

Promoting proper disposal of unused, unwanted, or expired medications

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Unused, unwanted, or expired (UUE) medications are piling up in homes and ending up in our landfills, sewers, streams, and water supply. Prescription drugs accumulate in households because of patient nonadherence, improvement in treated conditions, medication discontinuation and changes in dose, drug expiration, and patient deaths.

The improper storage and disposal of UUE medications has important public health consequences, including accidental poisonings and drug diversion leading to prescription drug abuse. For example, every day in the United States, more than 2,000 people are treated in emergency departments as a result of unintentional medication poisonings.¹ Proper disposal of UUE medications can protect children and even pets from accidental ingestions of unused medication that might be lying around the house. Moreover, home medication cabinets are a source of opiates that contribute to our nation's prescription drug abuse and drug overdose epidemic. Drug overdose is the leading cause of death by injury in the United States today.²

In this issue of *JAPhA*, Perry et al.³ assess a local community's medication take-back program, developed in collaboration with a college of pharmacy, local law enforcement, city government, health care professionals, and the U.S. Drug Enforcement Administration. They report that about 6,500 prescriptions representing some 787,000 dosing units were dropped off for disposal. While the main origin of the returned prescriptions was community pharmacies, the authors note that the average number of units per prescription was higher for products that were originally dispensed by mail-service

pharmacies. The value of all of the medications turned in was estimated to exceed \$1 million, representing a sizable expenditure of funds.

Also in this issue, Lystlund et al.⁴ report on a survey of patients about their interest in drug take-back programs and a fee-based medication take-back program. The pharmacy sold postage-paid envelopes at minimal cost that could be filled with UUE medications and sent to a drug-disposal facility for incineration. They report a low level of patient awareness of drug take-back programs as well as a low degree of participation in the envelope program.

Disposing unused medications by flushing down the toilet—and into streams, lakes, and the water supply—was reported in both studies.^{3,4}

While national-, community- and pharmacy-based efforts to properly dispose of UUE medications should be applauded, more widespread and definitive steps are needed to address this growing problem. We do not, for example, have reliable estimates on what percentage of the 3.8 billion retail prescriptions dispensed annually are not used or not finished by patients and improperly stored or discarded—and at what cost to society. Additionally, more consumer education is needed to call attention to the proper disposal of UUE prescription drugs.

Informed action, including policy, should be guided by evidence. Yet there is a paucity of evidence-based guidance on effective methods for getting this message across to consumers. Convenient, no-cost, ongoing medication disposal programs exist in some communities, but there is little information on rates of consumer participation.⁵ While nationwide, 1-day programs to collect

UUE medications at community sites are important and do have positive results and generally increase awareness, behavioral change is more likely to succeed through continuous efforts. Gray and Hagemeyer⁶ noted that “drug take-back events serve multiple purposes through proper disposal of medications donated by regional residents; however, the extent to which such programs are addressing the prescription drug abuse epidemic has yet to be determined.”

Getting UUE medications out of the home has many public health benefits. Pharmacy has an important role in strengthening this message and promoting the proper disposal of the medications we have dispensed.

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