AAP News™

How to help reduce home medication errors that impact children: AAP policy

November 29, 2021

Alyson Sulaski Wyckoff, Associate Editor

Article type: AAP Policy

Topics: Pharmacology

Errors in the home administration of pediatric medications occur for myriad reasons. Children with chronic conditions and special needs and those who take multiple medications are at greater risk.

Common mistakes involve errors in frequency, formulation, route of administration, preparation, storage and use of expired products. Certain physician prescribing and pharmacy dispensing practices also contribute to errors, especially when instructions are unclear.

A new AAP policy statement offers strategies to prevent such errors. The policy, *Preventing Home Medication Errors*, from the Council on Quality Improvement and Patient Safety and Committee on Drugs, is available at https://doi.org/10.1542/peds.2021-054666 will be published in the December issue of *Pediatrics*. It includes a supplement with resources to prevent errors.

Health care professional, pharmacist errors

Physicians and other health care providers contribute to the problem by providing unclear information, using unfamiliar abbreviations or confusing units of measurement, and relying on electronic medical record systems that don't allow for precise or proper instructions. Problems can proliferate if clinicians don't review medications at office visits and confirm that parents are giving medications correctly.

Studies show that when pharmacists change the units of measurement on prescriptions, it can confuse parents — especially if the units differ from what was discussed with the clinician. Problems also can occur when pharmacists use a different strength/concentration of medication than what was prescribed and neglect to explain the change.

Health literacy

About 21 million U.S. parents are considered to have low health literacy. They may not understand prescription and over-the-counter (OTC) labels, how to use measuring devices, active ingredient information and weight-based dosing.

Parents with limited English proficiency — about 12% of U.S. adults — also are at risk of misunderstanding instructions and making errors. The risk is magnified when caregivers have both low health literacy and limited English.

Other concerns

More than 80% of pediatric home medication errors involve liquid formulations. Many caregivers are not aware that nonstandard kitchen spoons, which vary in size and shape, should not be used to measure doses. The AAP recommends using standard dosing tools to measure liquid medications.

With prescription and OTC products, the policy suggests using only the administration tool provided with the medication.

Another issue concerns units of measurement of liquid medicines. Terms like milliliter, teaspoon and tablespoon — and their abbreviations — can cause confusion.

Errors also can result when children with more than one caregiver require multiple medications at different times of the day.

Recommendations

The following suggested actions are among the guidance in the policy statement:

- Improve communication with parents and caregivers.
- Simplify medication regimens as much as possible.
- Use appropriate dosing units (e.g., use “mL” only and avoid spoon-based or nonmetric units).
- Use only kilograms for child weight.
- Learn and use health literacy-informed verbal counseling strategies (plain language, pictures/drawings, “teachback-showback” methods) in clinical and pharmacy settings.
- Offer verbal counseling in the caregiver’s/patient’s preferred language, using a trained interpreter if necessary.
- Provide written patient education materials appropriate for the literacy level, as well as a printed after-visit summary.
- Confirm parent/patient understanding in cases of higher-risk regimens or for at-risk populations.
- Encourage use of a standardized dosing tool with all liquid medications.
- On all prescriptions, consider including patient weight and indications so pharmacists can double-check the dose.
- Continue to reconcile medications at all relevant patient encounters.
- Access educational modules and resources for safe prescribing practices.
- Promote safe disposal of unused medications.

Resources

- *AAP News* Parent Plus article “Tips to give your child right dose, type of over-the-counter medicine”
- Dosing tables for fever and pain medications
  - Acetaminophen dosing tables
  - Ibuprofen dosing table
  - Diphenhydramine dosing table