

Unused and Expired Medicines: A National Pandemic

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Mission

The mission of the Community Medical Foundation for Patient Safety is to promote patient safety and healthcare quality through education, research, and the demonstrated practice of patient-centered healthcare within a supportive culture of safety. We aim to educate and empower patients and their families to enable them to be more actively involved in making decisions to improve the quality, equity, timeliness, and safety of their own healthcare

What you find in your medicine cabinet may shock you. If you are like most people, you have a store of unused and expired prescription and over-the-counter (OTC) medicines. Do you recall why you no longer use a particular medicine? Do you know which medicines have expired or may be toxic? Throughout the U.S., the unused and expired medicines (UEM) stockpiled in our homes are rapidly becoming a major source of danger to our communities. Unfortunately, there is no systematic program for legally and safely dealing with these medicines.

Each month, more than 135 million Americans use prescribed medicines;¹ when people stop taking them or keep them beyond their expiration date, staggering quantities of unused medicines accumulate. To promote personal and community safety, some communities have begun to organize collection events to take back unwanted medicines. However, there are wide variations in how the collected medicines are classified and destroyed. What one group labels “medical waste” another might call “household waste.” Programs involving retail pharmacies typically involve reverse distributors, programs allowing return of unused pharmaceuticals to the manufacturer, and others simply transport the medicines to a landfill. Studies on the best classification system, as well as which method of destruction is most efficacious for various products, are urgently needed, but prudent individuals would do well to follow the “precautionary principle” to protect the environment.





The Community Medical Foundation for Patient Safety has established the only national database on UEM—the Unused and Expired Medicines Registry.

The Community Medical Foundation for Patient Safety strongly recommends and supports collection programs that directly involve law enforcement, which has the authority to collect and destroy unwanted controlled substances. For example, the *TRIAD Program* in Indiana and the *Maine Benzodiazepine Study Group (MBSG)* are collection events in which medicines are returned to law enforcement officers for processing and incineration. A planned pilot study, *Get Rid of Unused Medicines (GROUP)* in Houston, Texas, also will involve law enforcement officers.

Further, the Community Medical Foundation for Patient Safety has established the only national database on UEM—the Unused and Expired Medicines Registry. To date, we have entered and analyzed data from collection organizers on more than 3,000 UEM. A recent study in Maine reported that 40% of medicines that had been prescribed and purchased had never been used.² In that study, antidepressants (12%) were the most common UEM and the usual reason they had not been used was that the “doctor discontinued the medicine.” Another sample from Maine showed that analgesics (13%) were the most common UEM because of “expiration.”² Of the analyzed UEM (n=400), 15% was categorized as potentially hazardous to the environment (PBT Index: 4-9). Most of these were antibiotics.

While our ambitious effort to learn about UEM addresses the problem of this pandemic after the fact, our ultimate goal is to address the root causes of the problem by learning more about the reasons for the excessive prescription, production, and demand for medicines in our society. With our partners and collaborators, we are committed to solving this problem through awareness, education, research, and cost-effective interventions and preventive measures. However, as more medicines are manufactured, marketed, and consumed faster than at any time in our history, stemming the tide of a pandemic in the making is a formidable challenge.

Matthew Mireles is an injury and occupational epidemiologist, and is applying his training and expertise to the study of medical errors and patient safety through Community of Competence. He has an adjunct faculty appointment at the University of St. Thomas, Houston, Texas, and at the Center for International Studies.

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Statistics about Unused and Expired Medicines

- Of the 4 billion prescriptions to be filled in the U.S. in 2007, the elderly population will waste more than \$1 billion of drugs.^{3,4}
- Approximately 15 million people misused pharmaceuticals in 2005.⁵
- One of the most common sources of illicit pharmaceuticals is the home medicine cabinet.⁵
- Medication errors result in 700,000 emergency room visits each year.⁶
- Of non-institutionalized seniors, 90% used at least one medicine and 40% used 5 or more medicines weekly.⁷
- The average person over 65 takes between 2 to 7 prescription medicines daily and consumes more than 30% of all medicines prescribed nationally.⁸
- Medicines at home are a major source of accidental poisoning of children—36% occurs in grandparents' homes.⁸
- 19% (4.5 million) U.S. teenagers abuse prescription medicines—such as Vicodin and OxyContin—by engaging in “pharming,” which involves combining cocaine and other narcotics with painkillers. Ingesting these sometimes results in an overdose or death.⁹
- Illegal possession, theft, and diversion of prescription medicines and narcotics from homes to the streets contribute to crime.¹
- Four out of five patients leave their doctor's office with at least one prescription.¹¹

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