



Facebook and Pharmaceutical Companies: An Industry in Need of Guidance

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Abstract

Companies across product categories are working to learn the nuances of social media as it continues to grow in popularity and wide spread adoption. Pharmaceutical companies are no different, except that they must also adapt government regulation and industry standards to the new medium, making the topic important for pharmaceutical companies, consumers, and policy makers. The paper outlines the use of one specific social media platform, Facebook, by three of the world's largest pharmaceutical companies. In addition the paper includes an exploratory crossover study that examines consumer perceptions of the content on the different sites with regard to informative value, entertainment value, and learning. Results indicate that consumers perceive differences on all three variables. Open-ended responses are used to discuss some potential explanations for these differences.

Keywords: Facebook; Social Media; Pharmaceutical industry; DTCA



Facebook and Pharmaceutical Companies

Eight-in-ten internet users look online for health information, according to the Pew Research Internet and American Life Project (2011). That means that over 60% of all American adults use the internet to search for health information (Fox 2011). Another study found that 41% of “e-patients” have read about someone else’s experience with their health or medical issues via social media (Fox and Jones 2009). This makes social media an outlet opportunity for a variety of players in the health industry. One of those constituents is pharmaceutical companies. Spending on DTC pharmaceutical advertising reached \$4.3 billion in 2009, more than double the \$1.8 billion spent just a decade earlier (Kaiser Family Foundation 2010). Although many pharmaceutical companies have tested the waters of more contemporary media, the lack of guidance on social media, has encouraged caution. Although a draft guidance from the FDA is inevitable, the document that was to be released the first quarter of 2011 has been delayed for the second time (Schwartz 2011).

With or without guidance, social media is here to stay. It is being labeled as a new hybrid element in the marketing mix (Mangold and Fauldes 2009). Not only has it established a presence, it seems to be reshaping the marketing environment. According to Forrester Research, ¾ of all internet users use social media sites (Kaplan and Haenlein 2010). This makes social media a truly revolutionary trend. Just as corporate web pages and e-commerce dominated the late 1990s social media has emerged as a user-generated platform for sharing information—and marketers are beginning to embrace it as a real opportunity.

DTCA of Prescription Drugs

According to the Kaiser Family Foundation, 91% of Americans reported that they were aware of prescription drug advertising (2008). In another study, Brownfield et al. (2004) concluded that individuals may view as many as 30 hours of DTCA per year. Moreover, a growing number of prescription drugs, along with their slogans, themes and imagery have diffused into popular culture. A Manhattan Research study found that 112 million (48%) of U.S. adults went online for pharmaceutical information—more than double the number from 2005 (Manhattan Research



2011). With this ubiquitous presence, consumers should expect to find prescription drug information in both their new media and social media interactions.

Despite the prolific growth of DTCA, the implications of this practice remain heavily debated (Auton 2004; Frosch et al. 2010). The relative consumer benefits versus costs fuels much of the ongoing discussion. Proponents suggest that DTCA increases consumer awareness of a wide range of treatable medical conditions with minimal impact on drug prices (Capella et al. 2009). In addition, advocates propose that the practice promotes better healthcare decisions, leads to more productive patient-physician encounters, and boosts patient compliance with treatment regimens (Kelly 2004; Meek 2001) by educating patients. Opponents argue that DTCA is simply a vehicle for pharmaceutical companies to increase primary demand for more expensive new drugs that offer little therapeutic advantage over existing products (Lexchin and Mintzes 2002; Strange 2007). Some critics accuse pharmaceutical companies of “medicalizing” normal human experiences by treating them as diseases (Mintzes 2002).

Although policy makers and advocacy groups have repeatedly questioned DTCA guidelines, there have been relatively few changes in formal guidance. Recently, however, the FDA proposed its first major change to DTCA regulation in over a decade. Aimed at clarifying ambiguity related to the fair balance standard, the proposed guidelines outline specific requirements of the audio, video, and informative components for print and broadcast drug ads. In a random sample of 35 broadcast ads, the FDA found that approximately one-third of the sample violated the proposed “clear,” “conspicuous,” and “neutral” standards despite passing the fair balance standard (DHHS 2010). The agency concluded that existing regulatory and statutory guidelines have “not adequately prevented the broadcast of a significant number of potentially misleading or deceptive discussions of product risk” (p. 15381).

With the proliferation of information available online, the FDA has also promised guidance on social media. In November 2009, the FDA convened a public hearing on pharmaceutical promotion via social media outlets (DHHS 2009). One of the challenges that they recognized was how to provide balance in a media that constantly updates and change. Currently



prescription drug websites follow the one-click rule—risk information cannot be more than a single click away for browsers. Control is another important issue. Several platforms do not allow full control over user-generated content. Even without corporate sponsored social network usage, there is information available on social media from third-party posts, blogs, and tweets. For instance, the Google Sidewiki app allows users to post any commentary that they want to share on the Sidewiki of that site. This commentary then becomes available to all Sidewiki users, effectively blurring the distinction between owner and user generated content.

Although expected the first quarter of 2011, FDA guidance was delayed a second time. The guidance will likely focus on six specific areas: responding to unsolicited requests, fulfilling regulatory requirements when using tools associated with space limitations, fulfilling post-marketing submission requirements, on-line communications for which manufacturers, packers, or distributors are accountable, and use of links on the Internet and correcting misinformation. One PR firm compared it to “going through an obstacle course with a blindfold on. You don’t know what to do until you hit the wall.” (Schwartz 2011). Some argue that although the guidelines are not in place, companies can still comply with the spirit of the law by incorporating existing regulations into their social media strategies (Alkhateeb et al 2008).

Social Media and the Marketing Mix

Social media has been defined as “a variety of new sources of online information that are created, initiated, circulated and used by consumers intent on educating each other about products, brands, services, personalities, and issues” (Blackshaw and Nazzaro, 2004, p. 2).” The overarching category of social media includes a variety of online communication outlets such as blogs, discussion boards, email, rating websites, mobile blogs, social networking sites, creativity sharing sites photo and music sharing sites, news delivery, and education materials sharing among others (Mangold and Faulds 2009). Mangold and Faulds (2009) identified two key roles of social media. First, companies can use social media to communicate with customers. Using social networks or blogs, companies are able to open up a line of communication with customers. The second role of social media is less traditional: customers often communicate with each other. Thus, social media is a technological extension of traditional word-of-mouth both marketer



influenced and organic. The key difference is in quantity. Users are able to tell hundreds or thousands about their experiences. Companies can share information with thousands of users at a time via social networks.

Consumer socialization is the process by which “young people acquire skills, knowledge, and attitudes relevant to their functioning as consumers in the marketplace” (Ward 1974, p. 1). This process accentuates sources of influence labeled socialization agents that are used to transmit norms, attitudes, motivations, and behaviors (Moschis and Churchill 1978). The concept of consumer socialization has been used to explain how consumers learn specific consumption behaviors via modeling (Moschis and Churchill 1978). Chapman (2010) notes that social media is a marketing necessity because people now look for people on line. Thus, for an organization, consumers use the internet to 1) see if you have an online presence and 2) evaluate the quality of that presence. This, in part, indicates that the Internet along with social media is playing a major role as consumer socialization agents. This makes the medium an important focus for marketing managers and media planners.

A recent Nielson survey (The Nielsen Company 2010) states that we are now spending about 25 percent of our time online on social networking sites and blogs. In addition, 52% of all adults ages 18-64 have a profile on at least one social networking site (Madden and Smith 2010) Facebook currently boasts over 500 million active users and claims that half of its active users log on to Facebook in any given day. According to Facebook (2010), the average user has 130 friends and people spend over 700 billion minutes per month on Facebook.

Large firms, local businesses, community groups—everyone seems to be jumping onto the Facebook express. There are over 900 million objects that people interact with (pages, groups, events and community pages), and the average user is connected to 80 community pages, groups and events (Facebook 2010).



Social Media and Health Care

This social media frenzy has invaded health care on multiple fronts with content created by providers such as hospitals and pharmaceutical companies and locations created by patients or other interested parties. The prevalence can be demonstrated by sheer volume. Hospitals and academic medical institutions account for nearly 300 YouTube channels and 500 Twitter accounts (Sharp 2010), and an episode of the popular television drama Grey's Anatomy breached the subject of Tweeting during surgery as a learning tool for medical students. On the consumer side, more than 60 million American consumers use health related social media resources including blogs, wikis, social networks, and patient forums (Kane, Fishman, Gallagher, and Glaser 2009).

Part of the challenge for companies in health related fields is that they promote products and services that are often complicated, expensive, and sometimes scary for consumers (Shaw 2008). In the case of prescription medications, new drugs can be much more expensive than existing treatments or non-drug therapies; weighing the risks, side-effects and drug interactions against the benefits can be complex, and the adverse events can be frightening for consumers. This intimidation factor of health care marketing warrants thorough regulation, but at the same time relationships and trust. Social media provides an outlet for mass communication that is also interactive, which can be the ideal forum for building the necessary consumer relationships.

Facebook offers some specific advantages for health product marketers. Companies are able to create pages and allow consumers to follow their created content. In some instances, followers may be able to post questions, creating a dialogue (personal communication) that can be read by other followers (mass communication). One potential issue for healthcare marketers is the lack of control over wall posts. Although they can be removed after the fact, there are no mechanisms for approving posts before they are visible. The novelty and nuances of social media, leaves all companies in the health care industry searching for appropriate protocol, but the pharmaceutical industry is particularly vulnerable to scrutiny in handling social media.



Facebook Profiles

This study looked at some of the top global pharmaceutical companies based on sales data for 2009 (IMS Health 2009). Of the top 6, 3 were chosen based on length of time on Facebook (at least 6 months) and number of followers (at least 5,000). These variables were chosen to indicate that the company had some sort of established presence on Facebook. Companies like GlaxoSmithKline and Sanofi-Aventis joined the social network within the 2011 calendar year, and although Merck has operated its Facebook page for over a year, the company had less than 1,000 fans (they appear to concentrate Facebook efforts on the over-the-counter allergy medication Claritin). The companies profiled were Pfizer (posting since February 2010 with over 21,000 likes), Novartis (posting since August 2010 with over 5,000 likes), and AstraZeneca (posting since November 2009 with over 10,000 likes). These companies ranked first, third, and sixth in global sales, respectively.

Pfizer

With 21,832 likes as of April 2011, Pfizer has the most popular of the pharmaceutical Facebook sites. The tabs of information that they provide include the wall, company info, responsibility, news, ‘your health,’ science, careers, photos, and video. Pfizer does not allow consumers to post on its wall. This is likely due to the potential legal implications of adverse effect reporting. The company’s wall posts concentrate on things like science, company information, and corporate social responsibility. For instance

Use of Telemedicine in Major Disasters

Entropy, DNA replication, cell division and cancer

Creating Hope for Curing Childhood Disease

Pfizer Chief Medical Officer named 2011 Woman of the Year

Foundation Aids Bolivians with Urological Disease

The majority of the wall posts link to specific articles or videos either from other sources, the company, or Think Science Now (TSN), Pfizer’s online community of scientists, researchers and medical professionals. Pfizer’s first wall post was on February 27, 2010.



The info tab includes general information about the company, the mission statement, and a general description of the types of products along with links to the company's website. Within the likes and interests section, there are links to Pfizer Facebook pages designed for other countries along with a Pfizer animal health Facebook page.

The responsibility section of the page includes additional information on corporate responsibility and commitments, the annual report, partnerships, and environmental sustainability. These include global health fellows, International Trachoma Initiative, Mobilize Against Malaria, global health partnerships, Infectious Diseases Institute, and Diflucan Partnership. The news area has the same information available from their web page including press releases and kits and information for journalists. It also links to the Twitter account, the multimedia library of logos and promotional videos, archived speeches, and medicines in development.

The section on your health incorporates the companies "ethical and regulatory responsibility to monitor the safety of the medicines developed..." The company discusses education, safety management, and patient assistance programs. The science tab includes information about Pfizer's efforts at research and clinical trials. This contains policies, trial results, and an explanation of the phases of drug development. As expected, the careers tab highlights the value in a career with the company and includes the information about the company and available positions that you would expect from the human resources portion of a website. In addition, this section includes rewards and recognition.

Pfizer's photos focus predominantly on its products (there is a collection of pill bottle photos of many of their products). There are also photos of the iPhone App, a summit on Alzheimer's disease, and counterfeit pharmaceuticals (a total of 47 photos posted). The video section contains a total of 9 videos and 3 distinct types of videos: patients discussing diagnoses, scientific practices, and social marketing.



AstraZeneca

With 10,049 likes as of April 2011, AstraZeneca (AZ) had the second most followed Facebook page of the sample. The informational tabs for their page included the wall, info, discussions, highlights, video, and FAQ. Like Pfizer, AZ does not allow consumers to post on its wall, although the company does have a discussion section available. Rather than design it as a company page, the title of the Facebook site is AstraZeneca US Community Connections. As part of the profile picture (seen on each page of the site) AZ included the following text “This content is for informational purposes only and is not intended to be a substitute for professional medical advice. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.FDA.gov/medwatch or call 1-800-1088. This page is intended for U.S. residents only and is governed by applicable U.S. laws and regulations.” They are the only of the three sites to offer such a predominant disclaimer.

Like Pfizer, AZ includes wall posts about scientific innovation, but it has also focused many of its posts on politics and more consumer oriented healthcare topics along with an eclectic mix of other topics. Many of the posts are concerned with issues like diet, insurance, costs of medicine, physician care, social responsibility, and congressional updates relevant to the industry. AZ’s first comment was posted on November 13, 2009—the longest tenure of the group.

The next tab is info. This section includes general company information along with AZ’s mission statement. For its likes and interests, AZ has linked itself with a variety of non-profit community based groups and care-based associations like National Association of Free Clinics, National Association of Community Health Centers, HealthyWomen, Association of Clinicians for the Underserved (ACU), American Academy of Physician Assistants, American Academy of Nurse Practitioners, and National Council on Aging.

The next section of the site allows fans to communicate with the company via discussion board. Whereas wall posts cannot be screened, the company clearly states that each post to the discussion board will be evaluated and that not all posts will be published. This allows the company to provide an outlet for discussion while maintaining control. The company had posted



11 different discussion threads with a total of 23 posts. Of those, 13 posts were made by AZ and 10 were made by other Facebook users. Ironically, one of the discussion questions posted by AZ relates to the use of social media. They asked:

“When it comes to pharma social media, what do you think is most important? Should pharma take risks or tread more carefully, use it to improve their patient care and customer services, or perhaps to support advocacy groups? Following DoseOfDigital’s post titled, “10 Things I’d Like to Start Hearing About Pharma Social Media” (<http://bit.ly/c8pxS2>), we want to know what you value the most in pharma social media.”

There were no comments made to the post.

The next section is highlights. It concentrated on the contributions that AZ has made to community programs and non-profit initiatives that work toward a variety of goals including preventing heart disease, supporting cancer patients and their families, fighting the stigma of mental illness, making a life with asthma easier, and reducing healthcare disparities for African Americans and Hispanics. The video section includes only 2 clips. Both highlight AZ’s donations to the Hope Lodge of the American Cancer Society (a free housing facility for patients receiving treatments). One video focuses on the project in Boston, the other in Philadelphia.

The section labeled FAQ focuses on questions relating to the community and regulatory positions of AZ rather than on any specific drug questions.

What is AstraZeneca’s position on transparency and its importance to the healthcare industry?

Why is AstraZeneca going public with its contributions?

What types of programs does AstraZeneca support?

How does AstraZeneca make contribution funding decisions?

How can nonprofit organizations apply for funding?

What is AstraZeneca’s approval process for contributions?

Does previous support of a program by AstraZeneca guarantee future support?

How does AstraZeneca ensure that contributions do not pose a conflict of interest with recipient organizations?



Does AstraZeneca have a commitment to transparency in other areas besides contributions?

The reports tab builds from this by providing biannual reports of the company's contributions. The final tab is labeled important info about AstraZeneca. This page simply restates the disclaimer mentioned earlier. There are no photos on the AZ site.

Novartis

The Novartis site had 5,076 likes as of April 2011, and the company's first wall post was August 13, 2010. That makes it both the least well known and newest of the three sites examined. The informational tabs for the Facebook page include the wall, info, Youtube, and My Flickr. The majority of the wall posts made by Novartis are company specific. For instance, Novartis ranks second in the Scientist's Best Places to work for Postdocs, Novartis completes acquisition, Novartis recognized as one of the 50 most Innovative Companies of 2011, Novartis provides \$3 million in relief aid to Japan earthquake victims, Novartis announces 2010 financial results, etc. Along with these company related posts, the wall contains a variety of posted videos that are educational (drug discovery and development process, how bacterial meningitis affects the body, what a flu shot means to you, etc). The info tab includes general information about the company, the mission statement, and a general description of the types of products along with links to the company's website.

The Youtube and My Flickr links are used to integrate two different social media outlets. A sample of some of the videos available on Novartis' Youtube channel is listed along with a link to the Youtube channel. The sample videos covered a wide range of topics including corporate citizenship, innovation, Novartis leadership, patient stories and resources and working at Novartis. Similarly, the photos hosted on the My Flickr site are sampled and viewers are able to click through to the linked information without leaving Facebook. Photo galleries provided include company history, corporate citizenship, Basel headquarters, locations worldwide, people, research and development, and vaccines.



Comparisons

When discussing and viewing each of the 3 Facebook pages there is a variety of overlap in the type of information provided and the type of media used, but there are some key distinctions. Pfizer appears to be positioning its Facebook page with its Think Science Now initiative (science.pfizer.com). It is trying to highlight the scientific and progress components of the pharmaceutical industry and position itself as the leader in that field. Novartis also focused many of its posts on innovation, but the posts do not contain the common link like Pfizer's science.Pfizer.com website.

On the other hand, AstraZeneca has positioned its Facebook page more on community connections. The wall posts are predominantly consumer-oriented with practical health-related information. AZ is also the only of the companies to offer any consumer interaction via the discussion board—although fans have not yet embraced that element of the page. Beyond the discussion board and the wall, the majority of the rest of the site serves as institutional advertising for the company's non-profit and social responsibility efforts. Pfizer also discusses corporate social responsibility, dedicating one section to that information, but AZ really differentiates based on community, connection, and responsibility.

Novartis is the newest of the 3 to the Facebook platform. Although its page contains less information than the other 2, it is the only of the companies to take an integrative strategy (although Pfizer did link to its Twitter feeds). It uses other types of social media in video and photo sharing and links this information to Facebook in a way that is relatively seamless and does not require additional effort on the part of the viewer. This strategy may allow the company to reach users across social mediums with minimal additional effort.

Research Questions

After examining the positioning strategies in the Facebook pages of these 3 pharmaceutical companies, a variety of research questions arise. This study will look at only a very small sample of those questions:

RQ1: Are there differences in perceptions of informative value of these Facebook sites?



RQ2: Are there differences in perceptions of entertainment value of these Facebook sites?

RQ3: Are there differences in perceptions of learning from these Facebook sites?

RQ4: Which Facebook site do people prefer.

Method

To gather some insight relating to the proposed research questions, an exploratory study was designed. This crossover study, utilized a sample of undergraduate students at a Southwestern U.S. university who participated in the lab study. Participants utilized SurveyMonkey.com to respond to questions. They completed each section of the study at the same time. The study did not proceed until each respondent had completed the questions for that section. Each individual viewed each of the three Facebook sites discussed earlier. The order of viewing was randomized to control for order effects.

When clicking on the study link, respondents were randomly directed to a hyperlink that led them to the Facebook page of one of the three companies. They were asked to view the content of the page for 5 minutes. Once time was up, they were asked to close the browser and proceed with the next page of the survey answering questions about informative value, entertainment value, and learning. They were then asked to wait for further directions. This process was repeated twice more until all of the sites had been viewed. Respondents were then asked to rank the sites from best (1) to worst (3) and given an open-ended question about why. Finally, demographic data was gathered.

A total of 45 participants completed the study. The mean age of respondents was 23. Men made up 55% of the sample and women 45%.

Measures

Informative value and entertainment value of the website was measured using a six terms for each measured on a 5-point Likert scale (Chen and Wells 1999). Reliability for the scale was acceptable across the 3 companies with alpha ranging from 0.91-0.97 for informative and 0.94-



0.94 for entertainment. Learning was measured with a single item. Scale items and reliabilities are provided in table 1.

Table 1: Study Measures

Scale	Item	Alpha
Informative value (website)	Informative	0.91-0.97
	Intelligent	
	Knowledgeable	
	Resourceful	
	Useful	
	Helpful	
Entertainment value (website)	Fun	0.94-0.94
	Exciting	
	Cool	
	Imaginative	
	Entertaining	
	Flashy	
Learning	I learned a lot from this Facebook page.	

Results

Repeated measures ANOVA was used to look for mean differences across the Facebook sites on the variables of interest (informative value, entertainment value and learning. The results indicate perceptual differences do exist. Table 2 shows the means for the conditions of the design.

Table 2: Means

Measure	Mean	
Informative	Novartis	3.785
	Pfizer	4.281
	AstraZeneca	4.011
Entertaining	Novartis	2.433



	Pfizer	3.074
	AstraZeneca	2.556
Learning	Novartis	3.489
	Pfizer	4.244
	AstraZeneca	3.889

With regards to RQ1 and informative value, the Pfizer site ranked the highest on this variable ranking significantly better than both Novartis ($\alpha < .01$) and AstraZeneca ($\alpha < .01$). AstraZeneca ranked second on this variable, scoring significantly higher than Novartis ($\alpha < .01$). RQ2 focused on the entertainment value of the Facebook site. Again Pfizer had the highest mean on entertainment value and was perceived as more entertaining than the Novartis page ($\alpha < .01$). AstraZeneca was also perceived as more entertaining than Novartis ($\alpha < .01$). There were not significant differences between Pfizer and AstraZeneca ($\alpha = .203$).

RQ3 concentrated on how much consumers believe that they are learning from a Facebook page. Consumers associated the greatest learning with the Pfizer Facebook page. Respondents perceived significantly more learning from Pfizer than Novartis ($\alpha < .01$) or AstraZeneca ($\alpha < .01$), but no significant difference between Pfizer and AstraZeneca ($\alpha = .065$) or AstraZeneca and Novartis ($\alpha = .249$). Pairwise comparisons across the groups are shown in table 3.

Table 3: Parirwise Comparisons

Measure	(I) factor1	(J) factor1	Mean Difference	Std. Error	Sig.
Informative	Novartis	Pfizer	-2.919 [*]	.352	.000
		AstraZeneca	-1.726 [*]	.302	.000
	Pfizer	Novartis	2.919 [*]	.352	.000
		AstraZeneca	1.193 [*]	.319	.001
	AstraZeneca	Novartis	1.726 [*]	.302	.000
		Pfizer	-1.193 [*]	.319	.001



Entertaining	Novartis	Pfizer	.770 [*]	.198	.000
		AstraZeneca	.230	.178	.203
	Pfizer	Novartis	-.770 [*]	.198	.000
		AstraZeneca	-.541 [*]	.176	.004
Learning	Novartis	Pfizer	-.496 [*]	.179	.008
		AstraZeneca	-.226	.193	.249
	Pfizer	Novartis	.496 [*]	.179	.008
		AstraZeneca	.270	.143	.065
AstraZeneca	Novartis	.226	.193	.249	
	Pfizer	-.270	.143	.065	

* $\alpha < .01$

To test RQ4, a paired-samples t-test was performed to look for differences in the mean ranking score for each of the Facebook sites. The means for ranking are listed in table 4 (lower numbers indicate a higher ranking). Pfizer had the best average ranking of the 3 Facebook sites followed by Novartis, and AstraZeneca ranked worst.

Table 4: Ranking Means

	Mean	N	Std. Deviation	Std. Error Mean
Pfizer	1.71	45	.815	.122
Novartis	2.09	45	.821	.122
AstraZeneca	2.20	45	.757	.113

Pairwise comparisons indicate that there was a significant preference for the Pfizer page over the AstraZeneca page ($\alpha < .05$). There were no significant differences in rankings for Pfizer and



Novartis ($\alpha = .088$) or Novartis and AstraZeneca ($\alpha = .584$). The comparisons are reported in table 5.

Table 5: Pairwise Comparisons for Ranking

	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pair 1 Pfizer - Novartis	-.378	1.451	.216	-1.747	44	.088
Pair 2 Novartis AstraZeneca	-.111	1.352	.202	-.551	44	.584
Pair 3 AstraZeneca Pfizer	-.489	1.342	.200	2.444	44	.019*

* $\alpha < .05$

Discussion

The purpose of this paper is to open an investigation on pharmaceutical company use of social media platforms like Facebook. Delayed guidance has not stopped many of the world's largest pharmaceutical companies from establishing a presence on Facebook. The descriptive section of this paper outlines some of the information contained in the pages for 3 of these companies. This is an important stepping stone for understanding the potential benefits and pitfalls associated with Facebook both for pharmaceutical companies and health-related companies. These pharmaceutical companies have been cautious in the use of social media concentrating on science or social responsibility while keeping away from user-generated content and specific product information. These companies do not currently have Facebook pages relating to any specific drug therapies. This is likely to change if the FDA guidance provides companies the assurance that such an activity is not a violation.

AstraZeneca's website does link to an additional Facebook page that the company hosts titled 'take on depression.' Similar to the other sites, no specific product information is mentioned, but with antidepressants ranking 4th in class sales in 2009 at nearly \$10 billion (IMS 2010), it is a category that offers many opportunities. Future research of this kind should take a more



qualitative focus aimed at understanding the type of information available to consumers on these types of Facebook sites along with the value in that information. Social networks are an advertising medium, yet they have received little attention relating to their advertising value across product categories.

With regard to the exploratory study offered in this paper, it is an initial attempt to compare information that is made available to pharmaceutical consumers via Facebook. It is not surprising that Pfizer was seen as the most informative page nor that perceptions of learning were higher for the Pfizer page. Pfizer had the most overall wall posts at 76 (compared to AstraZeneca's 68 over a much longer time frame and only 38 posts made by Novartis). In addition, Pfizer's content revolves mostly around science and innovation. These are likely qualities that are seen as more relevant to this industry. Viewers of the Pfizer site had the opportunity to learn about things like DNA replication, how cells create cancer, and the diagnosis of autism. These may seem more relevant than the responsibility focus of the AstraZeneca page, and the Novartis page (as the newest) had a lower quantity of information. Open responses seem to confirm the assumptions:

“Pfizer has a lot of important information on their Facebook site. It was easy to find and made you want to look more in to the site. The basic information was right there in front of you. Pfizer had a list of medicines that they produce which a consumer could relate to and also had a picture of the products.”

“The Pfizer page looked the most well built and well managed site. While Novartis had some good information and was interesting, Pfizer had all of those as well plus interesting articles from around the world and interesting new break through in medicine. It looked like they were trying to show everyone that they were out to do good in this world.”

“Pfizer had by far the most informative Facebook page. I learned a lot about the other companies but I had to navigate away to their home sites. It was just a far better page



with more information. AstraZeneca was second best and seemed to have a lot of community efforts displayed their. The Novartis page was boring in about 30 seconds.”

“It was easier to navigate, and had more interesting topics to read. There was more discussion and I liked the "openness" of the page.”

The Pfizer website was also seen as the most entertaining of the sites. This may well be associated with the number of pictures uploaded directly to the site and the focus of some of those pictures. The first pictures that viewers saw when clicking that tab focus on the ‘The 7 Summits Climb for Alzheimer’s: Memories are Everything campaign’. The 6 photos in this album are beautiful pictures of the climb to the summit of Mt. Aconcagua. The open-ended response question gave some additional insight as to why participants found the Pfizer page more entertaining:

“It seemed that Pfizer actually put some time and effort on their Facebook page. Novartis was more of a just business type of thing and AstraZeneca was just terrible. Novartis did not have enough information and it seems like they are just starting. AstraZeneca just seemed like a preachy company that said that our way is right and everything else is wrong. They were sort of like the mother-in-law company that tells you that everything you do is wrong and that you need to live better.”

“Pfizer's page was more informative and more personal. The pictures helped!”

“It showed the people working behind the scenes and the layout of the web page was done in a fashion so that it would be interesting and informative.”

“The Pfizer page was very informative. It also had pictures and video of the people within the company working and enjoying themselves. This made them seem more down to Earth and approachable people.”

“It seemed a little more vibrant, and less ‘flash and dash’”



Overall, the results show that consumers may very well associate different levels of quality to Facebook pages for different companies within the same industry. Thus, just like any other advertising, establishing a presence, is just not enough. Of course, information, entertainment, and learning are just a few variables of interest, and may not have been relevant for the corporate goals of the individual sites. For many companies, Facebook along with other social media platforms, has the potential to be an extension of the company's image, but like any other advertising, the ultimate goal is to be persuasive. Under the current regulatory limbo, pharmaceutical companies have been forced to use Facebook as institutional advertising—selling fans and viewers on the innovativeness or responsibility of the company as a whole. This is a focus that may change if the medium is used for drug-specific information.

For policy makers, these exploratory results reinforce that consumers are likely to perceive differences in informativeness and entertainment. Both are variables of concern from a regulatory perspective. As with other types of media, guidelines need to consider balance. Once pharmaceutical companies take the plunge into offering drug information via Facebook, regulations will have to go beyond the balance of positive and negative information. They will need to consider the balance of information versus entertainment content. It is no wonder that the FDA has refused to even put a time frame on when it will offer guidance after the most recent delay (Schwartz 2011). It is a complicated media and a comprehensive process.

As with any research, the study in this paper has some limitations. First of all, the study is exploratory. It is only an initial investigation of a wide range of potential variables and situations that can and should be studied. As such, it makes no attempt at proposing or testing causation nor does it consider every variable that may influence persuasion, but it does offer some interesting initial insights on a topic of both theoretical and practical importance. Second, the use of a student sample may raise concerns about the generalizability of the results. Despite conflicting opinions on the use of student subjects, they are generally acceptable for theory testing and more exploratory research (Bergmann and Grahn 1997).



The current social media landscape is in limbo awaiting both regulatory and consumer response to the actions of pharmaceutical companies. They are left with limited strategic options for social media as a persuasive outlet, yet each of the 3 companies outlined here, used different strategies for their Facebook pages, and the exploratory study presented identified different perceptions of informational value, entertainment value, and learning from the different pages. It is important for policy-makers and researchers alike to remember that direct to consumer advertising is not bound by media. Thus, future research should look to develop a better understanding of social networks as an advertising media in general while identifying specific industries and product classes that require specific attention. Within the pharmaceutical industry, future research should work to build an understanding of what companies, consumers, and regulators see as important issues in social network advertising because this type of open discourse and examination can ensure appropriate and effective policies.

References

- Alkhateeb, F.M., K.A. Clauson, N.M. Khanfar, and D.A. Latif (2008), “Digital Marketing: Legal and Regulatory Risk Associated with Web 2.0 Adoption by Pharmaceutical Companies,” *Journal of Medical Marketing*, 8 (4), 311-18.
- Auton, F. (2004), “The Advertising of Pharmaceuticals Direct to Consumers: A Critical Review of the Literature and Debate,” *International Journal of Advertising*, 23 (1), 5-52.
- Blackshaw, P. and M. Nazzaro (2004). Consumer-Generated Media 101: Word-of-Mouth in the Age of the Web-Fortified Consumer. *Intelliseek.com*.
<http://www.intelliseek.com/whitepapers.asp> (Accessed on March 1, 2011).
- Brownfield, E. D., J.M. Bernhardt, J.L. Phan, M.V. Williams, and R.M. Parker (2004), “Direct-to-Consumer Drug Advertisements on Network Television: An Exploration of Quantity, Frequency, and Placement,” *Journal of Health Communication*, 9 (6), 491–97.
- Department of Health and Human Services (DHHS) (2010), “Food and Drug Administration 21 CFR Part 202,” *Federal Register*, 75 (59), 15376-15387.
- Department of Health and Human Services (DHHS) (2009), “Food and Drug Administration. Promotion of FDA-Regulated Medical Products Using the Internet and Social Media Tools. Part 15 public hearing”



- <http://www.fda.gov/AboutFDA/CentersOffices/CDER/ucm184250.htm> (accessed on April 1, 2011).
- Facebook. (2010), “Statistics,” <http://www.facebook.com/press/info.php?statistics> (Accessed on March 6, 2011).
- Fox S. (2010) “Accessing Health Topics on the Internet,” Washington, DC: Pew Internet & American Life Project. <http://pewresearch.org/pubs/1875/internet-health-topics-accessing-updated-data> (Accessed on April 11, 2011).
- Frosch, D.L., D. Grande, D.M Tarn, and R.L Kravitz (2010), “A Decade of Controversy: Balancing Policy With Evidence in the Regulation of Prescription Drug Advertising,” *American Journal of Public Health*, 100 (1), 24-32
- IMS Health Midas (2009), “Top 15 Global Corporations, 2009,” http://www.imshealth.com/deployedfiles/imshealth/Global/Content/StaticFile/Top_Line_Data/Top%20Global%20Corporations_2009.pdf (Accessed on April 1, 2011).
- IMS National Sales Perspectives (2010), “Top Therapeutic Classes by U.S. Sales,” http://www.imshealth.com/deployedfiles/imshealth/Global/Content/StaticFile/Top_Line_Data/Top%20Therapy%20Classes%20by%20U.S.Sales.pdf (Accessed on April 1, 2011).
- Kaiser Family Foundation (2010), “Prescription Drug Fact Sheet,” <http://www.kff.org/rxdrugs/upload/3057-08.pdf> (Accessed on March 20, 2010).
- Kane, G., R.G. Fishman, J. Gallaughier, and J. Glaser (2009), “Community Relations 2.0.,” *Harvard Business Review*, 87 (11), 45-50.
- Kelly, P. (2004), “Perspective: DTC Advertising’s Benefits Far Outweigh Its Imperfections,” *Health Affairs* <http://content.healthaffairs.org/cgi/content/abstract/hlthaff.w4.246> (Accessed on May 10, 2010).
- Lexchin, J. and B. Mintzes (2002), “Direct-to-Consumer Advertising of Prescription Drugs: The Evidence Says No,” *Journal of Public Policy & Marketing*, 21 (2), 194-201.
- Mangold, G. and D. Faulds, (2009) “Social Media: The new Hybrid Element of the Promotion Mix.” *Business Horizons*, (52) 357-365.



- Meek, C. (2001), *Direct to Consumer Advertising of Prescription Medicines: A Review of International Policy and Evidence*, London: Royal Pharmaceutical Society of Great Britain.
- Mintzes, Barbara (2002), “For and Against: Direct to Consumer Advertising is Medicalising Normal Human Experience,” *British Medical Journal*, 324, 908-09.
- Moschis, G.P. and G.A. Churchill Jr (1978). "Consumer Socialization: a Theoretical and Empirical Analysis." *Journal of Marketing Research*, 15 (November), 599-609.
- Schwartz, M. (2011), “FDA Again Delays Promised Social Media Guidance,” *Medical Marketing and Media*, (March 30).
- Sharp, J. (2010), “Social Media Being Adopted by Patients, Health Care Providers,” *PT in Motion*, (September), 26-27.
- Shaw, G. (2008). “Department Focus: Marketing – Lessons from the Field.”
www.healthleadersmedia.com/content/215014/topic/WS_HLM2_MAG/Department-Focus-MarketingLessonsfrom-the-Field.html (Accessed on April 12, 2011).
- Strange, Kurt C. (2007), “On Track: Intended and Unintended Consequences of Direct-to-consumer Drug Marketing,” *Annals of Family Medicine*, 5 (2), 175–77.
- The Nielson Company (2010), “What Americans Do Online: Social Media And Games Dominate Activity,” http://blog.nielsen.com/nielsenwire/online_mobile/what-americans-do-online-social-media-and-games-dominate-activity (Accessed on March 21, 2011).