Unique role of consumer studies in nonprescription drug development

Andrea Leonard-Segal, Laura E. Shay, Daiva Shetty, and Joel Schiffenbauer

Abstract

Objective: To inform the health care community about nonprescription drug labeling and consumer studies unique and integral to the nonprescription drug development process.

Summary: Data from consumer studies are essential for many nonprescription drug approvals. These studies are conducted to help predict actual consumer behavior in the marketplace if the product is approved. They test whether potential consumers understand a label (label comprehension study), can properly decide if a product is appropriate for them to use (self-selection study), and can use a product in accordance with the label (actual use study). The design and interpretation of these studies often pose unique challenges.

Conclusion: Consumer studies are often part of a nonprescription drug development program. Continued efforts to improve consumer research should result in greater access to safe and effective nonprescription drug products for the American public.

Keywords: Nonprescription medications, pharmaceutical development, regulations, consumers.

J Am Pharm Assoc. 2009;49:670–673.
doi: 10.1331/JAPhA.2009.08068

Received June 18, 2008, and in revised form October 27, 2008. Accepted for publication February 7, 2009.

Andrea Leonard-Segal, MD, is a board-certified rheumatologist and Director, **Laura E. Shay, PhD, C-ANP,** is a board-certified nurse practitioner and Social Science Analyst, **Daiva Shetty, MD,** is a board-certified pediatrician and Medical Team Leader, and **Joel Schiffenbauer, MD,** is a board-certified rheumatologist and Deputy Director, Division of Nonprescription Clinical Evaluation, Center for Drug Evaluation and Research, Food and Drug Administration, Silver Spring, MD.

Correspondence: Laura E. Shay, PhD, C-ANP, Division of Nonprescription Clinical Evaluation, Food and Drug Administration, Building 22, Rm. 5466, 10903 New Hampshire Ave., Silver Spring, MD 20993. Fax: 301-796-9899. E-mail: laura.shay@fda.hhs.gov

Disclosure: The opinions and assertions expressed in this article are the private views of the authors. No endorsement by the Food and Drug Administration is intended or should be inferred. The authors declare no conflicts of interest or financial interests in any product or service mentioned in this article, including grants, employment, gifts, stock holdings, or honoraria.

Acknowledgment: Charles J. Ganley, MD, Director, Office of Nonprescription Products, Center for Drug Evaluation and Research, Food and Drug Administration, for reviewing the final manuscript.

The Food and Drug Administration (FDA) oversees the approval and regulation of nonprescription drug products. These products are used daily by millions of Americans and therefore have a major public health impact. Furthermore, substantial consumer interest exists in having increased access to safe and effective nonprescription products. Drug manufacturers have been seeking approval for nonprescription drugs for a wide variety of indications. These range from acute symptomatic (e.g., insomnia due to pain) to chronic asymptomatic conditions (e.g., hypercholesterolemia) and pose challenges for the evaluation process.[1] During the previous few years, FDA has switched drugs from prescription to nonprescription availability for new self-care indications (e.g., emergency contraception, weight loss).

As with other approved drugs, randomized controlled clinical trials must demonstrate that nonprescription drugs are safe and effective. However, ascertaining through data whether consumers can use a product correctly without the input of a health care provider is distinctive and important to the development of nonprescription drugs. Correct drug use entails being able to self-diagnose the condition to be treated, the ability to make a proper decision to use or not to use the drug (self-selection decision) based on the product labeling, the ability to follow the directions for use, and the ability to know when to stop the drug and to seek medical care when appropriate. For those interested in further details, the design of consumer studies for nonprescription drugs was the topic of a public discussion at the September 25, 2006, Nonprescription Drug Advisory Committee Meeting; a transcript of this meeting is available.[2]

At a Glance

Synopsis: Consumer studies are integral to the nonprescription drug development process because they can help predict actual consumer behavior in the marketplace if the product is approved. Label comprehension studies test whether consumers understand a label, self-selection studies determine whether consumers can properly decide if a product is appropriate for them to use, and actual use studies test whether consumers can use products in accordance with the label.

Analysis: *Designing and interpreting consumer studies can be challenging. Deciding whether to approve a drug when a large percentage of users may benefit but a small percentage could potentially be harmed by inappropriate use can be difficult. Because actual use data are rarely available for drugs in the prescription setting, determining how high to set the bar for proper drug use in the nonprescription setting becomes a matter of clinical judgment. Continued efforts to improve consumer research for nonprescription drugs should result in greater access to safe and effective nonprescription drug products.*

Objective

The purpose of this article is to inform the health care community about nonprescription drug labeling and consumer studies unique and integral to the nonprescription drug development process.

Qualifications for nonprescription drugs

The prescription to nonprescription switch process is guided by federal regulations. The Durham-Humphrey Amendment to the Food, Drug, and Cosmetic Act draws a distinction between prescription and nonprescription drugs. This distinction is stated in the Code of Federal Regulations 21 CFR 310.200(b) as follows:

"Any drug limited to prescription use under section 503(b)(1)(C) of the act shall be exempted from prescription-dispensing requirements when the Commissioner finds such requirements are not necessary for the protection of the public health by reason of the drug's toxicity or other potentiality for harmful effect, or the method of its use, or the collateral measures necessary to its use, and he finds that the drug is safe and effective for use in self-medication as directed in proposed labeling."

When a drug, previously available only by prescription, is switched to nonprescription status, the health care provider no longer is a gatekeeper to access. Depending on the nonprescription indication and target population, the efficacy and safety may have already been established for prescription use. If not, additional efficacy and safety data may be required from new clinical trials for the switch. Safety data obtained from domestic and international markets where the drug has been approved for any indication also contribute to the safety evaluation.

OTC drug label requirements

The Code of Federal Regulations (21 CFR 201 subpart C) establishes labeling requirements for nonprescription drugs and provides for a standardized labeling format. Labeling standardization enables consumers to become familiar with the labeling layout so they can easily find the information they seek. The Drug Facts part of the label contains all information that is necessary for safe and effective use of the nonprescription product (21 CFR 201.66).

Types of consumer studies

In addition to safety data and the traditional randomized placebo-controlled trials to establish efficacy, consumer studies are often required and vital to the nonprescription approval process. These studies determine whether potential consumers can understand a label (label comprehension study [LCS]), properly decide if a product is appropriate for them to use (self-selection study [SS]), and correctly use a product in accordance with the label (actual use study [AUS]) directions.

Ideally, the tested consumer population reflects the demographics of the U.S. population and therefore includes a low literacy cohort as determined by a validated literacy testing instrument such as the REALM (Rapid Estimate of Adult Literacy in Medicine) test.[3] Sometimes the study population is enriched