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Overcoming Inertia to Improve Medication Use and Deprescribing: Patients, Pharmacists, and Physicians

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Inertia is a powerful force. Stopping or starting is difficult, in health care as well as in other sciences. Ineffective or potentially harmful treatments are often not stopped, even years after they have been started, and effective treatments are too often not started at all.

Once started, medications can be difficult to stop. It takes time for office-based clinicians to reassess use of medications prescribed for chronic diseases, particularly therapies that are not clearly related to the complaints or conditions that are the focus of a given patient encounter. Even if a clinician recognizes a medication as potentially inappropriate and a candidate for discontinuation, both clinicians and patients may be concerned that "the devil they know is worse than the devil they don't know" and that symptoms or biomarkers may worsen if the drug is stopped, or that stopping a drug may be perceived as "giving up." Clinicians also may be unsure about how best to taper different medications, or how to recognize and manage adverse drug withdrawal events. Thus, use of unnecessary and potentially harmful medications is common among older adults.[2]

In this issue of JAMA, three reports (3–5) highlight the power of inertia in stopping or starting medicines. The clinical trial by Martin and colleagues (3) found that a structured pharmacist-led educational intervention stopped use of an inappropriate medication for 1 in 3 eligible community-dwelling older adults. The investigators randomly assigned pharmacies in Quebec to an intervention that involved an approach for recommending deprescribing (n= 34 pharmacies) or to usual care (n=35 pharmacies), and included 489 older adults who were chronically taking one of several types of potentially inappropriate medications, including sedative-hypnotics, NSAIDs, glyburide, and first-generation antihistamines. Approximately half the group (241 study participants) were randomized to receive usual care and half (248 participants) to receive "D-PRESCRIBE," an intervention in which the patient's community pharmacist delivered (via mail or in person) a well-designed educational brochure about one of the patient's potentially inappropriate medications, including why the medication may be inappropriate, potential alternatives, and strategies for stopping the drug. The pharmacist was also encouraged to provide an evidence-based pharmaceutical opinion to the patient's physician about that medication using a standard

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template; such recommendations are reimbursable in Quebec. After 6 months, 43% of older adults (106 of 248) in the intervention group had stopped using the problem medication compared with 12% of older patients (29/241) in the usual care group.

This is an important study with a powerful effect. Intensive interventions are often highly effective for deprescribing medications, but are challenging to implement in actual clinical (ie, “real-world”) care settings given the time, effort, and costs required. (6) Interventions such as D-PRESCRIBE are likely more feasible, and the outcomes compare favorably with other lower-intensity interventions targeting similar types of medications.(7) Also, the D-PRESCRIBE evidence-based pharmaceutical opinions that recommended deprescribing to the primary physician likely augmented the patient education component of the intervention, yielding more powerful effects than a similar education-only study conducted by the same research group.(8) Although the study methods provide confidence in the validity of the results, limitations should be recognized. Only one in four eligible patients agreed to participate in the study, which probably selected for people more likely to respond and could have introduced biases in favor of the intervention. Also, it is not clear whether this intervention would be as effective in other health care systems, where comprehensive primary care is not as widespread. Yet despite these limitations, the results are potent and teach two key lessons.

First, interventions that engage several key people involved in the deprescribing process, including patients, physicians, and pharmacists, may be more effective than narrower interventions that do not. Given the inertia that accompanies chronic medication use, it is often insufficient to motivate only one of these groups to make a change. In earlier work done by Tannenbaum and colleagues on deprescribing, which employed pharmacist-led education for patients without the physician component, patients who did not stop their medications cited clinician discouragement as a major contributor. (8) Similarly, engaging only physicians neglects the critical role of patient buy-in to make change happen. Second, pharmacists can initiate and catalyze deprescribing, providing the expertise, focus, and targeted recommendations that can guide physicians while also serving as trusted arbiters and sources of advice for patients, including for issues that some patients may be reluctant to tell their physician. This pharmacist role should not be underestimated. Studies have repeatedly shown that involving pharmacists in quality improvement activities can yield substantial benefits, yet historically these professionals have not been used to their fullest potential. (9) Support for the pharmacist’s role, including the standard in Quebec where pharmacists can bill for providing pharmaceutical opinions to a physician, may promote beneficial deprescribing at low cost.

Also in this issue of JAMA, two research letters (4,5) highlight another example of inertia, reporting inadequate dispensing of naloxone by pharmacies to prevent fatal opiate overdoses. In these secret shopper studies, investigators evaluated the availability of naloxone from pharmacies in California and Texas, 2 of the 50 states that in recent years have passed legislation to empower pharmacists to dispense this life-saving medication without a direct physician’s prescription.(11) [8] As Evoy et al report (4), in 4 pharmacy chains, pharmacists in Texas, in which standing orders allow pharmacists to dispense naloxone, 83.7% of 2127 pharmacies contacted would dispense naloxone without an outside

prescription; 69.4% would dispense naloxone and had it in stock. Puzantian et al report (5) that in a random sample of all pharmacies in California, which allows pharmacists to furnish the drug without a physician's prescription, 23.5% of 1147 pharmacies that were contacted and provided data indicated that naloxone was available and could be provided without a prescription. The differences reported are not explained but may reflect differences in pharmacies included (chain vs. all pharmacies) and to differences in the state laws. Other actionable reasons may account for the limitations in availability in both states, including the training and comfort level of pharmacists, awareness of the legislation, and insurance coverage.(11) Improved training of pharmacists may be needed to make naloxone universally available for the prevention of opioid-related deaths. Such efforts will require resources, investment, and organizational supports.

Older people take too many medications. More naloxone in the hands of friends and family can save lives. Change – overcoming inertia in health care – is difficult but essential to deprescribing harmful medicines and to making effective medicines available to those who need them. Involving groups that are less often the target of interventions to overcome inertia, such as patients and pharmacists, will likely be necessary for medicine to achieve such changes. We are most likely to achieve such changes if we all - patients, pharmacists, nurses, and organizations - push and pull in the same direction.

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