



Future Challenges and Opportunities in Online Prescription Drug Promotion Research

Comment on “Trouble Spots in Online Direct-to-Consumer Prescription Drug Promotion: A Content Analysis of FDA Warning Letters”



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Abstract

Despite increased availability of online promotional tools for prescription drug marketers, evidence on online prescription drug promotion is far from settled or conclusive. We highlight ways in which online prescription drug promotion is similar to conventional broadcast and print advertising and ways in which it differs. We also highlight five key areas for future research: branded drug website influence on consumer knowledge and behavior, interactive features on branded drug websites, mobile viewing of branded websites and mobile advertisements, online promotion and non-US audiences, and social media and medication decisions.

Keywords: Direct-to-Consumer (DTC) Advertising, Prescription Drug, Social Media, Health Communication

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As Kim¹ notes, the emergence of online prescription drug promotion warrants research, both to inform regulation in countries that allow direct-to-consumer (DTC) promotion and to understand consumer behavior around the world. Although healthcare providers continue to be highly trusted sources of health information, consumers often first consult Internet-based sources to answer questions about health conditions or medications.^{2,3} At the same time, pharmaceutical companies are increasingly using online promotional tools, such as branded drug websites, online videos (eg, YouTube), and social media (eg, Facebook, Twitter, online forums, and chat rooms), to provide information about prescription drugs.^{4–8} Yet these online tools—as demonstrated by Kim and others^{9–11}—often fail to present balanced information about prescription drug benefits and risks.

Despite the availability of online promotional tools, however, the evidence on online prescription drug promotion is far from conclusive. Kim's study helps to address the need for new research; her overview of a decade of warning letters issued by the U.S. Food and Drug Administration (FDA) highlights some important observations. She notes that online promotion, like conventional broadcast and print advertising, harbors numerous instances of inaccurate description of drug benefits and risks. Unlike conventional broadcast advertising, however, online promotion can pose unique space constraints (such as character and space limits in Internet search engine results) that can make benefit and risk description challenging. Moreover, social media applications beg new questions about the influence of interpersonal communication online.

From a regulatory perspective, we should examine additional dimensions in FDA warnings beyond Kim's current analysis. Specifically, future research should compare online DTC

warnings against conventional broadcast and print ad warnings, should distinguish between notices of violation and more serious warning letters, and should compare the volume of FDA warnings against the prevalence of each DTC activity. These assessments would help to identify how online DTC violations compare to traditional DTC violations and whether the high volume of warnings for branded drug websites is because such sites are more prevalent than other online DTC activities.

From a decision science perspective, we need to expand online DTC research beyond FDA warning letters to examine how online promotion influences consumer knowledge, perceptions, and decision-making. Although it is important to ensure that online DTC content is fair and balanced, we also need to understand what role this content—balanced or not—plays in consumer health and medication choices. As researchers look ahead to new investigations of online prescription drug promotion, we recommend five key areas for consideration.

Branded Drug Website Influence on Consumer Knowledge and Behavior

Relatively little research has examined how consumers navigate and use branded drug websites, how sites affect consumer knowledge of drug benefits and risks, or how consumer reactions to DTC websites differ from reactions to traditional DTC ads.^{8,12} Moreover, older age, lower health literacy, and use of multiple medications can interfere with comprehension of drug labels and risk information, and we need to understand whether these audiences also struggle to process or retain important information from drug websites.^{13–18}

Interactive Features on Branded Drug Websites

Branded websites can (and sometimes do) incorporate interactive features that cannot be included in traditional print and broadcast ads, such as video testimonials, symptom checklists, printable coupons, and hyperlinks to disease information or medical resources.^{10,19,20} However, research has not yet explored how interactive features influence consumer knowledge, perceptions, and behavior in this arena and whether their presence interferes with the fair balance of benefit and risk information mandated by FDA.

Mobile Viewing of Branded Websites and Mobile Advertisements

Consumers increasingly access the Internet on mobile devices—such as smartphones and tablets—to seek health information online.²¹ However, many websites are still not optimized for mobile viewing, which can make it difficult for consumers to navigate sites.²² We have a limited understanding of whether consumers who visit non-optimized sites on mobile devices are able to find desired information, understand the benefits and risks of advertised drugs, and make appropriate decisions about the medications.

Along with the rise in mobile device use, marketers also are increasingly using mobile and targeted advertising to reach consumers.²³⁻²⁵ Consequently, we need to examine how often pharmaceutical companies employ mobile advertising, whether such advertising meets FDA's requirements for fair balance, and how consumers react to these ads.

Online Promotion and Non-US Audiences

The United States and New Zealand are the only countries that permit DTC prescription drug advertising. However, unlike traditional print and broadcast ads, online DTC activities have the ability to cross international borders and be accessed by consumers in countries where DTC advertising is not legal.⁴ In fact, adults in Europe and Asia frequently seek medication information online, often accessing branded drug sites.²⁶⁻²⁸ This raises questions not only about the ability of FDA, the European Medicines Agency (EMA), and other agencies to regulate drug promotion online, but also about how adults around the world react to these activities.

Social Media, Drug Promotion, and Medication Decisions

The promotion of prescription drugs via social media is still a new phenomenon, and FDA's guidance on social media promotion largely reiterates the general requirement for fair balance of benefit and risk information.^{4,29-30} However, consumer use of social media for health information has grown rapidly, and even though few pharmaceutical companies use social media to make drug product claims, consumers frequently discuss their own personal drug experiences—including effectiveness and side effects—on social media.^{5,31-33} Thus, we need to understand how pharmaceutical companies use social media, how consumers react to direct promotion (eg, product-specific Twitter feed) vs. subtle promotion (eg, online illness forum hosted by drug manufacturer), and how consumers use information gleaned from social media in their decisions.

Although relatively few of the warning letters in Kim's¹ sample directly involved social media, concerns over social media

activities by prescription drug marketers are likely to increase in the future. Social media applications raise important challenges for researchers relative to conventional broadcast advertising. Consider, for example, the range of ways in which people—either affiliated or unaffiliated with pharmaceutical companies—can encounter and propagate content online.³⁴ People can discuss prescription drugs in online forums, forward medication information to others, and share offers or incentives for drug samples with others. Consumers also can explicitly endorse advertisements or messages (eg, “liking” a Facebook post). Although FDA has provided some guidance on how pharmaceutical companies should respond to such third-party endorsements,³⁰ future research should investigate how consumers react to such endorsements and provide more concrete evidence to inform marketing guidelines.

With these ideas in mind, we face a robust research agenda for online prescription drug promotion. Building on Kim's work, future contributors to this journal and the literature can improve our understanding of how consumers encounter and process prescription drug promotion online and, ultimately, how online promotion influences consumer behavior.

Ethical issues

Not applicable.

Competing interests

Authors declare that they have no competing interests.

Authors' contributions

Both authors contributed equally to the conceptualization and writing of this piece.

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