PRINCIPLES OF SAFE MEDICATION USE AND DEPRESCRIBING FOR OLDER ADULTS

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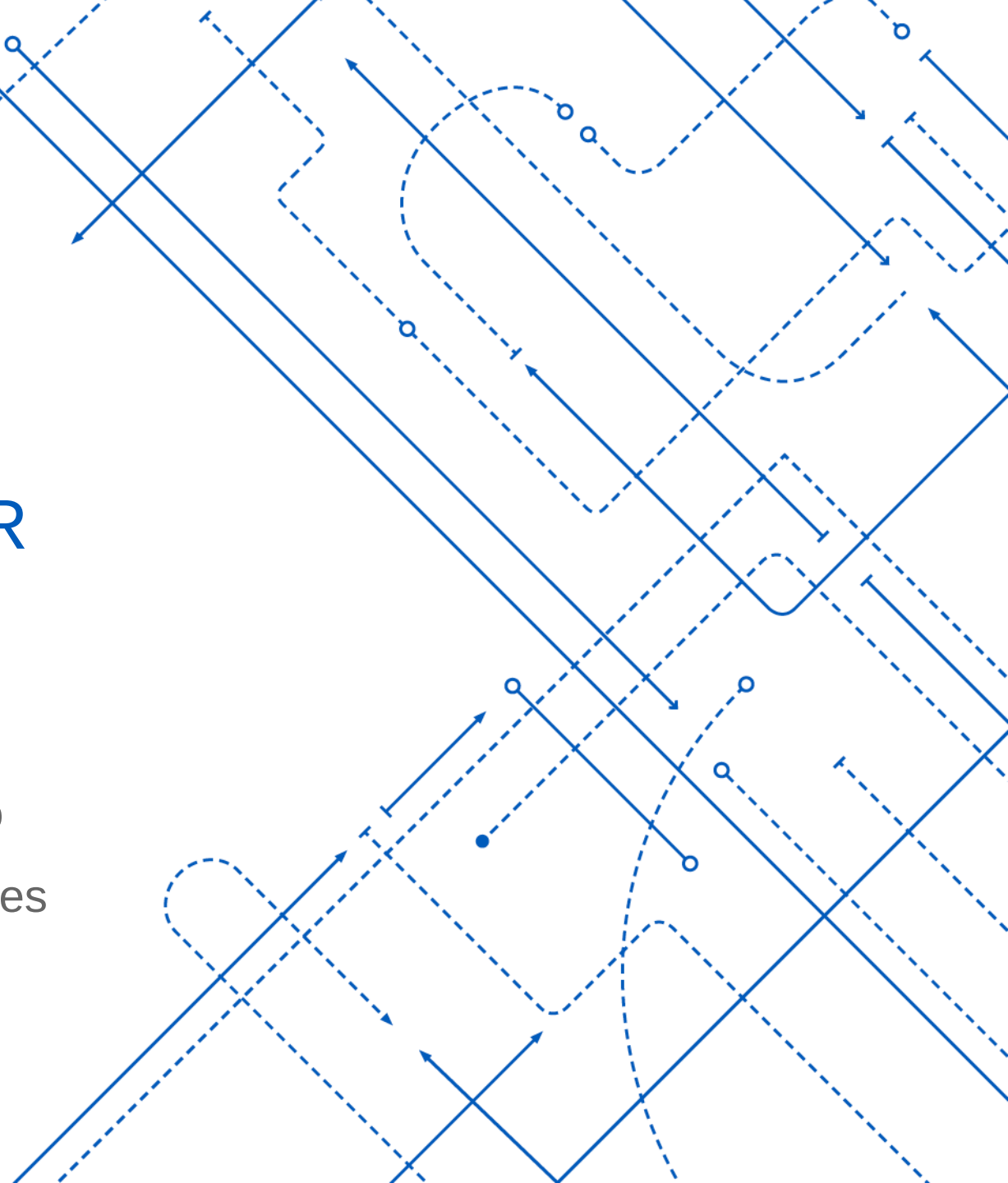
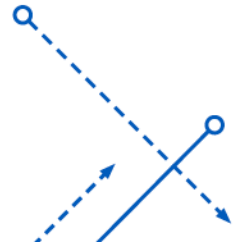


University at Buffalo The State University of New York

Relevant Financial Relationship Disclosures

- I have no relevant conflicts of interest



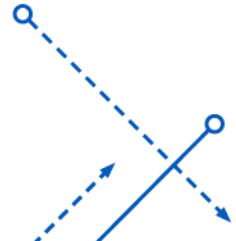
Learning Objectives

Objectives for Pharmacists:

1. Analyze available literature on the harm of inappropriate prescribing and impact of deprescribing
2. Identify available tools and resources to facilitate deprescribing
3. Develop innovative strategies to overcome common barriers to deprescribing

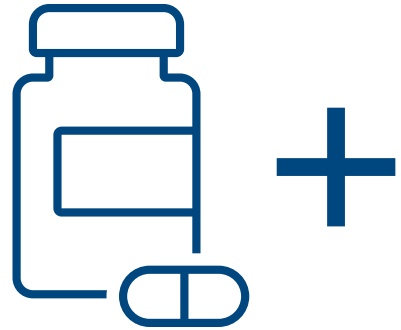
Objectives for Technicians:

1. Define potentially inappropriate medications and deprescribing
2. List recommended steps in the process of deprescribing
3. Identify tools and resources that can be used to identify potentially inappropriate medications



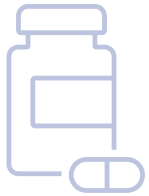
Polypharmacy

- Polypharmacy is defined as the use of multiple medications
- Definitions vary, but typically range from 5-10
- Consequences:
  - Adverse drug events
  - Drug-drug interactions
  - Cognitive impairment
  - Functional decline
  - Medication non-adherence
  - Increased healthcare cost
  - Falls



BMC Geriatrics, 2017. 17(1): p. 230-230.
Expert Opinion on Drug Safety, 2014. 13(1): 57-65.

Potentially Inappropriate Medications



Defined as medications in which the potential risks may outweigh potential benefits of use

Prevalence of the use of one or more of these medications has been reported to be over 30% of US adults over the age of 65 years

Use of these medications has been shown to be an independent risk factor for adverse drug reactions, hospitalizations, increased costs, and lower health related quality-of-life

J Am Geriatr Soc, 2015. 63(3): p. 486-500.; J Am Geriatr Soc, 2020. 68(11): p. 2542-2550.; Pharmacotherapy, 2006. 26(6): p. 768-78.; Ann Pharmacother, 2019. 53(10): p. 1005-1019.

Harms of PIMs – Healthcare Utilization

Author (year)	Study Design	Exposure	Outcomes	Results
Fillenbaum *et al*. (2004)	Retrospective cohort from Duke University Established Populations for Epidemiologic Studies of the Elderly	Beers Criteria 1997	Time to hospitalization Outpatient visit NH entry	Adj. Hazard ratio (95%CI) **1.20 (1.04, 1.39)** NS NS
Klarin *et al*. (2005)	Population-based, longitudinal cohort study within the Kungsholmen Project, Sweden, over 75 years	Beers Criteria 1997	Hospitalization Mortality	Odds ratio (95%CI) **2.72 (1.64, 4.51)** Relative Risk (95%CI) 0.93 (0.67, 1.29)
Albert *et al.* (2010)	Retrospective cohort from claims data from a single employer over 3 years	Beers Criteria 2003 NCQA	Hospitalization	Adj. Odds Ratio (95%CI) **Beers: 1.78 (1.5, 2.2)** **NCQA: 1.94 (1.7, 2.2)**
Clark *et al.* (2020)	Cross-sectional analysis of respondents age 65+ in Medical Expenditure Panel Survey 2011-2015	Beers Criteria 2019	Hospitalizations, ED visits, Outpatient visits	Adj. Incidence Rate Ratio (95%CI) **Hospitalization: 1.17 (1.08, 1.26)** **ED visit: 1.26 (1.17, 1.35)** **Outpatient: 1.18 (1.14, 1.21)**

Am J Geriatr Pharmacother, 2004. **2**(2): p. 92-101.; Drugs Aging, 2005. **22**(1): p. 69-82.; Drugs Aging, 2010. **27**(5): p. 407-15.; J Am Geriatr Soc, 2020. **68**(11): p. 2542-2550.

Harms of PIMs – Healthcare Costs

Author (year)	Study Design	Exposure	Outcomes	Results
Fick *et al*. (2001)	Retrospective cohort of a Southeastern HMO administrative claims data	Beers Criteria 1997	Costs as payments by HMO (Case vs. Control)	ANCOVA Mean (P-value) **Inpatient: 0.58 vs 0.19 (p=0.0001)** **ED: 0.36 vs 0.15 (p=0.0001)** **Outpatient: 1.73 vs 0.98 (p=0.0001)**
Feng *et al.* (2019)	Retrospective cohort study with SEER-Medicare linked data of older adults with breast, prostate, or colorectal cancer	Beers Criteria 2015	Total medical costs	Adjusted coefficient (95%CI) **Breast: 0.16 (0.08, 0.24)** **Prostate: 0.15 (0.07, 0.23)** **Colorectal (M): 0.31 (0.14, 0.47)** **Colorectal (F): 0.31 (0.18, 0.44)**
Clark *et al.* (2020)	Cross-sectional analysis of respondents age 65+ in Medical Expenditure Panel Survey 2011-2015	Beers Criteria 2019	Yearly expenditures for inpatient, ED, outpatient and medications	Adj. marginal expenditure (95%CI) **Total: $458 ($295, $664)** Inpatient: -$461 (-$1094, $775) ED: $38 (-$21, $142) **Outpatient: $116 ($105, $243)** **Medications: $128 ($72, $199)**

J Manag Care Pharm. 2001;7(5):407-413.; J Geriatr Oncol. 2019;10(5):698-704.; J Am Geriatr Soc, 2020. **68**(11): p. 2542-2550.

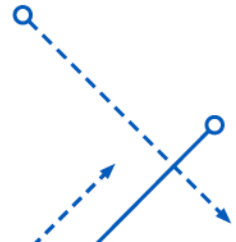
Harms of PIMs – Health Related Quality-of-Life

Author (year)	Study Design	Exposure	Outcomes	Results
Wallace *et al.* (2016)	2- year prospective cohort study of older adults recruited from 15 practices	STOPP criteria Beers 2012 criteria	EQ-5D (secondary)	Adjusted coefficient (95%CI) 1 PIM: -0.002 (-0.04, 0.04) **2+ PIM: -0.11 (-0.16, -0.06)**
Moriarty *et al.* (2016)	Prospective cohort study from The Irish Longitudinal Study on Ageing	STOPP (45/65) criteria START (15/22) criteria	CASP-R12 (secondary)	Adjusted coefficient (95%CI) 1 PIM: -0.21 (-0.81, 0.39) 2+ PIM: -0.45 (-1.16, 0.27) 1 PPO: 0.08 (-0.48, 0.64) **2+ PPO: -1.06 (-1.84, -0.27)**
Cahir *et al*. (2014)	Retrospective cohort study of 931 community dwelling patients aged >70s	STOPP criteria	EQ-5D (Secondary)	Adjusted coefficient (SE) 1 PIM: -0.01 (0.02) **2+ PIM: -0.09 (0.02)**
Franic and Jiang (2006)	Longitudinal retrospective cohort using Medical Expenditure Panel Survey data for respondents 65+	Beers 1997 Criteria	SF-12 Global PCS-12 MCS-12 EQ-5D EQ-5D Index	PIM use was not a significant predictor of HRQoL in any of the 5 models tested (number of medications was a significant predictor)

J Gerontol A Biol Sci Med Sci, 2017. **72**(2): p. 271-277.; Br J Clin Pharmacol, 2016. **82**(3): p. 849-57.; Br J Clin Pharmacol, 2014. **77**(1): p. 201-10.; Pharmacotherapy, 2006. **26**(6): p. 768-78.

Deprescribing

- "The systematic process of identifying and discontinuing drugs in instances in which existing 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."
- Should be seen as part of the prescribing process



JAMA Intern Med, 2015. **175**(5): p. 827-34.
Pharmacy (Basel), 2019. 7(3).

Deprescribing Evidence

Study (year), Design	n	Inclusion criteria	Intervention	Results
Hanlon *et al.* (1996), Randomized controlled rial	208	Patients aged 65 years or older with polypharmacy (≥5 chronic medications) from a general medicine clinic	Patients randomized to the control group received care from a clinical pharmacist in addition to usual care including drug therapy review with MAI, medication history, and recommendations made to physician verbally and in writing	Inappropriate prescribing scores decreased more in intervention group at 12 months (**28% vs. 5%, p=0.0002)**
Garfinkel and Mangin (2010), prospective cohort feasibility study	70	Elderly patients referred by PCP for comprehensive review	The Good Palliative–Geriatric Practice algorithm was applied to a cohort of 70 community dwelling older patients to recommend drug discontinuations. Success rates of discontinuation, morbidity, mortality, and changes in health status were recorded.	**82%** of medications recommended for cessation were stopped with no attributable adverse events reported. 88% reported improved global health
Beer *et al*. (2011), open randomized controlled trial	31	> 60 years of age and taking one of a list of target medications	Patients randomized to the intervention group received a systematic deprescribing intervention based on prospectively defined, drug specific criteria	**15** medications recommended for cessation, **11** ceased and **4** dose reduced
Potter et al. (2016), Open Randomized parallel groups design	95	Residents over the age of 65 at 4 residential care facilities taking medications and without terminal cancer	Intervention and control groups both received a medication review, but deprescribing was only attempted in the intervention group according to a specific set of criteria	Estimated mean difference 2.0 ± 0.9, 95%CI 0.08, 3.8**, p = 0.04**). No difference in mortality seen

Am J Med, 1996. **100**(4): p. 428-37. Arch Intern Med, 2010. **170**(18): p. 1648-54.; Ther Adv Drug Saf, 2011. **2**(2): p. 37-43.; PLoS One, 2016. **11**(3): p. e0149984.

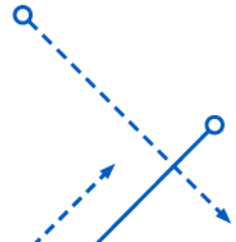
Deprescribing Evidence

Study (year), Design	n	Inclusion criteria	Intervention	Results
Ammerman (2019), Retrospective cohort	393	Veterans aged 80 and older who had filled a PIM at least 90 days before a GeriPACT appointment from January 1, 2015, to September 6, 2017, were included	The primary outcome was to determine whether an interdisciplinary team (IDT) including a clinical pharmacist resulted in greater deprescribing of PIMs vs. usual care	121 (26.8%) PIMs were deprescribed vs. 73 (16.1%) in usual care **(p = <.001).** Documented risk-benefit discussion occurred in 65.2% vs. 0.003% **(p<0.001)**
Martin (2018), Cluster randomized trial; Turner (2020), cost-utility analysis	489	Patients included were adults aged 65+ who were prescribed 1 of 4 Beers Criteria medications (sedative-hypnotics, 1st-generation antihistamines, glyburide, or NSAIDs), recruited from 69 community pharmacies	Pharmacists in the intervention group were encouraged to send patients an educational deprescribing brochure in parallel to sending their recommendations to the provider. Outcome was discontinuation at 6 months based on pharmacy records.	106 (43%) vs 29 (12%) in the control group had discontinued PIM at 6 months (risk difference**, 31% [95%CI, 23%to 38%**]). Post-hoc cost utility analysis suggests cost savings and improvement in quality adjusted life years for patients prescribed sedative hypnotics
Sheppard et al. (2020), randomized, unblinded, noninferiority trial	569	Patients over 80 years old whose primary care provider deemed appropriate and SBP was <150 mmHg on at least 2 antihypertensives	Participants were randomized (1:1 ratio) to a strategy of antihypertensive medication reduction (removal of 1 drug [intervention] usual care.	229 (86.4%) vs. 236 (87.7%) in the control group had a SBP <150mmHg at 12 weeks (adjusted RR, 0.98 [97.5%1-sided CI, 0.92 to ∞])

J Am Geriatr Soc, 2019. **67**(1): p. 115-118.; JAMA, 2018. **320**(18): p. 1889-1898.; J Gerontol A Biol Sci Med Sci, 2021. **76**(6): p. 1061-1067.; JAMA, 2020. **323**(20): p. 2039-2051.

Summary and Future Directions

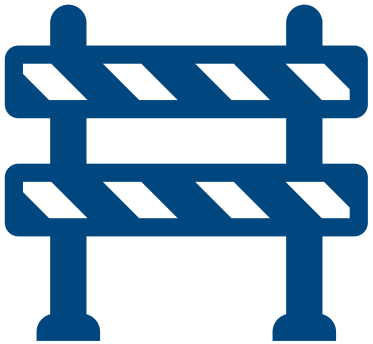
- Available evidence suggests that deprescribing interventions in various settings can lead to improvements is prescribing appropriate with limited effects on clinical status
- Future research is needed to understand the best implementation strategies for deprescribing and to motivate change at a policy level to address barrier to deprescribing



J Am Geriatr Soc. 2021 May 15. doi: 10.1111/jgs.17273. Epub ahead of print.

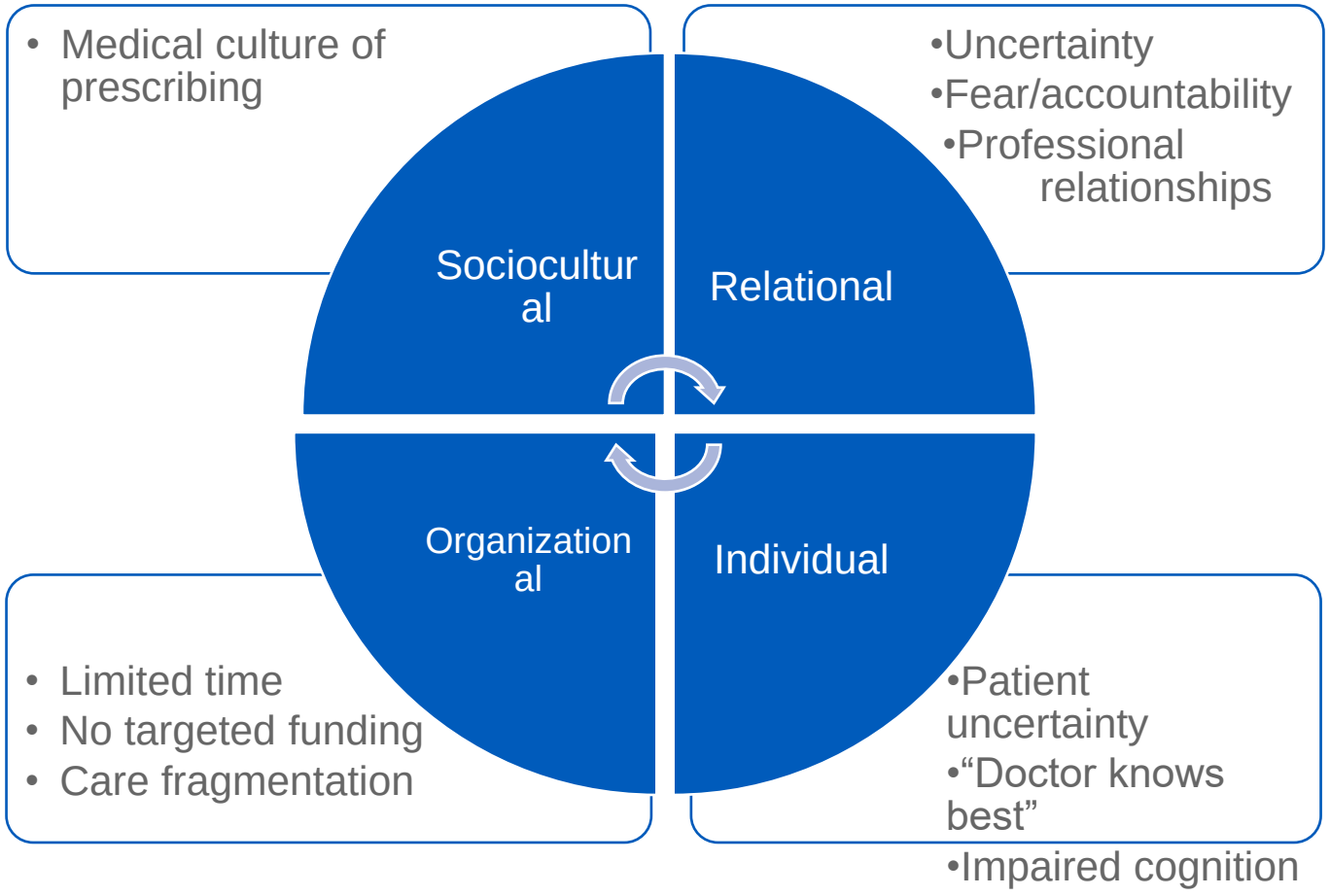
Barriers to Deprescribing

- Important to understand prescriber barriers to deprescribing prior to making recommendations for discontinuation
- Barriers to deprescribing have been extensively studied and broken down into different domains:
  - Individual/patient factors
  - Sociocultural factors
  - Personal and relational factors
  - Organizational factors



Ann Fam Med, 2017. **15**(4): p. 341-346.
BJGP Open, 2020. 4(3).

Barriers to Deprescribing



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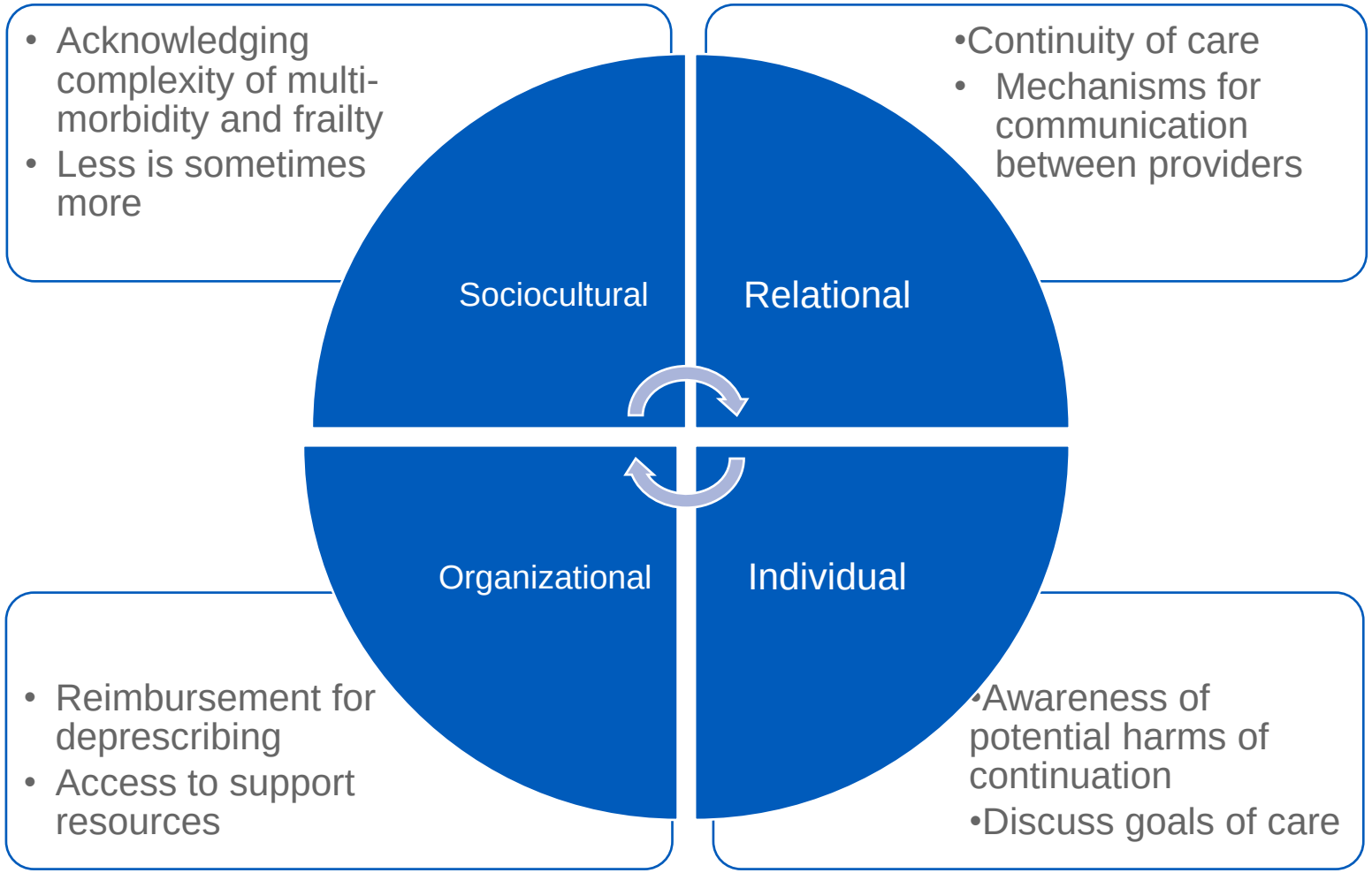
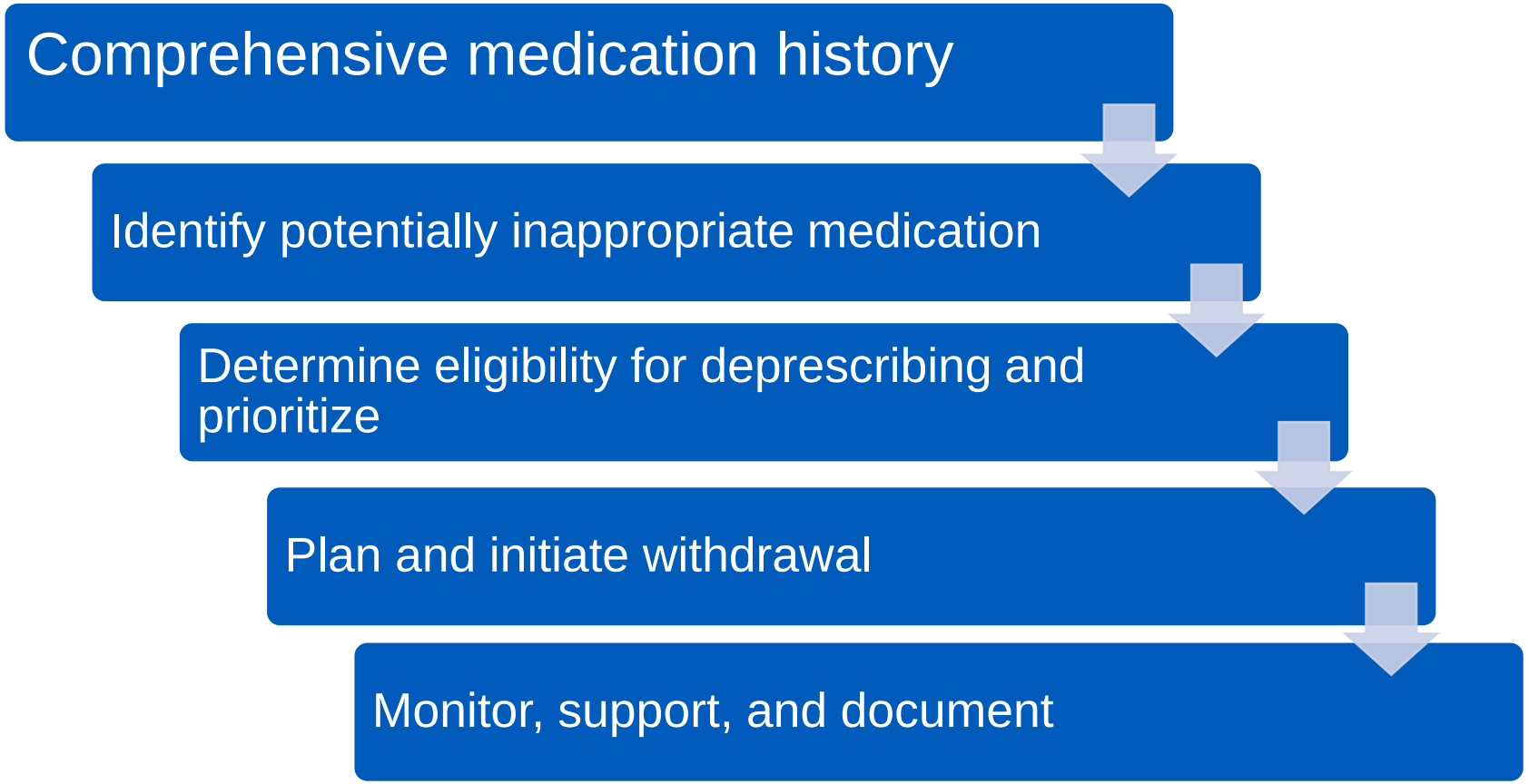
BJGP Open, 2020. 4(3).

Facilitators of Deprescribing



Ann Fam Med, 2017. **15**(4): p. 341-346.
BJGP Open, 2020. 4(3).
Research in Social and Administrative Pharmacy, 2021 [Published online ahead of print].

Process of Deprescribing



Br J Clin Pharmacol, 2014. 78(4): p. 738-47.
JAMA Intern Med, 2015. **175**(5): p. 827-34.

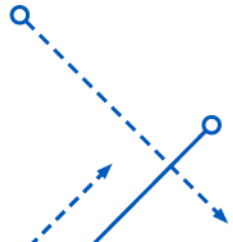
Comprehensive Medication History

- Ask patient (and caregivers as appropriate) about all prescribed, over the counter, complementary and alternative medicines, and supplements they currently take
  - Can be a more complex task with older adults (more comorbidities, providers, etc.)
- Assess adherence to current regimen with special attention paid to drugs not being taken and the reasons why (ex. expense, adverse events)

Br J Clin Pharmacol, 2014. 78(4): p. 738-47.
JAMA Intern Med, 2015. **175**(5): p. 827-34.

Assess Eligibility for Discontinuation

- Medications that would be good candidates for discontinuation include:
  - No valid indication
  - Part of a prescribing cascade
  - Harm clearly outweighs potential benefit (Potentially inappropriate medications)
  - Preventative medications unlikely to confer benefit in patient's remaining lifespan
  - Drugs imposing unacceptable treatment burden



JAMA Intern Med, 2015. **175**(5): p. 827-34.

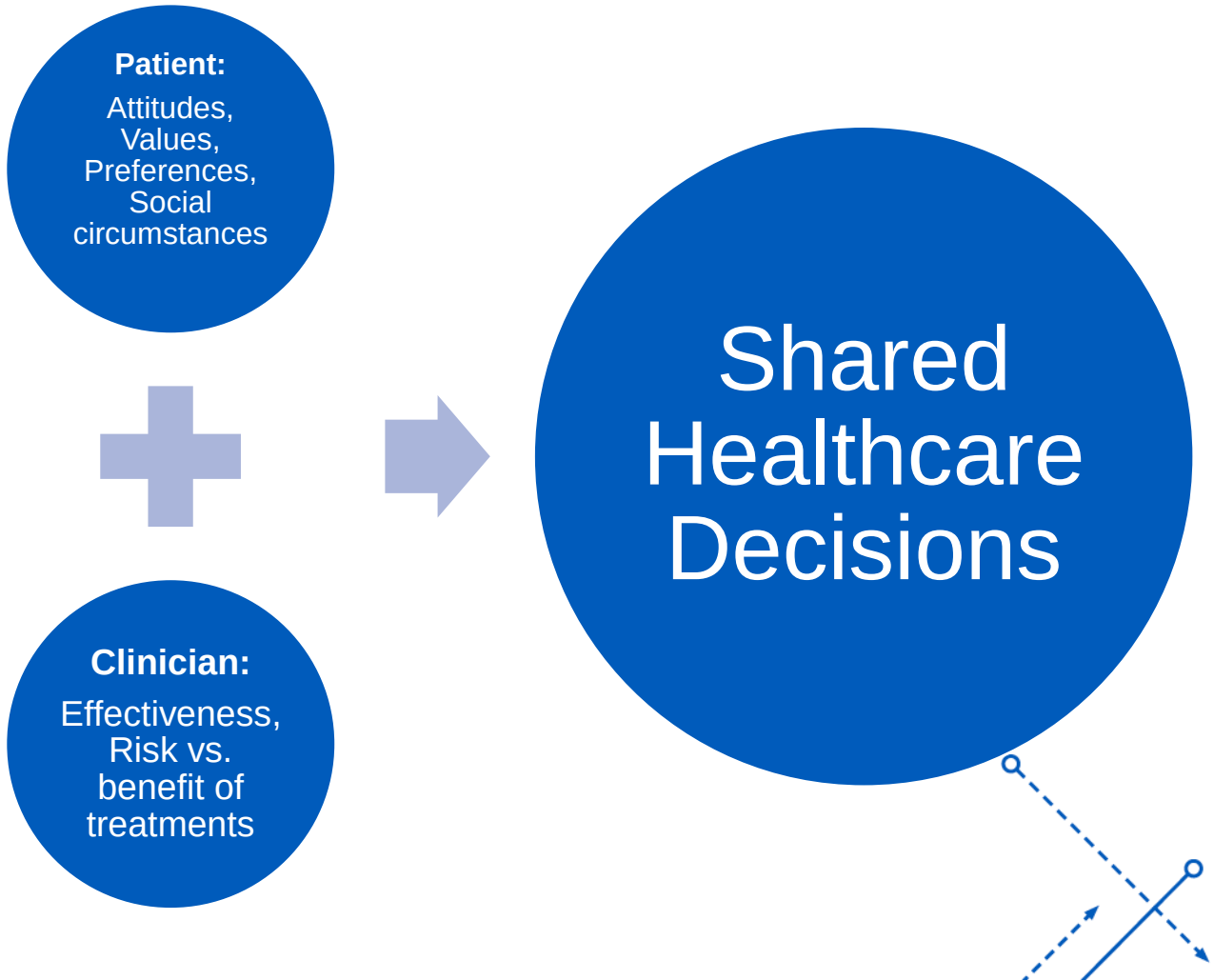
Tools to Guide Deprescribing

Beers Criteria	List of Potentially inappropriate medications for older patients. Not always dangerous but most have a poor risk-benefit profile. Offers suggested alternatives as well as medications to avoid in patients with certain disease states. Table for renal dosed medications.
STOPP/START Criteria	List of medications that may be inappropriate for older adults as well as medications that are commonly omitted in older people that they may benefit from adding to therapy.
Medication Appropriateness Index	Implicit criteria for judging medication appropriateness. Includes 10 questions with a 3-point Likert scale (inappropriate, marginally appropriate, appropriate)
VIONE	'Vital, Important to Quality of life, Optional, No indication, Every medication has a specific indication for use' is a tool utilized by the VA that organizes medications into five categories that guide clinicians to thoughtfully review and consider deprescribing medications that are unsafe, not needed, or add more burden than benefit
Deprescribing.org	Tools, including algorithms, to help patients and providers participate in deprescribing. Algorithms for benzodiazepines, proton-pump inhibitors, antipsychotics, Alzheimer's disease drugs, and anti-hyperglycemics are available.

J Am Geriatr Soc, 2019. **67**(4): p. 674-694.; Age Ageing, 2015. **44**(2): p. 213-8.; J Clin Epidemiol. 1992;45:1045-1051.; Fed Pract, 2019. **36**(12): p. 564-568.; deprescribing.org

Shared Decision Making and Deprescribing

- Process in which clinicians and patients work together to select tests, treatments, management or support packages, based on evidence and the patient's informed preferences.
- Involves the provision of evidence-based information about options, outcomes and uncertainties, together with decision support counselling and a system for recording and implementing patients' informed preferences



Pharmacy (Basel), 2019. 7(3).
N Engl J Med, 2012. **366**(9): p. 780-1.

Potential Drug Induced Harm

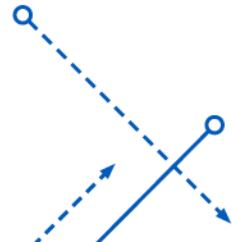
- Drug Factors:
  - Number of medications prescribed
  - Use of potentially inappropriate or “high risk” medications
  - Past or current toxicity

- Patient Factors:
  - Age >80 years old
  - Cognitive impairment
  - Multiple comorbidities
  - Multiple prescribers

JAMA Intern Med, 2015. **175**(5): p. 827-34.

Prioritize

- Decision on what to recommend stopping first should be based on integration of the criteria below:
  1. Those with the likelihood of greatest harm and least benefit
  2. Those easiest to discontinue (lowest likelihood of withdrawal reactions or disease rebound)
  3. Those that the patient is most willing to discontinue first (to gain buy-in to deprescribing other drugs)
- Suggested approach is to rank drugs from high harm/low benefit to low harm/high benefit and discontinue in sequential order



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Estimating Life Expectancy

Tool	Population	Outcome
Palliative Performance Scale[1]	Outpatients with advanced cancer	Median survival (days)
Mitchell Index[2]	Nursing home adults over 65 with dementia	6-month survival
Lee Schonberg Index[3]	Community dwelling adults over 50	4, 5, 10, 14-year mortality
Walter Index[4]	Hospitalized adults over 70	All cause 1-year mortality
Gagne Index[5]	Community dwelling adults over 50	All cause 1-year mortality
Porock Index[6]	Nursing home residents	6-month mortality
Flacker 1 Year Long Stay Revised Index[7]	Long stay nursing home patients over 65	All cause 1-year mortality
Flacker 1 Year Newly Admitted Revised Index[7]	New Nursing home admits over 65	All cause 1-year mortality

Online calculators available at eprognosis.com

[1]J Palliat Care, 1996. **12**(1): p. 5-11.; [2]JAMA, 2010. **304**(17): p. 1929-35.; [3]Jama, 2006. **295**(7): p. 801-8.; [4]Jama, 2001. **285**(23): p. 2987-94.; [5] J Clin Epidemiol, 2011. **64**(7): p. 749-59. [6]BMC Res Notes, 2010. **3**: p. 200.; [7] J Am Geriatr Soc, 2003. **51**(2): p. 213-21.

Polling Question

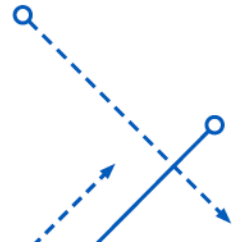
JC is an 86-year-old female patient with advanced dementia and COPD who was recently admitted to the memory care unit at a nursing home. Which of the following tools would be most appropriate to estimate her life expectancy?

A. Palliative Performance Scale

B. Mitchell Index

C. Flacker 1 Year Long Stay Revised Index

D. Flacker 1 Year Newly Admitted Revised Index



Clicker Question

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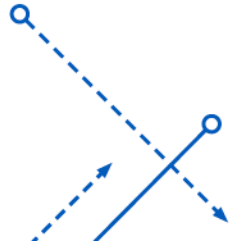
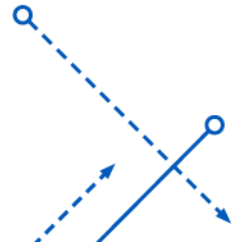


Estimating Risk of Harm and Benefit

- Number needed to treat: The number of people that need to be treated to achieve or prevent an event; inverse of the absolute risk reduction
- Measures benefit over a defined time period
- Inversely related to life expectancy
- Example: If NNT for Drug X to prevent an MI is 20 at 5 years, the number would be much higher to prevent MI over 1 year



J Am Geriatr Soc, 2018. **66**(2): p. 229-234.

Time to Benefit & Time to Harm

Time to Benefit (TTB)	The time it takes for a medications effect to become evident in a population
Time to Harm (TTH)	The time until a significantly significant adverse effect is seen in a trial for the treatment group compared to the control group

Example: Intensive glucose control in diabetes mellitus
- TTB ~10 years
- TTH ~minutes

Drugs Aging, 2013. **30**(9): p. 655-66.
J Am Geriatr Soc, 2018. **66**(2): p. 229-234.

Estimated Time to Benefit for Selected Medications

Treatment and Indication	Estimated Time to Benefit
Bisphosphonates for Osteoporosis	8-19 months
Statins for primary prevention	2-5 years
Primary Prevention, hypertension	1-2 years
Aspirin for primary prevention	10 years
Intensive glycemic control in diabetes	10 years

J Am Geriatr Soc, 2018. **66**(2): p. 229-234.

Summary

Life Expectancy < TTB

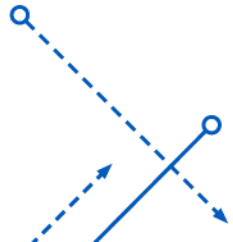
- Medication not recommended, consider discontinuation
- May contribute risk without possible benefit

Life Expectancy = TTB

- Defer to patient's values and preferences, Shared decision making

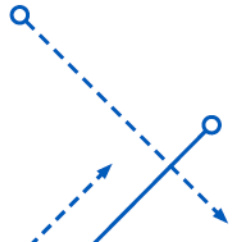
Life Expectancy > TTB

- Medication may have benefit and can be continued
- Consider relationship of TTB and TTH



Plan and Initiate

- Gain patient buy in before attempting discontinuation
- Discontinue one agent at a time
- Taper medications more likely to cause withdrawal symptoms
  - Tapering can help prevent or reduce withdrawal symptoms
  - If symptoms occur with tapering, consider return of disease symptoms
  - Published guidelines can help inform strategies
- Communicate plan for deprescribing to all care givers and healthcare professionals involved in patient's care
  - Includes alerting pharmacy is external to prescribing entity



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deprescribing.org | Benzodiazepine & Z-Drug (BZRA) Deprescribing Algorithm

February 2019

Why is patient taking a BZRA?

If unsure, find out if history of anxiety, past psychiatrist consult, whether may have been started in hospital for sleep, or for grief reaction.

- Insomnia on its own OR insomnia where underlying comorbidities managed
  For those ≥ 65 years of age: taking BZRA regardless of duration (avoid as first line therapy in older people)
  For those 18-64 years of age: taking BZRA > 4 weeks

- Other sleeping disorders (e.g. restless legs)
- Unmanaged anxiety, depression, physical or mental condition that may be causing or aggravating insomnia
- Benzodiazepine effective specifically for anxiety
- Alcohol withdrawal

Engage patients (discuss potential risks, benefits, withdrawal plan, symptoms and duration)

Recommend Deprescribing

Continue BZRA

- Minimize use of drugs that worsen insomnia (e.g. caffeine, alcohol etc.)
- Treat underlying condition
- Consider consulting psychologist or psychiatrist or sleep specialist

Taper and then stop BZRA

(taper slowly in collaboration with patient, for example ~25% every two weeks, and if possible, 12.5% reductions near end and/or planned drug-free days)

- For those ≥ 65 years of age (strong recommendation from systematic review and GRADE approach)
- For those 18-64 years of age (weak recommendation from systematic review and GRADE approach)
- Offer behavioural sleeping advice; consider CBT if available (see reverse)

Monitor every 1-2 weeks for duration of tapering

Expected benefits:

- May improve alertness, cognition, daytime sedation and reduce falls

Withdrawal symptoms:

- Insomnia, anxiety, irritability, sweating, gastrointestinal symptoms (all usually mild and last for days to a few weeks)

Use non-drug approaches to manage insomnia

Use behavioral approaches and/or CBT (see reverse)

If symptoms relapse:

Consider

- Maintaining current BZRA dose for 1-2 weeks, then continue to taper at slow rate

Alternate drugs

- Other medications have been used to manage insomnia. Assessment of their safety and effectiveness is beyond the scope of this algorithm. See BZRA deprescribing guideline for details.

Canadian Family Physician May 2017, 63 (5) 354-364;

deprescribing.org | Benzodiazepine & Z-Drug (BZRA) Deprescribing Notes

February 2019

BZRA Availability

BZRA	Strength
Alprazolam (Xanax®) T	0.25 mg, 0.5 mg, 1 mg, 2 mg
Bromazepam (Lectopam®) T	1.5 mg, 3 mg, 6 mg
Chlordiazepoxide C	5 mg, 10 mg, 25 mg
Clonazepam (Rivotril®) T	0.25 mg, 0.5 mg, 1 mg, 2 mg
Clorazepate (Tranxene®) C	3.75 mg, 7.5 mg, 15 mg
Diazepam (Valium®) T	2 mg, 5 mg, 10 mg
Flurazepam (Dalmane®) C	15 mg, 30 mg
Lorazepam (Ativan®) T, S	0.5 mg, 1 mg, 2 mg
Nitrazepam (Mogadon®) T	5 mg, 10 mg
Oxazepam (Serax®) T	10 mg, 15 mg, 30 mg
Temazepam (Restoril®) C	15 mg, 30 mg
Triazolam (Halcion®) T	0.125 mg, 0.25 mg
Zopiclone (Imovane®, Rhovane®) T	5mg, 7.5mg
Zolpidem (Sublinox®) S	5mg, 10mg

T = tablet, C = capsule, S = sublingual tablet

BZRA Side Effects

- **BZRAs have been associated with:**
  - physical dependence, falls, memory disorder, dementia, functional impairment, daytime sedation and motor vehicle accidents
- **Risks increase in older persons**

Engaging patients and caregivers

Patients should understand:
- The rationale for deprescribing (associated risks of continued BZRA use, reduced long-term efficacy)
- Withdrawal symptoms (insomnia, anxiety) may occur but are usually mild, transient and short-term (days to a few weeks)
- They are part of the tapering plan, and can control tapering rate and duration

Tapering doses

- No published evidence exists to suggest switching to long-acting BZRAs reduces incidence of withdrawal symptoms or is more effective than tapering shorter-acting BZRAs
- If dosage forms do not allow 25% reduction, consider 50% reduction initially using drug-free days during latter part of tapering, or switch to lorazepam or oxazepam for final taper steps

Behavioural management

Primary care:
1. Go to bed only when sleepy
2. Do not use bed or bedroom for anything but sleep (or intimacy)
3. If not asleep within about 20-30 min at the beginning of the night or after an awakening, exit the bedroom
4. If not asleep within 20-30 min on returning to bed, repeat #3
5. Use alarm to awaken at the same time every morning
6. Do not nap
7. Avoid caffeine after noon
8. Avoid exercise, nicotine, alcohol, and big meals within 2 hrs of bedtime

Institutional care:
1. Pull up curtains during the day to obtain bright light exposure
2. Keep alarm noises to a minimum
3. Increase daytime activity & discourage daytime sleeping
4. Reduce number of naps (no more than 30 mins and no naps after 2 pm)
5. Offer warm decaf drink, warm milk at night
6. Restrict food, caffeine, smoking before bedtime
7. Have the resident toilet before going to bed
8. Encourage regular bedtime and rising times
9. Avoid waking at night to provide direct care
10. Offer backrub, gentle massage

Using CBT

What is cognitive behavioural therapy (CBT)?
- CBT includes 5-6 educational sessions about sleep/insomnia, stimulus control, sleep restriction, sleep hygiene, relaxation training and support

Does it work?
- CBT has been shown in trials to improve sleep outcomes with sustained long-term benefits

Who can provide it?
- Clinical psychologists usually deliver CBT, however, others can be trained or can provide aspects of CBT education; self-help programs are available

How can providers and patients find out about it?
- Some resources can be found here: https://mysleepwell.ca/

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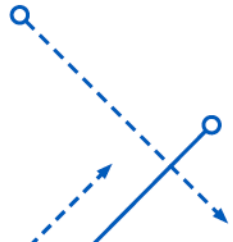
Monitor, Support and Document

- Degree of required monitoring will depend on the medication being deprescribed (ex. Tapering)
  - May be telephonic or in person
  - Role of the pharmacist?
- Support may include non-pharmacological interventions, advice on coping strategies, or referral to additional services
- Clearly document rationale and outcomes of deprescribing
  - Clear documentation will prevent medications from being restarted by other providers who may not be familiar with the patient (hospital admission)



Br J Clin Pharmacol, 2014. 78(4): p. 738-47.

Polling Question

JC is an 86-year-old female patient with advanced Alzheimer's dementia and COPD who was recently admitted to the memory care unit at a nursing home. Her estimated 6-month mortality risk per the Mitchell index is 49-62%.

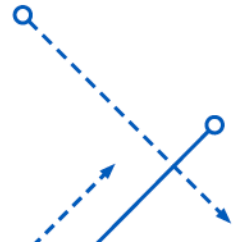
Home Medications: Aspirin 81 mg daily, Lisinopril 2.5 mg daily, Atorvastatin 40 mg daily, sertraline 25 mg daily, and albuterol 2.5mg/3mL via nebulizer q4h prn.

Vitals: HR: 60bpm BP: 102/64 mmHg RR:20 bpm

Lipid Panel: WNL

Which of the following home medications would be appropriate to deprescribe at this time?

A. Aspirin + Lisinopril
B. Aspirin + Lisinopril + Atorvastatin
C. Lisinopril + Atorvastatin
D. Aspirin + Sertraline



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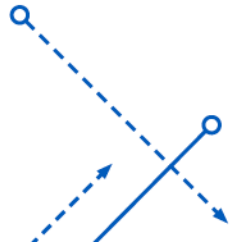

Conclusions

- Polypharmacy and potentially inappropriate medications pose a threat to the safety of older adults
- Shared decision making should be employed whenever possible when deprescribing is attempted
- When done in collaboration with patients, deprescribing can help improve patient safety