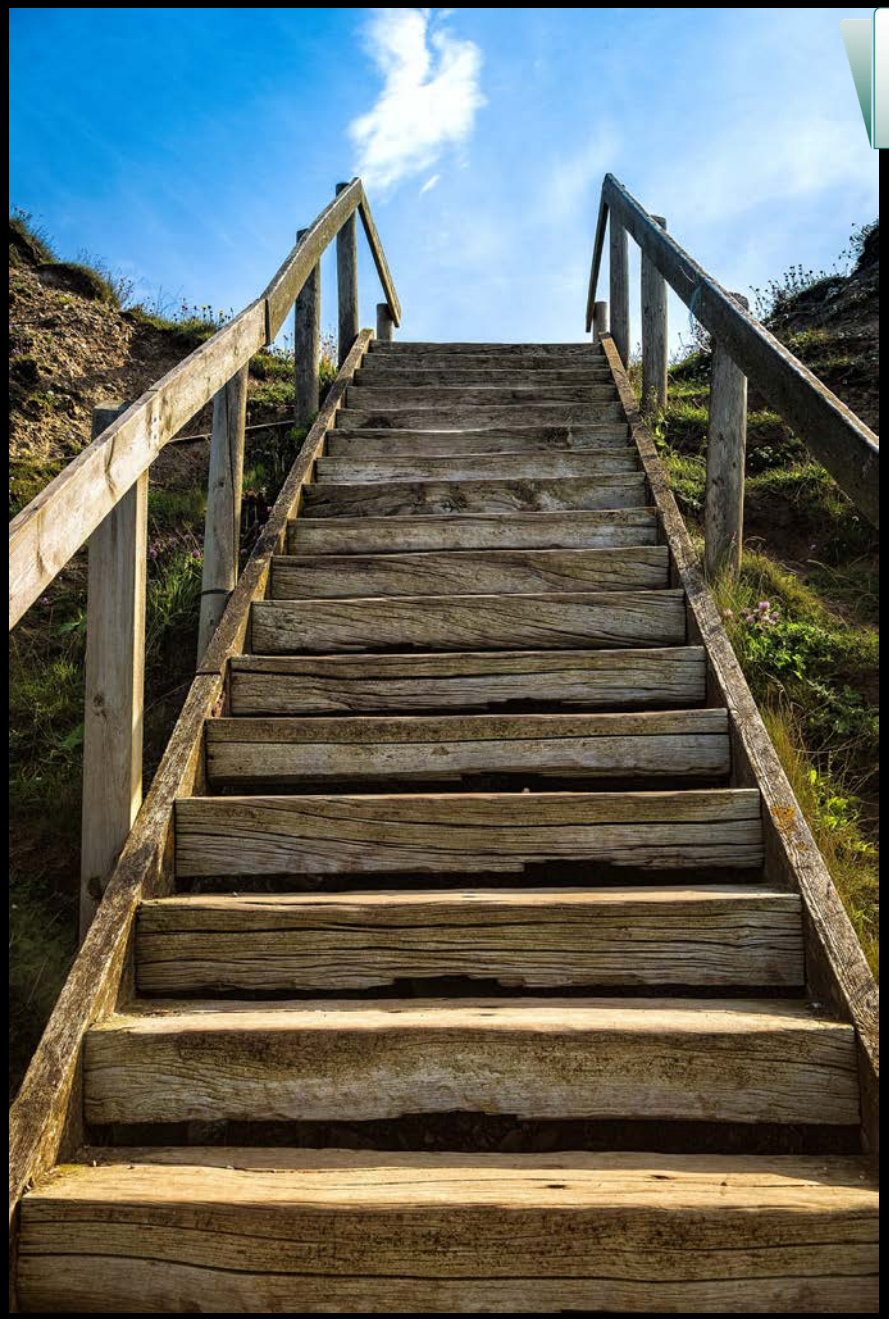
How much to ↓ dose by at the initial step of tapering	Speed	Situation to consider tapering by the corresponding amount
100% (abrupt discontinuation)	Very Fast	Drug-induced toxicity
50%	Fast	Not very concerned about withdrawal; individual is relatively healthy/vibrant
25%	Slow	Somewhat concerned about withdrawal; individual has multiple comorbidities, but is not yet very frail
5 to 10%	Very Slow	Concerned about withdrawal; individual is quite ill or frail

How to taper?

- Set expectations
  - Time required for the total tapering process and resultant discontinuation
    - Defining a ***FAST*** vs a ***SLOW*** taper:
      - ***Fast***: 2 to 4 weeks to complete
      - ***Slow***: 3 to 6 months to complete
        - » Eg, estrogens
      - ***Very Slow***: 1 to 2 years
        - » Eg, benzodiazepines, very long-term opioids

How to taper?

Step 5 – implement the taper



How to taper?

- When implementing a taper (even when implementing known tapering regimens), consider factors that may alter the approach:
  - ***Urgency***/reason for taper
  - ***Dose*** of medication
  - ***Duration*** of use
  - ***Indication*** for use and benefit received
  - ***Patient factors*** (eg, age, comorbidities, concomitant medications, prescribing cascades, adherence, consequences of potential withdrawal symptoms, patient's wishes)
  - Dosage ***forms/strengths*** available to facilitate taper

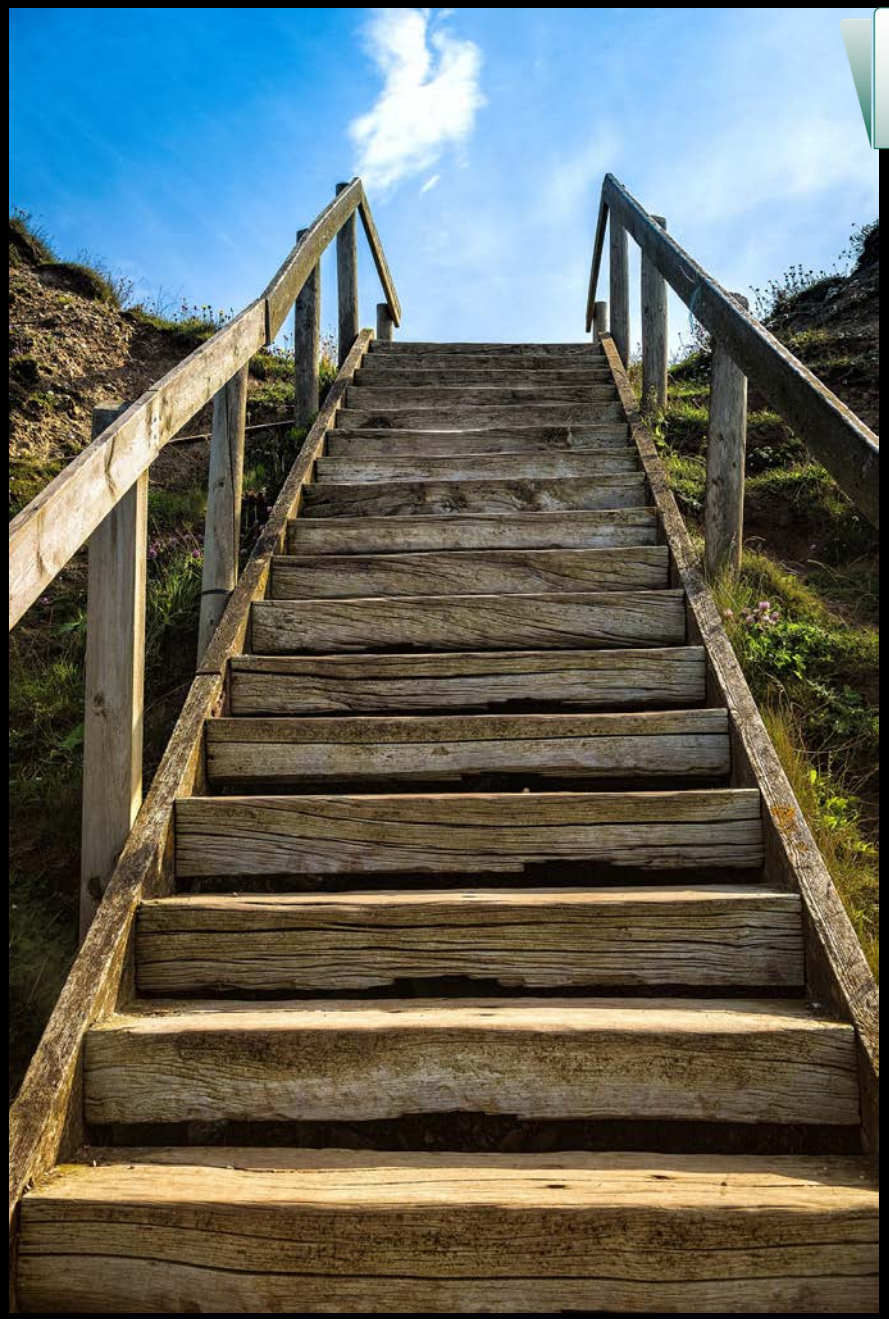
How to taper?

- If multiple medications are to be discontinued
  - Taper ***one medication at a time*** (if possible)
    - It will be easier to identify the likely cause if withdrawal reactions do occur

How to taper?

Step 6 – monitor and reassess, adjust if needed

PDSA!



Monitoring & Follow-up

- Pharmacists can provide leadership
  - ***Educate patients and caregivers*** about any symptoms for which they should contact their prescriber or seek emergency treatment
  - Reassure and offer ***symptom management*** options for other symptoms
  - Slow down (or restart the medication) ***if withdrawal symptoms*** or symptoms of the condition being treated occur during the tapering process
    - Resume the previous dose and consider a more gradual taper

- Might sound complicated… but it doesn't have to be
- And…

There is hope

There is hope

- Evidence for safety and cost-effectiveness is mounting
  - Eg, EMPOWER study (benzodiazepines) – CIHR
    - Testing the intervention
    - P: 144 patients
    - I: provided with brochure (info on risk, how-to stop, etc)
    - O: 45.1% perceived increased risk after intervention

Martin P, Ahmed S, Tamblyn R, Tannenbaum C. A drug education tool developed for older adults changes knowledge, beliefs and risk perceptions about inappropriate benzodiazepines in the elderly. Patient Educ Couns. 2013; 92(1):81-7.
Tannenbaum C, Martin P, Tamblyn R, Benedetti A, Ahmed S. Reduction of inappropriate benzodiazepine prescriptions among older adults through direct patient education: the EMPOWER cluster randomized trial. JAMA Intern Med. 2014; 174(6):890-8.

There is hope

- Evidence for safety and cost-effectiveness is mounting
  - Eg, EMPOWER study (benzodiazepines) – CIHR
    - The trial – Reduction of inappropriate benzodiazepine prescriptions among older adults through direct patient education: the EMPOWER cluster randomized trial
    - C: No brochure (usual care)
    - O: At 6 months ***27%*** of intervention group had stopped BZDs (vs 5% in control group); risk diff 23% (95% CI 14 to 32%)
  - In other words… more 'how-to' coming

Martin P, Ahmed S, Tamblyn R, Tannenbaum C. A drug education tool developed for older adults changes knowledge, beliefs and risk perceptions about inappropriate benzodiazepines in the elderly. Patient Educ Couns. 2013; 92(1):81-7.
Tannenbaum C, Martin P, Tamblyn R, Benedetti A, Ahmed S. Reduction of inappropriate benzodiazepine prescriptions among older adults through direct patient education: the EMPOWER cluster randomized trial. JAMA Intern Med. 2014; 174(6):890-8.

You May Be at Risk

You are taking one of the following sedative-hypnotic medications:

- ◯ Alprazolam (Xanax®)
- ◯ Chlorazepate
- ◯ Chlordiazepoxide-amitriptyline
- ◯ Clidinium-Chlordiazepoxide
- ◯ Clobazam
- ◯ Clonazepam (Rivotril®, Klonopin®)
- ◯ Diazepam (Valium®)
- ◯ Estazolam
- ◯ Flurazepam
- ◯ Loprazolam
- ◯ Lorazepam (Ativan®)
- ◯ Lormetazepam
- ◯ Nitrazepam
- ◯ Oxazepam (Serax®)
- ◯ Quazepam
- ◯ Temazepam (Restoril®)
- ◯ Triazolam (Halcion®)
- ◯ Eszopiclone (Lunesta®)
- ◯ Zaleplon (Sonata®)
- ◯ Zolpidem (Ambien®, Intermezzo®, Edluar®, Sublinox®, Zolpimist®)
- ◯ Zopiclone (Imovane®, Rhovane®)

CIHR IRSC

iugm Institut universitaire de gériatrie de Montréal

Affiliated with Université de Montréal

Michel Saucier Chair in Pharmacy, Health & Aging
La Chaire pharmaceutique Michel-Saucier en santé et vieillissement

CaDeN Canadian Deprescribing Network

QUIZ

SEDATIVE-HYPNOTIC DRUGS

1. The medication I am taking is a mild tranquilizer that is safe when taken for long periods of time. ◯ TRUE ◯ FALSE

2. The dose that I am taking causes no side effects. ◯ TRUE ◯ FALSE

3. Without this medication I will be unable to sleep or will experience unwanted anxiety. ◯ TRUE ◯ FALSE

4. This medication is the best available option to treat my symptoms. ◯ TRUE ◯ FALSE

ALTERNATIVES

If you are taking this sedative-hypnotic drug to help reduce your anxiety:

There are other solutions to deal with your stress and anxiety.

- Talking to a therapist is a good way to help you work out stressful situations and talk about what makes you anxious.
- Support groups help to relieve your stress and make you feel you are not alone.
- Try relaxation techniques like stretching, yoga, massage, meditation or tai chi that can help relieve you of everyday stress and help you work through your anxiety.
- Talk to your doctor about other anti-anxiety medications that have less serious side effects.

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	½	1	1	1	½	1	1	
3 and 4	½	1	½	½	1	½	½	
5 and 6	½	½	½	½	½	½	½	
7 and 8	½	¼	½	½	¼	½	½	
9 and 10	½	¼	½	¼	½	¼	½	
11 and 12	¼	¼	½	¼	¼	½	¼	
13 and 14	¼	¼	¼	¼	¼	¼	¼	
15 and 16	✕	¼	✕	✕	¼	✕	¼	
17 and 18	✕	✕	✕	✕	✕	✕	✕	

EXPLANATIONS

1 Full dose ½ Half dose ¼ Quarter of a dose ✕ No dose

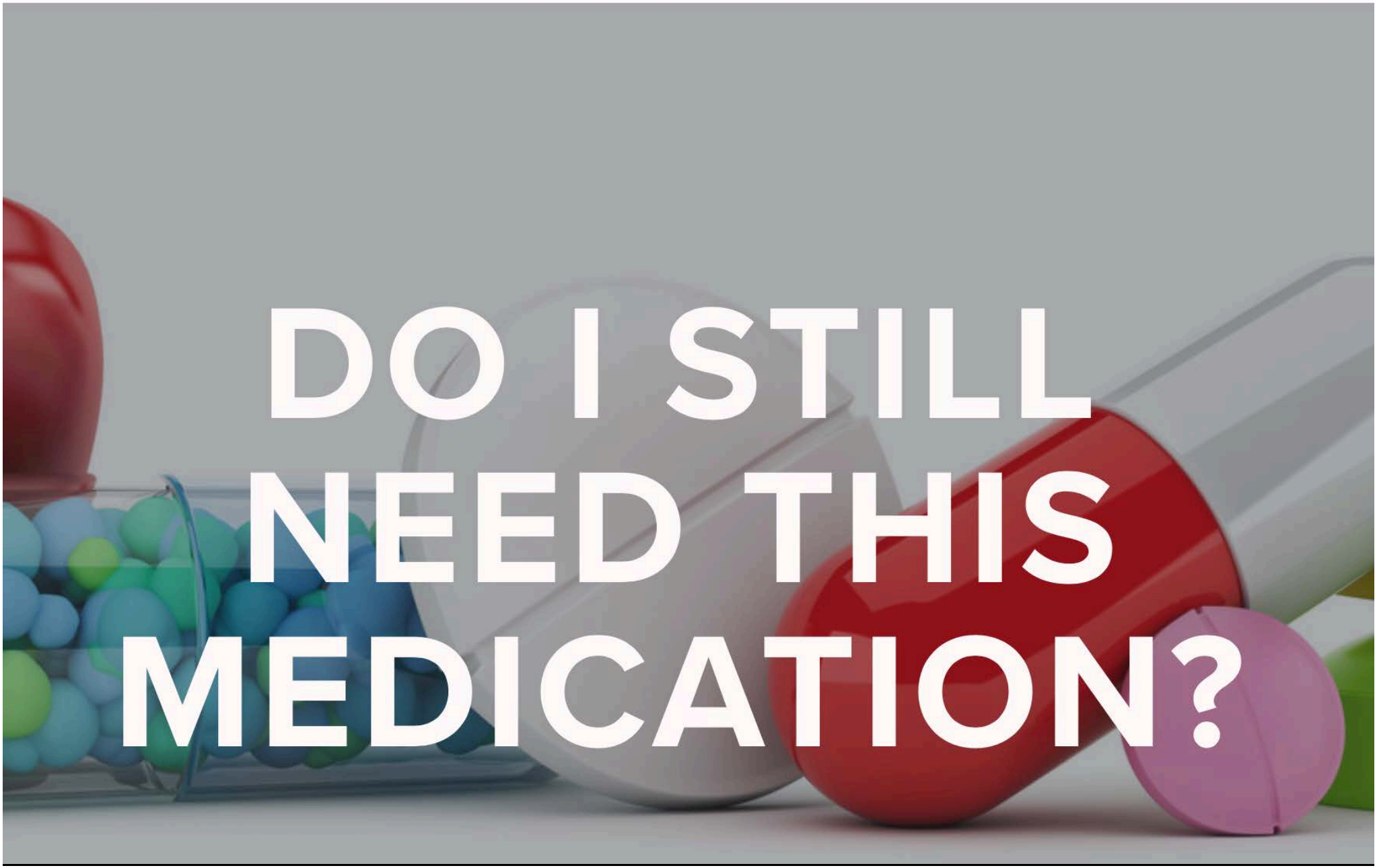
There is hope

- D-PRESCRIBE trial coming (expected in 2017)
- The Canadian Primary Care Sentinel Surveillance Network Seniors Deprescribing Trial (expected in 2018)
- Geriatric pharmacoeconomics (ongoing studies)
- CaDeN – Canadian Deprescribing Network
  - Members represent a wide range of perspectives related to deprescribing, including patient advocates, health care professionals, academic researchers, and other health care leaders with experience in the pharmaceutical field

Canadian Deprescribing Network

Réseau canadien pour la déprescription

FRANÇAIS ENGLISH



DO I STILL NEED THIS MEDICATION?


Rx
FILES
CASES

Case 1 (Quick)

- Heart Function Clinic (ambulatory)
  - SH, 68 year old female, low ejection fraction (EF) heart failure
  - Referred to clinic during recent hospital admission
  - PMHx: CHF (EF 23%), HTN
    - Blood pressure (BP) today = 105/61

Current Medications:

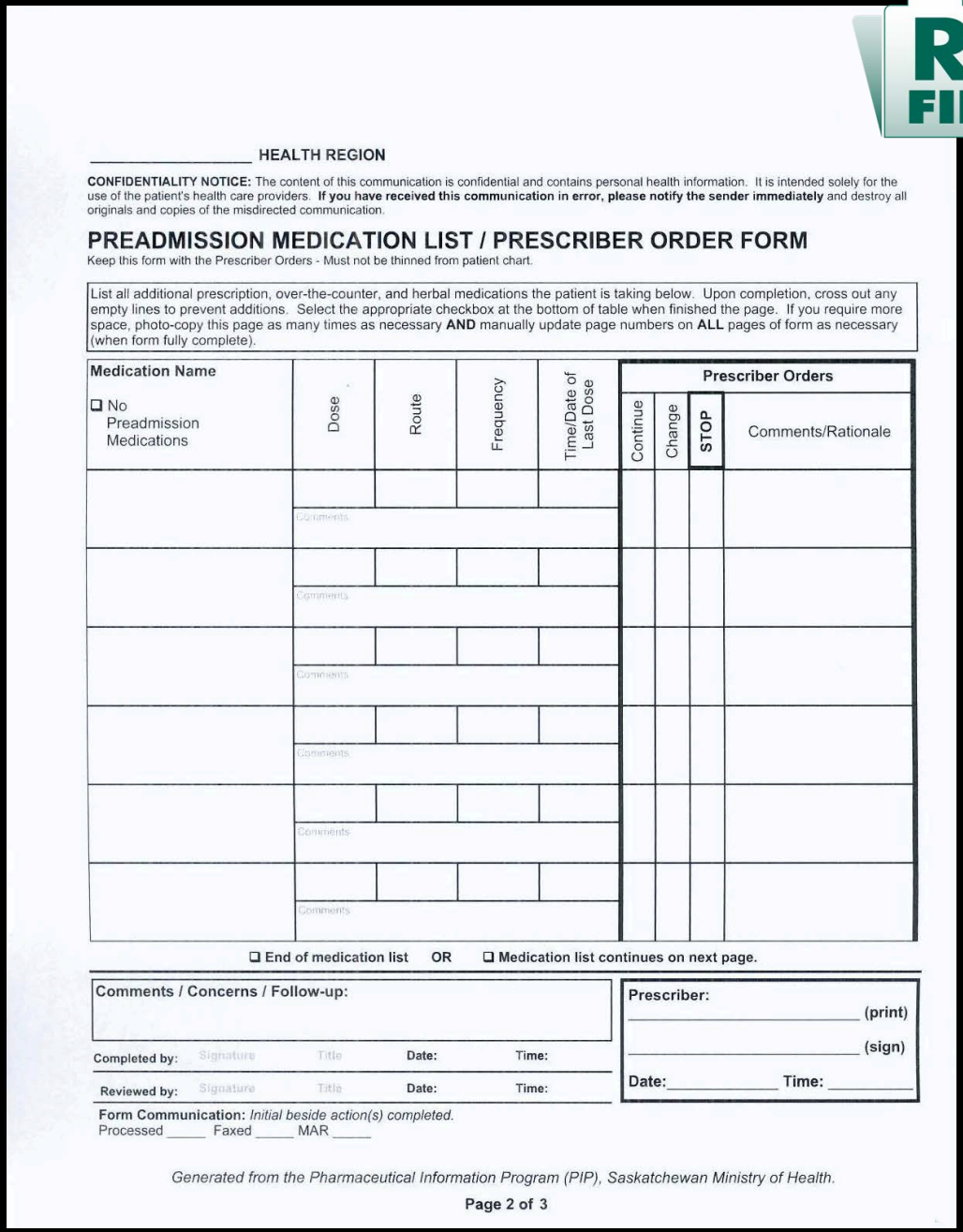
Ramipril 10 mg po daily

Metoprolol 50 mg po BID

Furosemide 40 mg po BID

Diltiazem 120 mg (SR) po daily

Atorvastatin 40 mg po HS



_____ HEALTH REGION

CONFIDENTIALITY NOTICE: The content of this communication is confidential and contains personal health information. It is intended solely for the use of the patient's health care providers. **If you have received this communication in error, please notify the sender immediately** and destroy all originals and copies of the misdirected communication.

PREADMISSION MEDICATION LIST / PRESCRIBER ORDER FORM

Keep this form with the Prescriber Orders - Must not be thinned from patient chart.

List all additional prescription, over-the-counter, and herbal medications the patient is taking below. Upon completion, cross out any empty lines to prevent additions. Select the appropriate checkbox at the bottom of table when finished the page. If you require more space, photo-copy this page as many times as necessary **AND** manually update page numbers on **ALL** pages of form as necessary (when form fully complete).

Medication Name ☐ No Preadmission Medications	Dose	Route	Frequency	Time/Date of Last Dose	Prescriber Orders: Continue	Change	STOP	Comments/Rationale
	Comments							
	Comments							
	Comments							
	Comments							
	Comments							
	Comments							

☐ End of medication list OR ☐ Medication list continues on next page.

Comments / Concerns / Follow-up:

Completed by: Signature Title **Date:** **Time:**

Reviewed by: Signature Title **Date:** **Time:**

Prescriber:
_____ (print)
_____ (sign)
Date:_____ **Time:** _____

Form Communication: *Initial beside action(s) completed.*
Processed _____ Faxed _____ MAR _____

Generated from the Pharmaceutical Information Program (PIP), Saskatchewan Ministry of Health.

Page 2 of 3

SH

PMHx: CHF (EF 23%), HTN

Current Medications:

Ramipril 10 mg po daily

Metoprolol 50 mg po BID

Furosemide 40 mg po BID

Diltiazem 120 mg (SR) po daily

Atorvastatin 40 mg po HS

- If you were to make any changes to SH's medications (ie, deprescribe), what would they be?
- How would you prioritize these medication changes?

Diltiazem in Low EF Heart Failure

- Worsens heart failure (can lead to conduction abnormalities and heart block)
  - ***Contraindicated***
- What would you do? Taper required?
  - We stopped it cold turkey – no taper
  - Rationale:
    - 1) potentially toxic drug
    - Not to mention: no simple tapering regimen
      - 120 mg is lowest slow-release dose (would need to switch to 60 mg po BID, but… see 1
    - 2) patient was able to monitor BP and HR at home
    - 3) it was preventing us from going up in other EBM therapies (eg, metoprolol was not optimized)

Case 2

- Falls Assessment Clinic
  - DT, 78-year-old male, previous hip fracture secondary to fall
    - Having difficulty at home; moved in with daughter's family 1 month ago
  - PMHx: Multiple falls (hip # 3 months ago) – has cane to ambulate, but doesn't like to use, osteoporosis, migraine, hypertension, COPD, insomnia
  - Social history: EtOH (1 glass wine weekly on Sundays)
  - Smoking: ex-smoker (quit age 37)
  - Drug use: no illicit drug use

Adapted from: J. Lake, PHM652 – Primary Care, University of Toronto

Current Medications: (blister-packed by community pharmacy)

Nitrazepam 10 mg po qHS + 10 mg po qHS prn if doesn't sleep

Hydrochlorothiazide 25 mg po daily

Perindopril 8 mg po BID

Amlodipine 10 mg po daily

Propranolol 40 mg po BID

Atorvastatin 40 mg po daily

Risedronate 35 mg po weekly

Calcium 500 mg po daily

Vitamin D 1000 units po daily

Acetaminophen 1 g po 30minutes before PT + 1 g po after PT if needed

Sennosides 8.6 mg 2 tabs po qHS prn

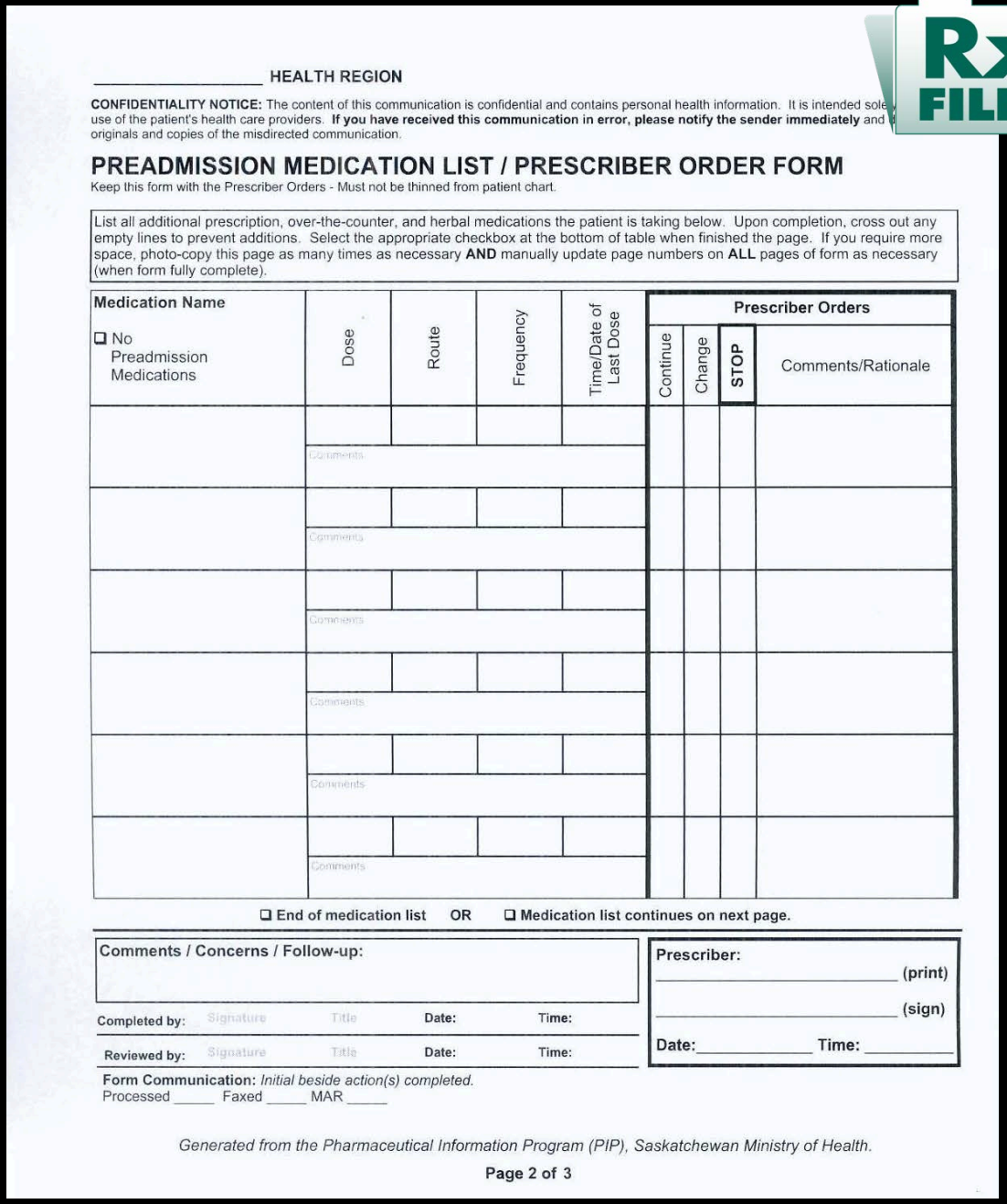
Docusate 100 mg po BID

Vitamin B12 1 mg sub-q monthly

Advair 500 Diskus 1 puff BID

Tiotropium 18 mcg daily

Salbutamol 2 puffs prn



_____ HEALTH REGION

CONFIDENTIALITY NOTICE: The content of this communication is confidential and contains personal health information. It is intended sole use of the patient's health care providers. **If you have received this communication in error, please notify the sender immediately** and originals and copies of the misdirected communication.

PREADMISSION MEDICATION LIST / PRESCRIBER ORDER FORM

Keep this form with the Prescriber Orders - Must not be thinned from patient chart.

List all additional prescription, over-the-counter, and herbal medications the patient is taking below. Upon completion, cross out any empty lines to prevent additions. Select the appropriate checkbox at the bottom of table when finished the page. If you require more space, photo-copy this page as many times as necessary **AND** manually update page numbers on **ALL** pages of form as necessary (when form fully complete).

Medication Name ☐ No Preadmission Medications	Dose	Route	Frequency	Time/Date of Last Dose	Prescriber Orders: Continue	Change	STOP	Comments/Rationale
	Comments							
	Comments							
	Comments							
	Comments							
	Comments							
	Comments							

☐ End of medication list OR ☐ Medication list continues on next page.

Comments / Concerns / Follow-up:

Completed by: Signature Title **Date:** **Time:**

Reviewed by: Signature Title **Date:** **Time:**

Form Communication: *Initial beside action(s) completed.*
Processed _____ Faxed _____ MAR _____

Prescriber:
_____ (print)
_____ (sign)
Date:_____ **Time:** _____

Generated from the Pharmaceutical Information Program (PIP), Saskatchewan Ministry of Health.

Page 2 of 3

Vitals:

	Today	2 weeks ago	6 weeks ago	3 months ago
BP	102/66 (sitting – BP Tru) 84/54 (standing)	90/54 (BP Tru average of 5 readings)	98/60 (BP Tru average of 5 readings)	100/60
HR	80	98	84	90
Weight				52 kg
Height				157.5 cm

Lab Values

Lab	Range	1 week ago	Lab	Value	1 week ago
Na	135 – 145 mmol/L	136	Hemoglobin	120 – 160 g/L	129
K	3.5 – 5.5 mmol/L	3.6	Hematocrit	0.36 – 0.46	0.37
Cl	95 – 105 mmol/L	103	WBC	4.5 – 10 x 10^9/L	5.7
SCr	53 - 106 umol/L	124	Platelets	150 – 400 x 10^9/L	221
eGFR	Calculated	39ml/min	INR	≤ 1.2	1
HBA1C	0.04 – 0.059	0.077	ACR	<3mg/mmol	< 3mg/mmol
TChol	< 5.2 mmol/L	4.8	TSH	0.05 – 5 mIU/L	4.2
LDL	Calculated	1.4	Alanine Aminotransferase (ALT)	8 – 20 U/L	18
HDL	>1mmol/L (men) >1.3mmol/L (women)	1.5	Aspartate Aminotransferase (AST)	8 – 20 U/L	16
TG	< 1.7 mmol/L	1.7	Albumin	35 – 55 g/L	35

DT

DOB: 23-AUG-1936 (78 yo)

PMHx: multiple falls (hip # 3 months ago), osteoporosis, migraine, hypertension, COPD, insomnia

Current Medications: (blister-packed)

Nitrazepam 10 mg po qHS + 10 mg po qHS prn if doesn't sleep

Hydrochlorothiazide 25 mg po daily

Perindopril 8 mg po BID

Amlodipine 10 mg po daily

Propranolol 40 mg po BID

Atorvastatin 40 mg po daily

Risedronate 35 mg po weekly

Calcium 500 mg po daily

Vitamin D 1000 units po daily

Acetaminophen 1 g po 30minutes before PT + 1 g po after PT if needed

Sennosides 8.6 mg 2 tabs po qHS prn

Docusate 100 mg po BID

Vitamin B12 1 mg sub-q monthly

Advair 500 Diskus 1 puff BID

Tiotropium 18 mcg daily

Salbutamol 2 puffs prn

Chronic Illness/Disability Impacting Falls Risk:

1. Cognitive impairment – no
2. Stroke – no
3. Parkinson's disease – no
4. Insomnia – yes
   - Poor historian about sleep issues as takes nitrazepam as ordered whether difficulty falling asleep or not
   - Has been on nitrazepam x 15 yrs (since sister died in accident)
5. Cardiac disease – yes (HTN, no cardiac events)
   - BP consistently low at home, tests several times weekly and always less 100/60
   - Complaints of dizziness on standing, has fallen back into chair upon standing up to walk at home
6. COPD – no
   - Well-controlled; no AECOPD in past 24 months
   - Has not used salbutamol in more than 6 months even with PT
7. Diabetes – no
8. Visual impairment – no, but hasn't seen optometrist for 3 years
9. Osteoporosis – yes
   - Recently diagnosed at time of hip # (3 months ago) and started risedronate, calcium, vitamin D – to be reassessed in 18 months
10. Osteoarthritis – no
11. Incontinence – no
12. Acute illness – no

DT

DOB: 23-AUG-1936 (78 yo)

PMHx: multiple falls (hip # 3 months ago), osteoporosis, migraine, hypertension, COPD, insomnia

Current Medications: (blister-packed)

Nitrazepam 10 mg po qHS + 10 mg po qHS prn if doesn't sleep

Hydrochlorothiazide 25 mg po daily

Perindopril 8 mg po BID

Amlodipine 10 mg po daily

Propranolol 40 mg po BID

Atorvastatin 40 mg po daily

Risedronate 35 mg po weekly

Calcium 500 mg po daily

Vitamin D 1000 units po daily

Acetaminophen 1 g po 30minutes before PT + 1 g po after PT if needed

Sennosides 8.6 mg 2 tabs po qHS prn

Docusate 100 mg po BID

Vitamin B12 1 mg sub-q monthly

Advair 500 Diskus 1 puff BID

Tiotropium 18 mcg daily

Salbutamol 2 puffs prn

- If you were to make any changes to DT's medications (ie, deprescribe), what would they be?
- How would you prioritize these medication changes?

Nitrazepam Use (Fall Risk)

- Initially prescribed this medication 10 to 15 years ago for difficulty sleeping after his sister died in MVA
  - Takes regularly whether he has difficulty falling asleep or not; feels it works well for him as he has no difficulty falling asleep or staying asleep with use; due to it's efficacy, he has never tried any alternatives to help him sleep
- Unknown whether he takes any additional prn nitrazepam doses if he doesn't sleep
  - Unlikely as he stated that the scheduled dose works well for him
- Sometimes feels sluggish in morning
  - Admitted to feeling "hungover," not himself, or extra tired sometimes when questioned

Nitrazepam Use (Fall Risk)

- Usual sleep regimen consists of taking nitrazepam dose 30 minutes prior to sleep, reading/watching TV, then attempting sleep at 22h00 each night
- What would be a reasonable approach to stopping his nitrazepam?
  - Decrease by 25%/week x 2 weeks, then 10%/week thereafter
  - Nitrazepam 7.5 mg po qHS x 1 week, then 5 mg po qHS x 1 week, then 2.5 mg po qHS x 1 week, then 2.5 mg po qHS every other day x 1 week, then stop

Hypotension (Fall Risk)

- Patient complains of dizziness on standing, and has fallen back into chair upon standing up to walk
- Propranolol 40 mg po BID
  - Originally prescribed for migraine prophylaxis; no migraines for the past 5 to 6 years, and when he was experiencing migraines, he would have 2 to 3 migraines/year
- Patient has no history of CVD or stroke, but may have new diagnosis of diabetes (HbA1C=7.7%), though this requires further investigation
- Patient states he does not follow low salt diet for hypertension; daughter prepares meals

Hypotension (Fall Risk)

- What would be a reasonable approach to stopping/lowering his BP medications?
  - Hydrochlorothiazide 25 mg po daily – taper?
    - Probably not
  - Perindopril 8 mg po BID – taper?
    - Not usually
  - Amlodipine 10 mg po daily – taper?
    - Maybe
  - Propranolol 40 mg po BID – taper?
    - Probably – gradually taper the dose by 25 to 50% every 1 to 2 weeks

Laxative Use (Polypharmacy)

- These were initiated when he was prescribed opioids for pain management post-hip fracture 3 months ago
  - Patient is no longer taking opioids as hip pain adequately controlled; patient rates pain as 1/10 to 2/10, but 4/10 during physiotherapy sessions which he manages by taking acetaminophen
- Patient has not been taking these medications as his dietary fiber intake has increased since having his meals prepared by his daughter
- At present, patient states he normally has 1 bowel movement daily, typically soft, easy to pass, with no pain

Laxative Use (Polypharmacy)

- What would be a reasonable approach to stopping some/all of his bowel care? Taper required?
  - Probably not

Vitamin B12 Use (Polypharmacy)

- Initiated this on physician recommendation to improve his symptoms of fatigue and low energy 15 years ago after his sister died in MVA
  - Patient does not recall being diagnosed with anemia or vitamin B12 deficiency
- Most recent lab values unremarkable: hemoglobin = 129 g/L, hematocrit = 0.37 (July 28/16); MCV, vitamin B12 level not drawn/reported; no other lab data available

Vitamin B12 Use (Polypharmacy)

- What would be a reasonable approach to stopping? Taper required?
  - Probably not

CONCLUSIONS

Summary of Tapering Process

- Step 1 – identify medication(s) to be discontinued
- Step 2 – create a deprescribing plan
  - Key question: Does the medication(s) need to be tapered?
- Step 3 – check available resources for a tapering regimen
- Step 4 – if no resources exist, create a tapering regimen
- Step 5 – implement the taper
- Step 6 – monitor and reassess, adjust if needed

Learning Objectives

- Participants will be able to:
  - Use available resources for tapering and deprescribing medications
  - Describe situations when tapering medications is supported by evidence and literature
  - Construct a plan when evidence or guidance for tapering medications is less clear

References

- A practical guide to stopping medications (BPJ; Issue 27; bpac.org.nz)
- Geri-RxFiles medication tapering sections
- Deprescribing.org
- Martin P, Ahmed S, Tamblyn R, Tannenbaum C. A drug education tool developed for older adults changes knowledge, beliefs and risk perceptions about inappropriate benzodiazepines in the elderly. Patient Educ Couns. 2013; 92(1):81-7
- Tannenbaum C, Martin P, Tamblyn R, Benedetti A, Ahmed S. Reduction of inappropriate benzodiazepine prescriptions among older adults through direct patient education: the EMPOWER cluster randomized trial. JAMA Intern Med. 2014; 174(6):890-8

Questions?

Now

- Please share any
  - Questions
  - Comments
  - Musings

Later

- Contact me
  - Email: zackdumont@me.com
  - Twitter: @ZackDumontYQR
  - LinkedIn: /ZackDumont