

The Impact of Direct-to-Consumer Pharmaceutical Advertising on Social Media: A Review

Abby Li

Glen A. Wilson High School, 16455 Wedgeworth Dr, Hacienda Heights, California, 91745, USA

ABSTRACT

Direct-to-consumer advertising (DTCA) is a marketing strategy that advertises prescription drugs directly to consumers instead of through healthcare providers. With the rise of social media platforms, pharmaceutical companies have implemented DTCA on social media as a way to promote their products to consumers. The aim of this literature review is to analyze the impacts of social media DTCA on consumer healthcare. I conclude there are benefits to DTCA such as increasing consumer awareness and accessibility; however, there are also concerns over the reliability of information shared on social media which can harm consumers. As the pharmaceutical industry continues to use social media as a way to market prescription drugs, it is important to do so in a way that educates consumers while reducing potential harm.

Keywords: Marketing; Advertising; Pharmaceuticals; Social Media; Healthcare; Direct-to-Consumer Advertising

INTRODUCTION

In recent years, social media usage has skyrocketed with Facebook, Instagram, and Youtube emerging as the most popular platforms (1). Social media has significantly changed the way people communicate and gain knowledge on various topics. On average, users spend about two and a half hours per day on social media, with 59.9% of the global population actively using these platforms (2). Due to its wide reach, social media has become a commonly used tool for influencing consumer behavior and promoting brands.

It is also an effective advertising channel: companies who use social media to reach consumers report 61% in growth revenue, and around 81% of businesses confirm its effectiveness at increasing sales (3). Social media platforms allow brands to directly reach consumers by exposing them to various advertisements across platforms on a daily basis. Consequently, many brands incorporate social media advertising to market to consumers in hopes of boosting sales and promoting brand visibility.

Recognizing the rapid growth of Web 2.0, pharmaceutical companies in the U.S. are beginning to incorporate social media into their promotional efforts as a way to advertise their products to consumers. The pharmaceutical industry uses direct-to-consumer advertising (DTCA) to generate consumer engagement (4). DTCA is a form of promotion that markets prescription pharmaceuticals to patients rather than healthcare professionals (5). Pharmaceutical companies

Corresponding author: Abby Li, E-mail: abbyli1328@icloud.com.

Copyright: © 2025 Abby Li. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Received December 15, 2024; **Accepted** January 21, 2025
<https://doi.org/10.70251/HYJR2348.315054>

have invested approximately \$6.1 billion on DTCA, reflecting a significant shift from how these companies approach marketing on prescription medications (6). On social media, pharmaceutical DTCA is generally found in advertisements that market a variety of medications along with reliable patient influencers that vouch for the product and inform consumers about different health conditions. DTCA plays a significant role as a pharmaceutical marketing strategy by helping businesses market medications directly to the public rather than through healthcare professionals. This route benefits businesses because it allows them to maintain brand recognition while also connecting with potential buyers. It aims to inform and persuade consumers who may be interested about specific medications, while also increasing engagement within the healthcare community (7).

The purpose of this literature review is to analyze the effects of direct-to-consumer pharmaceutical advertising on social media on consumer healthcare as well as to explore how exposure to these advertisements may play a role in the consumer decision-making process regarding their choice of medications or treatment. This topic is important to consider because it highlights how social media plays in shaping healthcare decisions and consumerism. With the growing frequency of interactions and daily engagement on social media platforms, it is important to note how such exposure can influence consumer attitudes towards specific medications and treatments, and subsequent healthcare decisions (8). Since these platforms serve as a primary source of information for many, engagement with DTCA can shape their understanding of health-related issues, ultimately influencing their health outcomes. Understanding this topic allows us to explore how these marketing strategies can alter consumer perceptions and decisions in regards to their health, while also highlighting the connection between pharmaceutical marketing and consumer healthcare choices.

LITERATURE REVIEW

History of DTCA

Direct to consumer pharmaceutical advertising began well before the rise of social media, but its historical roots impact current practices. DTCA has undergone significant changes since it was first permitted in the US in the early 1980s (9). These changes allowed pharmaceutical companies to advertise prescription drugs directly to consumers through different forms of media. Previously, the promotion of prescription medication was limited to the healthcare professionals capable of interpreting drug

information for the general public; this was the safest way to ensure informed decision-making and protect the safety of patients (9).

However, with technological advancements, DTCA has expanded from traditional forms of marketing to widely used platforms like social media. Social media has become one of the most effective and used tools for pharmaceutical advertising since it enhances engagement and improves brand visibility (10). Platforms such as Facebook, Twitter, and YouTube allow pharmaceutical companies to directly market their products to millions of consumers that are active on these platforms on a daily basis (11). This enables brands to better connect with their audience, as consumers can use social media to engage and interact with companies directly.

However, DTCA is controversial and is only legal in a few countries such as the United States and New Zealand. In other countries, direct-to-consumer pharmaceutical advertising is banned due to concerns about its harmful effects on health outcomes (12). For example, countries such as Australia, the United Kingdom, and Canada have restricted the use of DTCA as a form of marketing for pharmaceuticals as it poses a risk to public health. In Canada, the restriction of DTCA is used to protect consumers as prescription drugs are more toxic and rather used to treat conditions that are not generally self-diagnosed (13). This regulation stands with the concerns about the risks of DTCA such as over-prescribing and the spread of misinformation, which can ultimately endanger public health by promoting inappropriate medication usage, leading consumers to making uninformed healthcare decisions (13). As a result, DTCA raises several controversial issues about its role in the pharmaceutical market, particularly concerning its influence on promoting prescription drugs (11).

Trends in DTCA on Social Media

With the increasing use of digital platforms among consumers, the pharmaceutical industry has used social media to promote their products (10). Social media also allows companies to educate consumers on various diseases, treatments, and their health (14). Some ways that these companies use social media include virtual events, webinars, and use of patient influencers (15).

Pharmaceutical companies often collaborate with influencers or health advocates in order to market their medications in a way that generates consumers' trust (16). For example, an influencer who shares their experience with managing a medical illness might consider collaborating with a pharmaceutical brand to promote a specific product

designed for the condition. Since consumers tend to be skeptical of pharmaceutical companies, these companies can build a connection with their audiences by using patient influencers and therefore improve the relationship between consumer and pharmaceutical industry (17).

Consumers are placing greater trust in receiving information from influencers rather than directly pharmaceutical companies (18). Influencers are able to share personal stories that align with what the pharmaceutical companies are trying to advertise, making them seem relatable, authentic, and trustworthy to consumers. In addition to influencer marketing, a trend that has been rising as a pharmaceutical DTCA strategy is the use of interactive content on social media. This includes tools such as live Q&A sessions or virtual webinars, which allow consumers to actively increase engagement within brands while educating consumers on healthcare. By interacting with a brand's audience, influencers promote a company's products and establish a brand as a thought leader in the pharmaceutical industry (15).

Interactive content can also provide companies with a better understanding of their audience, which in turn, enables them to enhance their marketing strategies based on the consumers' needs and desires. This approach gives the audience a sense of involvement in their health while helping pharmaceutical companies foster a sense of trust, building a community through such engagement. As the pharmaceutical industry continues to adapt to changing trends in direct-to-consumer advertising on social media, the use of educational content and engagement will increasingly influence the way brands market their products.

Positive Impacts of DTCA

DTCA has been shown to have several positive impacts on consumer behavior, allowing individuals to become more informed about pharmaceuticals. For example, exposure to DTCA has been proven to encourage consumers to seek information about drugs, a behavior that can be shaped by various social influences (19,20, 21). The Theory of Planned Behavior suggests that this tendency—seeking out information about prescription medications after exposure to DTCA—is driven by a person's intention to participate in that behavior and is typically influenced by factors such as subjective norms and perceived behavioral control (22). People are more likely to reach out to healthcare professionals due to such subjective norms or social pressure, which makes consumers feel inclined to stay

informed about a specific pharmaceutical they saw in a social media advertisement (23).

Moreover, individuals with a level of market mavenism not only stay informed but also contribute to influencing others through electronic word-of-mouth, further proving the impact of DTCA on social media platforms (24). This fosters informed decision-making while enhancing patient involvement and opens better access to healthcare information. DTCA can influence consumers through the persuasive power of social media advertisements, which significantly influences treatment decisions. This persuasive effect is supported by consumers' trust in peer recommendations, such as those from influencers, over pharmaceutical sources, fostering a collaborative approach to healthcare decision-making and further promoting healthcare conversations (11). These social media platforms have increased patient awareness, pushing patients to seek information and take an active role in their healthcare choices, while also using marketing strategies to influence consumer behavior, raise awareness, and promote healthy behaviors (25).

Negative Impacts of DTCA

Despite the positive aspects, there are also concerns regarding the negative impacts of DTCA on social media. Opponents of drug marketing on social media suggest that DTCA spreads misinformation and overemphasizes the benefits of certain pharmaceuticals (26). As a result, many risks arise such as inappropriate prescribing of medications, which can lead to consumers making inappropriate healthcare decisions (4). For example, in a 2005 study, patients that were exposed to antidepressant advertisements were more likely to request specific medications from their physicians. This dramatically increased prescribing rates, even for conditions like adjustment disorder, where recommended treatments include therapy or observation (27). Overprescribing may expose patients to unnecessary risks and side effects with no beneficial results, indicating how DTCA can advertise underuse while simultaneously promoting overuse (27).

Additionally, pharmaceutical companies can also create a misleading impression of a drug's effectiveness by deleting or editing any negative reviews, ultimately altering the consumer's perspective on the product (28). A notable example is the case of Johnson & Johnson's marketing of the antipsychotic drug Risperdal. The company faced numerous lawsuits for concealing its significant side effects and promoting the drug for unapproved uses that led to large settlements, including a \$2.2 billion agreement with the U.S. Department of

Justice (29). This case highlights how pharmaceutical companies' selective presentation of information can lead consumers to believe that a drug is more effective and safer than it is, significantly influencing their healthcare decisions, and how pharmaceutical advertising prioritizes profit over transparency.

Some researchers argue that DTCA fails to provide quality health information that aids in healthcare decision-making, but rather contributes to expensive healthcare costs (30). It also downplays important information about a drug's potential side effects, resulting in decisions made without a thorough understanding of the risks involved and an inaccurate impression of the drug's safety (31). By manipulating the information being displayed, pharmaceutical companies are shaping a misleading public perception of their products and ultimately cause consumers to prioritize advertised drugs rather than medications that align best with their health.

CONCLUSION

In conclusion, the purpose of this literature review is to identify and assess the impact of social media on consumer healthcare, as well as to educate readers about the topic of DTCA, particularly on social media platforms. This form of marketing has introduced both benefits and concerns regarding consumer health. While DTCA on social media has increased consumer awareness and accessibility, it also raises ethical and public health concerns regarding the quality and reliability of information shared to consumers by the pharmaceutical industry. DTCA on social media is a powerful marketing strategy for patient education and involvement in healthcare; however, it requires certain regulations to ensure that consumers are making informed decisions. Regulatory measures such as requiring risk and benefit disclosures in pharmaceutical advertising can significantly enhance consumer safety by allowing consumers to acknowledge both the potential benefits and risks of a drug before purchase. Furthermore, social media platforms should also limit the ability of pharmaceutical advertisements to target specific audiences including minors or people with certain medical conditions who should avoid the drug being advertised. This can ultimately prevent the exploitation of vulnerable populations through the promotion of prescription drugs for conditions they may not have or that are not suitable for their health needs. By implementing these regulations, it ensures that pharmaceutical companies are able to market their products responsibly and transparently to consumers without the worry of potential risks. Overall,

such measures can help foster a healthier relationship between pharmaceutical ads and consumers on social media.

DECLARATION OF CONFLICT OF INTERESTS

The author declares that there are no conflicts of interest regarding the publication of this article.

REFERENCES

1. Connell A. 22 leading social media platforms for 2024 (ranked by monthly active users). *Adam Connell*. September 24, 2024. <https://adamconnell.me/social-media-platforms/> (accessed on 2024-10-23).
2. Nyst A. 134 Social Media Statistics You Need To Know For 2023. *Search Engine Journal*. July 14, 2023. <https://www.searchenginejournal.com/social-media-statistics/480507/> (accessed on 2024-10-23).
3. Alfred L. I found 76 Social Selling Statistics you need to know in 2024. *HubSpot Blog*. April 29, 2020. https://blog.hubspot.com/sales/social-selling-stats?trk=article-ssr-frontend-pulse_little-text-block (accessed on 2024-10-23).
4. Deshpande A, Menon A, Perri III M, Zinkhan G. Direct-to-Consumer Advertising and its Utility in Health Care Decision Making: A Consumer Perspective. *Journal of Health Communication*. 2004; 9(6): 499-513. doi:<https://doi.org/10.1080/10810730490523197>.
5. RANZCP. Direct-to-consumer advertising of Pharmaceuticals. *RANZCP*. July 2016. <https://www.ranzcp.org/clinical-guidelines-publications/clinical-guidelines-publications-library/direct-to-consumer-advertising-of-pharmaceuticals> (accessed on 2024-10-23).
6. Liesse J. A Healthy Ad Market. *Advertising Age*. October 17, 2016. http://gaia.adage.com/images/bin/pdf/KantarHCwhitepaper_complete.pdf (accessed on 2024-10-23).
7. DeFrank JT, Berkman ND, Kahwati L, Cullen K, Aikin KJ, Sullivan HW. Direct-to-consumer advertising of prescription drugs and the patient-prescriber encounter: A systematic review. *Health Communication*. 2019;35(6):739-746. doi:<https://doi.org/10.1080/10410236.2019.1584781>.
8. Chen J, Wang Y. Social Media Use for Health Purposes: Systematic Review. *Journal of Medical Internet Research*. 2021;23(5). doi:10.2196/17917.
9. Huang AJ. The Rise of Direct-to-Consumer Advertising of Prescription Drugs in the United States. *JAMA*. 2000;284(17):2240. doi:10.1001/jama.284.17.2240-JMS1101-1-2.
10. Dnyaneshwarivedpathak. The Power of Social Media for Biotech and Pharma Companies. *MarketBeam*. July 5, 2023. <https://marketbeam.io/the-power-of-social-media->

- for-biotech-and-pharma-companies/ (accessed on 2024-10-24).
11. Tyranski J, DeAndrea DC. Pharmaceutical Companies and Their Drugs on Social Media: A Content Analysis of Drug Information on Popular Social Media Sites. *Journal of Medical Internet Research*. 2015;17(6). doi:10.2196/jmir.4357.
 12. Genereaux G. Addicted to advertising: Should the U.S. Continue to Allow Direct-to-Consumer Drug Advertising? *Wake Forest Law Review*. February 8, 2023. <https://www.wakeforestlawreview.com/2023/02/addicted-to-advertising-should-the-u-s-continue-to-allow-direct-to-consumer-drug-advertising/>. (accessed on 2024-10-24).
 13. Gardner DM, Mintzes B, Ostry A. Direct-to-consumer prescription drug advertising in Canada: permission by default?. *CMAJ*. 2003;169(5):425-427.
 14. Williamson K, ed. Evolving Trends and Strategies in Pharmaceutical Marketing: Focus on the American Market. *Pharma Focus America*. September 16, 2023. <https://www.pharmafocusamerica.com/articles/evolving-trends-and-strategies-in-pharmaceutical-marketing-focus-on-the-american-market>. (accessed on 2024-10-24).
 15. Patel N. Expert's guide to Digital Marketing for Pharmaceutical Industry. *NeilPatel*. Accessed October 24, 2024. <https://neilpatel.com/blog/pharmaceutical-marketing/>.
 16. Dnyaneshwarivedpathak. Social Media Best Practices for Pharma. *MarketBeam*. August 16, 2024. <https://marketbeam.io/social-media-best-practices-for-pharma/>. (accessed on 2024-10-23).
 17. Willis E, Delbaere M. Patient Influencers: The Next Frontier in Direct-to-Consumer Pharmaceutical Marketing. *Journal of Medical Internet Research*. 2022;24(3). doi:10.2196/29422.
 18. Gibson S. Regulating Direct-to-Consumer Advertising of Prescription Drugs in the Digital Age. *Laws*. 2014;3(3):410-438. doi:10.3390/laws3030410.
 19. Palumbo FB, Mullins CD. The development of direct-to-consumer prescription drug advertising regulation. *Food Drug Law J*. 2002;57(3):423-443.
 20. Mintzes B, Barer ML, Kravitz RL, et al. How does direct-to-consumer advertising (DTCA) affect prescribing? A survey in primary care environments with and without legal DTCA. *CMAJ*. 2003;169(5):405-412. doi:https://pubmed.ncbi.nlm.nih.gov/12952801/.
 21. Robinson AR, Hohmann KB, Rifkin JI, et al. Direct-to-consumer pharmaceutical advertising. *Jama Network*. 2004;164(4):427-432. doi:10.1001/archinte.164.4.427.
 22. Fogel J, Shraybman-Buynova J. Direct-to-consumer prescription medication advertisements on social media: The role of Social Factors. *Health Marketing Quarterly*. 2021;40(2):190-205. doi:10.1080/07359683.2021.2011998.
 23. Fogel J, Teichman C. Variables associated with seeking information from doctors and the internet after exposure to direct-to-consumer advertisements for prescription medications. *Health Marketing Quarterly*. 2014;31(2):150-166. doi:10.1080/07359683.2014.907125.
 24. Yang H. Market Mavens in Social Media: Examining Young Chinese Consumers' Viral Marketing Attitude, eWOM Motive, and Behavior. *Journal of Asia-Pacific Business*. 2013;14(2):154-178. doi:10.1080/10599231.2013.756337.
 25. Evans WD, McCormack L. Applying Social Marketing in Health Care: Communicating Evidence to Change Consumer Behavior. *Medical Decision Making*. 2008;28(5):781-792. doi:10.1177/0272989x08318464.
 26. Ventola CL. Direct-to-consumer pharmaceutical advertising: Therapeutic or toxic? *P & T*. October 2011. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3278148/>. (accessed on 2024-10-24).
 27. Kravitz RL, Epstein RM, Feldman MD, et al. Influence of Patients' Requests for Direct-to-Consumer Advertised Antidepressants. *JAMA*. 2005;293(16):1995. doi:10.1001/jama.293.16.1995.
 28. Liang BA, Mackey TK. Prevalence and Global Health Implications of Social Media in Direct-to-Consumer Drug Advertising. *Journal of Medical Internet Research*. 2011;13(3). doi:10.2196/jmir.1775.
 29. Hensley S. Johnson & Johnson To Pay \$2.2 Billion In Marketing Settlement. NPR. November 4, 2013. [https://www.npr.org/sections/health-shots/2013/11/04/242989557/risperdal-johnson-johnson-to-pay-2-2-billion-in-marketing-settlement#:~:text=Johnson%20%20Johnson%20To%20Pay%20\\$2.2,:%20Shots%20%2D%20Health%20News%20:%20NPR&text=Hourly%20News-,Johnson%20%20Johnson%20To%20Pay%20\\$2.2%20Billion%20In%20Marketing%20Settlement%20:%20Shots,the%20drug%20for%20that%20use](https://www.npr.org/sections/health-shots/2013/11/04/242989557/risperdal-johnson-johnson-to-pay-2-2-billion-in-marketing-settlement#:~:text=Johnson%20%20Johnson%20To%20Pay%20$2.2,:%20Shots%20%2D%20Health%20News%20:%20NPR&text=Hourly%20News-,Johnson%20%20Johnson%20To%20Pay%20$2.2%20Billion%20In%20Marketing%20Settlement%20:%20Shots,the%20drug%20for%20that%20use). (accessed on 2024-10-24).
 30. Coney S. Direct-to-Consumer Advertising of Prescription Pharmaceuticals: A Consumer Perspective From New Zealand. *Journal of Public Policy and Marketing*. 2002;21(2):213-223. doi:10.1509/jppm.21.2.213.17592.
 31. Lexchin J, Mintzes B. Direct-to-consumer advertising of prescription drugs: The evidence says no. *Journal of Public Policy and Marketing*. 2002;21(2):194-201. doi:10.1509/jppm.21.2.194.17595.