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### Taking a Shot at Consumerism

Toward the end of my last year in preschool my mother informed me that I would be leaving school early that day to go get vaccinations. Unaware of what this entailed, I naïvely boasted to my classmates of the great adventure I was going to have that day. To my surprise, that afternoon when the nurse came in, I immediately spotted a syringe. I sat up on the examining table and nervously asked the nurse what she was about to do. With a cheery smile she answered “I’m just going to put a little medicine in your arm so you can go to Kindergarten.” I was horrified. “You are going to stick that needle in my arm?” I stubbornly refused until my mother gave me a stern warning. It must have worked because soon enough I mustered up the courage to roll up my sleeve. Since then, annual flu shots, public school vaccinations, and vaccinations for mission trips became the norm. It wasn’t until I got older that I realized this was not the case for everyone.

Vaccines have been around since the late 1700s, when Edward Jenner used fluid from blisters on milkmaids to create a vaccine against small pox (Offit and Moser Vaccines and Your Child, 2011, p.3). Thanks to this technology, epidemics like small pox, Polio, and Typhoid have seemingly vanished in the United States. Because of the decline in the prominence of these diseases, parents are questioning whether vaccines are necessary. In recent years, the United States has seen a growing controversy over mandated vaccinations for children. This question contains two parts: what type of risks

do vaccines pose to an individual child and are these risks great enough to justify vaccine refusal. As consumers, individuals are encouraged to buy things with their own best interest in mind. However, this same individualistic attitude is being applied to parents' decision to vaccinate their children, and consequently, is having a negative effect on the prominence of vaccine-preventable infections. The main causes of this downslide in the number of vaccinations are 1) The influence of media and 2) the recent surge of parents expressing a defiant attitude toward health professionals. With access to information from the Internet, television news, and social media, which encourage consumerist attitudes, parents want to express their right to become self-informed and make their own decisions about their children's healthcare. However, in doing this, parents are struggling to determine what is fact and what is fiction.

Given the increasingly consumer-driven nature of healthcare, parents are treating their decision whether or not to vaccinate their children much like they would any other purchase—based on characteristics such as quality, cost, and individual preference. However, unlike the decision to buy organic food, or a fit bit, which are marketed to affect the health of an individual, vaccines also affect the health of others. Thus, vaccines should not be treated as a normal purchase, as parents who choose not to vaccinate their children are not only putting their children at risk for infection, but also their children's peers.

It is no secret that vaccines have limited the rates of mortality and illness caused by infectious diseases. According to Ventola (2016), "It has been estimated that for each U.S. birth cohort receiving recommended childhood immunizations, around 20 million illnesses and more than 40,000 deaths are prevented." (p. 426) Vaccines are unique to

other forms of treatment in that they not only help the health of the individual who receives them, but, as Vendola also states, “when a large population is immunized, unvaccinated individuals benefit from ‘herd immunity,’ which is a reduced risk of exposure to pathogens.” (p. 426) Given these facts, the vaccine debate is not over the effectiveness of immunizations. Instead, the controversy is over whether or not this “herd immunity” is more important than the risks parents see in vaccines. Thus, even though parents know that vaccines are effective in preventing disease, they are primarily worried about how vaccine side effects could hurt their individual child which leads some to decide that “concern for their children outweighs concerns for herd immunity.” (Reich, 2016, p.237)

Despite the overwhelming decrease in mortality linked to vaccination, many parents are not convinced that vaccines are essential. From a consumer standpoint, this is completely logical. Because of the effectiveness of vaccines since their introduction in the 1900s, the current prevalence of most vaccine-preventable diseases is low. The small pox vaccine, for instance, has been discontinued because the disease was eradicated. (Offit and Moser, *Vaccines and Your Child*, 2011 p.5) However, this is the only case where a vaccine was determined unnecessary, every other vaccine-preventable disease still poses some sort of threat either because the disease still occurs in the United States or it is prominent in other countries. (Offit and Moser, *Vaccines and Your Child* p.5-7) Still, many parents see more risk associated with the side effects of a vaccine than with the disease. Consumers are trained to assess the need for a product before they buy it; parents are simply evaluating the risk versus the reward.

One of the primary concerns of parents is their child's safety. Doubts about safety are mainly attributed to either ingredients in the vaccine or the quantity of vaccines being administered at one time. Just as consumers read the labels on the back of their food, parents read about ingredients in vaccines. While there are questions over several ingredients in vaccines, the most controversial are aluminum (used to improve the child's immune response), formaldehyde (used to kill viral and bacterial toxins), and thimerosal (a preservative that contains mercury). While all of these ingredients are associated with toxicity and side effects, they are all present in such minute amounts that they pose no harm to the child. (Offit and Moser *Vaccines and your Child*, 2011, p. 76-83). For instance, the main fear of thimerosal, which is now only contained in an influenza vaccine for older infants, is that it contains mercury. Ironically, Offit and Moser point out that a breast-fed child actually consumes more methyl-mercury in his or her first six months of life than is present in every childhood vaccine put together. (p.77)

Even if parents are convinced that the ingredients in vaccines are safe, many have apprehensions toward the amount of content being administered to their child at one time. If following the recommended timeline for childhood vaccines, a child will receive ten different vaccines before the age of two, and many of these require multiple doses. As Offit and Moser point out in their book *Vaccines and your Child*, "During the first few years of life, children can receive as many as twenty-six separate inoculations and five shots at one time" (p.23) Many vaccines such as DTaP (Diphtheria, Tetanus, and acellular Pertussis) incorporate multiple vaccines into one dose. Thus, parents worry that this is too much for their child's immune system to handle.

This assumption leads many parents to try to create an alternative schedule. Most famous for this is Dr. Robert Sears the author of *The Vaccine Book: Making the Right Decision for Your Child*. In his book, he offers both an alternative schedule, which simply spaces out all of the recommended vaccines so that a child is never receiving more than two shots per visit, and a selective schedule, which opts out of some of the recommended vaccines (Offit and Moser, Problem with Dr. Bob's vaccine schedule, 2009, p.168). However, the heart of his logic is focused on the well being of only the children involved. Sears himself warns parents “not to share their fears with their neighbors” in the case of the MMR vaccine “because if too many people avoid the MMR, we’ll likely see the diseases increase significantly” (as cited by Offit and Moser, 2009, p.165). This reveals the danger of approaching vaccination from a consumer standpoint; vaccines are effective because they create immunity in a *population*, once individuals opt out, that population is open to the spread of disease.

In parents’ decisions not to vaccinate their children, they are choosing to ignore the recommendations of credible organizations. Two institutions determine the guidelines and recommendations for children and adolescents: The Centers for Disease Control (CDC) and the Advisory Committee on Immunization Practices (ACIP). The American Academy of Pediatrics (AAP), the American Academy of Family Physicians, and the American College of Obstetricians and Gynecologists in turn, approve the guidelines. All of these organizations are made up of individuals with extensive training in the field of medicine (Ventola, p. 426-428). Furthermore, vaccine recommendations are regulated by legislation. While the specific mandates differ slightly by state, every state has established specific vaccine requirements to enter day care, public, and private school.

Some states allow exemptions to these mandates for religious or philosophical reasons. However even this poses a risk as Offit and Moser point out that “states with philosophical exemptions have higher rates of vaccine-preventable diseases (such as pertussis), compared with states without such exemptions” (2009, p. 165) Some parents resist these recommendations simply because they do not want the government to have a say in their child’s healthcare. Geoboo Song explains that these groups of people “reject a stratified society controlled by institutions and rules imposed by what they perceive as lofty expert opinion” (2014, p.544). This is true in not only vaccinations, but in all markets. Consumerism is based on the fact that individuals have freedom in what they purchase, and because many apply this same logic to vaccines, government control is a complete turnoff.

Perhaps less credible authorities that parents also question are Pharmaceutical companies. In the last few years, Pharmaceutical companies have been increasingly criticized for their moneymaking agendas. According to Reich (2016), “parents believe that pharmaceutical companies’ primary goal is to promote vaccines rather than ensure safety”. (p. 137) However, Offit and Moser (2011) point out that vaccines do not bring nearly the amount of profit as traditional drugs. Weight-loss and protein supplements, hair treatments, and other drugs of that nature are the main source of revenue as they are marketed with the sole initiative to make money. Vaccines, in contrast, are only administered between one and three times a year thus, unlike usual drugs, which companies can make money on almost indefinitely, vaccines have a limited capacity to produce a profit. Furthermore, the vaccine market speaks for itself; seldom are there commercials advertising for vaccines. Because vaccines are already recommended by

organizations like the CDC and ACIP, pharmaceutical companies have no need to be dishonest in the way they present information about them (Offit and Moser, 2011, p. 27). Hence, while parents are justified in being suspicious of the motives of pharmaceutical companies, they should not be worried about how this affects vaccines because vaccines are not the products making money.

Even though vaccines don't make as much money as traditional drugs, parents still worry that political involvement with health regulations is often a cause for conflicts of interest. Parents question the trustworthiness of recommendations that are mandated by government officials, who are known to slant information for their own benefit and profit. In his book *Autism's False Prophets*, Offit uses the example of Dan Burton, a former U.S representative for the state of Indiana who believed his grandson's autism was the result of the MMR vaccine. When Brent Taylor, a British epidemiologist, challenged Burton's claims, Burton challenged back by saying 'We have been checking into all the financial records... and we are finding some possible financial conflicts.' (as cited in Offit, 2008, pg. 197) Offit points out that this logic is based on an individual's assumption that "everyone is in someone's pocket" (2008, pg.197) However, if this is the basis for distrust, then there is just as much reason to doubt advocates of the anti vaccine movement. Offit points out that Burton's daughter profited from suing the federal government, and Andrew Wakefield (known for his studies showing that the MMR vaccine causes Autism,) "received more than \$800,000 from a personal-injury lawyer representing parents who were suing pharmaceutical companies." (2008, pg. 200) As seen in these examples, both sides of the argument have their share of corruption. So how do parents make a decision about what research to believe? Knowing who is funding the

source is important in determining the reliability of information, but perhaps more important factors are the uniformity of the data, and the experiment's ability to be duplicated and yield the same results. (Offit, 2008, p. 200) Thus, while government involvement in healthcare poses the risk of corruption to both sides of the vaccine controversy, individuals should not simply dismiss all of the research in this field, but know how to interpret the information despite this conflict.

The matter of parents' opting out of vaccinating their children is relatively new. In an interview with Dr. Meg Farmer, a pediatrician who has been practicing medicine for over twenty years, when asked if she had seen a change in the number of parents refusing vaccines or requesting an alternative schedule, she replied that she never saw parents refusing vaccines while in her residency in the late 1990s (M. Farmer, personal communication, October 26, 2016). So what has changed in these last twenty years to encourage this consumerist approach to medical decisions? The answer to this can be summarized in two words: technology and trust.

Parental hesitation is often a matter of the parent's ability to feel like they have control over their child's healthcare. As consumers, parents are concerned with how the vaccine will affect their own child. Thus, when a health professional does not take an individual approach, the parent becomes suspicious of the doctor's attention, and motives. Dr. Farmer told a story of an older male doctor that she knew who was known for his ability to get in and out of an examining room remarkably fast. People praised him for being able to get the job done so efficiently (M. Farmer, personal communication, October 26, 2016). However, in today's society people would have the opposite reaction. Parents want to be able to sit down and have a shared role in their child's healthcare. It is

no longer sufficient for a doctor to come in, write a prescription, and leave. In other words, parents' lack of trust in their children's physicians is due to impersonal relationships with them. As Heidi Larson (2010) points out, "One of the drivers of distrust is the health consumers' sense that their concerns are not being heard" (p.9) According to Dr. Farmer, the way she tries to work with parents on this issue is through education (M. Farmer, personal communication, October 26, 2016). Just as one would like to be educated about a product before they buy it, consumers of medicine want to be educated about the vaccine that will be administered to their child. Nevertheless, it seems that no matter what doctors do to reassure patients of the safety and necessity of vaccines, parents are more persuaded more by their own instincts than by the expertise of their doctor.

One of the main enablers of parent's lack of trust in healthcare is technology. Access to information has equipped parents with the knowledge they need to become smart consumers. Instead of simply taking their doctor's word for it, parents have taken their children's health into their own hands. The problem with this lies in where this information is coming from. Offit (2008) draws attention to the fact that when parents say 'I've done my research', what they actually mean is, "they have perused a variety of websites on the Internet." (p. 203) In the same article, Offit also points out that even if parents did read medical journals with original studies, they are not equipped with a background to understand them. (p. 203) Thus, parents are left with Internet articles, and news stories that often exaggerate and present the information in a false light.

One of the main problems with the way arguments against vaccines are presented is they rely almost exclusively on anecdotes. Take this anecdote from Allison M.

Whelan's (2016) article "Lowering the Age of Consent: Pushing Back against the Anti-Vaccine Movement"

On July 30, 2014, Rebecca Prohaska took her 12-year-old daughter Meredith to the doctor for a sore throat. During the appointment, Meredith received her first dose of the Human Papillomavirus (HPV) vaccine. Later that afternoon, Rebecca found Meredith face down on the floor — she had vomited, her lips were purple, and she was not breathing. Rebecca called 911 and performed CPR. Despite her efforts, Meredith was pronounced dead at the hospital.

Meredith's parents believe the HPV vaccine caused her death. According to Rebecca, "the only thing different about that day was the shot. I wish I would've known more about it before I agreed to it. (p.462)

In this case it was later determined that the patient's death was not caused by the vaccine, but was a reaction to an overdose of over the counter cold medicine. Ironically, these parents put more trust in over the counter cold medicine, which, according to a study by the CDC mentioned in an article by the FDA, result in 7,000 emergency room visits each year. ("Avoiding Medication Mistakes", 2009) Still, Many parents read anecdotes like this and determine that vaccines are too great a risk. The Internet is flooded with blogs led by parents against vaccinations and most of the authors claim to be writing the blog because they had a child experience complications with vaccines. The main problem with these anecdotes is there is typically no medical proof to back them up. As Offit (2008) puts it, "another challenge for those communicating science to the public is explaining the difference between coincidence and causality" (p.209). One of the biggest debates of the vaccine controversy is the correlation between vaccines and autism. Andrew Wakefield introduced this phenomenon in his 1998 article in the *Lancet* claiming that there was a link between the MMR vaccine and autism. Since then, his article has been

withdrawn and the General Medical Council of the U.K has taken away his medical license. Despite his dismissal by most health authorities, there are still groups of people who see Wakefield as “a doctor of ‘conscience and courage’ who stands ‘up for truth and freedom in science’” (Reich, 2016, p.119)

In addition to the type of information being presented, there is also the issue of who is presenting it. Jenny McCarthy is an outspoken celebrity and supporter of Wakefield’s research who claims that her son’s autism was a result of childhood vaccinations. Reich (2016) acknowledges that the “notion that vaccines are toxic received the greatest attention in 2008, when the celebrities Jenny McCarthy and Jim Carrey, in collaboration with several autism advocacy organizations, including Talk About Curing Autism (TACA), Generation Rescue, HEAL Foundation, and Moms Against Mercury, protested in Washington, D.C.” (p. 123) Just as companies use celebrity testimonies to endorse their products, McCarthy and Carrey are doing the same for the anti-vaccine debate. Because of their fame, they have greater access to the type of press that the average person is exposed to. People are more likely to tune in for celebrity appearances on talk shows than spend time reading an established medical researcher’s journal. People trust celebrities to be authorities on products based on some form of expertise that their status gives them. For example, just as individuals trust an athlete’s opinion of sports apparel, people trust McCarthy because she claims that, because of her son, she has a stake in the matter. In today’s society celebrity opinions are given more clout than they should. Parents are more likely to listen to the claims of a familiar face and remain ignorant to the claims of an individual who is actually qualified.

Media also encourages a consumerist mindset. Technology has expanded the

venues for advertisements, and as a result, individuals have been trained to make decisions from a customer's standpoint. Consumerism inspires logic based on media hype, reliability of the company, and primarily, how the product fits the consumer's needs. However, this type of rationale, when applied to childhood vaccination, would have devastating results. This was the case in California just eight years ago as Offit and

Moser (2011) narrate in their book *Vaccines and Your Child: Separating Fact from*

*Fiction*:

In 2008, a San Diego family took their unvaccinated children to Switzerland for a vacation. One of the children caught measles. (Measles occurs fairly commonly in Western Europe, where immunization rates aren't very high.) The child brought the disease back with him and proceeded to infect several children waiting in the pediatrician's office, one of whom developed severe dehydration. The disease also spread to classmates and people with whom he had come into contact at a grocery store. All of those infected weren't vaccinated. Most people don't realize that every year about 60 people with measles enter the United States, most from Western Europe. Typically, because most Americans are immunized, the virus doesn't spread. But the outbreak in San Diego shows that when enough people choose not to vaccinate their children, the virus can spread quite rapidly. (p.7)

This scare in California is just a snap shot of what could happen if every parent decided to be a "smart" consumer of medicine by focusing on their individual needs. In a world where everyone is trying to make money, consumers have to look out for their own interests to survive. Ironically, to survive in the case of vaccinations requires the exact opposite. Parents must look beyond their own uncertainties and trust that the doctors, researchers, and other medical professionals, who have devoted their lives to improving

people's health, are looking out for the safety of their children and the population as a whole.

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