

**Prescriptions Online and On-Demand  : A Qualitative Analysis of Direct-to-  
Consumer Pharmaceutical Company Advertising on Facebook**

Karen Bates

University of Michigan School of Information

MTOP

Advised by Casey Pierce, PhD

April 26, 2021

## Introduction

Attendees of the 1958 American Medical Association (AMA) convention had the opportunity to walk through a sixty-foot, undulating cocoon. Upon entering the cocoon, visitors could peer through windows in the sides of the installation to see artistic representations of anxiety and the ways in which it attacks or pervades the body. While they journeyed through the structure, they would see a progression from anxiety toward peace and tranquility, symbolized in female figures. At the end of the cocoon, there was a woman with a bouquet of flowers blooming from her head, signifying a complete transition to health (Freeman, 1958).

The art installation was designed by the surrealist, Salvador Dalí. He had been commissioned by the popular pharmaceutical company, Miltown to create a piece for the AMA convention (Tone, 2008). Miltown was widely known and celebrated for their anti-anxiety medications, known as tranquilizers. Dalí suggested that tranquility is necessary for genius and that his installation at the AMA illustrated how the Miltown medication allowed people to pass, “through the evils of nightmares to divine and paradisiacal dreams” (Tone, 2008). Fittingly, the piece was named *The Crisálida*, or *The Chrysalis*, which symbolizes transformation. A newspaper article that chronicled the creation of the large artwork wrote, “Dali said it represented man’s release from anxiety to perfect peace and complete freedom by means of tranquilizing drugs” (Freeman, 1958). It represented the same feelings that Miltown’s anti-anxiety medication fostered in him as an artist: freedom and tranquility (Freeman, 1958).



Figure 1 A print of *The Crisálida* by Salvador Dalí, given to convention goers as a souvenir, copyright © 2008 Salvador Dali, Gala-Dalvador Dali Foundation/Artists Rights Society (ARS), New York. (Salvador, n.d.; image obtained from Tone, 2008)

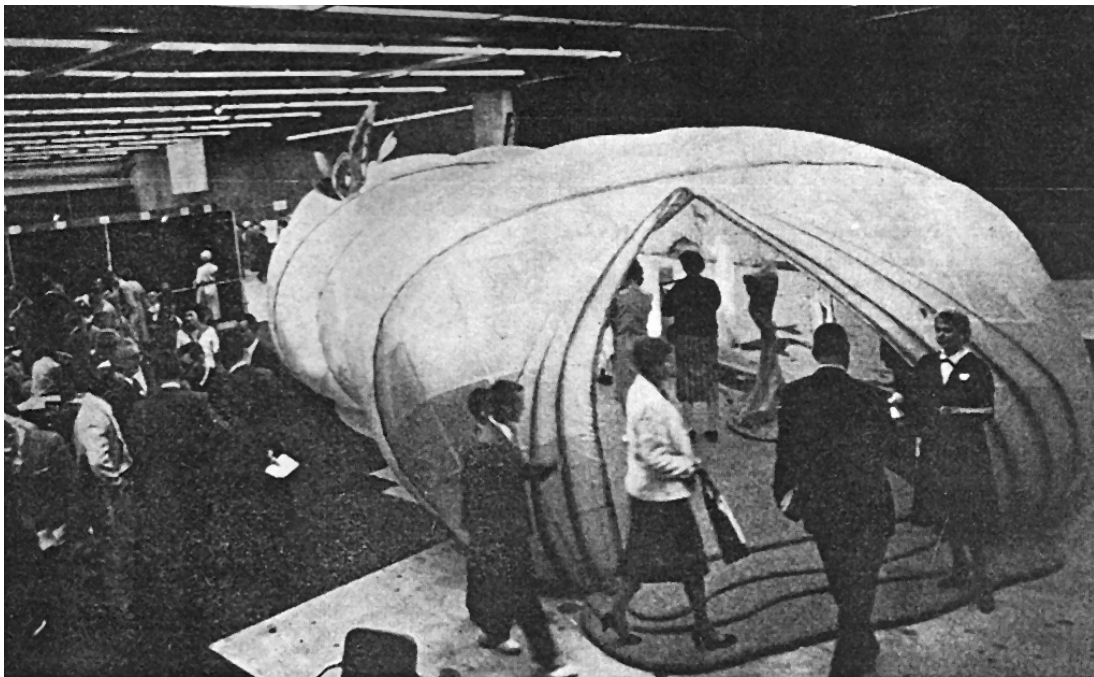


Figure 2 AMA conference visitors walk through *The Crisálida*, an installation by Salvador Dalí, commissioned by Miltown Pharmaceuticals. (Salvador, Dali, 1958; image obtained from Tone, 2008)

Dalí created The Crisálida near the end of a decade-long pharmaceutical boom in the United States. New medications were entering the market and tranquilizers, like the one's Miltown manufactured were popular. There was also a new flood of people seeking health care in the post-World War II baby boom and era of relative financial prosperity. While the pairing of art and pharmaceuticals manufacturing was a bit strange at the time, it was potentially indicative of the branding and advertising that would follow through the subsequent decades and into the twenty-first century.

Pharmaceutical ads that evoke promises of cured ailments and lifestyle improvements appear everywhere that media and advertising reaches consumers. New, direct-to-consumer (DTC) pharmaceutical companies take the messaging a step further with promises of convenience, simplicity, and medicines delivered straight to your home and bringing with them a cure, sense of freedom, and affordability. Rather than advertising to physicians as Miltown was doing with their commissioned Dalí installation, or to patients on television with the message to, "Ask your doctor about..." and stating a specific brand-name medication, these new companies are advertising and distributing medications directly to the consumer.

### *Background on Direct-to-Consumer Pharmaceutical Companies*

In 2017 two companies emerged almost simultaneously with DTC pharmaceutical offerings. These companies, Roman and Hims, differ from traditional pharmacies and telehealth because they serve in both capacities as the prescriber and the distributor. They also offer limited services catered to specific health concerns like hair loss, acne, and contraception. A consumer completes a brief screening visit with a provider that determines if one of the medications they

sell is be safe and effective for the consumer's health concern. If a prescription is written, the company mails the medication on an appropriate recurring schedule in discreet packaging.

Both of these companies, Roman and Hims, entered the market within months of sildenafil, a generic equivalent of Viagra, becoming available on the market (Curtis & Milner, 2020). Prior to the patent expiration for Viagra, one pill of the brand-name medication cost \$65. Comparatively, Hims can prescribe a month's worth of generic sildenafil for \$30. Generic medications paved the way for DTC pharmaceutical companies to grow and expand their offerings (Curtis & Milner, 2020). They also enable the brands to market themselves as a cheaper alternative to recognizable pharmaceutical brands.

The affordability of generic medications sold by DTC pharmaceutical companies make the prescriptions more accessible to consumers. Both Roman and Hims initially focused on male-centric products like medication for erectile dysfunction and hair loss. Since 2017, both have added a female-centric counterpart (Rory and Hers respectively) which include offerings for birth control and prescription skin care. They have also been joined by several competitors that focus on birth control and skin care exclusively, selling popular birth control brands as well as generics.

Accessibility and affordability is a challenge for many people in the United States seeking health care and medication regardless of their insurance status. All of the companies reviewed for this paper will prescribe and sell medication to patients both with and without insurance coverage. Most offer a scale where the consultation and prescription are either free or lower with coverage or a slightly higher fee but still possibly cheaper than seeking health care in a traditional setting for a prescription. These companies may be filling in a care gap for many young people that are uninsured or find that their premiums and deductibles keep health care out

of reach. Although it is difficult to know what percentage of consumers using some of these companies already have access to care outside of the DTC pharmaceutical companies. For example, a patient needs a steady address for medications to be shipped to, a credit card to be billed, and access to the internet for both obtaining a prescription and periodically managing their consumer account as necessary. These remain as barriers to many would-be patients that could benefit from easier access to health care providers and prescription medications.

Another reason for examining these companies at this moment in history is the push for telemedicine during the COVID-19 pandemic. The option to virtually visit a provider or chat online and obtain a prescription medication that is mailed to your door removes several touch points in which a patient would traditionally need to attend an in-person appointment and visit their pharmacy. Additionally, with more people using telemedicine options, it may feel more natural to consumers, if not appealing, to use similar telehealth companies to obtain prescription medications.

There is also a cultural dialogue around self-care and wellness, which is echoed throughout the advertisements for DTC pharmaceutical companies. With more companies offering mail order vitamins, skin care products, shampoos, and remedies delivered straight to your home, it may feel completely natural to also have your prescription medications delivered in sleek, thoughtfully-designed and discreet packaging.

As more people turn to these telehealth type companies—both pharmaceutical and non-pharmaceutical—people will increasingly be taking a do-it-yourself (DIY) approach to their health. Prior to visiting one of these DTC pharmaceutical sites, a consumer is probably either exposed to the company and their services through marketing or they are self-diagnosing a symptom or condition and searching online for a solution. By self-diagnosing and then self-

selecting a company through which they will be both prescribed and dispensed medication, they are circumventing the expertise of a primary care provider (PCP) that would traditionally write a prescription to address symptoms of a patient, rather than the condition a patient brings forward. Consumers may also be piecing their skin care, medications, and vitamins together through disparate sources that cater to different needs. This mix-and-match approach is not dissimilar from seeing specialists in a traditional health care setting. However the trendy, lifestyle messaging, digital aspect of the providers, and the ability to be both prescribed and dispensed medications from the same company is novel.

A DIY approach, in which a patient takes the initiative to self-diagnose and seek a prescription could be a way to celebrate patient autonomy and the idea that a patient knows their body best and can identify their needs. On the other hand, as patients DIY their care, they may not be seeking adequate care from providers with the necessary expertise. None of the companies examined for this paper are explicit in how or whether they share health information with traditional PCPs. If some patients are splitting their care between a telemedicine company for select health concerns that they are not comfortable sharing with their PCP for example, their provider may not have a complete picture of their health and well-being. As these companies continue to grow in scale of consumers and conditions they treat, they may need to pursue interoperability with traditional health systems so that providers have access to complete health records.

Another difference in the health care provider structure that DTC pharmaceutical companies illustrate is a new combination of providers under one entity. The providers that prescribe on behalf of DTC companies work for the same organization that dispenses the

medication. These companies may offer a window into how care can safely and effectively be delivered to patients while reshaping the role of the pharmacist in the care delivery process.

## Background

In the four years since Roman and Hims entered the market, more companies have followed suit with similar offerings. Some are dedicated to a single prescription type like birth control or skin care. There are still some state-by-state restrictions so in order to get their brand name out, targeted digital media is a sensible option for their marketing campaigns. Additionally, being a digital-focused company with an entirely online presence and a target demographic of younger individuals further leans into digital advertising options. Digital, online ads and podcast ad spots have been popular selections for DTC pharmaceutical companies (Curtis & Milner, 2020). Placements in social media apps and websites have targeting capabilities that allow companies to reach their target audience with more precision than mass market placements like television or billboards. Additionally, they often allow for measurable outcomes in media campaigns by counting clicks and actions on site after clicking on an ad, rather than just ad impressions.

### *Research Opportunity*

A significant amount of research has been done on the trends and potential effects of pharmaceutical advertising. Much of the research has focused on marketing practices in general or television ads and print ads though since historically, these mediums have absorbed the majority of advertising dollars from pharmaceutical companies (Ventola, 2011). Key examples of research that inspired this analysis focused on the content messaging behind DTC



pharmaceutical ads on TV (Applequist & Ball, 2018); a survey of a population to see if they had asked their physician for a specific medication after seeing an ad (Mintzes, 2012); and an oft-cited random-controlled trial that sent paid actors to physicians with the instructions to either ask for an antidepressant by name (presumably because they learned it from an ad) or without a specific name and then measured the likelihood of the patient receiving a prescription for that medication (Kravitz et al., 2005; Mintzes, 2012). There has also been some preliminary discussions and research on DTC pharmaceutical companies as an industry but primarily with a focus on the ethics of their business models (Avery et al., 2008; Curtis & Milner, 2020; Jain et al., 2019).

I was not able to find any studies that took a research lens of exploring both the DTC pharmaceutical companies and their messaging in social media advertisements. While this topic appears to be an untapped area in research communities, it is a worthwhile pursuit because of the prominent role that social media plays as an outreach and branding tool for DTC pharmaceutical companies and as an information source for social media users. We are currently living with the ramifications of dis- and misinformation about health spreading online and through social media platforms. It is important to understand how these services influence public perception of health and medicine as well as the intersection of lifestyle content and prescription-only or wellness-centered products.

### *Research Questions*

This research aims to situate newer, DTC pharmaceutical company ads in the longer historical context of pharmaceutical advertising. This study explores how DTC pharmaceutical companies communicate their services in social media advertisements and what are the main

themes throughout their ads? Do they emphasize a DIY approach to health for individuals while leveraging lifestyle-like content and branding? To answer these questions, I did a qualitative content analysis of ads on Facebook's platforms for DTC pharmaceutical companies. I systematically analyzed the visual imagery and text captions for the ads that were from primarily female-centric companies to find common threads in the messaging and content.

In this paper, I will review the history of pharmaceutical advertising in the United States to establish the context in which these new advertisements on a relatively new medium are displayed. Then I will outline the methodology used in this study as well as the results from the qualitative data analysis. Next, I will discuss the findings of the study and what it means for patients or consumers of health care as well as public health.

## Historical Background

### *Early Pharmaceutical Ads and Industry Self-Regulation*

DTC pharmaceutical advertising in the United States dates back to 1708 when a Boston newspaper included an ad for "Daffy's Elixir" (Einsiedel & Geransar, 2009). Daffy's Elixir was considered a proprietary or "patent" medicine because its formula was a family secret, compared to more transparent, medicinal products of the time. Some doctors endorsed the elixir for use in England and the North American colonies as a general cure-all for many conditions, and there were several well-advertised patient testimonials for its effectiveness against gout and colic (Haycock & Wallis, 2005). Despite skepticism and outright denouncement from several doctors in New England, the product continued to be well-advertised in the colonies throughout the eighteenth century, until elixirs declined in popularity after more vocal disapproval from the medical community (Haycock & Wallis, 2005).

The distinction between so-called “ethical drugs” and patent medicines became more entrenched throughout the nineteenth century. Producers of patent medicines like Daffy’s Elixir were secretive about their ingredients but their products were highly visible to consumers because their ample advertisements. Ethical drug manufacturers wanted to build public trust in their medicinal products and the nascent medical profession in the United States (Conrad & Leiter, 2008). They believed advertising their products directly to consumers would prevent the reputation of the medical field as a serious profession from advancing.

The American Medical Association (AMA) was established shortly before the Civil War, in 1847 and they adopted a policy that barred advertising to the general public (Conrad & Leiter, 2008). Ethical drug manufacturers saw an opportunity to further distance themselves from patent medicines by affiliating with the AMA and similarly refusing to advertise directly to patients or consumers. Conrad & Leiter (2008) quote Spillane (2004), “Indeed, the ethical firms took great pains to publicise [sic] the fact that they did not make direct advertising appeals to the general public, but confined their sales pitches to persuading doctors and druggists of the superiority and reliability of their brands.” This organization-initiated policy was not formally drafted as legislation. Rather, it was a period of self-regulation for the pharmaceutical marketing. There were no state or federal policies guiding the advertisements but there was a moral authority throughout drug manufacturers.

Not until the early twentieth century, would a federal policy regulate the labeling or marketing of pharmaceutical products. Upton Sinclair’s novel, *The Jungle*, which detailed the horrific conditions inside meat-packing plants was the final impetus for the 1906 Pure Food and Drugs Act (Commissioner, 2019b). The Act established the Food and Drug Administration (FDA) and the requirement that drug labels appropriately noted the “strength, quality, and

purity” of medications (Greene & Herzberg, 2010). The Sherley Amendment of 1912 built upon the Pure Food and Drugs Act to prohibit false claims on drug labels—a common characteristic among patent medicines (Greene & Herzberg, 2010).

### *Period of Increasing Government Regulations and Oversight.*

The Federal Trade Commission was established in 1914 by President Woodrow Wilson with the mission of protecting consumers and promoting competition. A key aspect of the act, “...made unfair methods of competition in interstate commerce unlawful...” which restricted broad advertising campaigns in the interest of protecting consumers from malicious sales people selling, “a mixture of Epsom salts and water...represented to be a cure for cancer” (Davis, 1940). Ads targeted to physicians were exempted from additional regulations because it was believed that their professional expertise would protect them from false advertising claims (Greene & Herzberg, 2010). Greene & Herzberg (2010) write, “This created a favorable legal framework for what had been a matter of corporate culture.” Beyond the ban on interstate advertising though, few restrictions were placed on marketing as long as the ads appeared in medical journals, as direct mail to physicians, or delivered to offices and hospitals by sales representatives (Greene & Herzberg, 2010).

While the requirement for pharmaceutical ads to appear in professional publications and marketed to physicians themselves seems fairly straight forward, the reality was much more complex. Even though pharmaceutical manufacturers were still eager to differentiate their products from patent medicines or remedies, the same manufacturer often sold both ethical and patent medicines. So while they were not producing ads for their ethical medicines, they were still advertising their patent medicines.

In the 1920's, pharmaceutical companies gradually shifted their ads from selling a singular product to promoting their overall brand to consumers. Since the ads were focused on the brand overall, rather than a specific medication, they were beyond regulatory reach. These ads, "...praised the achievements of modern medical science, lauded the heroic figure of the modern physician, and testified to the high standards and quality of modern pharmaceutical" (Greene & Herzberg, 2010). One popular pharmaceutical manufacturer, Squibb, even explicitly warned against self-medication and advised readers to seek advice from a physician before taking any medicinal products (Greene & Herzberg, 2010). The companies believed that by not naming their products in ads, they were further distinguishing themselves from the consumeristic motivations of strictly patent medicine manufacturers, further entrenching their reputation as serious medically-based companies and ethical practitioners (Greene & Herzberg, 2010).

In the 1930's, there were growing concerns about the lack of regulations for cosmetics and pharmaceuticals. Previous acts from the FDA and the FTC were aimed at preventing false claims, but no oversight body was created to review ingredients. A series of bad and even fatal reactions to cosmetics and pharmaceuticals led to calls for increased regulations. In 1933, Lash Lure mascara was marketed to women, promising a permanent, "made-up" look (Eschner, 2017). The mascara contained p-phenylenediamine, a chemical that resulted in blisters and ulcers on the faces of some women (Eschner, 2017). At least one woman went completely blind as a result and another passed away after a severe reaction to the chemical ingredient (Gasch, 2017). Lash Lure and the severe reactions many women experienced is credited for bringing about the Congressional Food and Drug Act of 1938 (Eschner, 2017).

However, an additional incident that occurred in 1937 should not be overlooked. A new pharmaceutical called Elixir sulfanilamide was brought to market and touted as a "wonder drug"

for pediatric patients with streptococcal infections (Ballentine, 1981; Commissioner, 2019a). It was a new formulation of the same drug that had been offered in pills, now in liquid form. But to convert it to a liquid, the drug was mixed with a chemical that is essentially antifreeze (Ballentine, 1981). The manufacturers had not tested the product for safety prior to distribution nor were they required to by law (Ballentine, 1981). More than 100 people died in 15 different states as a result of the pharmaceutical (Ballentine, 1981).

Lash Lure and the Elixir sulfanilamide both contributed to the public desire for more regulatory oversight of cosmetics and medications. The Congressional Food and Drug Act of 1938 required accurate labels for safe dosage and administration of cosmetics and pharmaceutical products and pre-market approval for any new medications had to be obtained by the manufacturer (Commissioner, 2019a). The Act also banned false claims by drug manufacturers but this led to confusion over whether the FTC, which had previously made the same regulation, or the FDA was in charge of reviewing advertisements (Commissioner, 2019a; Greene & Herzberg, 2010). The grey area would remain until the Kefauver-Harris Amendment in 1962.

### *Transition to Consumer Pharmaceuticals*

The 1940's and 1950's were decades of growth in consumer pharmaceutical production and consumption. There was a simultaneous increase in Americans seeking health care services alongside new "miracle drugs" like penicillin and new antibiotics. These new medications entering the market at unprecedented rates improved the reputation of pharmaceutical companies in the eyes of the public and physicians (Greene & Herzberg, 2010). Realizing that not all directions and dosage information could be pared down for safe consumer consumption, the

Durham-Humphrey amendment was made in 1951 to the 1938 Congressional Food and Drug Act. The amendment required some medications to be labeled as prescription only and a pharmacist could not dispense them to patients without a prescription.

Another medical tragedy in which a non-FDA approved drug was circulated in the U.S. led President Kennedy to sign the Kefauver-Harris amendment in 1962 (Commissioner, 2020).<sup>1</sup> The amendment included several rules that strengthened the FDA's regulatory abilities and the approval threshold for new pharmaceuticals. It also ruled that the FDA had authority for regulating ads and promotional content, clearing up lingering questions about jurisdiction between the FTC and FDA. Later additions were made to the Kefauver-Harris amendment that required a summary of all the side effects, contraindications, warnings, and guidance for use, and a "fair balance" of information that presents both risks and benefits of the pharmaceutical within the advertisement (Greene & Herzberg, 2010).

Marketing in this era was still primarily focused on the pharmaceutical manufacturers, rather than any individual product. This was known as "indirect-to-consumer" advertising (Greene & Herzberg, 2010). For example, Dalí's installation at the AMA, *The Crisálida*, was a celebration of Miltown's tranquilizer products, rather than the medicine itself. With the 1962 Kefauver-Harris amendment rules and subsequent additions that required a balance of information and inclusion of all possible side effects and warnings, it was easier to promote the trusted name of a manufacturer, rather than any specific product. Roche Pharmaceuticals pushed this boundary though in 1964 when it was discovered during a Senate investigation that they had included ads for their new tranquilizer, Librium, in copies of *Time* magazine that were delivered

---

<sup>1</sup> When the Durham-Humphrey amendment was enacted, Senator Estes Kefauver had already introduced legislation to strengthen the rules against false claims in pharmaceutical advertising. He had done so when Kevadon, a new brand of thalidomide was brought to the FDA for approval in 1962 (Commissioner, 2020). The FDA did not approve the new formulation but unfortunately, they had already distributed 1,200 doses to physicians across the United States.

to doctors' office waiting rooms (Greene & Herzberg, 2010). The copies were removed and Roche was censured, but no other legal changes came from the incident.

Branded advertising for specific prescription medications picked up in 1981 when the first television ads for prescription-only pharmaceuticals aired (Mintzes, 2012). Shortly after, Orflex an anti-inflammatory that was marketed directly to consumers for arthritis pain was withdrawn from the market due to liver toxicity in those that took the medication (Mintzes, 2012). In response, the FDA asked for a voluntary moratorium on DTC pharmaceutical advertising, which lasted until 1985 (Mintzes, 2012). At the conclusion of the moratorium, the FDA stated that the previous ruling that ads must include "fair balance" and "brief summary" of benefits and risks would be sufficient to protect consumers (Greene & Herzberg, 2010).

In 1997, the FDA relaxed rules on risk information in advertisements (Mintzes, 2012). This proved to be a pivotal change for the prescription pharmaceutical advertisements. The rule allowed TV ads to direct viewers toward another source or their physician for additional information, rather than requiring that all information about risks be included in the advertisement. This made purchasing television spots significantly more affordable for full product ads (Mintzes, 2012). Previously, print had been the dominant medium for pharmaceutical advertisements, but within two years of the policy change, spending on television ads was greater than print ads (Mintzes, 2012).

Again, there was a period of relative quiet from regulatory bodies while pharmaceutical companies continued to increase their spending on advertisements. On just digital DTC ads, pharmaceutical companies spent an estimated \$59 million in 2003, increasing to \$1 billion by 2011 (Ventola, 2011). The shift toward digital ad targeting and formats was lucrative for pharmaceutical companies. Their return-on-invest increased to 5:1 and one estimate found that



for every dollar spent on ads, their sales increased from \$2.20 to \$4.20 (Ventola, 2011). In 2005, pharmaceutical companies spent roughly 14% of the DTC advertising market (Ventola, 2011). By 2008, they accounted for 4% of all DTC advertising on the internet (Greene & Kesselheim, 2010).

### *Pharmaceutical Advertising Expands to the Internet*

Like many other industries, in the early 2000s pharmaceutical companies began to leverage new digital media ad spots, including search engine ads. Search engine ads appear at the top of search query results and are typically denoted by an “Ad” disclaimer seen in bold next to the URLs in Figure 1. These ads can be very lucrative for brands because a consumer is actively searching for their product or something similar to their offering. Which company appears in which ranked spot, either as the first, second, or third ad placement is based on keyword bidding. In order to maintain a high ranking and attract the most amount of search query traffic as possible, many brands invest in a Search Engine Optimization (SEO) strategy.

A brand’s SEO strategy is typically to be at the top of the search results page for any query related directly to their brand or for their product. Searchers are more likely to click on the first link they see and stay on that webpage so it is important in terms of sales and brand loyalty to drive searchers to your webpage. Brands also typically have a conquest strategy in which they aim to appear at the top of the search results page for their direct competitors as well, with the goal of attracting customers from competitors. Search algorithms are constantly evolving and SEO becomes a delicate balance of bidding on the best search terms that are most likely to draw site traffic. For this reason, it is imaginable that pharmaceutical brands would be selective about

the risks included in their sponsored links, in order to further differentiate their product and portray a more palatable alternative.

These ranked ad placements, also called sponsored links, became a concern for the FDA. The FDA sent a letter to 14 pharmaceutical companies in 2009 with a warning that their sponsored links did not provide comprehensive information about the risks of the advertised products (Greene & Kesselheim, 2010). Advertisers had been following the “one-click rule” which meant that a consumer had to be able to reach risk information within one click of arriving to the pharmaceutical ad’s landing page (Greene & Kesselheim, 2010). However, these advertisers neglected to include that channel to risk information. No policy changes were made to ensure compliance.

The image shows a Google search results page for the query "simple health". The search bar at the top contains the text "simple health" and has a search icon on the right. Below the search bar, there are navigation links for "All", "News", "Shopping", "Images", "Videos", and "More", along with "Settings" and "Tools". The search results show approximately 4,350,000,000 results in 0.69 seconds.

The first search result is an advertisement from [www.simplehealth.com/](http://www.simplehealth.com/). The ad title is "SimpleHealth Birth Control - Birth Control, Simplified". The ad description reads: "The Simplest Way To Get Birth Control, With Online Prescriptions & Home Delivery. Save Time & Money On Birth Control With Convenient Online Prescriptions & Home Delivery!". Below the description, there are four links: "How It Works" (with subtext "Want To Learn More? See A Step By Step Of How It Works"), "Read Reviews" (with subtext "Real Reviews From Our Patients Find Out Why They Rate Us 5 Stars"), "FAQ" (with subtext "Learn More About How It Works And Other Frequently Asked Questions"), and "Our Medical Advisor" (with subtext "Meet Rashmi Kudesia, MD Our product is designed by doctors").

The second search result is an advertisement from [www.thepillclub.com/](http://www.thepillclub.com/) with the phone number (855) 406-3358. The ad title is "Pill Club - Get Birth Control Delivered". The ad description reads: "Birth Control Delivered For \$0 Or As Low As \$9/mo With A 12 mo. Supply. Birth Control...".

The third search result is an advertisement from [www.nurx.com/birth-control/online](http://www.nurx.com/birth-control/online). The ad title is "Birth Control Online - \$0 With Insurance, \$15 Without". The ad description reads: "Birth Control Online For As Little As \$0 With Insurance Or \$15 Without. No In-Person...".

Figure 3: Search Engine Results on Google for a search of "simple health." Simple Health is the first paid result, followed by The Pill Club and Nurx which are competitors for their product.

Prescription pharmaceutical companies have been a bit slower to adopt advertising on social media despite the advanced consumer targeting and measurable outcomes available through the platforms. One possible reason is that they are not interested in driving viewers of an ad to a website or landing page, but rather to their primary care physicians to obtain a prescription. Compared to companies with a robust digital presence, there is less incentive for the pharmaceutical manufacturer themselves to advertise on social media websites. Additionally, pharmaceutical companies sell products that are regulated at the national level and they have significant marketed budgets. Television ads selectively nested in programming that their audience watches may offer sufficient targeting capabilities and they have the budget to afford the pricier placements associated with television spots.

Despite the significant increase in advertisements across all mediums, and expansion into entirely new fields like SEO and social media, the number of FDA staff that review pharmaceutical ads has remained constant (Ventola, 2011). When television was still the primary mode of DTC advertising for pharmaceuticals, the FDA was already overwhelmed by the amount of ads that required review (Ventola, 2011). They are understaffed and unable to review all ad materials so significant reorganizing and increased allocation of resources will be required to increase any regulation or oversight of pharmaceutical marketing.

Particularly with digital advertising, both in social media and on the web, companies can send a set of assets to an ad distributor that work like interchangeable puzzle pieces. The assets can be configured into many different iterations, allowing the brand to test the effectiveness of different combinations of images, text, and placements against their campaign objectives. It is

also much cheaper and quicker to produce a set of images to be used in online ads compared to television or print ads which often require additional resources. As of a 2011 article, the FDA only had 59 full-time employees to review over 71,000 submissions of promotional content from pharmaceutical manufacturers. They were only able to review a small fraction of the total with the time and resources they had available (Liang & Mackey, 2011). Undoubtedly, advertising online has increased in the last decade since that article was written but it is not clear that additional resources were made available to the FDA to review additional submission. Combined with the addition of new types of pharmaceutical providers like they DTC companies analyzed in this study, it is possible that there is very little oversight to ensure prescription-only medicines give “fair balance” to the risks and benefits of their products.

## Methods

The Facebook Ad Library archives active and inactive advertisements that companies are running on their associated platforms, which includes Facebook, Instagram, Facebook Messenger, and the Facebook Ad Network (*Ad Library*, n.d.). Anyone is able to search through the Ad Library by company names or certain ad categories like election ads. To select companies for the qualitative analysis, I did a Google search for “direct-to-consumer pharmaceutical companies” and “delivery prescriptions.” I then searched for these companies on Facebook’s Ad Library. My search led me to Roman (also known as Ro), Rory, Hims, Hers, Nurx, Apostrophe, Lemonaid Health, Alpha, The Pill Club, and SimpleHealth. I focused on companies that both prescribe and deliver prescription pharmaceuticals or skin care products given the relatively new role they play in health care.

I considered including companies that sell solely vitamins and supplements as this is also a growing space with similar ad aesthetics. However, I wanted to keep the focus on prescription medications since these products are regulated by the FDA and there are advertising restrictions for traditional pharmaceutical companies. Some of the companies I did include in the data pull do offer non-prescription services like talk therapy or probiotics and I kept these ads in the qualitative analysis because they are visually indistinguishable from the images and copy text in their prescription counterparts.

All companies that were on my list had run or were currently running ads on Facebook's platforms. I pulled data twice in February and once in March to ensure that the code was running correctly. The final data pull was run on March 3, 2021 and captured all ads contained in the library page, whether they were active and inactive. Although some companies were included in my initial list to pull ad data on, nothing returned for Hims, Hers, Ro, or Nurx. One possible reason for the challenge is that all of these companies ran video-heavy campaigns with limited static image ads. Since I only included static images and their associated text captions in this analysis, these companies were excluded in the analysis.

### *Data Capture*

To quickly and most accurately capture all of the ad data, I wrote a program in Python to scrape the data from the Facebook Ad Library for the selected companies. I used Selenium to launch a Chrome browser and navigate between pages and BeautifulSoup to scrape and parse the information. Two blog posts by Mack Grenfell inspired the set-up and scraping portion of the code for this project (Grenfell, 2020b, 2020a). After pulling and saving the ad library data, I used Pandas to transform the scraped ad captions to a format that could more easily be uploaded to

Figure 4 An example of an ad card for Latisse, by Rory that was scraped from the Facebook Ad Library.



h images and text. In total, I uploaded 1,211 images and ad cards files to NVIVO for the quantitative portion of this analysis.

All static images that were used in ad campaigns and listed on the company's Facebook Ad Library page were pulled. Videos were also scraped and downloaded but were not studied in this analysis. The image pull generated a total of 759 images files. This included the ad itself, company logos associated with ads, and some error messages that were from carousel ads. Carousels are a dynamic ad placement in the Facebook ad feed that feature several images or video clips lined up horizontally for a user to scroll through. With the structure of the scraping code, these ads show as an error message when

downloaded. Since these ad placements are different than the singular static images, these ads were excluded from the analysis. There were 107 error messages. Logos were also included in the data pull but excluded from the analysis. There were a total of 450 logos. This left 202 images to review.

Data associated with each ad including the unique ad id, start date, end date, status (whether the ad was active or inactive), call-to-action button, and the caption that appears above

the image was pulled. There were a total of 452 individual ad cards pulled. No additional analyses were done with the ad card information for this paper.

Some of the images and copy are duplicative on their own. However, companies frequently repurpose images and copy in different combinations or over varying time periods, making the combinations and time the ad was active unique. The qualitative analysis for both the images and the copy was done at the ad id level so even if an image or text caption is repeated several times, it was coded on its own and counted as an individual ad.

### *Data Analysis*

Prior to starting the qualitative coding, I reviewed existing research and articles on pharmaceutical advertising and DTC pharmaceutical companies. This process was completed before I began the qualitative coding process and several of the articles that I read before the analysis discussed themes in pharmaceutical advertising or the rise in DTC consumer pharmaceutical companies. This likely informed the lens through which each of the ad's and their associated copy were reviewed during the coding process.

To generate the coding scheme, I used a grounded theory approach (Glaser & Strauss, 2017). I created a baseline coding scheme from an initial set of 350 images, seen in Table 1. In this stage, I identified 38 common themes and then I sorted them into six groups: People, which included mentions of professional qualifications or targeted patient groups like pediatrics; Emotions displayed; Directions or a Call-to-Action for the consumer; the Experience of using a company; Pharmaceutical related content like a specific medication or pill imagery; and a small but no insignificant category of "Other" that did not quite fit any groups initially.

**People**

Pediatrics  
Professional Qualifications

**Emotions**

Smiling faces  
Sexual Themes/Sex Implied  
Advocacy  
Confidence  
Statistics

**Directions/Call to Action**

Learn More  
Get Treated

**Experience of Using Company**

Personalization/Customization  
Subscription  
Less Time  
Convenience or Easy to do/use  
Affordability or Cheaper/Cost Comparison  
Discretion  
Testimonial

**Pharmaceuticals**

Pharmaceutical Name  
Prescription  
Targeted Problems/Symptoms  
FDA Approved  
Specific Condition Name  
Insurance  
Pill Imagery  
Generics

**OTHER**

Home  
Spanish Language  
Cialis  
Sildenafil  
Viagra  
Insomnia  
Acne  
Erectile Dysfunction  
Eczema  
Infection

Table 1 Initial coding scheme after first review of images.



## Expertise

### Provider Expertise

Professional Qualifications  
Stethoscope

### Consumer Expertise

Testimonial

### Company Expertise

### Product Expertise/Qualifications

FDA Approved

## People

### Company

Company Point of View (we <3 our customers)

### Consumer

Pediatrics

## Emotions

### Individual-level emotions

Smiling faces  
Sexual Themes/Sex Implied  
Confidence  
Celebrity Imagery

### Community or Collective Emotion

Advocacy

### Logic driven

Statistics

## Directions/Call to Action

Learn More

Get Treated

## Experience of Using Company

### Personalization/Customization

### Convenience or Easy to do/use

Home  
Subscription  
Less Time  
Delivery

### Affordability or Cheaper/Cost Comparison

### Discretion

### Wellness

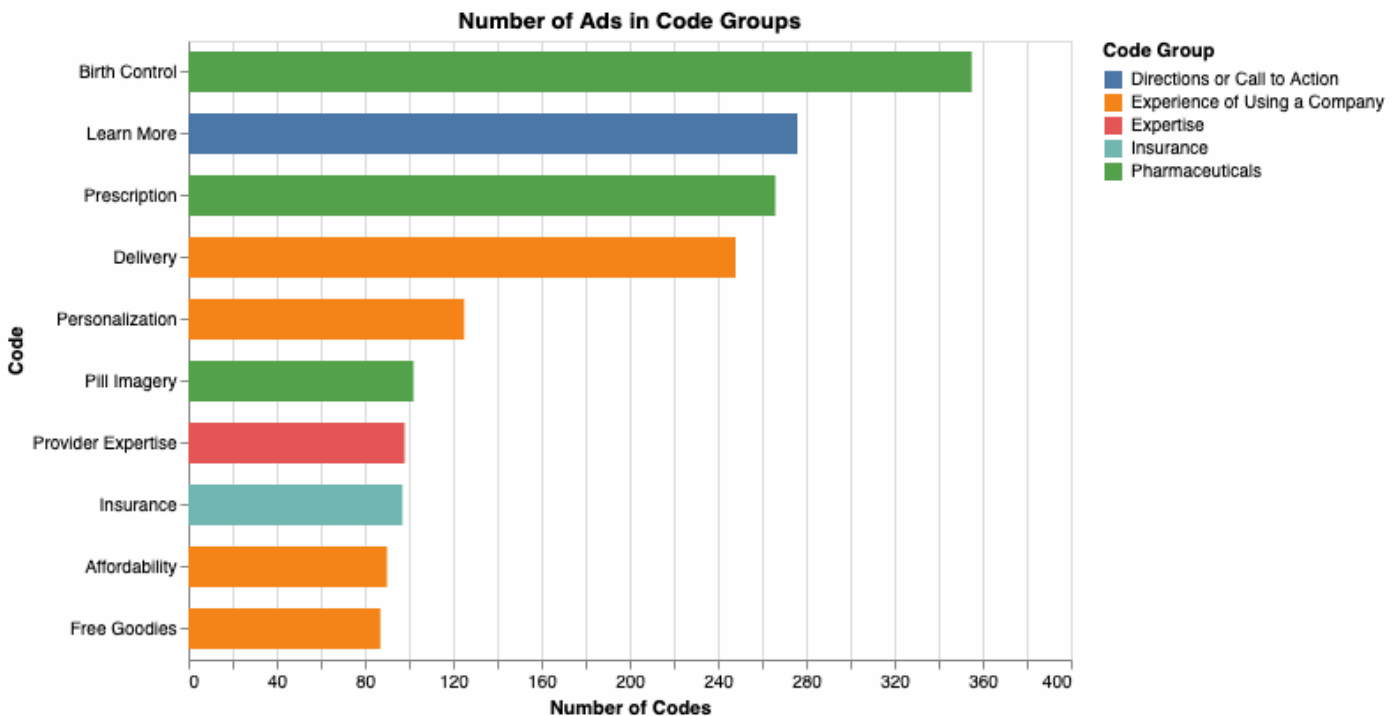
<b>Free Goodies</b>
<b>Pharmaceuticals</b>
<b>Pharmaceutical Name</b>
Cialis
Sildenafil
Viagra
Plan B
<b>Prescription</b>
Generics
<b>Targeted Problems/Symptoms</b>
Insomnia
Acne
Erectile Dysfunction
Eczema
Infection
Emergency Contraceptive
<b>Pill Imagery</b>
<b>Insurance</b>
<b>Logo (used to separate company logo images)</b>

Table 2 Second iteration of the coding scheme, after rearranging the codes and adding detail to Table 1.

Wanting to add more detail to the coding scheme and approach it with the central idea of what is being conveyed to a non-initiated viewer, I reorganized the codes into seven main groups, seen in Table 2: Expertise from professionals, the products or consumers; People that captures specific consumer-groups; Emotions; Directions or a Call-to-Action; Experience of Using a Company; Pharmaceuticals; and Logos, which is used to separate the logo-specific images. Most of the top-level codes remained the same but they each included more specific sub-codes and the reorganization eliminated the vague Other code. I continued to add more codes as they arose throughout the process and cycled through all of the images three times and the text captions twice to ensure consistency in tagging.

## Results

The most used terms and themes throughout the images and their affiliated captions were “Birth control” (n=355, 54% of images and copy files, not counting the logos), “Learn More” (276, 42%), and prescription (266, 41%). Half (51%) of the images contained pictures of pills or pill packets, which reinforces the question of whether the companies should be allowed to follow different “fine print” rules than traditional pharmaceutical companies. If pills and pharmaceutical products are clearly shown in an ad, arguably the image is not just a lifestyle or branding image for the company but also their prescription products. When pharmaceutical companies sell their prescription products, they must include reasonable access to additional information and disclosure of potential side effects.



The largest tagged top-level code group was pharmaceuticals (579, 89%), which understandably encompasses most of the ads for DTC pharmaceutical companies. Codes in the

pharmaceutical group include specific mentions of a obtaining a prescription or prescription-level medication, symptoms that prescriptions are written for like birth control, targeted problems or symptoms like acne or erectile dysfunction, or a pharmaceutical brand name like Viagra, and pill imagery. Prescription (266, 41%) is the most common group within pharmaceuticals, counting both mentions of prescriptions for things like birth control, skin care, emergency contraceptives, mention of generics, inhalers, contact lenses, and dandruff shampoo, as well as the use of the word “prescription” itself.

Specific pharmaceutical product names occur in 48 files or 7%. The three most common are Cialis (15, 2%), Viagra (15, 2%), and Latisse (10, 2%), a glaucoma medication that can also be used to help lashes grow. The use of Cialis and Viagra often occurs when companies are differentiating their price point from the brand name medications for erectile dysfunction. Since these companies are selling sildenafil and tadalafil, the generic names for Viagra and Cialis respectively, the prescriptions are much cheaper than brand name pills. Since Viagra and Cialis are widely known by name though, it allows the DTC companies to set up a comparison based on price and capture the attention of ad viewers that may recognize the more popular brand names.

Many of the ads include mentions of the experience of using the company (493, 76%). The most prominent experience is convenience (312, 48%) which includes subtopics like

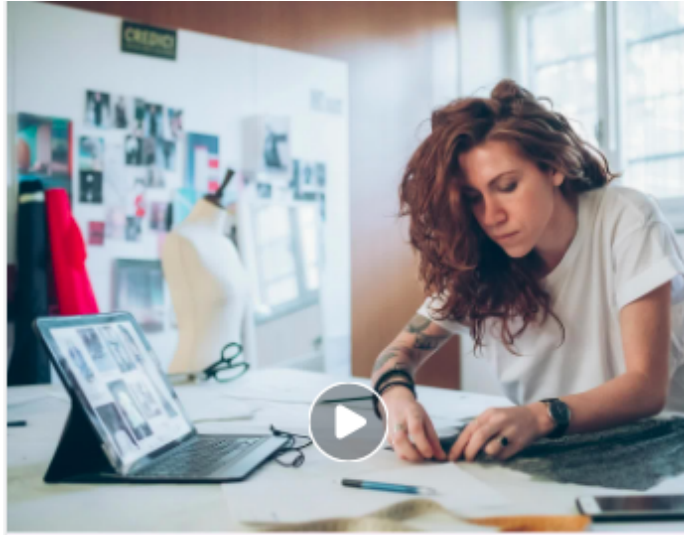


Figure 7 One of the ads from The Pill Club that contains a fine print disclaimer.

delivery, home, simple, easy, fast sign up process, automatic refills, and less time. Delivery (248, 38%) is understandably prevalent throughout the ads because it is a fundamental aspect to the companies' product—prescriptions delivered to your home. After convenience, personalization (125, 19%) is the second highest ranking theme under experience. Personalization is used as a way to contrast the DTC pharmaceutical

offerings with the experience of traditional providers and pharmacies. It is also used in conjunction with birth control, often saying, "find the right birth control for you," or with skin care, "find the best formulation for your skin." There are 76 files that contain both mentions of personalization and birth control and 20 files that contain mentions of both personalization and skin care.

Free items that are delivered with the prescription medication were mentioned in 87 (13%) images or captions. These mentions were specific to one brand, The Pill Club, who



Lo Loestrin Fe is a prescription birth control pill used for the prevention of pregnancy. If you are moderately obese, discuss with your healthcare provider whether Lo Loestrin Fe is appropriate for you.

**IMPORTANT RISK INFORMATION**

**WARNING TO WOMEN WHO SMOKE**  
Do not use Lo Loestrin Fe if you smoke cigarettes and are over 35 years old. Smoking increases your risk of serious cardiovascular side effects (heart and blood vessel problems) from birth control pills, including death from heart attack, blood clots, or stroke. This risk increases with age and the number of cigarettes you smoke.

includes items like chocolates, condoms, and Midol with birth control deliveries. The free goodies were primarily used as a selling point to generate excitement among potential new

subscribers of The Pill Club. These ads are the only ones that had fine print like traditional pharmaceutical ads feature. The fine print states the generic name for the birth control pills that are shown and a clarification that the price applies to a bulk order of a year supply of pills. The final line of the fine print states that the free goodies mailed along with the pills are seasonal and vary between shipments so there is no guarantee of what is included. There is no mention of the risks and benefits of taking birth control.

The practice of mailing “free” treats or fun, extra items echoes other trendy, monthly and quarterly subscription boxes. The similarity gives the product more of a lifestyle feel than a traditional health care experience. This sentiment is further enforced by the side-by-side visual comparison used in several images (see Figure 8) to compare the DTC company to the traditional provider or pharmacy experience. The images show a literal side-by-side comparison of a bland, white bag that sometimes holds prescription medications to a fun, colorful mailer package alongside things like candy, individual dose packets of Midol, and glittery stickers for example.



Figure 9 Example of a side-by-side comparison of The Pill Club to a traditional pharmacy, with emphasis on the "FREE goodies" sent with every order.

Another surprising find was the inclusion of sales or discount language in 44 files. While this only accounts for 7% of files, it is a contrast to traditional pharmaceutical ads. The language often used is a variation on, “first month for \$5,” implying that new consumers or subscribers receive a discount. While pharmaceutical companies do offer coupons for prescriptions through sites like GoodRx, including sales and discount offers in advertising is not

common for traditional pharmaceutical ads. Additionally, attaching the sale to something like the first month of a subscription is another element that is more reminiscent of trendy subscription boxes.

I was surprised to find that mentions of discretion was not more prevalent among the ads (40, 6%). All of the companies advertised offer consultations for their medications virtually through phone conversations, text communication, and occasionally a video conference. Then the prescription is delivered direct to the consumers door in discrete packaging. One of the major differentiating points for these companies is that there is little to no face-to-face interaction necessary to obtain a prescriptions for something that may be an uncomfortable conversation with a provider.

Another theme that emerged is expertise. Expertise (151, 23%) was demonstrated primarily from the provider-side (101, 15%) and to a lesser extent through the consumer perspective (40, 6%) and product (15, 2%). Provider expertise was demonstrated through text overlaid on images noting “derm experts” or “real Doctors.” There were also several instances of captions that read, “Not sure what birth control is right for you? Consult our doctors online...” implying that their medical professionals have the knowledge to assist consumers. There were also two instances of images that featured a doctor with a stethoscope, a recognizable symbol of medical professionalism. While the statements of provider expertise were noticeable and comprised the majority of expertise-related themes, they were more conveying the validity of their services and emphasizing legitimacy.

Comparatively, consumer demonstrations of expertise all came in the form of testimonials. The largest two groups of these testimonials also reference birth control (15, 38% of testimonials) and convenience (15, 38% of testimonials). Some of the testimonials are



overlays of a consumer's text in the ad's image while others appear to be screenshots of Tweets or Facebook posts. Demonstrations of consumer expertise among the DTC pharmaceutical company ads appear to be an effort to foster relatability among potential consumers.

In addition to the explicit and implicit messaging in the ads themselves, I also tagged the call-to-action (CTA) or directions they are giving through the ad. By far, the most common was "Learn More" (276, 42%), followed by "Sign up" (39, 6%), then "Shop now" (13, 2%), and there was one instance each of "Visit Instagram Profile" and "Get Treated." These CTA's appear as a clickable button in the bottom right corner of an ad placement. Learn more is an invitation to gain a better understanding. Comparatively, sign-up has a direct, measurable action. The Pill Club is the only company to use this CTA and the language, combined with their company name, reinforces the idea of a membership, not something that is typically associated with pharmaceutical products. The "Shop now" CTA also directs consumers to a specific action and it is interest language considering that most products would require a prescription to be written. They cannot be shopped or browsed like consumer goods in a store.

## Discussion

### *Main Takeaway*

Social media may not be the most appropriate channel for DTC pharmaceutical companies to place in-feed advertisements. In social media apps, information is typically delivered quickly and repetitively to convey a message and convert potential consumers into customers, users, and members. There is not enough space for nuance or details in the short amount of time that a viewer is scrolling by posts. What a viewer will notice in the ads, are

repeated themes of prescription pharmaceuticals that can be conveniently obtained and ads that feature trendy, lifestyle-like branding.

A positive benefit of DTC pharmaceutical companies leverage social media is that the targeted marketing tools available on the platform may help companies to reach potential consumers that would otherwise have difficulty obtaining prescription medications. This could improve consumers' health and well-being. Affordable health care should be available to everyone in a safe environment that they feel comfortable using. If these services are the best outlet for doing that, then there could be some very real benefits for consumers that would not otherwise be able to bring their concerns to a PCP. However, if these companies continue to grow in scale and quantity, then this DIY-ing of health could become more commonplace and should continue to be studied for potential health impacts on the individual and population levels.

The combination of DTC pharmaceutical ads from new companies that prescribe and deliver generic medications to a consumer's door, shifts the framing of pharmaceuticals and patients. The line between consumer and patient is not as clear—to these new companies, individuals are viewed more like consumers or members even. Not necessarily a patient that has an individual health history.

While all of the companies studied in this analysis offer prescriptions for specific conditions and for symptoms that have been treated through pharmaceutical interventions for decades, their new dynamic is still shifting these conditions or symptoms into the consumer marketplace and away from health care. Even if the medications are considered to be safe, this could have larger public health or social impacts that influence the ways in which people treat their bodies and approach their health care. When consumers opt to use these companies for their

prescriptions, it is similar in a way to choosing supplements or vitamins. It is a self-initiated process in which the consumer self-identifies what they think is best to fit their needs and then contacts the company seeking that specific medication—in a way, it is self-diagnoses.

Traditionally, a patient would bring a symptom like a low sex drive or a health concern like wanting to obtain birth control to their PCP. Some patients will undoubtedly do some web-sleuthing ahead of time and arrive at their appointment with a request for whatever prescription they feel would be right for them. An estimated 60% of Americans turn to the internet as their first source when they are looking for health information (Greene & Kesselheim, 2010). In the context of a PCP visit, hopefully their provider would take the time to listen to the patient's request as well as consider other health variables and the patient's health history that could lead to the symptoms. While it takes self-initiation and a personal health concern to make an appointment, the patient is really seeking the advice of their physician who is able to leverage their training and expertise to make a recommendation. The expertise is balanced in favor of the provider.

Advertising can chip away at the self-initiation though and reframe the expert through regular reminders of a company's presence, their products, how those products could make you feel, and how easy it is to obtain them. It could be very empowering for patients to be able to seek the medication that they feel is best for their bodies—retipping the expertise balance away from providers and toward the patients. However, personal empowerment was not as strong of a theme as the emphasis on the prescription products and the focus on convenience throughout the marketing of DTC pharmaceutical companies on Facebook.

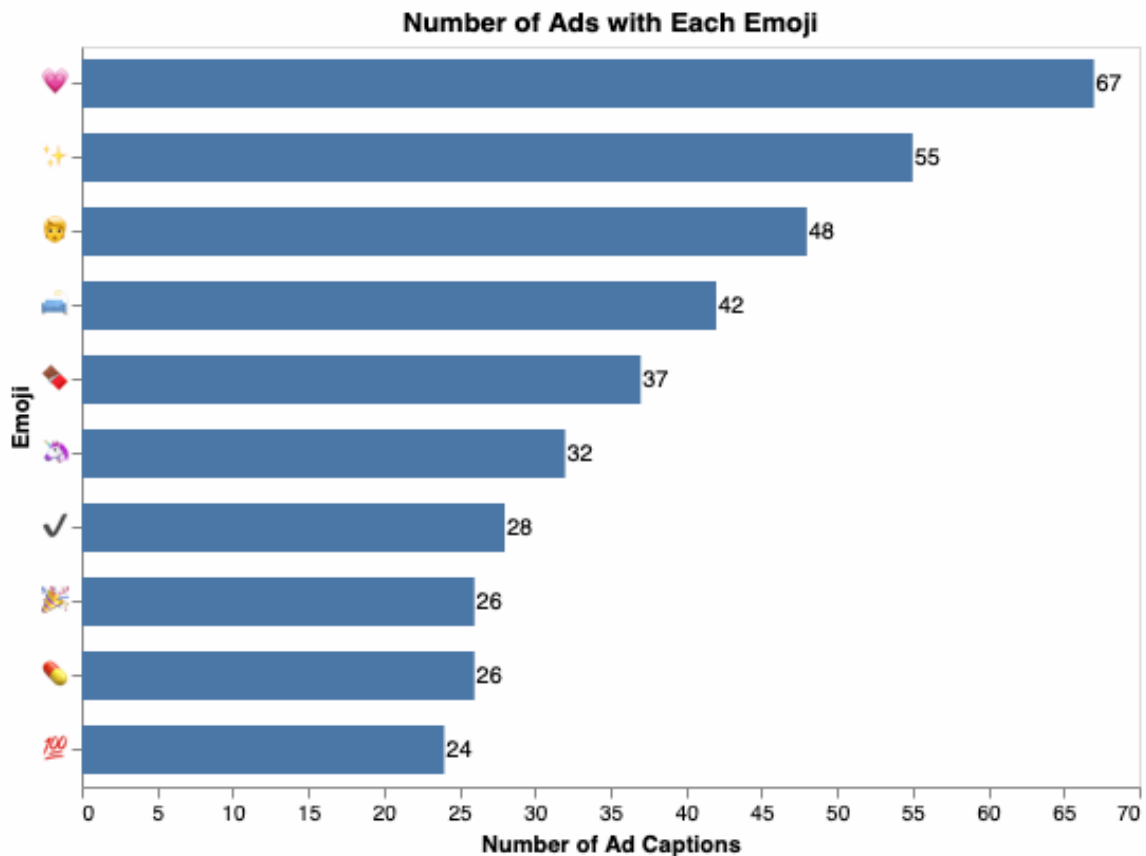
DTC pharmaceutical companies could also influence public health through increased accessibility to prescription medications and a shift in the cultural perception of pharmaceutical

products. Access and affordability of care is a significant issue in the United States and these companies offer a new way to obtain medications that were previously only available through a PCP or maybe a community clinic. They also provide an avenue of access for medications that address personal, sometimes stigmatized symptoms that patients may not feel comfortable discussing with their PCP or local pharmacist.

'Birth Control, prescribed & delivered for free  
❖ Plus free goodies in every package 📦 ❤️'

Figure 11 Example of ad copy using emojis to emphasize the free items mailed with a prescription.

However, the companies also bring a new frame for prescription medication that blends lifestyle-branding and influencer like ad campaigns with prescription medications. And they are doing so through mediums like social media feeds that have grappled with the spread of mis- and disinformation related to vaccines, COVID-19, and other health-related issues in recent history. Their use of emojis throughout the ad captions also indicates a new language for pharmaceutical advertising. Playful, fun emojis like unicorns and hearts are used throughout the ad copy, which is a different tone than people might normally associate with their prescription medications. This language could make the products feel more friendly and accessible or approachable to consumers. They also push the products away from the traditional pharmaceutical market and align them more with lifestyle, wellness, and beauty products. The presence of these companies,



that appear to be fairly unregulated in their advertising campaigns could further legitimize social

media platforms as a source for health information. This could have dangerous implications for public health when the possibility is combined with the increased accessibility of medications and influencer-like visuals throughout their ads.

While the early history of pharmaceutical advertising in the United States exhibits some self-regulation by the industry, more recent history has illustrated more of a push-and-pull relationship between pharmaceutical ads and regulation. Several instances in which people were harmed by or even died from using or consuming pharmaceutical products that had been advertised as safe and effective treatments led to increasingly tighter regulations. Then the industry pushed the boundary several times by testing new ad formats like television, search engine ads, and now the internet and more specifically, social media. Reviewing the pattern throughout history would indicate that it is perhaps time to revisit regulatory policies that could protect consumers and ensure that DTC pharmaceutical companies are offering fair and balanced information on their products.

### *Future work*

#### Video Ads

In the data gathering stage of this research project, I was able to download and save the URL's that link to the video ads for the companies included in this study. Several of the companies, like Hims, Roman, Hers, and Nurx rely heavily or almost exclusively on video ads and therefore were excluded from this analysis because I only reviewed static ads. Videos are able to provide a different perspective from static ads so in future work, I would like to analyze the videos to see if they contain similar themes to the static ads and how they leverage the format to convey their message.

### Gender-based Differences in Ads

The de facto exclusion of some companies like Hims, Roman, Hers, and Nurx due to their heavy reliance on video ads on social media, also contributed to a gendered skew in the ad content. Both Hims and Roman are the male focused counterparts to Hers and Rory and may have provided a more balanced distribution of ads. Nurx used to prescribe solely birth control but has recently expanded their products to more gender-neutral prescriptions. This analysis primarily captures female-centric companies and advertisements which gives a gendered skew. Including more male-centric ads in a future analysis and then comparing the messaging style or terms between the male and female-centric products could be a worthwhile analysis.

Another gender-based dynamic at play is in how some of the ads are classified by Facebook. Some of the birth control ads are classified as, “Issues, Elections, or Politics” on Facebook’s advertising algorithm. Ads that are deemed to be political carry different fees for advertisers and they are only shown to viewers that are at least 18 years old based on their Facebook profile. When the Ad Library was last checked for this analysis (March, 2021) only 2 ads for Hims, a male-centric company that sells products to support sexual activity, were categorized under “Issues, Elections, or Politics.” This indicates that there are potentially different gender-based standards for ads pertaining to reproduction and sexuality.

### Differences on Advertising Platforms and Social Media Accounts

Another aspect of this study to expand in the future is the source of the advertisements. This study only pulled ads from the Facebook Ad Library, which includes ads that run on the Facebook app and website, Instagram, Facebook Messenger, and the Facebook Audience

Network which is a large expanse of mobile app and web-based sites that route their advertising through Facebook. This does not account for other popular social media websites like Twitter, Snapchat, or TikTok. I know that at least Alpha runs ads on Snapchat based on personal experience but I am not sure about the presence of other companies on other social media sites. Facebook was a good source for the data in this project since it has the Ad Library. However, other advertising platforms, or even other social media sites, have different audiences, different ad formats with creative allowances, and different engagement opportunities.

## Vitamins

The final area that could be interesting to expand upon is the inclusion of companies that sell vitamins and minerals. Simple Health, one of the companies included in this study, recently launched a probiotic which does not require a prescription. The ad for their probiotic is similar in imagery and text caption to their prescription products. It could be informative to expand the analysis to include more non-pharmaceutical products like vitamins and then compare their messaging to the DTC pharmaceutical companies and their prescription products.

## Conclusion

The objective of this exploratory study was to understand the imagery and messaging employed by DTC pharmaceutical companies on social media. Both the companies and the ad platforms themselves are relatively new in the history of health care delivery and advertising respectively. DTC pharmaceutical companies serve in two roles as both the prescriber and the prescription filler and they both appear throughout the images and copy in their ads in themes of professional expertise and pharmaceuticals. Their trendy advertising exudes the effortlessly cool



demeanor so often shown in influencer posts, yet the product being sold is only available through a prescription. And the platform that hosts these of-the-moment ads has been leveraged to rapidly disseminate mis- and disinformation related to health care specifically. Examining the new dynamic these companies are creating with their combined services of prescribing and delivering medications, alongside the information channel through which they deliver their advertising illuminated trends in the way consumers are spoken to and situates these new companies in the long history of DTC pharmaceutical advertising.

## Acknowledgments

“Thank you” feels like an inadequate phrase to express my gratitude for my advisor, Casey Pierce, PhD. She eagerly took me on as a mentee in the midst of a pandemic and consistently supported me with stimulating conversations, research advice, and thoughtful writing edits. This paper would not exist without her unwavering support. I also want to extend a sincere thank you to my committee members, Allen Flynn PhD, PharmD, and Denise Anthony, PhD for their guidance and participation in the thesis defense. Their expertise and support has made me a better scholar and writer.

## References

*Ad Library*. (n.d.). Retrieved April 17, 2021, from

[https://www.facebook.com/ads/library/?active\\_status=all&ad\\_type=political\\_and\\_issue\\_ads&country=US](https://www.facebook.com/ads/library/?active_status=all&ad_type=political_and_issue_ads&country=US)

- Applequist, J., & Ball, J. G. (2018). An Updated Analysis of Direct-to-Consumer Television Advertisements for Prescription Drugs. *Annals of Family Medicine*, *16*(3), 211–216.  
<https://doi.org/10.1370/afm.2220>
- Avery, R. J., Kenkel, D., Lillard, D. R., Mathios, A., & Wang, H. (2008). Health disparities and direct-to-consumer advertising of pharmaceutical products. In *Advances in Health Economics and Health Services Research* (Vol. 19, pp. 71–94). Emerald (MCB UP ).  
[https://doi.org/10.1016/S0731-2199\(08\)19004-5](https://doi.org/10.1016/S0731-2199(08)19004-5)
- Ballentine, C. (1981). Sulfanilamide Disaster. *FDA Consumer Magazine*, *5*.
- Commissioner, O. of the. (2019a). Part II: 1938, Food, Drug, Cosmetic Act. *FDA*.  
<https://www.fda.gov/about-fda/changes-science-law-and-regulatory-authorities/part-ii-1938-food-drug-cosmetic-act>
- Commissioner, O. of the. (2019b). Part I: The 1906 Food and Drugs Act and Its Enforcement. *FDA*. <https://www.fda.gov/about-fda/changes-science-law-and-regulatory-authorities/part-i-1906-food-and-drugs-act-and-its-enforcement>
- Commissioner, O. of the. (2020). Kefauver-Harris Amendments Revolutionized Drug Development. *FDA*. <http://www.fda.gov/consumers/consumer-updates/kefauver-harris-amendments-revolutionized-drug-development>
- Conrad, P., & Leiter, V. (2008). From Lydia Pinkham to Queen Levitra: Direct-to-consumer advertising and medicalisation. *Sociology of Health & Illness*, *30*(6), 825–838.  
<https://doi.org/10.1111/j.1467-9566.2008.01092.x>
- Curtis, H., & Milner, J. (2020). Ethical concerns with online direct-to-consumer pharmaceutical companies. *Journal of Medical Ethics*, *46*(3), 168–171.  
<https://doi.org/10.1136/medethics-2019-105776>

Dalí, S. (1958). *The Crisálida* [Print].

Dalí, S. (1958). *The Crisálida at the Convention* [Photograph].

Davis, E. L. (1940, May 21). *Address on the Federal Trade Commission and Its Relation to Advertising*. 58th Annual Convention of The Proprietary Association, Biltmore Hotel, New York City.

Einsiedel, E. F., & Geransar, R. (2009). Framing genetic risk: Trust and credibility markers in online direct-to-consumer advertising for genetic testing. *New Genetics and Society*, 28(4), 339–362. <https://doi.org/10.1080/14636770903314509>

Eschner, K. (2017, June 26). *Three Horrifying Pre-FDA Cosmetics*. Smithsonian Magazine. <https://www.smithsonianmag.com/smart-news/three-horrifying-pre-fda-cosmetics-180963775/>

Freeman, I. H. (1958). Dali Gives a View of Tranquility: 60-Foot Fantasy Being Built Here Is Surrealist's Idea of Medicinal Peace. *New York Times*, 33.

Gasch, A. T. (2017, November 2). *Lash Lure and Paraphenylenediamine: Toxic Beauty Past and Present*. American Academy of Ophthalmology. <https://www.aao.org/senior-ophthalmologists/scope/article/lash-lure-paraphenylenediamine-toxic-beauty>

Glaser, B. G., & Strauss, A. L. (2017). *The discovery of grounded theory: Strategies for qualitative research*. <https://www.taylorfrancis.com/books/9780203793206>

Greene, J. A., & Herzberg, D. (2010). HIDDEN in PLAIN SIGHT Marketing Prescription Drugs to Consumers in the Twentieth Century. *American Journal of Public Health*, 100(5), 793–803. <https://doi.org/10.2105/AJPH.2009.181255>

Greene, J. A., & Kesselheim, A. S. (2010). Pharmaceutical marketing and the new social media. *The New England Journal of Medicine*, 363(22), 2087–2089.

<https://doi.org/10.1056/NEJMp1004986>

Grenfell, M. (2020a, January 4). *Fixing The Facebook Ad Library (Part 2): Recreating The Ad Library*. Medium. <https://mackgrenfell.medium.com/fixing-the-facebook-ad-library-part-2-recreating-the-ad-library-de10b7829ac0>

Grenfell, M. (2020b, January 4). *Fixing The Facebook Ad Library (Part 1): Scraping Can Save It*. Medium. <https://mackgrenfell.medium.com/fixing-the-facebook-ad-library-part-i-scraping-can-save-it-6b737d04614c>

Haycock, D. B., & Wallis, P. (2005). Quackery and commerce in seventeenth-century London: The proprietary medicine business of Anthony Daffy. *Medical History. Supplement*, 25, 1–216.

Jain, T., Lu, R. J., & Mehrotra, A. (2019). Prescriptions on Demand: The Growth of Direct-to-Consumer Telemedicine Companies. *JAMA*, 322(10), 925–926.

<https://doi.org/10.1001/jama.2019.9889>

Kravitz, R. L., Epstein, R. M., Feldman, M. D., Franz, C. E., Azari, R., Wilkes, M. S., Hinton, L., & Franks, P. (2005). Influence of Patients' Requests for Direct-to-Consumer Advertised Antidepressants: A Randomized Controlled Trial. *JAMA*, 293(16), 1995.

<https://doi.org/10.1001/jama.293.16.1995>

Liang, B. A., & Mackey, T. (2011). Direct-to-Consumer Advertising With Interactive Internet Media: Global Regulation and Public Health Issues. *JAMA*, 305(8), 824–825.

<https://doi.org/10.1001/jama.2011.203>

Mintzes, B. (2012). Advertising of Prescription-Only Medicines to the Public: Does Evidence of Benefit Counterbalance Harm? *Annual Review of Public Health*, 33(1), 259–277.

<https://doi.org/10.1146/annurev-publhealth-031811-124540>

Tone, A. (2008). *The Age of Anxiety: A History of America's Turbulent Affair with Tranquilizers*. Basic Books.

<http://ebookcentral.proquest.com/lib/umichigan/detail.action?docID=625190>

Ventola, C. L. (2011). Direct-to-Consumer Pharmaceutical Advertising. *Pharmacy and Therapeutics*, 36(10), 669–684.

## Appendix

### Final Code Book

Code	Number of References
Clause or fine print	2
Directions or Call to Action	330

Get Treated	1
Learn More	276
Shop Now	13
Sign Up	39
Visit Instagram Profile	1
Emojis	599
100	24
Alarm	6
Calendar	8
Celebration Streamers	26
Checkmark	28
Chocolate	37
Clapping Hands	3
Couch	42
Dollar Bills	6
Eggplant	22
Explosion	1
Eyes	2
Fire	7
Fist	1
Flexed Arm	1
Hearts	67
Home Emoji	16
Hospital	9
Lemon	18
Lock	8
Mailbox	21
No Babies	2
Person	48
Pill Capsule	26
Present	6
Raised Hands	20
Sand Timer	5

Sleep Emojis	4
Smiley Face	17
Sun	1
Thought bubble	6
Three Sparkles	55
Unicorn	32
Vehicle	4
Wave	20
Emotions	118
Community Level or collective emotions	59
Advocacy	59
Individual-level emotions	54
Celebrity	3
Confidence	25
No Embarrassment	1
Relaxation	1
Sexual Themes or Sex Implied	7
Smiling Faces	16
Logic driven	5
Statistics	4
Error, Gone Message	107
Experience of Using a Company	943
Access	13
Affordability	90
Convenience	467
Automatic refills	18
Delivery	248
Easy	27
Fast Sign Up Process	23
Home	65
Less Time	8
Simple	55

Discretion	40
Free Goodies	87
No awkwardness	2
No visit to doctor or pharmacist	35
Personalization	125
Safe or Secure	10
Sale or Discount	44
Wellness or Self Care	30
Expertise	156
Consumer Expertise	40
Testimonial	40
Product Expertise	15
FDA Approved	2
Provider Expertise	101
Professional Qualifications	1
Stethoscope	2
White coat medical professional	0
Influencer type product shot	8
Insurance	97
Logo	452
Non-pharmaceutical Interventions	12
Probiotics	1
People	4
Company Point of View	1
Consumer	3
Spanish Language	2
Pharmaceuticals	951
Pharmaceutical Name	53
Cialis	15
Clindamycin	1
Doxycycline	3
FC2	2
Latisse	10



Plan B	2
Sildenafil	3
Spirolactone	1
Tretinoin	1
Viagra	15
Pill Imagery	102
Prescription	699
Birth Control	355
Contact Lenses	2
Daily or Rescue Inhaler	4
Dandruff Shampoo	1
Emergency Contraception	15
Generic	10
Skin care	46
Product Imagery	6
Targeted Problem or Symptom	91
Acne	20
Asthma	12
Eczema	2
Erectile Dysfunction	7
Eyelashes	4
Habit	1
Herpes	2
Infection	8
Insomnia	7
Menopause	2
Mental Health	18
Urinary Tract Support or Infection	4
Vaginitis	1