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1, Paper; 3 Audiences

Audience 1: 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. When correctly administered, vaccines have little to no risk with dangerous adverse effects being less likely to kill an American as a cow attack is (1 out of 1 million versus 1 out of 1.6 million) (CDC, 2009).

Research has shown that the blame lies on the inconsistent regulation, misleading information available and the botched 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, yet are seldom observed doing so correctly.

Social resistance due to government actions

It is understandable that people would be wary of introducing unknown chemicals of undecipherable names into their blood. For those not familiar with the vaccination process, the application can be a stressful environment, especially if one experiences minor side effects after the injection without understanding why. Logically, the best method for dissuading fear and establishing trust would be informing the public with facts and benefits of vaccination programs.

However, the 2009 Indian polio eradication program showcases where vaccines have adverse effects and a botched government response that leads to extremely detrimental “social resistance” or the lack of participation by families. At the time, children were routinely vaccinated with a P1 monovalent vaccine with the risk of contracting Vaccine Associated Paralytic Polio (VAPP). To give an idea of the fear the innocent residents faced, VAPP’s most notorious symptom is paralytic polio, in which the virus reobtains its virulence through mishandling of vaccines or insufficient vaccine uptake in the population and proceeds to create muscle weakness and paralysis that can be permanent with insufficient medical care.

This situation was mishandled by the GPEI officials as they maliciously withheld important information from the public, claiming they felt no obligation to inform the parents as a measure to avoid confusion, considering their own citizens too uneducated to understand otherwise. Information about VAPP was kept a secret with families 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). To disregard the opinions of a nation’s most vulnerable populations stands in stark contrast against what the obligations of a government should be to its people. To emphasize, this is a modern nation-state making decisions against the welfare of its own people. Not only were families uninformed about VAPP, the program shifted from yearly vaccinations at institutions to mandatory door-to-door monthly vaccines due to lack of participation from several families. With no advanced notice, villagers were extremely suspicious of vaccine teams suddenly knocking on their door to administer a vaccine in increased frequency to their children. If asked, the GPEI 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 parents, responsible for their children’s health and well-being, the government’s increasingly outlandish behavior became a prime point of suspicion. By spreading misinformation over such a dangerous disease, officials lost the trust of their public and thus failed to promote herd immunity despite parents expressing their willingness to vaccinate their children through trusted medical centers and approved institutions.

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 were 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 their 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 dependent on the way in which the government handles the outbreak.

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 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. The journal interviewed people of different social standings from Sweden, Poland, and the Netherlands to understand public opinion on vaccines to have successful outbreak management and communication between the government and its citizens in Europe. 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 an untested H1N1 vaccination that resulted in narcolepsy (Determann et al., 2015).

Addressing the at-risk population

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

The Internet acts as an echo chamber for people to reinforce their beliefs through Google searches regardless of the validity of the claim. In essence, the Internet does not have the reputation of medical academic journals, which undergo an extensive review process before publication. Pairing a lack of regulation with massively increased accessibility, almost nearing ubiquity, allows for individuals to write fraudulent accounts of anti-vaccine rhetoric. This is extremely dangerous as it creates a pathway of confirmation bias. Individuals who are distrusting of vaccines search up adverse effects on the Internet and are met with large amounts of articles claiming the dangers of vaccination, which leads to social resistance and the term “anti-vaxxers”. Despite the presence of thousands of credible medical journals promoting the benefits of vaccines, “anti-vaxxers” actively reject these sources as “fake news” and governmental conspiracies against the American people. For this level of distrust, Federman (2014) suggests focusing on the delivery of vaccination information to use 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, and a bolstering of misinformation.

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 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, as a government without its people, is no government at all.

Audience 2: Letter to the World Health Organization

To the World Health Organization,

The primary responsibility of a government is its interaction with its citizens. Government officials had trust placed in them to efficiently control the government and improve citizens' quality of life. Among the most important factors for living a good life is to live a healthy one, and that is centered around the manner in which you handle the public perception of vaccines, as well as their participation rates. Regulating the expectations of your citizens regarding health, and the preventative measures they can take to help ensure that health is among the chief of responsibilities.

The possibilities through which this might be achieved are variable, and offer differing levels of success. However, there are a few key points that were discovered from case studies documenting the success or failure of vaccination programs. The absolute foundation of a government's successful response is a strong line of communication to its citizens in that messages are able to be disseminated rapidly and accurately. In a place like the U.S., that would preclude the existence of the Emergency Alert System, a system utilized only by the U.S. government to send alerts of any scale directly to its citizens' cell phones.

To contrast, the 2009 study in India showcased what a lack of information may do in a stressful scenario. Without reassurance or clear information being received from their government, the parents of children receiving polio vaccines felt uneasy, and did not trust the government agents sent to their homes. This would be the social resistance that results from a lack of communication, and makes it more difficult to accomplish vaccination programs and other health events. Had the government been honest from the start, and readily disseminated information through agents and pamphlets, the response to the vaccination programs may have been much more successful.

While developing a source of communication with the people is essential, being able to regulate the anxiety created from the honest messages delivered in times of crisis is also important. While it is imperative to maintain that integrity, and continue to deliver honest messages, it is also essential to regulate the response of your citizens into constructive behaviors.

The U.S. in 2015 had worked alongside the CDC during the Ebola scare and had run into exactly the same problem. Despite using verifiable data, and honest reporting on the low risk Ebola posed to the citizens, the citizens still felt anxiety. There was a disease on the loose, and nothing to be done about it. However, to alleviate that kind of passive anxiety, the CDC introduced its "just as well" strategy. To combat the Ebola virus, the CDC recommended washing hands as a DIY vaccine, which also helped prevent people from contracting the flu, a disease that is often overlooked in terms of lethality. In addition, flu shots were recommended to help eliminate Ebola virus false positives. Interestingly, the American people took up these habits rather quickly and a less severe flu season was had in 2015, in addition to stopping the Ebola virus dead in its tracks.

Much of the information gathered, and listed here as steps to succeed with one's population seems extremely intuitive. It is true that what is listed here is a gross oversimplification of the actual work that goes into fulfilling these main two points. However, these open ended guidelines exist as a checklist for countries to prepare their health agenda. If anything, the research proves that there are no shortcuts to an effective health based policy for a government.

Janice Jiang

Audience 3: Article to the common people

Health Policy and you: Cultivating a healthy relationship between government and citizens

The U.S. on average, loses about 110 million work days annually to the flu. To translate into a dollar amount, that's about 16.3 billion dollars that employees never get to see. For something considered so common and negligible, that provides an economic impact on the level of natural disasters. As a citizen concerned about their health, there is only so much that can be done on an individual level to prevent the spread of disease. However, the government is equipped with the means to assist in this goal, and is obligated to help provide a relationship with its citizens that has them feeling secure and safe.

Public health officials implement policies that they feel would best improve the health of their citizens. There are many subjective ways to interpret this, that research was done on health programs globally to narrow down what works, and what does not.

Perhaps the most integral point out of all the studies found that effective communication between a government and its people helped the most in facilitating public health policies. In governments like the U.S., its citizens readily accept the statistics that branches of credible authority, such as the CDC. That inherent trust is earned, not given. Alternatively, villagers in India were extremely wary of their government officials after door-to-door monthly vaccinations, and adverse side effects began to take place. With the government intentionally lying to its citizens, a strong social resistance against polio vaccination was formed.

With effective communication established, the ability for health officials to have a frank conversation with the population exists. It allows for a dissemination of information to occur, and educates the citizens on relevant concerns. An educated citizen base helps improve both vaccination rates, as well as dynamic responses in times of crises. Perfectly representing this would be the CDC “just as well” strategy, in which the CDC encouraged Americans to wash their hands as a way to alleviate the anxiety of a potential endemic at the time: the Ebola virus. Interestingly, what was found was a higher uptake of flu shots, to prevent false Ebola virus scares, as well as an overall decrease in the rate of influenza for the U.S. in 2015.

Recalling that the USA loses approximately 16.3 billion dollars annually to influenza, an effective public health response such as the one above provides a boon of tens of millions of extra dollars to productivity. Coupled with the decreased loss of life due to annual influenza, one can clearly see where a proper relationship with public health officials can benefit the whole of society.

That being said, the research has shown that this does indeed need to be reciprocated properly by the health officials. To summarize, health officials should provide their citizens with a reliable source to obtain health information from. Whether this be a monthly live report, or a source of writing to post online. By doing so, the government creates an environment in which the details of crises could be spread extremely quickly, as a concerned citizen would follow the governmental response closely for next steps. Therefore, a citizen concerned about their health

should ensure their government does follow these protocols, and if not, they should consider methods to create that kind of dialogue via petitions, public demonstrations, and personal letters to health officials of their country. Recent events notwithstanding, humanity stands on the precipice of medical greatness. We are closer than ever before to winning the battle on disease, and it is imperative that we remain pragmatic and constructively critical in our approach to global health.

References

- Centers for Disease Control and Prevention. (2009). Fatalities Caused by Cattle --- Four States, 2003--2008. Retrieved from <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5829a2.htm/>
- Hussain, R. S., McGarvey, S. T., Shahab, T., & Fruzzetti, L. M. (2012). Fatigue and fear with shifting polio eradication strategies in India: a study of social resistance to vaccination. *PloS one*, 7(9), e46274. <https://doi.org/10.1371/journal.pone.0046274>
- Determann, D., de Bekker-Grob, E. W., French, J., Voeten, H. A., Richardus, J. H., Das, E., & Korfage, I. J. (2016). Future pandemics and vaccination: Public opinion and attitudes across three European countries. *Vaccine*, 34(6), 803-808. <https://doi.org/10.1016/j.vaccine.2015.12.035>
- Rowell, A. (2014). Regulating Fear: The Case of Ebola in the United States. *SSRN Electronic Journal*. <https://dx.doi.org/10.2139/ssrn.2513130>
- Federman R. S. (2014). Understanding vaccines: a public imperative. *The Yale journal of biology and medicine*, 87(4), 417–422.
- Wilson, C., Marcuse, E. (2001). Vaccine safety–vaccine benefits: science and the public's perception. *Nat Rev Immunol*, 1(2), 160–165. <https://doi.org/10.1038/35100585>