



# Drug Safety Review

## Medication errors in the patient's home

The U.S. Pharmacopeia's Safe Medication Use Expert Committee (SMU EC) created a work group to examine reports submitted to USP's medication error reporting programs when the error occurred in the patient's home. From these data compiled, from Sept. 1998, through Aug. 2003, USP hopes to identify safe practices that healthcare professionals and consumers can use to prevent errors from occurring in the patient's home.

### Results

Where the location of the error was identified as the patient's home, reports were analyzed from MEDMARX and the USP Medication Errors Reporting (MER) Program. Medication errors occurring in the patient's home resulted in some form of harm to the patient 11% (87/802) of the time. *Improper dose/quantity* and *omission error* were the top two reported **types of errors** (see table). When compared with prior USP studies, this study found that *extra dose* (12%) was more frequently reported as a **type of error**. *Communication* (21%), *knowledge deficit* (19%), and *monitoring inadequate/lacking* (4%) were recurring **causes of error**. *No access to patient information* (10%) was reported more frequently as a **contributing factor**, and warfarin (9%) was the product most frequently associated with medication errors at home.

### Observations

In many of the cases, patients did not understand how to take their medication, misunderstood the abbreviations used for dosing, or did not ask questions when the

appearance of the product (i.e., tablet or capsule) or instructions on their refilled medications were different. Practitioners and patients did not have adequate training in the use of programmable pumps. Pumps were described as hard to use, and the processes surrounding the pro-

gramming of the pumps was complicated. Warnings and auxiliary labels on containers were either lacking information or were not prominent enough, especially on containers that looked like eyedrop bottles. Errors were also reported due to the lack of patient-specific labeling on medication samples provided by physician offices; oftentimes such samples were not accompanied by a product information sheet outlining their use, side effects, and warnings.

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It is apparent from these data that adequate education and training, as well as communication, are

### Recommendations

Some of the recommendations reported by healthcare professionals include:

- Evaluate the need for education and training for staff and/or patient and family members/caregivers.
- Establish better communication and patient counseling processes.
- Provide better warning

and auxiliary labels on containers.

- Create easier programming features for IV pumps.

- Encourage patients to inquire if something is different or doesn't seem right when they are taking or being administered a medication.

Understanding the characteristics of these errors can contribute to the development of strategies to improve the safe use of medications both in the home and other healthcare settings.

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USP operates two complementary reporting programs: the Medication Errors Reporting Program, presented in cooperation with the Institute for Safe Medication Practices, and MEDMARX. For more information on how to report errors, visit: [www.usp.org/patientsafety](http://www.usp.org/patientsafety).

### Types of errors

Error type	n	%
Improper dose/quantity	253	36%
Omission error	197	28%
Extra dose	81	12%
Unauthorized drug	54	8%
Wrong time	50	7%
Prescribing error	43	6%
Wrong drug preparation	27	4%
Wrong patient	16	2%
Wrong administration technique	15	2%

Note: There were 704 records associated with 759 selections in this multi-select field. The time period covered is from Sept. 1998, through Aug. 2003.

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