Editorials

The Importance of Physicians Identifying and Reporting Adverse Drug Events

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By identifying and reporting adverse drug events, conscientious physicians may influence drug labeling or alerts that impact prescribing practices and help protect the public's health.[1] Many drugs studied in clinical trials have limited experience in the general population and in special populations such as children and older adults; therefore, reporting on adverse events from real-life use in clinical practice is invaluable. Although a busy physician may have reasons for not reporting adverse events, there are just as many reasons to report them. As polypharmacy becomes more prevalent in all age groups, and as alternative remedies and over-the-counter drugs permeate the market, reporting on drug side effects cannot be overemphasized.

The Institute of Medicine report, *To Err Is Human: Building a Safer Health System,* deals primarily with human error, rather than harm related to intrinsic properties of drugs or medical procedures. It also discusses physicians' fear of punitive or legal ramifications related to reporting adverse drug events despite assurances of anonymity.[2] Additional barriers to reporting include lack of instruction during training, excessive paperwork and time, and lack of incentives for reporting.[3]

The Medwatch system (http://www.fda.gov/medwatch) is one mechanism the U.S. Food and Drug Administration (FDA) uses to collect reports of adverse drug events submitted by physicians, manufacturers, and the general public following general marketing. Reports are placed into the FDA's Adverse Event Reporting System (AERS) database upon receipt. The AERS database currently contains more than 4 million adverse event reports on human drugs and therapeutic biologics.[1]

Medwatch reports may affect regulatory decisions on product labeling. Cases with sufficient information are assessed for the association between time of drug use and the onset of an adverse event (temporality); the drug's likelihood of causing the event (causality); concomitant medications; comorbidities; and resolution or return of the adverse event after discontinuation of the drug (dechallenge/rechallenge). Label warnings and contraindications may be generated by evidence from literature references, the AERS database, and data mining, a mathematical analysis used to detect and generate a hypothesis for a safety signal that "refers to a concern about an excess of adverse events compared to what would be expected to be associated with a product's use."[4] Of particular interest are adverse events that occur more frequently than those reported during clinical trials, new adverse events, rare events associated with newly approved drugs, and events that have serious outcomes.[1] Reviewers and regulators may dismiss case reports that have insufficient information.

Ways to report adverse events include:[1]

• Contacting the FDA by: (1) calling 800-332-1088; (2) completing voluntary Form 3500 online through the Medwatch system; (3) faxing Form 3500 to 800-332-0178; or (4) mailing Form 3500. Information on how to report an adverse event to the FDA is available at http://www.fda.gov/Safety/MedWatch/HowToReport/default.htm.

• Contacting a pharmaceutical representative who is required to relay the report to their company.[1]

Literature searches are another way that FDA reviewers may obtain adverse event information. Tools using mobile device applications and social media Web sites are also being investigated or are in early use.

In the United Kingdom, the Drug Safety Research Unit (http://www.dsru.org) has modules for general practitioners. As an incentive, medical associations may incorporate a module on drug adverse event reporting that is eligible for continuing medical education credit.

There are many avenues for physicians to report adverse drug events. This information serves as an invaluable tool to safely prescribe medications for our patients.

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REFERENCES

1. Kortepeter C, Jones JK. The astute clinician: filing high-value adverse drug event reports. Medscape Pharmacists. Sept. 23, 2008. http://www.medscape.org/viewprogram/17438 [login required].
2. Kohn LT, Corrigan JM, Donaldson MS, eds.; Institute of Medicine. *To Err Is Human: Building a Safer Health System.* Washington, DC: The National Academies Press; 2000.
3. Harper ML, Helmreich RL. Identifying barriers to the success of a reporting system. In: Henriksen K, Battles JB, Marks ES, Lewin DI, eds. *Advances in Patient Safety: From Research to Implementation. Volume 3: Implementation Issues.* Rockville, Md.: Agency for Healthcare Research and Quality; 2005:167-179.
4. Guidance for industry: good pharmacovigilance practices and pharmacoepidemiologic assessment. Washington, DC: Center for Drug Evaluation and Research, Food and Drug Administration; March 2005. ∎