

and unexpected. Third, it states that FDA must be provided with relevant data from animal testing. Fourth, it requires the sponsor to transmit not just to FDA, but to the participating investigators. And fifth, it provides a 7-day deadline for SAEs that are unexpected fatal or life-threatening experiences. Some of these themes can be seen in Figs. 24.2–24.5, that is, the transmission of information from the sponsor to the FDA, and the concept of follow-up.

## VI. POST-MARKETING REPORT OF ADVERSE EVENTS

Following regulatory approval of a drug, there is continued surveillance of drug safety. Health care professionals, as well as the general public, can submit drug safety reports to the FDA by way of a MedWatch form. There are two different versions of the MedWatch form, one of which is used by pharmaceutical companies, and the other by consumers in the post-marketing context.

The MedWatch form provides a rapid way to communicate SAEs to the FDA. This form is used for any SAE, especially those that might not be listed on the package insert, including fatalities, hospitalization, and other medically significant events. The FDA welcomes the use of MedWatch forms to report therapeutic failures, for example if a patient needed to switch to another brand of the same drug, to report errors in the dosing instructions, and to report suspected counterfeit drugs or contaminated drugs. In the context of post-approval reporting, Nebeker et al. (182) stated that, “[t]he FDA is interested in receiving reports on serious, unexpected adverse drug reactions (not adverse drug events) from marketed drugs. Unexpected reactions are those whose nature or severity is not consistent with the product label.”

The following provides one example of the utility of use of the MedWatch form, when used by physicians not involved in any clinical trials. Injuries to patients resulted from confusion with Lanoxin<sup>®</sup> (heart medicine) and Levoxine<sup>®</sup> (thyroid medicine) (183,184). Patients were receiving Lanoxin, when they should have been receiving Levoxine, that is, levothyroxine, a medicine for hypothyroidism. The confusion was accentuated by the fact that the dosages were the same (0.125 mg). These injuries were reported to the FDA, and as a result the name of Levoxine<sup>®</sup> was changed to Levoxy<sup>®</sup> (185). In other words, numerous medication errors associated with levothyroxine were reported to FDA using the MedWatch device.

<sup>182</sup> Nebeker JR, Barach P, Samore MH. Clarifying adverse drug events: a clinician’s guide to terminology, documentation, and reporting. *Ann Intern Med.* 2004;140:795–801.

<sup>183</sup> Pourmatobbed G. The naming of drugs is a difficult matter. *N Engl J Med.* 1994;311:1163.

<sup>184</sup> <http://video.google.com/videoplay?docid=7028108578849636582#>

<sup>185</sup> FDA Advise-ERR: Medication errors associated with levothyroxine products. ISMP Medication Safety Alert! (September 6, 2000).