Editorials

Deprescribing Is an Essential Part of Good Prescribing

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See related Practice Guidelines on page 57 and at https://www.aafp.org/afp/2018/0915/p394.html.

Nearly one-half of older adults take five or more medications, and as many as one in five of these prescriptions is potentially inappropriate. Older adults prescribed more medications are more likely to be hospitalized for an adverse drug reaction. Moreover, adverse drug reactions account for more morbidity and mortality than most chronic diseases, 4.5 with death rates higher than many common cancers. 6.7

Polypharmacy is a clinical challenge because the health care system is geared toward starting medications, not reducing or stopping them, and guidelines typically include recommendations for initiating medications, but not stopping them. Although any medication may offer potential benefit, each also has potential harm. When combined, the risk of interactions with other medications or conditions or cumulative harms can outweigh the benefits. This means prioritization for ongoing treatment is an essential skill for clinicians. One component of good prescribing is deprescribing, which is defined as adjusting medications down to the minimum effective dosage or stopping them when a patient's health status changes in a way that medication burden or potential for harm outweighs the benefit of the medication.

Discussions about deprescribing with patients and families provide a prime opportunity for person-focused care and shared decision making. There are four important medication issues to discuss with patients as they get older: (1) the way older bodies respond to and process medication changes,⁸ which often results in different surrogate targets⁹ and lower medication dosages to avoid adverse effects while achieving the same benefit; (2) the weaker evidence regarding medication effectiveness, especially in patients who have multiple comorbidities and who are frail^{10,11}; (3) the additive adverse effects from medication burden¹²; and (4) the possible evolving goals of treatment as patients near the end of life.¹³ These issues can

introduce patients to the idea of choice regarding continuing or deprescribing medications, which facilitates a discussion of options and naturally leads to an exploration of preferences.¹⁴

Patients would like to take fewer medications if they could, but often rely on clinicians to take the initiative to start the conversation. These conversations should be focused on helping patients understand that reducing or stopping medications maintains the best quality of life possible while still maximizing the benefit of medications in the areas important to the patient, where there is good evidence for ongoing benefit in this age group.

The five steps to individualize deprescribing practices to each patient are (1) to identify potentially inappropriate medications; (2) to determine if the medication dosage can be reduced or the medication stopped; (3) to plan tapering; (4) to monitor (for discontinuation symptoms or the need to restart) and support the patient; and (5) to document outcomes^{16,17} (*Table 1*). This process seems fairly straightforward; however, each step requires time, careful thought, preparation, and conversation. It is not necessary, nor always possible, to take all these steps at once; leveraging the longitudinal relationship of family medicine and iterative monitoring can have a big effect. Some simple ways to start include:

- Assessing one particular adverse effect across all medications (e.g., additive anticholinergic effects affecting cognition).¹²
- Routinely asking if a patient's problem is caused by his or her medication (e.g., falls, cognitive impairment).
- Looking at "legacy prescribing," ¹⁶ which is when medications are initially prescribed for an intermediate duration, but continued indefinitely (e.g., proton pump inhibitors, selective serotonin reuptake inhibitors, benzodiazepines); for example, modifying the prescribing system to flag when the course of intended treatment is complete.
- Choosing specific medications on which to focus; for example, target medications known to have significant changes in metabolism or excretion or effects in older persons (e.g., beta blockers).
- Choosing one or two patients per day with whom to start deprescribing conversations.

Communication and collaboration with patients, families (when appropriate), and other

TABLE 1

Resources for Each Step of the Desprescribing Process

Step	Consider	Resources
Identify potentially inappropriate medications	Continued necessity, benefit, contribution to or cause of an adverse reaction, future risk of adverse reaction, medication or food interactions, adherence, patient preference, goals of care, life expectancy	American Geriatrics Society Beers Criteria
		https://onlinelibrary.wiley.com/doi/ full/10.1111/jgs.13702
		Anticholinergic burden scales
		https://bmcgeriatr.biomedcentral.com/ articles/10.1186/s12877-015-0029-9
		http://www.ephor.nl/media/1076/anticholin- ergic-drugs.pdf
		http://www.miltonkeynesccg.nhs.uk/ resources/uploads/ACB_scalelegal_size. pdf
		http://www.acbcalc.com/
		Medstopper
		http://medstopper.com/
		STOPP/START Criteria (screening tool of older persons' prescriptions)
		https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC4339726/
Determine if the dosage can be reduced or the medication stopped Plan tapering and withdrawal steps Monitor (for adverse withdrawal events and against criteria for restarting) and support patient	How to best engage the patient in a conversation about deprescribing, determine options, and provide monitoring and support	Adverse medication withdrawal events information
		https://jamanetwork.com/jour- nals/jamainternalmedicine/ article-abstract/623931
		Deprescribing guidelines and algorithms
		https://deprescribing.org/resources/ deprescribing-guidelines-algorithms/
		Deprescribing information pamphlets
		https://deprescribing.org/resources/ deprescribing-information-pamphlets/
		Prescribing information (product monographs with information on dosing in older patients, renal dysfunction, or dosing and monitoring for discontinuation symptoms)
		Shared decision-making steps for deprescribing
		https://link.springer.com/ article/10.1007%2Fs11606-010-1629-x
Document outcomes	Documenting reasons for changes and positive and negative outcomes to facilitate future care and prescribing decision making	

prescribers are essential. Shared decision making about deprescribing can inform the conversation with patients (Table 2). As a possible precursor to discontinuation, a "pause and monitor" 17 (drug holiday) approach can be an appealing choice for patients and other prescribers, but it should be combined with a clear plan for dosage changes,

monitoring and follow-up, and agreed criteria for restarting.

To maximize a life worth living for older patients, the focus should be as much on when and how to stop medications as on starting them. Family medicine is ideally placed to rise to this challenge.

Examples of How to Discuss Deprescribing with Patients

Introducing choice

You are on a number of medications now. I would like to regularly review these to make sure each of them is still benefiting you, as well as check for side effects.

Medication side effects can add up. I'm worried that "x," "y," and "z" might all contribute to memory challenges.

Several of your medications might be contributing to this growing issue you are having with falls. I would like to tell you about different options to reduce risks from these medications. We can try reducing the dose or stopping one or more of these medications. What do you think?

As we get older, medications that worked well may no longer have the same benefit; in particular, I'm thinking that "x" may no longer be needed.

A "course" for this medication is usually eight weeks. Because you have been taking it for longer than "x" weeks, we can reduce the dose slowly and stop it.

Benefits and risks

If we reduce the dose or stop your sleeping pill(s), there is a risk you might have difficulty sleeping for a few nights. We will need to focus on how you can get a good night's sleep without medication. On the plus side, if the sleeping pill is reduced or stopped, you may feel less tired in the morning and have fewer falls.

Exploring options and making decisions

From your point of view, what matters most to you? How do you feel about these options? Is this something you would consider?

What medications are important for you to keep taking?

Are you ready to decide? Do you need more time?

Would you like to try a "pause and monitor' approach, in which we stop the medication, monitor you carefully, and restart the medication if needed?

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References

- 1. National Center for Health Statistics. Health, United States, 2016. Hyattsville, Md.: Centers for Disease Control and Prevention; 2017:25. https://www.cdc.gov/nchs/data/hus/ hus16.pdf#01. Accessed October 20, 2018.
- 2. Opondo D, Eslami S, Visscher S, et al. Inappropriateness of medication prescriptions to elderly patients in the primary care setting: a systematic review. PLoS One. 2012; 7(8):e43617.
- 3. Canadian Institute for Health Information. Drug Use among seniors in Canada, 2016. Ottawa, Ontario: Canadian Institute of Health Information; 2016. http://www. cihi.ca/sites/default/files/document/drug-use-amongseniors-2016-en-web.pdf. Accessed October 20, 2018.
- 4. Lipska KJ, Ross JS, Wang Y, et al. National trends in US hospital admissions for hyperglycemia and hypoglycemia among Medicare beneficiaries, 1999 to 2011. JAMA Intern Med. 2014;174(7):1116-1124.
- 5. Lazarou J, Pomeranz BH, Corey PN. Incidence of adverse drug reactions in hospitalized patients: a meta-analysis of prospective studies. JAMA. 1998;279(15):1200-1205.
- 6. European Commission. Proposal for a regulation of the European Parliament and of the Council amending, as regards pharmacovigilance of medicinal products for human use. Regulation no. 726/2004. Published October 21, 2008. https://eur-lex.europa.eu/legal-content/en/ ALL/?uri=CELEX%3A52008SC2671. Accessed October 20, 2018
- 7. Malvezzi M, Bertuccio P, Levi F, et al. European cancer mortality predictions for the year 2013. Ann Oncol. 2013; 24(3):792-800.

- 8. Sera LC, McPherson ML. Pharmacokinetics and pharmacodynamic changes associated with aging and implications for drug therapy. Clin Geriatr Med. 2012;28(2): 273-286.
- 9. Lee SJ, Eng C. Goals of glycemic control in frail older patients with diabetes. JAMA. 2011;305(13):1350-1351.
- 10. Zulman DM, Sussman JB, Chen X, Cigolle CT, Blaum CS, Hayward RA. Examining the evidence: a systematic review of the inclusion and analysis of older adults in randomized controlled trials. J Gen Intern Med. 2011;26(7):783-790.
- 11. Konrat C, Boutron I, Trinquart L, Auleley GR, Ricordeau P, Ravaud P. Underrepresentation of elderly people in randomised controlled trials. The example of trials of 4 widely prescribed drugs. PLoS One. 2012;7(3):e33559.
- 12. Campbell NL, Perkins AJ, Bradt P, et al. Association of anticholinergic burden with cognitive impairment and health care utilization among a diverse ambulatory older adult population. Pharmacotherapy. 2016;36(11):1123-1131.
- 13. Todd A, Holmes HM. Recommendations to support deprescribing medications late in life. Int J Clin Pharm. 2015;37(5):678-681.
- 14. Jansen J, Naganathan V, Carter SM, et al. Too much medicine in older people? Deprescribing through shared decision making. BMJ. 2016;353:i2893.
- 15. Reeve E, Wiese MD, Hendrix I, Roberts MS, Shakib S. People's attitudes, beliefs, and experiences regarding polypharmacy and willingness to deprescribe. J Am Geriatr Soc. 2013;61(9):1508-1514.
- 16. Mangin D, Lawson J, Cuppage J, et al. Legacy drugprescribing patterns in primary care. Ann Fam Med. 2018; 16(6):515-520.
- 17. Taper MD. Are your patients on too many prescription meds? https://tapermd.com/. Accessed October 20, 2018. ■