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Research Paper

## **Introduction**

The first ever vaccine to be made was synthesized in 1796, after a doctor by the name of Edward Jenner noticed that milkmaids suffered no smallpox scarring. After realizing cows carried a benign strain of smallpox, Jenner found that those who caught “cowpox” were asymptomatic, and were conferred immunity from smallpox despite never catching it. This was truly a remarkable outcome, and as a result the most important medical innovation was discovered: vaccinations. Vaccines were made with the sole purpose to improve the welfare of humanity, helping protect society through herd immunity. Yet, there exists a skepticism amongst the U.S. community of recent times. “Anti-vaccination” advocates expound that vaccines cause neuroatypical conditions such as ADHD and autism in children who undergo over 21 shots in their first 6 years of life as required by the U.S. government. However, the cost of vaccines is relatively high, which creates a disparity between the developed and developing countries in accessibility.

Research on a global scale has shown that there still exists a distrust in vaccinations, part of which is to blame on the regulation, education, and administration of vaccines from governments globally. To state plainly, governments should be structured to act in the best interests of their people to successfully eliminate diseases.

### **The precedent set by loose regulations in vaccines**

When provided with a vaccine, there is a level of trust that the vaccine is not only effective, but safe. However, there have been certain agitations between nations and their populace due to the lack of regulations, such as when U.S. parents worried of the usage of preservative thimerosal in children's vaccines as it contained ethylmercury, a neurotoxin that was theorized to cause the neuroatypical conditions ADHD and autism (Wilson & Marcuse, 2001). Out of caution, substitutes were made to replace the thimerosal, but the precedent to suspect vaccines was already set. Globally speaking, there have been a number of controversies degrading public opinion. Famously in France, vaccinations for hepatitis B caused waves of public concern as it was thought to induce multiple sclerosis. Large groups of skeptics decreased their usage of vaccines thereafter, for themselves and children. (Wilson & Marcuse, 2001).

The perceived threat of vaccines is a negative externality against its benefits. As a whole, they are overwhelmingly helpful to the population when administered properly. However, this is all dependent on the way in which the government handles the outbreak.

### **Social resistance due to government actions**

From an empathetic viewpoint, it is understandable that people would be wary of introducing unknown chemicals into their blood. For those not familiar with the vaccination process, the application is a stressful environment, especially if one experiences minor side effects after the injection. Logically, the best method for dissuading fear, and establishing trust would be informing the public with the facts and benefits of vaccination programs.

The 2009 Indian polio eradication program showcases where the vaccines have adverse effects that lead to "social resistance" or the lack of participation by families. Children were

routinely vaccinated with a P1 monovalent vaccine with the risk of contracting Vaccine Associated Paralytic Polio (VAPP).

This situation was mishandled by the GPEI officials as they willingly withheld important information from the public, claiming they felt no obligation to inform the parents in order to avoid confusion, considering them too uneducated to understand. Information about VAPP was kept a secret with families being told lies such as “there is no harm from the vaccine itself, there is no side-effect, and your child will be fully safe” (Hussain, 2011). Not only were families uninformed about VAPP, the program had shifted from yearly vaccinations at institutions to door-to-door monthly vaccines. If asked, the agents would levy vague responses onto the family, such as “polio was ‘special’ and needed a constant boost which other vaccines did not.” (Hussain et al, 2012).

The government did not take into account the importance of involving and educating the public. For the parents, this was a prime point of suspicion when worrying about the sake of your children’s health and well-being. By spreading misinformation over such a dangerous disease, the officials lost the trust of the public and failed to promote herd immunity despite parents expressing their willingness to vaccinate their children.

### **How previous outbreaks affect public opinion on governments**

There is a strong distrust in governments to the point of people refusing or holding back on receiving vaccines. For the most part, this is the aftermath caused by the precedents set up by the lack of trust in the government and/or the lack of regulations.

The surveys conducted across three European countries, Sweden, Poland, and the Netherlands by Determann et al. (2015) provides insight into public opinion on vaccination

across national lines that can be used to determine how a government might improve its approach around vaccinations and the handlings of an outbreak. Many support the concept of vaccinations and the herd immunity it brings, but disliked the manner in which governments approach vaccination programs. The push for vaccination by governments is applauded, but not when the vaccinations come with adverse effects such as the Sweden government pushing for the H1N1 vaccination, which lead to narcolepsy as the vaccine was not tested (Determann et al., 2015).

### **Addressing the at-risk population**

The primary purpose of studying vaccine history and policy was to see where policies clashed most strongly with social resistance and decipher the biggest points of anxiety amongst the non-vaccinated. Conversion of naturalists into vaccinated citizens is the cornerstone of this research.

With the advent of personal health blogs, and other forms of media, the credibility of the claims made on the Internet are not representative of fact. In essence, the Internet does not have a regulation of credibility in the same format that medical articles do, which undergo an extensive review process. Pairing a lack of regulation with accessibility allows for individuals to write fraudulent accounts of anti-vaccine rhetoric. To combat that best, Federman (2014) suggests focusing on the delivery of vaccination information through analogies as they break down complex topics into digestible information. Federman's thesis is applicable to any nation looking to increase vaccine reuptake: educate citizens on vaccines in a layman's breakdown of the process of vaccination, herd immunity, and how it naturally bolsters one's immune system. There

exists a barrier of knowledge that keeps naturalists from vaccinating, which is out of the fear of the unknown.

### **Call to action**

The most effective method to increase vaccinations is to clear any and all miscommunication as those fears will ultimately hurt the goal of maximizing vaccinations. Importantly, this does not state that withholding information on adverse effects is a viable option. To truly educate the public, both the benefits and the risks must be explained as to upkeep trust, which is paramount to achieve herd immunity.

Minimizing the adverse effects of vaccinations is integral towards progressing the agenda, as even the best intentioned explanations fall flat in the face of crippling adverse effects. Luckily, the frequency of adverse effects is tiny in updated vaccinations. However, these vaccinations have been described as costly and are not yet accessible enough to provide to developing countries. Although the production of vaccines has been mostly privatized, there is a growing movement globally to request for the nationalization of vaccines. Profiteering creates price points that exclude developing countries from utilizing the most recent vaccines, and therefore a natural inequality of health exists via income brackets. To truly standardize vaccinations, aged ideas such as for profit health movements should be analyzed and critiqued for possible removal.

Arden Rowell has devised an outline on the proper governmental response to outbreaks through a U.S. Ebola CDC delivery in 2016 promoting the “just as well” strategy. The hallmark points of the “just as well” strategy is promoting minor adjustments to people’s habitual behavior to align it with public welfare behaviors they should have had already. Essentially, it's creating a

social hygienic etiquette. Giving the population constructive methods to ease the fear allows for a more thoughtful and strategic approach towards handling endemics and pandemics. By washing hands, healthy hygienic standards become routine, prevent the risk of new outbreaks, and also improve the mental health of the citizens by making them feel actively involved in the prevention of disease.

Furthermore, increasing the severity of the guidance for a disease lowers the barrier of entry for vaccinations (Deutermann et al, 2015). In other words, people are likely to receive vaccinations when the alternative is being stricken by a virulent disease. [Should all else fail]. This shows that in the face of crises, citizens are more willing to undergo the proper medical procedures to maximize success, because organizations like the CDC maintain a position of authority and guidance to best direct citizens towards success against disease.

## **Discussion**

It is clear that having contingencies to assist in the upkeep of citizen health should be a major obligation of government. Preventative measures like educating the populace on vaccines helps clear away the falsehoods that may drive some individuals away. Also having constructive behaviors that alleviates some of the helplessness that citizens may feel when dealing with shocks like pandemics is integral for public welfare. It is easy to forget the dangers of disease in a world as modulated for people as it is. Therefore, it is the duty of a government to work alongside its people as a vanguard against all that would harm them.

## References

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