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Evaluation of consistency in dosing directions and measuring devices for pediatric nonprescription liquid medications.

July 3, 2014
Yin S, Wolf MS, Dreyer BP, et al. Evaluation of consistency in dosing directions and measuring devices for pediatric nonprescription liquid medications. JAMA. 2010;304(23):2595-602. doi:10.1001/jama.2010.1797.
https://psnet.ahrq.gov/issue/evaluation-consistency-dosing-directions-and-measuring-devices-pediatric-nonprescription

In November 2009, the US Food and Drug Administration (FDA) released a voluntary set of recommendations around the safety of over-the-counter (OTC) medications, particularly for children. This study examined the prevalence of inconsistent dosing directions and measuring devices among 200 top-selling pediatric liquid OTC medications. Investigators discovered an alarming 99% rate of inconsistency between medication dosing directions and the markings on the measuring device. Furthermore, the use of milliliter, teaspoon, and tablespoon units were also highly variable as was nonstandard abbreviations for milliliter. The authors advocate for three specific recommendations based on their findings: (i) ensure standardized measuring devices in all liquid packaging, (ii) ensure consistency between label dosing instructions and markings on measuring devices, and (iii) choose standard measurement units and abbreviations. A related editorial and news piece [see links below] discuss the implications of this study and the growing need for action to promote patient safety. A past AHRQ WebM&M commentary discussed a pediatric dosing error involving OTC acetaminophen.