

Patient participation in a clinic-based community pharmacy medication take-back program

Stefanie Lystlund, Eric Stevens,
Lourdes G. Planas, and Todd R. Marcy

Abstract

Objectives: To describe patient interest and involvement in participating in a clinic-based community pharmacy drug take-back program to dispose of unused, unwanted, or expired (UUE) medications and to identify patients' reasons for participating in the program.

Methods: A convenience sample of patients at the University of Oklahoma Family Medicine Pharmacy was recruited to complete a needs assessment survey regarding interest in drug take-back programs and current practices for handling UUE medications. Participants who purchased a postage-paid drug disposal envelope were asked to complete a program survey identifying sources of UUE medications, experience with drug take-back programs, and reasons for participation. These participants were later contacted for a follow-up telephone survey regarding their experience with the program and medications sent back.

Results: 62 needs assessment surveys were collected. 61% of patients reported interest in a drug take-back program. 57% reported having no UUE medications at home. Commonly reported UUE handling practices included disposal in the garbage (53.2%) or sewer (29.0%) and home storage (17.7%). 15 disposal envelopes were sold to 10 participants whose most common reasons for participation included concern about the safety of household members, accidental or intentional ingestion, and environmental impact. For 4 patients who returned a median of 9.5 prescriptions, the most common class of returned drugs was antibiotics (19.0%).

Conclusion: Interest in drug take-back programs exists, but awareness and availability of continuous programs is limited. Programs may be more successful if offered at no cost to patients. Future studies are needed on the types of medications sent back and specific reasons for accumulation.

Keywords: Take-back programs, drug disposal, environment

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Accumulation of unused, unwanted, or expired (UUE) medications occurs for several reasons, including death of a family member, improvement in a treated condition, and medication discontinuation.^{1,2} Limited information exists regarding how Americans dispose of such medications. About 75% of Kuwaiti consumers reported disposing of UUE medications in the trash; less common methods of disposal included emptying medications into the toilet or sink, returning them to the pharmacy, and giving them to a friend.²

Disposal of medications in the trash or sewer system can contaminate the water supply, leading to inadvertent exposure to medicinal compounds. In 2002, the U.S. Geological Survey confirmed the presence of medicinal compounds in the nation's water system.³ Since that time, compounds have been found in the drinking water of 24 major U.S. metropolitan areas,⁴ and the U.S. Environmental Protection Agency has proposed adding hazardous pharmaceutical wastes to its universal waste regulations.⁵ In one survey, consumers noted that the awareness of risk associated with improper UUE medication disposal did not reduce their potentially harmful disposal practices.⁶ While difficult to quantify, the accumulation of UUE medications in homes increases risk of accidental and intentional ingestion by household members. Such actions as consumer education and regulatory changes are needed to improve the frequency of appropriate medication disposal.

The Food and Drug Administration and the Office of National Drug Control Policy have developed federal guidelines on proper consumer disposal of UUE medications. The guidelines prioritize the use of available community drug take-back programs to reduce

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Stefanie Lystlund, PharmD, is Staff Pharmacist, Walgreens, Oklahoma City, OK; at the time of the research, she was Postgraduate Year (PGY)1 Community Pharmacy Resident, University of Oklahoma College of Pharmacy, Oklahoma City. **Eric Stevens, PharmD**, is Staff Pharmacist, University of Oklahoma Family Medicine Pharmacy, Oklahoma City. **Lourdes G. Planas, BSpPharm, PhD**, is Assistant Professor, and **Todd R. Marcy, PharmD, BCPS, CDE, CACP**, is Associate Professor, University of Oklahoma College of Pharmacy, Oklahoma City.

Correspondence: Todd R. Marcy, PharmD, BCPS, CDE, CACP, University of Oklahoma College of Pharmacy, P.O. Box 26901, Oklahoma City, OK 73126. Fax: 405-271-6430. E-mail: todd-marcy@ouhsc.edu

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environmental contamination, medication abuse, and accidental exposure. Drug take-back programs provide opportunities for the safe disposal of UUE medications.

In 2010, the U.S. Drug Enforcement Administration (DEA) initiated a National Prescription Drug Take-Back Day in response to growing public concern over improper UUE medication disposal. Since then, 1,733 tons of medications have been collected during seven DEA Take-Back Days.⁷ While the success of DEA's take-back initiatives suggests public concern remains, little or no information is available about the nature or extent of public concern or the most effective approaches for safe drug disposal.

The establishment of a continuous drug take-back program in a community pharmacy would allow patients to return UUE medications at their convenience and would provide pharmacists an opportunity to counsel patients on medication safety information. Community pharmacies in other countries regularly offer such programs.^{1,8}

There is currently a lack of information regarding the establishment of a continuous community pharmacy drug take-back program. Data are needed to better characterize public concern regarding UUE medications to aid in the delivery of well-received UUE medication disposal services. Specifically, data helping to quantify and define reasons for public concern are needed. Also, data describe patient interest and participation in various service models for UUE medication disposal, such as in a community pharmacy.

Objectives

The primary objectives of this study were to describe patient interest in participating in a clinic-based community pharmacy drug take-back program and to identify patients' reasons for participating in such a program. Secondary objectives were to describe patient-reported sources of excess medication in the home, current practices for dealing with UUE medications, and involvement in the take-back process.

Methods

The setting of the study, which used a survey design, was a community pharmacy inside a family medicine clinic located on the University of Oklahoma Health Sciences Center (OUHSC) campus. Pharmacy support consisted of 2.2 pharmacist full-time equivalents (FTEs), 0.2 pharmacy resident FTE, and 2.0 pharmacy technician FTEs. The patient mix in the pharmacy reflected that of the clinic, which serves patients of all ages. Approximately 70% of the patients served were either Medicare or Medicaid beneficiaries, 44% were white, 40% were black, and 9% were Hispanic.

Three patient surveys were administered. A convenience sample of pharmacy patients 18 years of age or older were recruited over a 4-week period to complete a

needs assessment survey, which was intended to identify patient interest in drug take-back programs and current practices for handling UUE medications. This survey was completed before the launch of a new take-back program.

With the commencement of the take-back program, the pharmacy began offering postage-paid envelopes to patients at a minimal cost. UUE medications could be placed in the envelopes and mailed to a drug disposal facility for incineration. At the point of sale, patients were asked to complete a program survey to identify sources of UUE medications, previous experience participating in a drug take-back program, and reasons for choosing to participate.

Patients who purchased an envelope were asked if they would be willing to participate in a telephone survey. The purpose of this follow-up survey was to collect more detailed information regarding the number of prescriptions mailed back, the types of medications mailed back, and overall experience with the program. Patients who agreed to participate in the telephone survey received a form to record those medications mailed back and were contacted approximately 1 week after purchasing the drug take-back envelope.

The study was approved by the OUHSC Institutional Review Board.

Descriptive statistics of participant responses to the surveys were tabulated, with participant comments summarized for the most common themes. The number of envelopes sold and the patient-reported number of envelopes mailed with UUE medications were recorded.

Results

A total of 62 patients completed needs assessment surveys during the 4-week period before the initiation of the take-back program. The majority of participants were women (78.0%) and either black (43.3%) or white (45.0%). The mean age was 45.8 years (range, 19–73).

Of those participating in the needs assessment survey, 85% were aware that prescription and over-the-counter medications have expiration dates. When asked if they currently had UUE medications at home, 17.2% responded "yes," while nearly 22% were unsure. Only 24.2% of participants knew that take-back programs are available for proper medication disposal. The top three current disposal practices reported were throwing medications away in the garbage (53.2%), flushing them down the toilet (29.0%), and storing them at home (17.7%).

The majority of participants (61.3%) indicated that they would participate in a program to mail in their UUE medications for destruction. Participants also indicated the importance of various concerns about take-back program participation (Table 1). When asked how much they would be willing to pay to participate in such a program, 30.6% responded they would not be willing

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