The answer to the question, “Can patient package inserts for prescription drugs be improved?” is a resounding, “Yes.” In a 2003 speech before the Food and Drug Law Institute (Washington, DC), former FDA Commissioner Mark B. McClellan, MD, PhD, noted, “…package inserts have become so laden with legal considerations that they are often unintelligible to the average consumer and ignored by many physicians. They’ve become liability-avoidance tools rather than efficient risk-communication tools. They should be written with a patient in mind, not a jury. How many patients and doctors ignore hard-to-read labels? How many of these patients then go on to have an adverse event that could have been avoided if they knew what to watch for?”

The Food and Drug Administration estimates that improper use of prescription drugs costs about $20 billion a year in preventable drug-related illnesses, emergency room visits, hospital admissions, and deaths. There’s no question better patient information could reduce this number. What is up to debate is how to best deliver accurate, up-to-date, and comprehensible information to consumers about their prescriptions.

FDA differentiates between package inserts and patient package inserts, or what sometimes are called printed patient inserts (PPIs). The former are directed to healthcare professionals, the latter to consumers. Numerous studies have shown that PPIs improve compliance, reduce improper use and medication errors, and help consumers identify adverse drug reactions.

The PPI issue is one of long standing. In 1982, the agency withdrew a proposal to require mandatory PPIs for all prescription drugs in favor of private-sector initiatives. As a result, providing a PPI is voluntary for prescription drug manufacturers except for 15 drugs or drug classes considered particularly dangerous when used improperly. Under 21 CFR 208 (effective 1 June 1999), these potentially more-hazardous products require that an FDA-approved and manufacturer-provided “medication guide” be included with the prescription. Outside this group of products, relatively few prescription drugs are dispensed with FDA-approved and manufacturer-provided information.

However, a provision in the 1996 Health and Human Services FDA Funding Act (Public Law 104-80) requires that individuals filling new prescriptions should receive useful written information. It set a goal of having such information included with 75% of new prescriptions by 2000 and 95% by 2006.

To meet this requirement and provide a value-added service, many pharmacies have begun producing their own patient-information documents. This is so widespread that a majority of new prescriptions written today are accompanied by a PPI. Because pharmacies normally rely on data provided by third-party services, however, information may not be entirely accurate, complete, or up-to-date.

To determine the percentage of prescriptions being dispensed with PPIs and their quality, FDA periodically undertakes a “National Tracking Survey of Prescription Drug Information Provided to Patients.” The national survey involves a random sample of adults who filled a new prescription for themselves or a family member within the previous four weeks.

Surveys were conducted in 1992, 1994, 1996, 1998, 2001, and 2004. In the 2001 study (the most recent study for which results are available), which was considerably larger than previous studies, shoppers presented four new prescriptions at 384 randomly selected pharmacies in 44 states. Results show the percentage of patients receiving PPIs was actually quite high. Unfortunately, only about 50% of the materials provided with the pre-
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Prescriptions contained useful information. The other 50% were illegible, incomprehensible to those lacking a healthcare background, inconsistent, incomplete, or all of the above. The lowest ratings involved contraindications, precautions, legibility, and comprehensibility. Illegibility appears to be a problem with multiple causes, including poor print quality, small type size, and inadequate line spacing.

Supporting FDA’s findings are the results of another study, “Health Literacy: A Prescription to End Confusion.” According to this report by the Institute of Medicine of the National Academies (Washington, DC, www.iom.edu), 90 million Americans have difficulty understanding and using health information. Not surprisingly, the study goes on to note that limited health literacy tends to be more common among older adults, people with limited education, and those who lack fluency in English.

The main reason so many people have difficulty understanding PPIs and other health-related materials is that the reading skills of the patients typically are much lower than the reading level for which the materials are written. The study reports most health information is written at a level exceeding the reading skills of the average high school graduate. In fact, the writing generally is so complex it’s likely that even well educated people with strong reading and writing skills will at some point in time have difficulty comprehending a medical form or doctor’s instructions.

Numerous consumer organizations believe a mandatory approach to providing PPIs would best provide the information patients need to take their medicines properly and recognize side effects.

One trade association advocating greater availability of FDA-approved, manufacturer-supplied printed prescription information for patients and leaflets that are accurate, consistent, comprehensible, and legible is the Pharmaceutical Printed Literature Association (PPLA, Falls Church, VA, http://pplaonline.org). Made up of more than 25 printers and North American manufacturers of pharmaceutical inserts, labels, and cartons, the goal of the three-year-old, not-for-profit trade association is to advance drug safety information that is FDA-approved, patient friendly, and distributed with every prescription filled.

According to PPLA’s background statement, the group’s “core initial goal is to help the pharmaceutical industry help consumers benefit from existing and new drugs … by taking those drugs as prescribed, with instructions, precautions, and risk data clearly understood. The desired outcome is a win-win-win situation: Consumers enjoy better health; the healthcare system operates at lower total cost; and drug manufacturers report higher sales.”

PPLA asserts that the voluntary PPI program is not working and has given testimony before FDA advocating agency-approved, manufacturer-produced printed patient literature for all prescriptions. The organization believes that this can be done efficiently and cost effectively, and contends that printed information has advan-
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tages over electronic because it is more difficult to tamper with and can be transported easily to be read anywhere.

PPLA also claims printed drug information technologies can guard against counterfeiting and would like to see dietary supplements held to the same labeling standards required for over-the-counter drug products.

Other groups and FDA itself are exploring the potential of electronic technology. Assuming database changes are made in a timely manner, electronic technology has the potential for addressing what many see as major flaws with printed materials. First, if databases are kept up to date, electronic technology can eliminate the lag time between when a change is made in an insert and when it can be put into print. Second, electronic technology can reduce the likelihood of changes being overlooked by providing pharmacists with an alert regarding updates made since the last session.

Electronic sourcing has its own set of drawbacks, however, including timeliness of database maintenance; universal and consistent access to the electronic system from all dispensing sites; security; and potential disruptions resulting from power failures, network crashes, hackers, or terrorist attacks.

In 2000 the Pharmaceutical Research and Manufacturers Association (PhRMA, www.phrma.org) formed a “Paperless Labeling Task Force” to look at the use of new technologies in the distribution of full prescribing information to pharmacists in lieu of a printed package insert. Since then, a small pilot study in the Washington, DC, area has been completed with positive results, and a second larger pilot project reportedly is underway.

To date, FDA’s interest in electronic transmission has focused mainly on electronic submissions of various documents such as new drug applications and abbreviated new drug applications. With regard to labeling, which in FDA parlance means any printed packaging materials related to the product, FDA appears to be keeping an open mind. Agency officials have not embraced either printed or paperless solutions to the exclusion of the other. Although some FDA staffers have expressed a positive view of some aspects of electronic labeling, former FDA Commissioner McClellan is on record as stating that electronic drug information will not replace printed prescription literature.

The United States Pharmacopeial Convention (USPC) also has concerns about prescription drug information and has proposed revisions to General Chapter (1265), Written Prescription Drug Information—Guidelines.

The proposed guidelines, which have been refined over the past few years, are directed primarily to healthcare providers and help ensure that prescription drug information leaflets are “useful.” Useful in
the context of General Chapter (1265) means that the leaflets are understandable and provide sufficient information about the medication and its side effects. According to the proposed Guidelines, labeling should identify activities that the patient should avoid while taking the medication and whether there’s a risk of developing a dependence or tolerance to the drug. In addition, the proposed Guidelines recommend grouping side effects according to how serious and common they are, and mentioning only the most important interactions to avoid alarming patients. The leaflet also should advise patients to talk to their healthcare provider before making any dosage changes.

USPC continues to accept comments on the proposed changes to General Chapter (1265) and may publish a final document in the United States Pharmacopeia–National Formulary in 2005. One change PPLA would like to see in the final version is a broadening of the languages specified. The proposed Guidelines call for the use of English and Spanish in the leaflets. PPLA would like to see French included as well. This would bring US practice into closer harmony with the European Union, which mandates the inclusion of five languages: English, Spanish, French, Italian, and German. It also would be more consistent with what PPLA Executive Director Peter Mayberry describes as “wider consumer-product labeling norms.” Printing prescription drug information in English, Spanish, and French also would be “inclusive of wider consumer populations,” he notes in a 14 February 2003 comment letter to USPC.

With healthcare costs soaring and the potential for millions of dollars in savings by eliminating adverse events related to poor patient information, it seems probable that improved PPIs are in our future. It also is likely that a combination electronic–print solution will evolve. There’s also a good chance PPIs will eventually rely on radio frequency identification (RFID) tags, which patients would read using a personal RFID reader built into a device like a PDA or cell phone. In this scenario, the RFID tag might carry PPI information as well as a product pedigree. Alternatively, the tag simply could hold the data needed to link to the database where this information resides.