

---

# The Influence of the Pharmaceutical Industry on Healthcare Practitioners' Prescribing Habits

J Rhee

---

## Citation

J Rhee. *The Influence of the Pharmaceutical Industry on Healthcare Practitioners' Prescribing Habits*. The Internet Journal of Academic Physician Assistants. 2008 Volume 7 Number 1.

## Abstract

Pharmaceutical companies invest billions of dollars annually on marketing drugs they manufacture. They use methods such as direct to consumer marketing, physician speakers, representatives and catered foods while introducing products to a target audience. A literature review of articles, books and reviews dating from 2000 to present was conducted using Google Scholar, Ovid Medline and PubMed to determine the influence the pharmaceutical industry had on healthcare professionals' prescribing habits. The authors and researchers have concluded that there is a degree of influence that pharmaceutical companies have on providers' prescribing habits, which have sometimes been labeled as unethical. Recently updated regulations now restrict the use of small gifts as part of their marketing strategies but this is only one of many ways used to influence. It is a collaborative effort to ensure that patients receive quality healthcare and appropriate medications.

## METHODS

Literature was reviewed using books and book reviews from the New York Times and electronic search engines Google scholar, PubMed, and Ovid Medline dating from 2000 to present. Search terms used were: pharmaceutical companies, influence, healthcare providers, pharmaceutical sales representatives, prescribing habits, and ethical. An extensive list of articles was found. In order to limit the search criteria, articles selected were 2000-recent with older articles used for background information not pertinent to the literature review.

## THE INFLUENCE OF THE PHARMACEUTICAL INDUSTRY ON HEALTHCARE PRACTITIONERS' PRESCRIBING HABITS

Fortune magazine has reported that in 2008, the pharmaceutical industry continued to be in the top three most profitable industries in the United States for the past two decades.<sup>1</sup> It is a lucrative industry that utilizes different strategies to gain revenue. Companies manufacture drugs that are developed from research. After FDA approval, these drugs are patented which can last up to 20 years. This allows them to keep exclusive rights to selling these brand name drugs. It is only after these patents expire that other drug companies can use the 'formulas to be manufactured as generic drugs. This allows the drugs to be bought at greatly discounted rates in comparison to the brand name drugs. A

company makes the majority of profits during the times they hold this drug patent. Money and time are invested into marketing these medications from many different angles. Large percentages of a company's budget are allocated for this because these strategies work.

## LITERATURE REVIEW

Pharmaceutical companies in a given year will allocate more than a billion dollars in the marketing of medications.<sup>2</sup> This is distributed through a number of different venues reaching a wide range of people. This includes Direct-to-Consumer (DTC) ads used in television and magazines to inform people of the most recent drugs. DTCs many times are presented with vibrant colors, impressive large print statistics and basic information about certain illnesses. Pharmaceutical companies also utilize these to provide education and awareness of conditions. This empowers people to take responsibility of their own health. "Between 1991 and 2003, spending on DTC ads in the United States increased 58-fold reaching \$3.2 billion a year."<sup>3</sup> This has lead to more than one third of patients asking their healthcare providers about medications they have seen through the media such as Mucinex, Lamisil, and Celebrex. ""As a result, when a patient asked for a drug by name, they were more likely to receive a prescription for it from their healthcare provider three times out of four."<sup>2</sup> This shows the pharmaceutical companies' advertisements have an

influence on the consumer. The reason why these companies allocate such a large percentage of their budget on marketing is because it has been proven to influence the consumer.

Pharmaceutical companies also employ representatives to visit healthcare practitioners in hospitals and offices to educate, update and provide samples of recent drugs their companies have produced. As experts on these drugs, they present their products with confidence, assurance and with the ability to answer questions about side effects, insurance coverage, microbial coverage and more. With the understanding that pharmaceutical companies play active roles in marketing their products, it is important to ask, how much influence these companies have on healthcare practitioners' prescribing habits.

There has been some controversy with the idea of healthcare providers having periodic contact with pharmaceutical company representatives. Every year more than \$11 billion is spent on drug marketing, with half of the budget funding sales representative work.<sup>4</sup> It is important to identify the extent of this relationship and its ultimate impact on providers' attitudes, behaviors, and knowledge. It is also important to understand how this potentially affects the patients.

### **METHODS OF INFLUENCE**

There are different strategies that are used in marketing drugs. "Food, flattery and friendship are all powerful tools of persuasion, particularly when combined."<sup>5</sup> Shahram Ahari, a former pharmaceutical sales representative for Eli Lilly, and Adriane Fugh-Berman, a physician/researcher on the pharmaceutical industry have both examined these strategies through the Attorney General Prescriber and Consumer Education Grant Program. This program was created as part of the 2004 Warner-Lambert settlement related to allegations that Warner-Lambert conducted an unlawful marketing campaign for the drug Neurontin violating consumer laws<sup>6</sup>.

Pharmaceutical sales reps are hired for their personalities and based on criteria that would make them excellent sales people. They are trained to observe and understand the best approaches to take when interacting with a healthcare provider. They use information they gather and understand what it takes to sell the drugs they represent. Not all practitioners have the same attitude toward sales reps, thus conversations and pitches need to be tailored to fit the particular personality type. Ahari testifies that Eli-Lilly delegates eight different categories that a physician could fit into: 1. Friendly and outgoing, 2. Aloof and skeptical, 3.

Mercenary, 4. High-prescribers, 5. Prefers a competing drug, 6. Acquiescent docs, 7. No-see/No-time docs, and 8. Thought leaders. Each category is different and the company provides descriptions to determine the best ways to approach a sale.

Pharmaceutical companies can also gain influence through research and prescription tracking. Information about prescription purchases can be bought by large health information organizations like IMS Health, Dendrite, or Verispan. These companies keep track of prescriptions filled in a given community. These records are then sold by pharmacies with details of personal information excluded. The pharmaceutical companies are the largest buyers of this information, which can be used to monitor marketing trends as well as identify which drugs need a different marketing approach. Representatives "see how many of a physician's patients receive specific drugs, how many prescriptions the physician writes for targeted and competing drugs, and how a physician's prescribing habits change over time."<sup>6</sup> In addition, this information allows representatives to see how easily providers can be influenced. They not only figure out 'who' the healthcare providers are, but 'what' drugs are being prescribed, and 'how'. A tremendous amount of information can be gathered and used. As a result, some practitioners who do not meet standards set by the company may not get the attention that other 'high-prescribers' would.

"Studies have shown that samples influence prescribing choices."<sup>6</sup> These can be used in a number of different ways to benefit not only the doctor but the patient as well. Samples allow practitioners to provide certain medications to their patients free of charge. The trial doses allow the patient an opportunity to see if the particular medication works or not. It is obvious that the only medications that can be given are the ones that companies leave as samples. Some problems may arise when patients find out these medications are too expensive when paying out of pocket.

Studies have also shown that small gifts could have some type of influence on behavior. "A physician who is the recipient of a gift may recommend products made by the gift-giver without due consideration of other cheaper or more effective options."<sup>7</sup> Gifts have encompassed a broad range of items from pens and pads to medical reference books and continuing medical education trips. Some aspects of this have changed through recent guideline updates that prohibit the distribution of small gifts-explained later.

Food has always been a source for common ground. People

have the natural tendency to relate to one another while eating. To find the best and most convenient ways to present their products, representatives provide restaurant-catered foods and deliver onsite so practitioners can eat and obtain some education and updates on drugs as well. This is yet another way that companies use to gain influence. All providers admitted to the fact that interactions with representatives would decline if there were no gifts or meals.<sup>4</sup>

However, all the influence does not come from the giving of small gifts. They also come from the advice and talks given by physicians. Practicing licensed physicians have agreements with pharmaceutical companies all across the country to speak on behalf of the company for what can be a modest honorarium. These companies provide information and even specially designed presentations for these physicians.<sup>8</sup> They stand before their colleagues and introduce a drug that is subtly presented within a health education talk. It may not be uncommon for key information to be conveniently left out in order for the focused drug to stand out. Many times there is no direct push for these medications to be used but subtle nuances or messages are used to send the message across.

### **PERCEPTION**

A total of 29 studies were used to identify interactions that healthcare providers had on pharmaceutical representatives.<sup>4</sup> It was reported that interactions started as early as medical school and estimated that representatives meet with physicians about four times a month. The trends showed that physician's benefits decreased in lunches and samples as they entered practice but increased with honorariums, conference travels, and research funding. In assessing attitudes of residents and physicians toward representatives, providers believed that they had accurate information concerning the drugs and could probably provide the same amount of accuracy in information with other drugs. There is incongruence in the fact that providers believe pharmaceutical companies are successful in influencing other practitioners, but deny that they themselves are impacted. This influence has been found to be not only on physicians but also on residents and those in leadership positions who may have influences on other physicians.<sup>7</sup>

The point of concern arose when representatives prioritized the promotion of the product more than the patient's welfare and as a result were more likely to have used unethical approaches. In the studies, physicians have denied the fact

that gifts could influence their behavior, particularly their prescribing habits. But, residents conceded that without the gifts, they were more likely not to meet with representatives. "Interactions with pharmaceutical representatives were also found to impact the prescribing practice of residents and physicians in terms of prescribing cost, non rational prescribing, awareness, preference and rapid prescribing of new drugs, and decreased prescribing of generic drugs."<sup>4</sup> Accepting samples correlated with awareness, preference, and rapid prescription of a new drug, as well as positive attitudes toward pharmaceutical company representatives. Funding for travel to attend educational symposia had increased influence and impacted hospital prescribing practices for two years after groups of physicians accepted the trips. Residents' exposure to pharmaceutical representatives resulted in inaccurate information learned about the sponsors' and competitors' drugs resulting in inappropriate treatment decisions. Healthcare providers were skeptical of the motives and the knowledge that representatives had and expressed the concerns that gifts, samples, meals etc. had an influence. There were however some positive aspects (ie. Improvement in identifying treatment for complicated illness) even though most studies found a negative outcome that came about from the interactions (knowledge, attitude, and behavior).

### **CHALLENGING THE INFLUENCE**

Studies have shown that roughly 90% of physicians interact with pharmaceutical representatives even though the evidence shows the information they provide is skewed (even slightly) in favor of the drug being promoted, resulting in inappropriate prescribing habits.<sup>5</sup> Interactions with some providers show a preference for new products even though there is no demonstrated advantage over existing medications. This correlates with a decline in prescribing generics and a gradual increase over the past several years in retail spending on prescription drugs in the United States.

There have been some steps taken to combat these tactics. In July 2006, the American Medical Association (AMA) began the Prescribing Data Restriction Program, which gives physicians the right to withhold prescribing information from representatives and their supervisors.<sup>6</sup>

The pharmaceutical industry has been using money to influence not only prescribing practices but also in teaching and research. Interest groups like Pharmaceutical Research and Manufacturers of America (PhRMA) have responded to these influencing trends. They have recently passed updates

that prohibit the distribution of small gifts. PhRMA and their marketing code have recognized the fact that certain gifts and dinners impede on ethical practices and that professional unbiased relationships need to be fostered. "The revised, voluntary code, which took effect January 1, 2009 reaffirms that interactions between pharmaceutical company representatives and healthcare professionals should be focused on informing the healthcare professionals about products, providing scientific and educational information, and supporting medical research and education." Many companies have realized the benefits of opting into voluntary program as good public relations. A total of 45 pharmaceutical companies as of February 24, 2009 have committed to this agreement. <sup>8</sup>

With pharmaceutical companies working to find open doors within healthcare some have even began targeting medical schools. Although there are few that welcome pharmaceutical representatives, others have stricter policies. Medical institutions such as the University of California San Francisco (UCSF) have had a reputation as having one of the strictest policies for monetary funding and sponsors. It is because some have viewed representatives as being regarded as the 'industry's favorite marketing tool'. <sup>5</sup> Policies like those of UCSF, University of Pennsylvania, Stanford, and Yale have been created to limit the amount of contact and influence the pharmaceutical companies can have on future medical professionals. <sup>7</sup>

### **DISCUSSION**

It is not uncommon for a patient in need of a prescription to ask for certain medications by a brand name. Research and budget reports have shown that pharmaceutical companies have spent billions of dollars annually on marketing drugs. The effects of this have an impact on anyone seeking healthcare and prescription drugs. They market their products to appeal to the needs and desires of people. The methods and approaches they take allow them to influence their audience more than realized. Research has shown that pharmaceutical companies play a role and have a clear influence on prescribing habits. This continues to be a thriving market because there will always be sickness and disease and people will always want and need medicine for those illnesses.

It is reasonable and fair to argue that pharmaceutical representatives alone do not have complete responsibility in influencing healthcare providers' prescribing habits. There

are other factors. Healthcare providers may seek the advice of their fellow practitioners and pharmacists when prescribing drugs. They may have also had enough experience with certain drugs not to allow pharmaceutical representatives to sway them one-way or the other. The more avid and diligent journal readers may keep up with researching case studies of medications and as a result base prescribing medications on nonbiased independent randomized controlled trials or meta-analyses.

It is also very important to understand that pharmaceutical companies play a vital role in the research and development of medications. They invest in and at times advance important medical discoveries. They provide medications to millions of patients in efforts to alleviate pain, improve quality of life and promote health. Most have a pharmacy assistance program that low income patients can enroll in. Hospitals, clinics, healthcare providers and patients rely on these companies to develop the latest drugs. Pharmaceutical representatives are trained not only to relate with those in the healthcare field but they are also required to know and understand the products they market. This means that they must understand the mechanisms of disease, routes of drug metabolism and excretion, side effects, indications and contraindications. They must be well educated in certain aspects of pharmacology spending countless hours studying their drugs and the diseases they treat. On many occasions these representatives provide credible, up to date information concerning drugs and their uses that may very well provide opportunities for practitioners to learn as well.

Pharmaceutical companies are only partial contributors within the healthcare industry. Hospitals, clinics, medical insurance companies and healthcare workers are all involved in the business-some for profit and others not. The concern arises when the mindset of business and profit become the only focus while the patients' health are at risk and proper ethical practices are breached. Financial gain then becomes the sole motivation, which can easily overshadow a person's welfare. Will there be a change if or when universal healthcare is implemented into United States healthcare practices? Will President Obama's healthcare reform plan dramatically change the way Americans receive their care? If the general consensus is in agreement to first do no harm, would even that need to be defined? There are many questions concerning healthcare and what it will look like for the American people in the upcoming years. It is

important that these questions be addressed and properly answered.

## **CONCLUSION**

Pharmaceutical companies play a vital role in healthcare. They invest tremendous amounts of money in research, development and marketing. It is through marketing, that healthcare providers and patients can be influenced into prescribing or wanting these medications. Whether deliberate or not, they develop a type of quid pro quo understanding which may not represent innocent business practices all the time. Several aspects of healthcare are driven by financial gain, and boundaries must be set on all levels when the welfare of patients and professionals are at stake. All healthcare providers must uphold the fiduciary relationship they have with patients and be held to a higher standard in earning the trust and confidence of others while avoiding conflicts of interest. There are programs and organizations that have taken proactive steps toward limiting the amounts of influence pharmaceutical companies may have. Further research may be required to understand exactly how much influence and to what degree this issue extends.

## **References**

1. Money-Fortune 500 Magazine (2008). FORTUNE 500: Our annual ranking of America's largest corporations-Top Industries: Most profitable. 2008. Available at: <http://money.cnn.com/magazines/fortune/fortune500/2008/p>
2. Huang AJ, M Phil. The rise of direct-to-consumer advertising of prescription drugs in the United States. JAMA. 2000 Nov 1; 284:2240.
3. Abramson, J. Overdosed America: The broken promise of American medicine. New York, NY: Harper Collins; 2008.
4. Wazana, A. Physicians and the pharmaceutical industry: Is a gift ever just a gift? JAMA. 2000. Jan 19; 283:373-380.
5. Moynihan, R. Who pays for the pizza? Redefining the relationships between doctors and drug companies. 1: Entanglement. British Medical Journal. 2003. May 31; 326:1189-1192.
6. Fugh-Berman, A., Ahari, S. Following the script: How drug reps make friends and influence doctors. PLOS Medicine. 2007. April; 4:621-625.
7. Higgins, MD, S. P. Drug representatives: Giving you lunch or stealing your soul? Dermatology Online Journal. 2007; 13:1-6.
8. PhRMA. PhRMA Statement on Restricting Drug Marketing and Education. 2007. Feb 13. Available at: [http://www.phrma.org/news\\_room/press\\_releases/phrma\\_statement\\_on\\_restricting\\_drug\\_marketing\\_and\\_education/](http://www.phrma.org/news_room/press_releases/phrma_statement_on_restricting_drug_marketing_and_education/). Accessed April 3, 2008.
9. Angell, M.MD (2005). The truth about the drug companies: How they deceive us and what to do about it. New York, NY: Random House.
10. Barlett, D. L., & Steele, J. B. (2006). Critical condition: How healthcare in America became big business-and bad medicine. New York, NY: Random House.
11. Chimonas, S., Brennan, T. A., & Rothman, D. J. (2007, January 17). Physician and drug representatives: Exploring the dynamics of the relationship. Journal of General Internal Medicine. 2007. Jan 17; 22:184-190.
12. Freemantle, N., Johnson, R., Dennis, J., Kennedy, A., & Marchment, M. Sleeping with the enemy? A randomized controlled trial of a collaborative health authority/industry intervention to influence prescribing practice. British Journal of Clinical Pharmacology. 2000. 49:174-179.

**Author Information**

**James Rhee, PA-S**

Department of Physician Assistant Studies, Eastern Virginia Medical School