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Considering Value in Prescribing and Deprescribing for Older Adults

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Physicians know how easy it is to start a medication for a chronic condition in older adults. Often, these medications have marginal benefits and substantial potential harms and can be difficult to stop once started. Many older patients receive multiple medications with potential interactions and harms, which can be costly and is sometimes referred to as *financial toxicity* from treatment. Yet the problems of polypharmacy and overprescribing in older adults remain stubbornly difficult to address despite the many well-meaning attempts at a solution that targets prescribers and patients.

The article by Radomski et al[1] proposes a new metric for identifying low-value prescribing in older adults: Evaluating Opportunities to Decrease Low-Value Prescribing (EVOLV-Rx). The authors reviewed medication guidelines, including existing lists of high-risk drugs in older adults and the Beers Criteria,[2] peer-reviewed literature, and studies of patient and caregiver perspectives to develop a list of 27 common prescribing practices that were considered low value. The authors used the following criteria to assess practices for inclusion in the EVOLV-Rx metric: lack of effectiveness because of inappropriately prolonged use, potential harm because of the risk of an adverse drug event or drug interaction, excessive cost because of the use of brand-name medication, and use of a medication to treat the adverse effect of another drug.[1] The authors also reviewed the 100 most frequently prescribed medications among Medicare beneficiaries to identify the most frequently prescribed drugs. Radomski et al. formed a panel of experts composed of physicians, pharmacist, and health system leaders and through a modified Delphi process refined the criteria for the practices included in EVOLV-Rx. Using the RAND/UCLA (University of California, Los Angeles) Appropriateness Method,[3] the authors narrowed the list of 27 to 18 common practices that are low value and therefore good targets for intervention to decrease their use. The resulting metric (EVOLV-Rx) is an important addition to the existing tools for improving prescribing practices.

A few clinical examples can illustrate the clinical significance of this metric. One of the low-value medications identified was thyroid hormone, a commonly overprescribed and ineffective medication for subclinical hypothyroidism. For each medication, the tool provides specific criteria for identifying patients who are particularly at risk for receiving the medication. In this case, patients older than 80 years or those with a new prescription but with a thyrotropin (previously thyroid-stimulating hormone) dose of less than 10 mIU/L are at risk for receiving a thyroid hormone prescription. In addition, the tool identifies patients who use a brand-name thyroid medication instead of a less expensive generic equivalent. Another example is the use of a benzodiazepine for a period of more than 4 weeks. Long-term use of this medication class is associated with increased risk of falls and fractures in older patients. The tool identifies patients who have a concurrent prescription for any other psychoactive medication that could further increase risk, and it flags the brand-name products. In short, EVOLV-Rx is a practical list of low-value drugs and prescribing practices that should not be started or should be stopped. It also helps identify at-risk patients.

There is a large body of evidence from higher-income countries that signals a need for this tool. In spite of the known overprescribing and harms of low-value medications for older adults, these drugs remain commonly prescribed. For example, despite a recommendation from Choosing Wisely Canada to avoid prescribing benzodiazepines for patients who are older than 65 years, national data show that 10% of Canadians aged 65 years or older receive benzodiazepines and other sedative hypnotics on a regular basis, with considerable variation in use nationally.[4] In the eastern Canadian province of New Brunswick, nearly 25% of older adults regularly receive such drugs.[4] Similarly, the Organisation for Economic Co-operation and Development reported that, across multiple European

countries, use of benzodiazepines is 5 times higher in Iceland and Ireland than in Denmark and Italy.[5] There is no doubt that there is room to improve.

Low-value care is increasingly recognized as an important and unaddressed quality concern in health care. Almost 10 years ago, the ABIM Foundation launched the Choosing Wisely campaign in the US. The goal was to develop evidence-based recommendations to address the overuse of tests, treatments, and procedures that do not add value and can even be harmful for patients. Since the campaign's launch, hundreds of recommendations have been developed and released by national medical, nursing, and other health professional societies as part of the initiative. However, issuing recommendations is easier than putting them into practice. The EVOLV-Rx can be used by a variety of stakeholders to reduce the prescribing of these low-value medications, with a focus on older adults. This tool can complement other recently developed tools to identify low-value tests, treatments, and procedures for a variety of clinical conditions, including cancer screening, routine testing, and drugs.[6]

How can EVOLV-Rx make a difference in practice? Radomski et al[1] suggest that it can help third-party payers and policy makers, such as Medicare and private insurers, make decisions about coverage for prescription drugs. It can also be useful to physician groups and clinical practices that seek to provide high-quality patient care. Embedding tools in computerized physician order entry and electronic medical record systems can reduce low-value prescribing by a small but meaningful amount of approximately 5%.[7] Auditing and giving feedback to clinicians based on their own practice data and in comparison to their peers can have a similar impact. EVOLV-Rx can serve as the basis for these types of practice improvement efforts.

Involving patients and caregivers in shared decision-making is important to reduce the overuse of medications on which patients may have a psychological reliance and that may affect habitual health behaviors and expectations. It is important that shared decision-making focuses on a discussion of medication benefits and harms, and patients need to be informed that reducing overuse does not mean withholding care or treatment that they need. Pharmaceutical companies aggressively promote the use of brand-name medications even when their net benefits are marginal. There is a broad societal view that "more is better" in health care, and this view can permeate the expectations of older adults and caregivers. Radomski et al[1] reviewed studies of patient and caregiver perspectives, emphasizing the point that engaging these groups is critical. Patients often do not understand the true costs of drugs, not just the financial costs but also the cascade of possible complications, and the lack of benefit from these drugs. Older patients and their caregivers should be educated to enable them to carefully consider the value of medications and to discuss other options with their clinicians.

Physician-led efforts to reduce low-value care and low-value drugs offer an opportunity to improve care, decrease harm, and save resources that could be better invested elsewhere. EVOLV-Rx is an innovative, evidence-based, and practical tool that can help move us toward achieving this important goal.

ARTICLE INFORMATION

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REFERENCES

1. Radomski TR, Decker A, Khodyakov D, et al. Development of a metric to detect and decrease low-value prescribing in older adults. *JAMA Netw Open*. 2022;5(2):e2148599. doi:10.1001/jamanetworkopen.2021.48599

2. American Geriatrics Society Beers Criteria Update Expert Panel. American Geriatrics Society 2019 Updated AGS Beers Criteria for potentially inappropriate medication use in older adults. *J Am Geriatr Soc*. 2019;67(4):674-694.

3. Fitch K, Bernstein SJ, Aguilar MD, et al *The RAND/UCLA Appropriateness Method User's Manual*. RAND; 2001.

4. Canadian Institute for Health Information. Unnecessary care in Canada. Accessed November 8, 2021. https://www.cihi.ca/en/unnecessary-care-in-canada

5. Organisation for Economic Co-operation and Development. *Health at a Glance: Europe* 2020. OECD; 2020. Accessed November 19, 2021. https://www.oecd-ilibrary.org/social-issues-migration-health/benzodiazepine-use-in-people-aged-65-and-over-2017-or-nearest-year_64fbe551-en

6. Kerr EA, Klamerus ML, Markovitz AA, et al. Identifying recommendations for stopping or scaling back unnecessary routine services in primary care. *JAMA Intern Med*. 2020;180(11):1500-1508. doi:10.1001/jamainternmed.2020.4001

7. Kwan JL, Lo L, Ferguson J, et al. Computerised clinical decision support systems and absolute improvements in care: meta-analysis of controlled clinical trials. *BMJ*. 2020;370:m3216. doi:10.1136/bmj.m3216