Of Plight and Providence: Big Pharma and The Effects of Pharmaceutical Advertising on U.S. patients with RLS, Insomnia, GERD, and GAD

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Abstract

Advertising is a dynamic industry from which the public pharmaceutical identity has formed and flourished. This study strives to answer questions relating to direct-to-consumer advertising and its effects on patients/potential patients in terms of viewing a medical condition and treatment. The study also aims to examine whether or not concepts of illness and how one views himself or herself as a being of the medical world have any relationship with pharmaceutical advertisements. If a relationship is found to exist, the study aims to define the correlation between them. The four specific disorders researched are: Restless Legs Syndrome (RLS), Gastroesophagea Reflux Disease (GERD), Insomnia, and Generalized Anxiety Disorder (GAD). The participants include residents of the Southern California, U.S., who are a minimum of eighteen years old and speak English fluently. The study procedure is comprised primarily of interviews, but a survey created for this study is viewed as a guideline for the overall project. Possible implications of this research include an increased awareness of the impact of pharmaceutical advertisements on consumers and general society as well as the formation of policies connected to direct-to-consumer (DTC) advertising and laws written concerning the ethics of the pharmaceutical industries' procedures and prescription drugs.

Introduction

As you turn on the T.V., a visual appears of someone living in a faded, monochromatic world with a blurry, soft focus. Regardless of the representation as a windup doll, animation, ambiguous blob, or even someone with an invisible body, you can tell that this person is unhappy and withdrawn by the exaggerated frowns, immobility and wall-staring. You may begin to wonder why this individual is sad or wonder what is wrong, but a calm, clear voice rings through the speakers as if personally called by your consideration. The voice narrates the represented subject's thoughts, emotions, and lifestyle thereby confirming your analysis of the situation: sleeplessness, sadness, loss of interest, and even strange sensations are ruining this person's life.

Luckily, the understanding and descriptive voice also speaks of a treatment for these symptoms: medication. Suddenly, the frowning and lethargic person living in a dull world is transformed into a smiling, active, and engaging person surrounded by bright light and color. You might even get to witness a wedding, camping trip, bike ride or other vivacious event that results from the great power of pills.

For those apprehensive viewers, an additional cartoon simulation of chemicals in the body serves to scientifically validate the effectiveness of the drug. Ultimately, with the simple steps of "talking to your doctor" and getting a prescription, anybody can be cured- even windup dolls, animations, ambiguous blobs, and people with invisible bodies.

The above description is a simulation of real-life pharmaceutical advertisements. If you are wondering what company and drug the advertisement was for, the truth is that the scenario described fits a number of commercials made for at least eleven different types of drugs used to treat various medical conditions ranging from heartburn to bipolar depression (See Figure 1).

Figure 1: An image taken from a Mirapex commercial posted on Youtube in 2008 exemplifying the tone and representation of those suffering from Restless Legs Syndrome.

Jef Richards and Catharine Curran, in their article, "Oracles on 'Advertising': Searching for a Definition", relay several definitions of advertising that have developed over the years. They credit the 2000 *American Heritage Dictionary*'s definition as being one of the most modern and comprehensive descriptions: "The activity of attracting public attention to a product or business, as by paid announcements in the print, broadcast, or electronic media". As such, for the purpose of this study, advertising shall be defined as a form of paid communication whose function is to convince a potential customer to buy and/or consume the item being sold.

Yet, advertisements act as much more than extensions of salespeople. Advertisements tell stories and give information; they provide guidelines that may bring pleasure, fulfillment and satisfaction into one's life. Though the person in the T.V. commercial is sad in the beginning, the most important part of the ad is the depiction of happiness experienced by this individual; it ultimately links this state of being to the secrets of the ad: if you pay attention to what the advertisement says, then you, too, could be this happy.

Pharmaceutical advertisements have gained the attention of many social scientists due to the great appeal of what advertisements portray. Many of the symptoms represented in pharmaceutical advertisements range between somewhat inconvenient for everyday life to

important signs of greater health concerns. Hence, it is important to acknowledge these signs as well as be informed of possible treatments. However, it is equally important to be able to distinguish between what is relevant to your life or your loved one's life, and what is not. Thus, a great debate has sprung up around pharmaceutical advertising over these and other concerns.

Literature Review

Background Information of Pharmaceutical Advertising and the Conditions

Advertising, as an industry, has metamorphosed as often and drastically as the advertisements it sells. According to the U.S. Census Bureau (2008), $5.7 billion was spent in advertising of all mediums nationally and locally in 1950. By the year 2000, advertising expenditure had increased by more than forty-three times the amount set fifty years prior with $247.472 billion spent (U.S. Census Bureau, 2008). Less than a decade later, the 2007 costs of advertising in the United States had reached $279.612 billion- an increase of around $4.591 billion per year (U.S. Census Bureau, 2008).

In addition to the increase in money spent, the media in which advertising appears has grown along with the types of products it sells due to new innovations and technological advances such as the radio, television, and internet. Pharmaceutical advertising is one such subfield of the general industry.

According to research by Cevasco J. Donohue and M. Rosenthal (2007), pharmaceutical companies spent approximately $11.4 billion in 1996 and increased their spending to $29.9 billion in 2005. Roughly 14% of the 2005 total expenditure was used on direct-to-consumer (DTC) advertising, but this is a 330% increase compared to what was spent in 1996 (Donohue et al., 2007) (See Figure 2). Although he did not coin the term, Ronald A. Rader, in his article

"What is a *biopharmaceutical?* Part Two: Company and Industry Definitions", defines "large international drug companies" grouped together into a single term as "Big Pharma" to represent the mighty entity that pharmaceutical industries have become.

With the growth of pharmaceutical advertisements comes the concern over ethics and the industries' influence on consumers and patients. Gil Roth (2009), editor of Contract Pharma Magazine, named U.S.-established Pfizer Incorporated as the top pharmaceutical company in the world based on its 2008 Pharma revenue of $44.174 billion. Incidentally, Pfizer is also associated with the United States' largest healthcare fraud in the history of the Department of Justice (Harris 2009). In a report from Gardiner Harris of The New York Times, Pfizer pleaded guilty to a criminal violation of the Food, Drug and Cosmetic Act by admitting that it had illegally misbranded and mispromoted four of its drugs. The $2.3 billion settlement is the largest healthcare fraud settlement in U.S. history and one of four Pfizer settlements over illegal marketing activities since 2002.

Figure 2: Image by Madelyn Smith. Taken from a blog entry by Madelyn Smith posted May 2, titled: Big Pharma and Consumer Confusion: Are We Overmedicated?

As exposure to pharmaceutical advertisements grows and potentially questionable methods- such as those discussed in the Pfizer lawsuit- continue, it is increasingly important to critically analyze the connection between pharmaceuticals, advertisements, and patients of

medical conditions. This study aims to examine such relationships with a focus on the medical ailments of Restless Legs Syndrome, Insomnia, Gastroesophagea Reflux Disease, and Generalized Anxiety Disorder.

In his book, *Effective advertising: When, how, and why advertising works*, Gerard Tellis (2004, 5) attributes difficulty in assessing the effectiveness of advertising to its complexity; the advertisement is multidimensional in aspects such as in what form of media it exists or how it is portrayed- individually and during the life of a campaign. The consumer is also a part of advertising and further complicates measuring effectiveness because consumers buy products for a number of reasons, maybe several of those reasons combined (Tellis 2004, 6). Regardless, Tellis (2004, 46) states that advertisement influences can be measured by outcomes such as a consumer's trial of a brand or brand sales and classifies advertisement measurement into four categories: brand choices, purchase intensity, market outcomes, and firm's accounting variables. In addition, Tellis notes that although advertisements have different effects on a consumers mental processes, the value of the advertisement weighs on its ability to deliver a purchase (2004, 10).

Controversies surrounding pharmaceutical advertising exist in the realm of direct-to-consumer (DTC) marketing. According to a 2010 article from the U.S. Food and Drug Administration (FDA), New Zealand is the only other developed nation in the world, besides the United States, that allows DTC advertising. It is banned in all other Western countries for fear of their negative impacts.

In 2002 an article titled "For and against: Direct to consumer advertising is medicalising normal human experience" was published in the British Medical Journal (BMJ) whose authors analyzed both sides of the controversy. Proponents of pharmaceutical advertising focus on the

issues of under-diagnosis and a lack of treatment of diseases. They claim that DTC advertising is a valuable way to increase public knowledge of modern medicine and increase patients' control over their medical lives (Bonaccorso and Sturchio 2002).

Bonaccorso and Sturchio (2002) argue in defense of DTC advertising, claiming that there is epidemiological evidence of an underdiagnosis of major disease for which treatments exist. Furthermore, they claim that there are a large proportion of ailments that go untreated even with a diagnosis (Bonaccorso and Sturchio 2002). Bonaccorso and Sturchio (2002) argue that DTC advertising is valuable as a means of increasing public knowledge of modern medicinal benefits. Furthermore, they assert that DTC advertising will not diminish the role of the doctor, but rather modify the amount of control a patient has over his health and may help increase communication between doctor and patient- a sensitive area known for having problems in the past and present (Bonaccorso and Sturchio 2002).

However, B. Mintzes, an opponent of DTC advertising, argues that these advertisements may cause human conditions once seen as normal to become medicalized into conditions from which pharmaceutical industries benefit. She emphasizes the lines being blurred during the process of medicalization in which "nonmedical problems become defined and treated as medical problems" (Mintzes 2002). Mintzes also comments on the lack of precision when a drug is targeting a serious disease; advertisements focus on healthier populations rather than those who are actually diagnosed with a disease which is due to the pharmaceutical industries' desire to increase their consumer base and buying of a product rather than to better the medical world.

In addition, Moynihan et al. (2008) share their growing concern for what is termed "disease mongering" in their article, "Disease Mongering Is Now Part of the Global Health Debate". Disease mongering is the concept of exaggerating the severity of a condition and/or the

effects of medication (Moynihan et al., 2008). With this concept in mind, one could argue that the many diseases are symptoms blown out of proportion rather than a serious condition gone unnoticed or minimized.

Media Anthropology

As media have grown in prevalence and importance for numerous societies, so has the field of media anthropology. Explained by Eric W. Rothenbuhler and Mihai Coman in *Media Anthropolgy*, media anthropology lies in "the idea that the media are cultural phenomena, worthy of study using the concepts and methods anthropologists have developed for the study of indigenous cultures-adapted, of course, to global media markets, technologies, and industrial systems" (ix). Like classical anthropologists, media anthropologists use participant observation, qualitative methods, and open-ended interviewing as part of their research. In contrast, the main difference between the two forms of anthropology is the characteristic that media anthropologists are often a part of the culture that they are studying. This self-involvement potentially eliminates certain elements of the researcher's experience such as travelling and learning new cultures.

Additionally, a common issue for media anthropology is the question of universality for theories and practices catered to specific anthropologic studies and transferred to the use in relation to media. For example, Antonio C. La Pastina argues in his first chapter of *A Media Engagement Approach* in Rothenbuhler and Coman's *Media Anthropology* that "audience ethnography needs to be repositioned as a fieldwork based, long-term practice of data collection and analysis" like traditional forms of ethnography (139).

There are concerns over the effectiveness and validity of researching with less observational methods as well as an apprehension for the increasingly encompassing use of the word "ethnography" to include the intentions of broadening insight into the topic of study rather

than just the logistics of the research procedures. However, Rothenbuhler and Coman recognize the importance of producing "useful answers to interesting questions" regardless of whether or not the method is traditional (2).

The Conditions

Restless Legs Syndrome:

According to the National Institute of Neurological Disorders and Stroke (NINDS; 2009), Restless Legs Syndrome (RLS) is a neurological condition characterized by the uncontrollable urge to move ones legs. It is said to be triggered when one tries to relax or lie down and varies in severity from a mild annoyance to painful. Due to lack of sleep, these leg sensations may cause fatigue or exhaustion and the effects that come with it such as a lack of concentration and impaired memory. NINDS estimates that as many as twelve million Americans suffer of RLS, but even this estimation may be low from undiagnosed or misdiagnosed (as disorders like Insomnia, stress, or anxiety) sufferers.

In addition, the RLS Foundation lists four criteria that it thinks must be met in order for one to have RLS: a potentially uncontrollable need to move ones legs, often accompanied by "creeping, itching, pulling, tugging, or gnawing" sensations; the RLS symptoms worsen when resting; the RLS symptoms are relieved when ones moves his or her legs; and the RLS symptoms are worse in the evening, especially when lying down.

RLS treatment is often influenced by a linked medical condition, such as diabetes, or by lifestyle choices like lowering caffeine intake. Massages, heating pads, icepack or hot baths may help relieve symptoms, but medication can be prescribed and are typically dopaminergics, benzodiazepines, opioids, and anticonvulsants: these drugs are often developed to treat related conditions. Dopaminergic drugs, created for the treatment of Parkinson's disease, has shown

effectiveness in reducing RLS symptoms and is often the first form of medication used (NINDS, 2009).

Dopamingeric medications work to increase levels of dopamine in the brain. Side effects include: nausea and vomiting, dizziness or fainting, sudden, unpredictable "attacks" of sleepiness, low blood pressure when you stand up (orthostatic hypotension), confusion or hallucinations, depression, Insomnia, dyskinesias (jerky, involuntary movements), and irregular heart rate and chest pain (WebMD 2008).

Benzodiazepine drugs are depressants known as hypnotics in high doses, anxiolytics in moderate doses, and sedatives in low doses (USDEA). Complications that may arise from the use of these drugs include: severe allergic reactions, respiratory problems, increase depression, memory loss, sleepwalking, sleep driving, eating while asleep, and other odd mood states (Simon, 2009).

Opioids are used to treat RLS only when other forms of treatment have failed. The hesitance to use opioids is founded upon the addictive tendencies and easy development of tolerance that occurs. The major consequences of opioid use include: Dizziness, sedation, nausea, vomiting, and constipation (WebMD 2009).

Anticonvulsants help control or prevent abnormal increases in brain electrical activities that are related to seizures. Side effects of anticonvulsants used to treat other conditions include: Drowsiness, dizziness, tremors, blurred vision, nausea, and poor. However, there is a lack of research concerning side effects of anticonvulsants when used on RLS patients (WebMD 2009).

Gastroesophagea Reflux Disease:

Gastroesophagea Reflux Disease (GERD) is described by the International Foundation for Functional Gastrointestinal Disorders (IFFGD; 2009) as a condition in which stomach acid

produced for digestion regresses into the esophagus causing irritation and potential complications. The IFFGD states heartburn as the most common symptom of GERD, but others include difficulty swallowing, sore throat, and throat hoarseness in the morning.

Lifestyle changes, especially modifications in diet and eating habits, are recommended before medication but if these and nonprescription drugs are not sufficient, prescription drugs and surgery are other options. Emedicinehealth (2009) names some prescription drugs used to reduce reflux such as histamine antagonists that block acid production, proton pump inhibitors (PPIs) whose goal is to better protect the esophagus from acid through the blocking of acid secretions, and promotility agents which help tighten the lower part of the esophagus and attempt to empty the stomach more quickly (IFFGD, 2009).

Medicinenet.com also lists foam barriers as a form of treatment. Foam barriers are tablets that are made of an antacid and a foaming agent that disintegrate in the stomach when ingested leaving a floating foam barrier that blocks the reflux of liquid while the antacid neutralizes the stomach acid. Foam barriers are usually taken with other drugs for GERD when the other drugs are not adequately effective in relieving symptoms.

Histamine antagonists (H2 blockers) have been in use since the late 1960s and thus are well-studied and are considered very safe. The side effects for H2 blockers includes: headache, dizziness, diarrhea, constipation, nausea and vomiting.

The most common side effects for PPIs are headaches and diarrhea, though these medicines may slightly interfere with other medications. In addition, PPIs may reduce the amount of calcium your body absorbs and may increase susceptibility to infections (WebMD 2009).

Insomnia:

The most common signs of Insomnia are listed as having difficulty falling asleep, difficulty staying asleep or going back to sleep, waking up too early and waking up tired (WebMD 2009). Primary Insomnia is not linked to an outstanding cause, but secondary Insomnia is linked to a problem or health condition. Furthermore, Insomnia is categorized by the severity or length in which it occurs: short term is acute Insomnia while long term (three nights per week for a month or more) is chronic Insomnia. WebMD lists the general symptoms as fatigue or exhaustion, irritability and memory loss. Jerrold Meyer and Linda Quenxer, in their book titled *Pharmacology: Drugs, the Brain, and Behavior*, extend those symptoms to loss of productivity, impaired judgment and possibly be a factor in accidents.

Similar to RLS, Insomnia may be treated based on underlying causes including sleep habits or other medical conditions and includes changing one's daily routine, such as avoiding caffeine and alcohol or increasing exercise and removing disruptive stimuli as well as using herbs and over-the-counter or prescription sedatives (WebMD 2009).

Meyer and Quenzer state that common over-the-counter medicines made to treat allergies contain antihistamines and are sometimes used to treat Insomnia because they tend to have a side effect of making someone drowsy. If these treatments are not potent enough, or if tolerance has built up, prescription drugs are another option. Unfortunately, Meyer and Quenzer note that Insomnia is not the only cause of disruptions of sleep cycles- drugs treating Insomnia have shown to generate disturbances, too. Grogginess upon waking, sleep disturbance due to an increase in tolerance, and suppression of more restful sleep stages in place of other sleep stages occur.

Newer drugs are short-acting nonbenzodiazepine hypnotics, as opposed to the barbiturates and benzodiazepines that were previously used. Further evaluation is needed on nonbenzodiazepines but current data shows these drugs to have a lower occurrence of tolerance and rebound Insomnia after withdrawal of the drug. This is likely due to its lack of specific anxiolytic, anticonvulsant and muscle-relaxing effects despite inducing sedation and sleep. (Meyer & Quenzer, 2005).

All medications contain risks for withdrawal, dependency, and rebound Insomnia. The University of Maryland Medical Center website includes a list of possible side effects for Insomnia medication. Side effects for over-the-counter brands containing antihistamines include: daytime sleepiness, cognitive impairment, dizziness, drunken movements, blurred vision, dry mouth and throat. General consequences of nonbenzodiazepines are: drowsiness, dizziness, fatigue, headache, unpleasant taste, and diarrhea. Side effects of benzodiazepines are greater in number and more extreme ranging from severe allergic reactions to memory loss and, in rare cases, overdoses have been fatal.

Generalized Anxiety Disorder:

The Anxiety Disorders Association of America (ADAA; 2010-2011) claims anxiety disorders to be the most prevalent mental disorder in the United States and, as a group, makes up a large proportion of medical expenses. The ADAA describes Generalized Anxiety Disorder (GAD) as "persistent, excessive, and unrealistic worry" with listed symptoms such as muscle tensions, fatigue, restlessness, difficulty sleeping, irritability, and gastrointestinal upsets. Results of these symptoms, as noted by Meyer and Quenzer, are a reduction in task productivity and a decrease in the level of pleasure gotten from a person's efforts.

In addition, the ADAA distinguishes GAD from normal anxiety by the severity of anxiety produced and the lack of a specific trigger to the anxiety. GAD is treatable with relaxation techniques, short-term psychotherapy process called cognitive-behavioral therapy (CBT), or medication, with short-term or long-term options. There are four main classes of medications: Selective Serotonin Reuptake Inhibitors (SSRIs), Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs), Benzodiazepines, and Tricyclic Antidepressants (ADAA, 2010-2011).

SSRIs prevent absorption of serotonin leaving a higher level or serotonin in the body. Common side effects of include Insomnia or sleepiness, sexual dysfunction, and weight gain. SNRIs are similar to SSRIs, but these medications prevent absorption of serotonin and norepinephrine. Their side effects include: stomach upset, Insomnia, headache, sexual dysfunction, and minor increase in blood pressure. These medications are believed to be as effective as SSRIs and are a first-line treatment for Generalized Anxiety Disorder.

Benzodiazepines are more often used for short-acting anxiety and their potential side effects have been included in the RLS and Insomnia sections listed above. Tricyclic antidepressants are preferred over long-term use of benzodiazepines, but they can cause significant side effects such as: orthostatic hypotension (drop in blood pressure on standing), constipation, urinary retention, dry mouth, and blurry vision (ADAA, 2010-2011).

Overview:

All four conditions are medical concerns within the United States. The first two are mainly physical ailments while the last two disorders may have a more emotional trigger. These ailments were chosen based on their differences as well as their similarities. They have general and overlapping symptoms which also have paralleled modes of treatment but are distinct medical illnesses.

The superimposition of vague symptoms is a concern for critics of DTC Advertising who question the validity of any or all of these conditions because they assert that each lacks a strongly distinct description. For the most part, they do not argue against the reality of these symptoms. Rather, they argue that conditions like RLS, GERD, Insomnia, and GAD are either normal imperfections of the human form or are signs of an underlying issue, instead of being the problem itself.

On the other hand, each condition has a distinct element to it despite having the potential to influence one another. Doubting the legitimacy of any of these conditions may be related to common claim made by advocates of these diseases saying that they are underdiagnosed or misdiagnosed. The incorrect identification and relatively recent medical description of these conditions could explain why there is such a large influx of newly diagnosed or self-diagnosed patients. Either way, this study focuses on how a patient comes to view himself or herself as one with a medical condition rather than arguing for or against the validity of RLS, GERD, Insomnia, and GAD.

Research Questions

In order to attain a better understanding of my research, I have included a short history of my studies. My educational background has given me insight into the social and biological views of pharmaceuticals and advertising. I have studied the molecular mechanisms involved in conditions like Insomnia and GAD, how pharmaceuticals work, and how scientists approach them. I have also learned about theories of societal influence and how to read images in a cultural setting. This research aims to combine the two schools of study, biology and anthropology, through the use of biological entities in a social situation.

Most studies surrounding pharmaceutical advertising focus on the how the advertisements are run by looking at the number of pharmaceutical sales, the amount of money a company invests into DTC advertising, and incidents such as the illegal misbranding and mis-promoting of drugs (Roth, 2009). While the majority of studies for pharmaceutical advertising focus on the potential benefits of more available knowledge to the general public, a preponderance of studies against such advertising question the ethics of how DTC advertising is being used (and list many lawsuits against top industries for such ethical and legal violations). This study, however, aims to look at previous research and take it one step further by putting consumers up front and center, giving them a more active say and role in what is essentially a debate about them.

With a growing expense on advertising and pharmaceutical advertisements, it is important to gauge the influence and effects these product promoters have on people's views of a condition, its severity, and how to treat it. The four conditions: Restless Legs Syndrome, Gastroesophagea Reflux Disease, Insomnia, and Generalized Anxiety Disorder, are chosen so that the specificity of each condition remains individual yet comparisons between them are possible. The study focuses on the influence of DTC advertising, rather than any medical condition, and may bring greater insight into the effectiveness of such tactics on social ideals of health and sickness.

The first underlying question of the study deals with the power and persuasion of advertisements. With a vast number of avenues used, it is important to understand which forms of advertising have the most influence on potential consumers as well as why and how are they influenced.

The second research question of this study focuses on the consumer. With an increasing awareness of RLS, GERD, Insomnia and GAD through advertisements and other forms of communication, and those with the appropriate symptoms may be diagnosed or diagnose themselves with a certain condition. How do these patients react to finding out about and/or having a medical condition?

Furthermore, the third question deals more specifically with medication as a treatment to a condition. How are patients made aware of these medications? What are their opinions on the medication, the pharmaceutical industry, and its mode of functioning?

Methods

This study used two primary sources of data that were collected simultaneously and secondary sources of data that were collected before and during the collection of primary sources. This data consists of a survey, geared towards advertising in general, as well as interviews and observations of subjects directly involved in the research topic (pharmacists, professors, and patients of RLS/Insomnia/GERD/GAD).

The majority of the study will be examined using qualitative, rather than quantitative, analysis through observation and commentary of the content of the interviews. Such analysis uses a balance between background knowledge of anthropology and pharmaceutical advertising and the material presented during the study. The key factors of interest are the thoughts and opinions of the interviewees. The primary outcomes were anticipated to comprise verification of arguments for DTC advertising, verification of arguments against DTC advertising, or an outcome in between these two extremes.

The Subject Population

The study subject population included any person eighteen or older who lives in Southern California and speaks English fluently. The subject may be of any social background (gender, ethnicity, socio-economic, education, etc) and was eligible to partake in the study so long as they met the above criteria. Those participating in the interview also had to belong to at least one of the following subject groups: academic professionals (professors), medical professionals (pharmacists) and subjects with one or more of the specified conditions that were looked at during this study.

This research focuses on how adults view (pharmaceutical) advertisements and the medical media. A concentration on adults provides a level of maturity (physical, mental, and autonomous) and increases the specificity of the study that would not be available with the inclusion of children.

In addition, the study is limited to English speakers because this study could easily become "lost in translation" and given the sensitivity of including any form of potential medical information is difficult since the researcher is not fluent enough to do research in any other language. However, subjects may be bi-lingual or multi-lingual and English does not have to be the subject's first language.

The total sample size is 185 participants.

The Survey

The first source of data is a survey that was created using an online survey software and was distributed via Facebook. Although Facebook contains identifiers, the link to the survey itself is completely anonymous hence there is no connection to the survey and the participant's identity. My personal Facebook network had access to the survey by viewing my status which

included the survey link and an appeal for those in my network to distribute it to their own networks. Hence, through snowball sampling, the survey very quickly reached a vast majority of people with whom I have no connection. In addition, the link will be posted on Facebook UCI group "walls" for anyone in the UCI community to repost and/or participate in. The link was available to participants for three weeks and the total number of survey participants was 164 subjects.

Each participant went through the procedure only once and his or her contribution was fulfilled once the survey was finished. The twenty-two question survey was taken online and took about ten minutes to complete. Questions consisted of estimations and comparisons of the most popular and least popular mediums of advertisement, influential mediums of advertisements, and estimations of an advertisement's degree of importance when buying products. The study survey results are then compared with the results of previous surveys from other studies. Its main use is to provide a general guideline of ideas that may loosely direct the focus of the study (the interview portion).

The survey is open to a greater variety of people than the interviews because it is a broader guideline to what people think of advertisements in general. Its use is to provide a greater understanding of how the public views advertisements on a more widespread scale.

The Interviews

The second source of data was interviews. Potential subjects, or those who have access to potential subjects such as leaders of organizations, were contacted by email and asked to participate.

The interview lasted about an hour and took place in a public site designated by the subject as a place of comfort for the study. The interview was audio recorded, but does not

contain subject identifiable information. Also, each interviewee was assigned a pseudonym using an online random name generator and all interview data (written or otherwise) was transcribed using the assigned name. If the subject preferred, telephone and internet interviews were also accepted. Once the interview was complete, the subject's role in the study was finished and no further contact was made unless requested by the subject or clarification on an issue was needed.

The interview questions were specific to each subject group, but all pertained to pharmaceutical advertising. Subjects with medical conditions were asked more personal questions relating to their experiences with the disease while academic and medical professionals were asked questions relating to their professional background. After contacting over seventy-five professors, pharmacists, support groups, and organizations, I interviewed a total of twenty-one subjects: five professors, five pharmacists, and eleven patients (eight with RLS, two with GERD, one with all four conditions).

Speculation as to the lack of response from people with Insomnia, GERD, and GAD is based on stigma relating to the disease and treatments for the disease. These conditions are critiqued for being too general or for being presented occurrences that invalidate other diseases and take up research resources and attention. Additionally, those who take medication to treat such illnesses sometimes fear being labeled as "pill poppers", people who takes pills all the time, with the connotation that they are addicted to the pill or the action of taking a pill rather than from the need of the medication.

In contrast, I was told by the interviewees with Restless Legs Syndrome that they were not only willing to participate in this study, but also that they were grateful to it because there are rumors, misunderstandings, and a general lack of information about RLS. One patient said she wish RLS would be taken more seriously: "People say it's psychological, not real… RLS is a

brain disease, an over-production of dopamine." Because of their desire to be heard, RLS patients were responded with much more fervor.

Secondary Sources

Secondary sources of data are made up of previous studies on advertisements, medical conditions, and theories on thought as well as online blogs and support groups for people suffering RLS, Insomnia, GERD, or GAD. The background literature provides an academic context for the study while the blogs and support groups present topics of concern and discussion that circulate amongst communities of people with RLS, Insomnia, GERD, or GAD and are compared to the responses that were given during the interviews.

Results

The Survey

Out of the 164 responses, 91 participants are female and 59 are male ranging in age from 18 to 66. The top two learning stimuli were visual, with 91 percent reporting to be good or excellent at learning through visual cues and 7 percent reporting to be poor to average at learning visually, followed by kinesthetic (touching) learning with 77 percent respondents claiming to be good or excellent at learning through physical cues and 20 percent claiming to be poor to average at kinesthetic learning. Feeling (emotions), auditory, and tasting learning-stimuli followed in the respective order.

In addition, 81 percent of the participants answered that they are most exposed to advertisements in broadcast media (television, radio, internet) followed by print media (magazines, books, brochures, flyers) at 69 percent. Not surprisingly, the strongest remembered traits about a product were visual signals over sounds and product messages.

86.48 percent of the participants agreed or strongly agreed to the statement "sex sells" while 9.57 percent were undecided and 6.96 disagreed or strongly disagreed. 94.78 percent disagreed or strongly disagreed to the statement that advertisements have no influence on the viewer while 2.61 percent are undecided and 2.61 agreed or strongly agreed with the statement.

In contrast, respondents were more evenly divided when asked about whether or not content should be strictly about the product's use with the following results: 42.11 percent disagreed or strongly disagreed, 26.32 percent were undecided, and 31.58 percent agreed or strongly agreed. However, the most controversial question in the survey asked whether or not the participants are more likely to by a product if it has warnings. 37.39 percent disagreed to strongly disagreed, 26.09 percent were undecided, and 36.52 percent agreed to strongly agreed.

Additionally, a majority of participants responded that they agreed to strongly agreed to the statements "Advertisements influence my decision to buy the product" and "Social opinions of a product influence my decision to purchase" (52.17 percent and 60 percent respectively).

Because the participants are not a product of random sampling, the survey is used as a general guideline to the thoughts of adult residents from Southern California. Also, surveys are less in depth based on the limitation of asking "what" without a "how" or "why". Still, these trends in opinions about advertisements correlate with many of the interviewee's responses.

The Interviews:

As previously mentioned, all names used in this paper are pseudonyms and have been produced by an online random name generator. Also, each group was carefully chosen based on the blurred definitions of each condition thereby providing a unique experience compared to those with short-term, less serious illnesses such as the common cold (which are often little more than a nuisance in Southern California) or a life-threatening disease like cancer (which is clearly defined and hardly debated amongst scientists and overall society).

The general responses to the interview questions are as follows:

Most patients had symptoms of their medical condition before knowing about the condition itself, but all of the patient interviewees had symptoms before considering RLS, Insomnia, GERD, or GAD. All subjects, except one Insomnia respondent, have been officially diagnosed by a doctor and are either taking medication or will take it in the near future (one interviewee, going by the pseudonym Lawrence, was very recently diagnosed and has yet to take the medication prescribed to him by his doctor).

Some interviewees said that they were prescribed medication originally designed for Parkinson's Disease and used it off-label to treat RLS because it relieved the symptoms of restless legs. Also, not all medications work for everyone. One subject, Katherine Longoria, takes medication for her other conditions, but not for RLS because they do not work for her. However, all of the patients agreed that would or do take generic forms of the drug.

There were split answers concerning money: three of the five interviewees said that money does not influence decisions about medication and going to the doctor. However, two of those three said that money would be an issue if insurance did not cover the costs of medication (one is retired, two are on disability, one is unemployed, one is a first-year college student).

Analysis

Pharmaceutical companies exist on one side of the advertisement playing field, yet another group inhabits the other side: the viewers. Critics of advertisements often try to warn the general public of the "evils of Big Pharma". Although these warnings are born from good intentions, the viewers are not passive entities who absorb and believe whatever they are exposed to and I believe they deserve more credit. As Mark Allen Peterson explains, "people are never *only* audiences constructing readings of texts, they also seize upon, remember, replicate, and

transform elements from the media they consume" (Performing Media: *Toward an Ethography of Intertextuality* 130 [original emphasis]). However, Peterson continues with a comment on how it is socially patterned in the sense that, "knowledge of particular kinds of media texts and an ability to display this knowledge competently is a form of cultural capital" (130).

With this in mind, two main models of health care pluralism were revealed through the interviews. I call the first model "personal health care" because it is a separate, medical entity that exists between the individual, their loved ones, and their doctors. The second model, in which I use the term "manufactured health care", encompasses the concepts of health care as an industry.

Currently, both models are being implemented in Southern Californian society. There is still a very strong tie between the patient and the doctor. Everyone interviewed exhibited symptoms that concerned them enough to seek medical help by talking to their doctor or by going to the hospital. This action can be dissected into two parts. First, the patients noticed unusual behavior in their bodies compared with their normal status rather than by comparison with subjects in advertisements- several of the interviewees were diagnosed before the existence DTC advertisements. Second, these individuals sought help from doctors and hospitals indicating a level of trust and security in these establishments. Despite the risk of being misdiagnosed, most of the interviewees recommended seeing a doctor and uses one's own resources as a means of information.

Laurie Bucher, a fifty year old woman who has suffered from RLS for over thirty years, was misdiagnosed several times. She was told she had low vitamins or low iron and she was given a plethora of recommendations for treatments that work for other people that didn't work for her. Some of those treatments not only did not help relieve symptoms, they triggered the

restless legs. In addition, even when she was properly diagnosed she responded very negatively to the prescribed medications, Requip and Mirapex, both of which made her severely depressed and break out into rashes. Eventually she found a medication that worked for her and, despite the difficulties of her journey, she still recommends maintaining a relationship with doctors as a key feature of health management.

The second model of health care is the one run by Big Pharma. It is the industy side which once provided trips to Hawaii and other paraphernalia to doctors and medical students under the description of an informative conference as well as sponsors university research and plays a large role in the FDA. It is also the group that pays millions of dollars to remind the public of illnesses through advertisements. Critics claim that Big Pharma's advertisements are dangerously persuasive and defendants of pharmaceutical advertisements argue that these ads are informative and not just anyone is eligible to get a prescription.

The viewers know about the nature of advertising and so they are wary, annoyed, even humored or fascinated by them. Professor Jacob Shubert laughed as he described commercials as "irrelevant images followed by horrible side effects". Other subjects had more negative views ranging from boredom to anger and fear. Ultimately, it is of utmost importance to acknowledge that people are conscious of advertisements. Viewers are active participants and as such, they contain their own analyses of each commercial and ad they are exposed to. Some advertisements may be more noticeable or controversial than others, but people are not mindless zombies.

So, if pharmaceutical ads do not directly convince everyone to go out and by medication, what is the issue here? People research medical conditions as well as the medications prescribed to treat these conditions. However, the doctors, research, and advertisements are all geared towards the same general trend: each aspect is verifying the others in a positive feedback loop.

The research is given to doctors who confirm what is said in the advertisements. Everything is funded by the same industries that make, test, and advertise for the drugs. In this sense, advertisements may not make everyone think they have every disease. However, it opens the doors to accepting that there is something wrong about one's health and the answer is to treat it with medication.

One day, Lawrence Mariano, a 19 year-old college student, experienced pain in his chest and shoulders that lasted for hours- strong enough and long enough for him to decide to go to the hospital. There, he was diagnosed with GERD and told he needs to change his eating habits as well as cut down on smoking and drinking. In addition, he was prescribed Prilosec. When I asked Mariano why he decided to take medication before seeing if lifestyle changes were sufficient to control his GERD symptoms, he said it was because the doctor prescribed it. The same answer was given after he answered "no" to being asked if he would try a different brand name known for having the same effects. To Mariano, the doctor chose to prescribe Prilosec, and prescribe it over any other brand, for specific reasons that would benefit his health more than not taking medication.

Unfortunately, doctors are not always familiar with a disease for several reasons. At the time of inquiry it could be uncommon or there could simply be a limited amount of information on the disease and/or treatment. In addition, even if there are studies on medications used to treat certain illnesses, it is difficult to determine the effects of mixing medications. Multiple interviewees take several medications to treat different medical conditions and symptoms and as such it is vitally important to monitor an individual's response to each medication independently, as well as in a group.

Even if a single medication is used, factors such as diet and other lifestyle habits as well as dosage influence a patient. One RLS interviewee, Lillian Guzman, splits her Ropinirole pill in half. Instead of taking a full pill once a day, she takes half a pill twice a day to decrease the amount of drowsiness that the medication brings. This is important when one needs to consider actions such as driving in order to avoid falling asleep at the wheel.

While Prilosec truly may be the best medication for Lawrence Mariano, doctors are also influenced by Big Pharma. Although it is looked down upon today as being along the lines of bribery, many medical specialists received large, personal perks for collaborating with certain companies. Even when assuming doctors are not interested in material gains, not all drugs are equally represented and their representations change.

Professor Eugene Sigmon described an image he saw at a medical conference printed on T-shirts, programs, and pamphlets of someone cropping sugarcane in the Caribbean. Firstly, the drug on display got a lot of attention simply by being everywhere. Secondly, the motif of the advertisement mimics the style and color palate of Latin American art; both of which encompass a part of that ethnic person and the strong historical relationship between non-white people and sugar cane production in the Caribbean. When the pharmaceutical representatives in charge of this depiction were asked about the meaning of the image, they read it as “cutting sugar” which is what the drug, made for diabetics, does. Although this reading is connotatively correct- the man in the image is literally cutting sugar, there were other consequences. Soon after the conference, the drug which was nearing the end of a five year campaign began to be targeted toward ethnic people along the same time a new drug was released.

The significance of this timing is a marketing ploy that attempts to maximize the number of sales for both drugs: the new medication is advertised as being more technologically advanced

and hence more effective while the old medication may contribute to sales based on a potential lowering of its price and a change in the target audience.

The doctors at that conference were given information about the diabetes drug, but they were given it in a loaded context, full of assumptions and meanings that are likely subconscious. The doctors learn what the pharmaceutical representatives and research (both controlled by Big Pharma) tell them: this drug cuts sugar. However, it is implied that this drug is to be prescribe to ethnic people because that is an assumed association.

Simultaneously, although symptoms of ill health and discomfort exist as part of the aging experience, there is a trend to increase the degree to which these symptoms are seen as pathologies. Katherine Longoria, both a patient and advocate of Restless Legs Syndrome, has been a health activist since 1996 and is a leader of several support groups whose members span sixteen different countries, including the United States. After engaging with hundreds of people diagnosed with or concerned about RLS, she is both grateful and wary of pharmaceutical advertisements. She believes that society in general needs to learn how devastating RLS is; that it is usually life changing and lifestyle changing and that "it wreaks havoc on you mentally and physically, the meds have mostly terrible side effects and they are usually a necessary evil if one wants to keep one's sanity".

According to Longoria's experience, once RLS medication began to be advertised, a huge influx of new members with numerous questions came to the RLS support group. She notes that most did have RLS, but previously did not know such a thing existed because "so many people used to be afraid to even discuss it with their doctors for fear of being classified as 'nuts'." Those who did not have RLS were often mistaking RLS for leg cramps- which is a completely different sensation than restless legs. Hence, Longoria stresses the importance of

honesty and clarity when representing a disease and a pill because, "THAT [depiction in the advertisement] is NOT the face or the body of anyone who has moderate to severe RLS! And, the actual fact is- Requip and/or Mirapex do not help even half of the people with RLS that I have talked to over the years. Probably more than half" (original emphasis). If the advertisements were more true to form, it would not only avoid misguidance for those seeking a medical answer, but would also inform people of the medical issue being portrayed. Yet, Longoria also noted a positive trait of the current advertisements: the medications for RLS that had been used off-label for many years are now approved and advertised specifically for RLS which gives the disease a lot more credibility since it has been formally acknowledged by the pharmaceutical industry.

So, how do people feel about being sick? Illnesses are negatively viewed because they represent a malfunctioning body which Professor Elaine Lindell terms "biologically flawed". Furthermore, if being chronically sick means that one is flawed for life, he or she tends to get very intent on trying to cure the disease or manage it through control of the symptoms. Although many factors add to each individual's experience of illness, such as the type of disease, gender, race, and socio-economic status, a main consequence of being sick in the United States is that the individual falls under the what Michel Foucault, the French philosopher, termed the "medical gaze" and so loses control of certain aspects of his or her life as the doctor becomes the dominant subject in those areas (Foucault, 1975).

And yet, although some respondents do not want to medicalize their symptoms, most said that a name and/or diagnosis is beneficial, and so preferred, for several reasons. On a superficial level, most people in the United States, namely Southern California, prefer a diagnosis because it verifies that the symptoms are real and categorizes them in a way that people can understand

more clearly. Plus, the label of a disease usually implies that enough people have it or have had it to call for a universal identification of the illness implying that the diagnosed individual is not suffering alone. It also validates that someone is not "making [the disease] up in their head". Knowing what is wrong is preferred over not knowing, even if it is "bad news".

Moreover, most people want the label of having a disease because they like the certainty a diagnosis can give them. As several professors explain, this society has been conditioned to feel that a diagnosis is empowering; that there is help and hope. People still have faith that doctors and pharmaceuticals can and are there to direct them along a path that might alleviate them from their pain and suffering. People may also like the quick-fixedness of a diagnosis which has a genre of symptoms, treatments, and advice. Taking medication, for example, may allow someone to avoid changing his or her lifestyle as much as they would need to without medication.

Even the pharmacists have opposing views on the advertisements with which they work and often for the same reasons as the patients and professors interviewed: pharmaceutical advertisements are a great way to get medical knowledge out to the public. However, several pharmacists stated concerns for patients who see or hear advertisements then come into the pharmacy or call the pharmacy thinking that it is simple to obtain the product advertised. These direct-to-consumer pharmaceutical advertisements mislead the public into thinking people can stop by their local pharmacy and get the medication quickly when, in reality, they need to go to the doctor.

Although the regulation of needing to go to the doctor to get a prescription for the medication may deter some people from getting a potentially unnecessary, irrelevant, or even harmful medication, those who are set on the product may push for a prescription. In addition,

the degrees and symptoms to which one is eligible for such a prescription have loosened over the years increasing the likelihood that those interested in a medication may get it.

As such, an outcome of these advertisements noted by pharmacists is an increase in demand by the public onto the pharmacists and doctors, but this is not necessarily a bad thing. Though this may increase the work load of pharmacists who are already busy from open to close (and some pharmacies are open 24 hours), it implies that the public is taking the initiative on their health. More work does not invalidate a new aspect of the patient-doctor/pharmacist relationship, but rather points to a need to absorb this addition if it is wanted and/or beneficial enough for society. Every institution changes over time due to new technology, information, current events, etc and pharmacies are no different.

However, a complication of nonmedical individuals taking action over their health is the discrepancy of views that may occur between these individuals and those of medical professionals. As Beth E. Barnes argues in her article "Doctor knows best: Why DTC advertising of prescription medications is bad for patients", information and knowledge are not always equivalent (145-149). A critique that pharmacists make is that, although people do get more informed about diseases and treatments through advertisements that they would likely not have heard otherwise, people assume that once they know some information, they know all of it. A consequence of this thinking is that people may misdiagnose their symptoms and ask for the medication that would be relevant to these diagnoses rather than their actual diseases.

If medications were only helpful or only affected those with the actual disease, perhaps this way of thinking would not be so hazardous. Unfortunately, as one pharmacist points out, "drugs are chemicals and all chemicals affect the body". Patients believe they have an idea of what the advertised medication is and does, and what the side effects are, but this information is

limited by time/space, by the medium through which it is advertised (one cannot have a dialogue with a television commercial or a magazine ad), as well as by the limited knowledge scientists and pharmaceutical industries have about a product. This puts the doctor in a difficult position: if he or she doesn't feel comfortable writing a prescription, tension might build between the doctor and patient due to a disagreement of opinion. The patient may go to someone else who will write a prescription for the drug, anyway. With the ease of regulations, doctors may be more likely to write prescriptions because it avoids this pressure and not only gives the patient what he or she wants, but also makes the individual feel like they are being acknowledged and heard by the doctor.

The two main factors found to influence people's opinions of taking medication are money and how the medication affects the patient, which correspond with the two health care pluralisms. In the area of manufactured health care, a large majority of interviewees, when asked if they would change anything about the pharmaceutical industry what would it be, gave an answer related to money. Such responses include lowering prices of medication, reducing the number of years that a patent is valid thereby allowing generic forms (which are cheaper) to be sold faster, and covering more medications on insurance formularies thereby decreasing or eliminating costs of medications for more patients.

Another desired regulation that is indirectly related to money is want for the US to pass a federal law like the one in Germany that does not allow pharmaceutical executives to work for the FDA. One RLS interviewee, Colleen Weintraub, describes the regulation of pharmaceuticals by the pharmaceutical industry as a revolving door and says they need to close that door. If the industry, whose priority and function is to make money, is in charge of the regulations that guide

the products it sells, there may be a temptation to ease those regulations in order to increase profits.

Other changes respondents wanted to see in the pharmaceutical industry that are unrelated to money include factors of personal health care that influence how medication affects a patient, such as a longer follow-up period in the last phase of clinical trials, which would give more time to show that the efficacy of the drug is not outweighed by adverse effects. There is also a desire to rid pharmaceutical advertisements from media unrelated to science and health. In relation to RLS, one interviewee voices a desire for advertisements to describe the condition a lot better in hopes of making it sound as bad as it is while another wishes that those without RLS could experience it for just a moment so that the public could better understand what having restless legs is like.

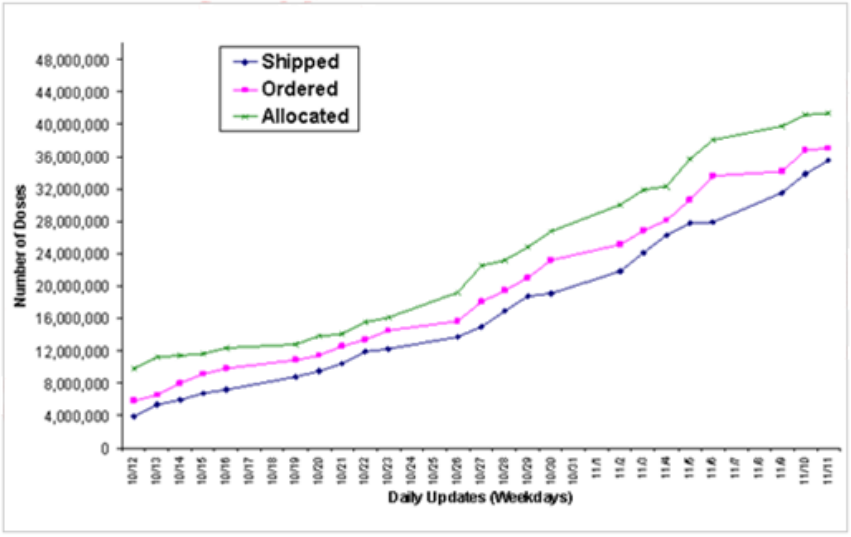
In contrast, other interviewees have no problem with the way the pharmaceutical industry is currently run. In their opinion, the public has to be informed and it has to use its own intelligence to evaluate the information that is given. No one should believe everything that he or she sees.

An interesting outcome of the interviews is that, when asked if they change their views and habits of drugs and vaccinations during an epidemic, every patient says “no”. However, every pharmacist notes a change in behavior amongst the general population during such times. For example, there is currently a concern about whooping cough and pharmacies have seen a great influx of people coming to get the vaccine. One reason is because schools are making it mandatory for students to get vaccinated.

However, when an article linking the MMR vaccine, an immunization shot against the measles, mumps, and rubella, with autism was published in 1998, there was a drastic response

from parents who prevented their children from being vaccinated. The article was later discounted but it took a while before a large number of people started to vaccinate their children again. Another example of society responding to a health scare is when the "swine flu" was prevalent in the media in 2009. There was a huge sale increase due to the vast desire to get the normal flu vaccine and the H1N1 vaccine that year but, according to the pharmacists interviewed, once the hype died down, the number of people getting vaccinated dropped to normal levels (See Figure 3.a and Figure 3.b).

Graph. 2009 H1N1 Influenza Vaccine Doses Allocated, Ordered, and Shipped in U.S.



(NOTE: all data in graph can be found in table below.)

- **Allocated:** Doses that are at the distribution depots and ready for states to order. Vaccine is allocated to each state in proportion to its population (pro rata)
- **Ordered:** Doses requested by states as of 9 PM ET for shipment to state-designated locations
- **Shipped:** Doses sent as of 5 PM ET from the central distributor to state-designated locations

Figure 3.a: A CDC graph exemplifying the increase in shipment, order, and allocation for the H1N1 Influenza Vaccine from October 12, 2009 to November 11, 2009.

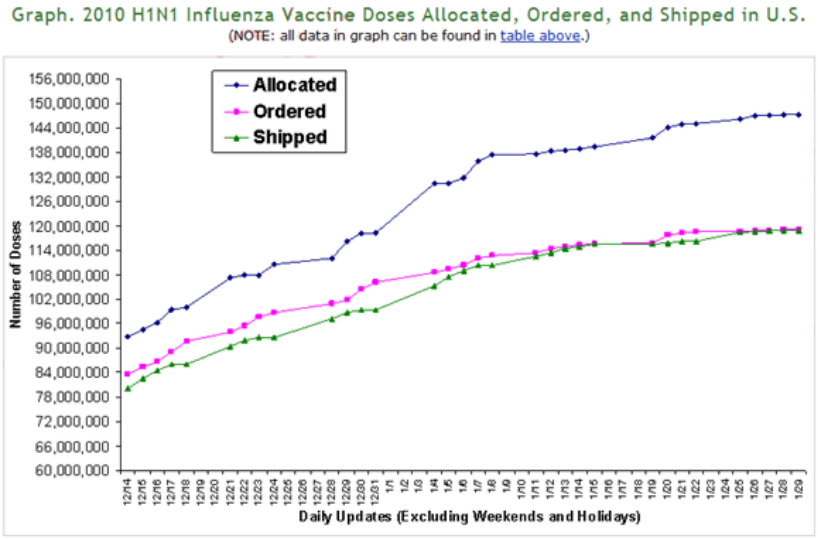


Figure 3.bL A CDC graph exemplifying the increase in shipment, order, and allocation for the H1N1 Influenza Vaccination from December 14, 2009 to January 29, 2010. Note the increase in numbers from Figure 3.a to Figure 3.b.

Although I did not study the phenomenon of why people may think they are not influenced by media scares and epidemics while social trends indicate that they are, there are several factors that may influence this discrepancy. First, those who claim to not be affected by disease outbreaks may be a different population than those who actively seek out preventative and treatment measures for those outbreaks. Someone with a chronic medical condition (excluding immune-deficient diseases) such as RLS may be less concerned with catching whooping cough or the flu because it may seem like a trivial concern when compared to the traits of what restless legs entail. Or perhaps individuals of this group prefer to focus less on disease in general because they have a chronic illness and do not want health issues to take over their lives.

Another explanation could be that people are influenced by these outbreaks, but do not realize it because they are active readers and viewers thereby thinking that they are immune to the influence of the public and to advertisements. Again, all of these options are merely speculations to contrasting statements made between patients and pharmacists.

Conclusion

Overall, responses indicate that people put their trust and faith into doctors and medical professionals. Pharmaceutical advertisements are something of a consideration, but are seen more as an annoyance that seems unfitting when watching television or reading a magazine. Commercials are a good way to advertise but ultimately it is up to the individual to ask for the prescription and up to the doctor to see if the medication is pertinent to the patient and the condition. Because of this, it is imperative that doctors remain or become more in-tune with their patients in relation to their true condition and the types medications they are taking. Based on the experiences of those interviewed who have medical conditions, a lot of doctors dismiss potential problems and write prescriptions for diseases and medication they do not fully understand.

However, as Professor Arthur Stack critiqued, "if we have this insatiable demand for health, how can we deny someone who wants to spend a million dollars on a drug from spending a million dollars on a drug?" If the medical field is to continue as an industry, then isn't it wrong to limit the product to a choice few?

For better or for worse, part of the human experience is illness and no one wants to be sick, diseased, or malfunctioning so everyone is affected by these advertisements. Medication and treatment are major factors that improve production for those who are chronically ill, but they must be used carefully because of adverse consequences like side effects and tolerance build-up.

However, if the pharmaceutical industry were to pull out of the many avenues it has rooted itself into, many of our universities and research programs would need a complete

restructuring due to a question of finances. If this were to happen, the price of medications would be left uncertain.

The two models are currently in a game of tug-of-war in an attempt to gain balance between them. Though this balance is critical for the decisions and lives of everyone, since everyone is in some state of health, it has yet to be decided upon by the public. They must choose how they want to live and be truly honest about their conflicting interests of money, health, and livelihood. The plight of sickness may yet be healed by means of the providence that Big Pharma claims it can bring through knowledge and medication, but it could also bring people further into the depths of affliction due to collateral damage from viewing profits as the highest priority.

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