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William Grant McCollum 4/21/2022

The Big Push Narrative and COVID-19 Vaccine Hesitancy among Black and Latinx Populations

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B.S., Kennesaw State University, 2020

Thesis Committee Chair: James V. Lavery, M.Sc., Ph.D.

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Abstract

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Background: The goal of my thesis is to describe the logical fallacies of the Big Push narrative and their contribution to COVID-19 vaccine hesitancy among Black and Latinx people. 11.2% of the 18+ US population have not had any doses of the COVID vaccine, and this indication of vaccine hesitancy is particularly disconcerting for racial minorities, who are disproportionately affected [4, 5]. Upon closing the major knowledge gap that exists in contemporary American society, citizens will have more opportunities to access information on the ways to build vaccine confidence and logical, effective approaches to countering the narratives of vaccine hesitant persons.

Methods: The data were previously collected by the Human Engagement Learning Platform for Global Health through semi-structured interview design with 57 FGDs [13]. I developed themes pertaining to the five elements of the narrative through a codebook and designated a code and type of narrative fallacy to patterns within the quotations. I identified which type of narrative fallacy fits these coded groupings of quotes, and then I conduct a sociological analysis.

Results: Based on my analysis, I found that subjects who recognized financial elitism were jumping to conclusions and were inclined to practice the control fallacy – that they have no control over their lives. The corrupt systems code was positively associated embellishment and the control fallacy. In addition, the control fallacy and emotional reasoning contributed to fear associated with the vaccine being developed too fast; and overgeneralization, fallacy of fairness, and disqualifying the positive contributed to stress. Finally, ulterior motives were characterized by the fallacy of change and polarized thinking, which were correlated with the lack of trust that subjects experienced. The control fallacy and disqualifying the positive were strongly associated with defiance or lack of respect.

Limitations: The convenience sample in the study may not be representative of the general population.

Conclusion: We must engage communities of racial minorities with honest dialogue to better understand the causes of their positions. I would also assert that a priority for stakeholders and policymakers must be to reduce racial disparities in access to vaccine information, vaccine doses, and health insurance.

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The Big Push Narrative and COVID-19 Vaccine Hesitancy among Black and Latinx Populations

Statement of Purpose

The goal of my thesis is to describe the logical fallacies of the Big Push narrative and their contribution to COVID-19 vaccine hesitancy among Black and Latinx people.

Background:

In my thesis, I will identify the logical fallacies in each of the elements of the Big Push narrative and explain the ways that they contribute to COVID-19 vaccine hesitancy. The Big Push narrative is a product of the vaccine hesitancy research conducted by the Human Engagement Learning Platform (HELP) for Global Health, which is a based in Atlanta, GA. Their team of 9 staff members works to help global health organizations translate their ethical aspirations into policy or practice through research, scholarship, training, education, and strategic consulting [1].

The COVID-19 pandemic has caused 80,588,854 cases and 987,034 deaths in the US as of April 21st, 2022 [2]. The vaccines have been a polarizing subject for many, and this is a problem because the nation needs vaccines to avert further COVID-19 disabilities and deaths. Mounting social pressure, internal conflict, and stress-induced indecisiveness in a social climate that has endured a 2 and a half year-long pandemic have been major contributors to vaccine hesitancy. A research paper defines vaccine hesitancy as a delay in uptake or refusal of a vaccine even when the vaccine is proven safe and widely accessible [3]. It can be influenced by demographic factors, health insurance, religious and moral convictions, political affiliation, level of income and education, and mistrust in the biomedical and healthcare establishment [3]. Economic and racial inequality are social determinants of health that cause people to experience more distance between one another physically and psychologically, stretching the social fabric of our world. This

phenomenon has been exemplified by the politicization of the vaccine, the civil unrest and protests against mandates in the US and Canada, and the adoption of attitudes that the vaccine is impeding on personal liberties. There has also been a shared experience of hesitancy pertaining to long-standing fear, mistrust, misinformation, antivaxxer propaganda, and religious and political affiliations [3]. Individuals in minority communities are less equipped to navigate the complexities of vaccine access and more likely to become hesitant to get vaccinated, and antivaxxers can impose undue harm on society by refusing safe and effective vaccines [3].

Out of those who are 18 years of age and older in the US population, 75.9% have been fully vaccinated, 229,337,262 (88.8%) people in that age group have had at least one dose of a COVID vaccine, and the 11.2% of the remaining US population aged 18+ have not had any doses [4]. The reason for the latter could be due to lack of access, medical or religious exemption, vaccine hesitancy or refusal, as well as those who thought that their previous infection gave them enough natural immunity. The current pandemic has widened health disparities and inequities as disease transmission has continued, and the issue of vaccine hesitancy has impeded on the restoration of population health. One author described a trend that is discernable in the US, which is that the high prevalence of COVID-19 vaccination hesitancy in these groups is disconcerting because it has disproportionately affected racial minorities; and refusing to get vaccinated may further increase the risk of morbidity and premature mortality in these populations [5]. Vaccination should be a priority among minority groups because the proportion of socially disadvantaged individuals is much higher among racial minorities, and there could be a higher confluence of factors associated with COVID-19 vaccination hesitancy in racial minorities [5]. Another contributor to vaccine hesitancy is decreased trust in health care providers due to the limited amount of Black people in health systems policy making [6].

The public health field is working to prevent, treat, and control a novel virus which has also brought about new social norms and defiant attitudes that substantially impact vaccine uptake. There are over 2,500 public health organizations in the US, many of whom are working on the distribution and administration of vaccines. Some of them are working to accomplish that equitably by reaching the last mile, which cannot be done successfully unless there are willing participants in those communities. Despite these efforts, disparities and inequities in COVID-19 vaccine access, administration, and coverage persist. This could have short term impacts of people experiencing higher rates of disease transmission, disability, and death. Additionally, it could have long-term implications, including putting strain on this country's health systems.

All cultures have traditionally passed down knowledge through stories. Constructing narratives is one of the most important ways in which the human race communicates, and an instrumental tool for teaching, learning, and making sense of the world. Stories are often experiential, persuasive, and grounded in strongly held beliefs, which can be conducive to building trust. Conveying a compelling story has the ability to engage the audience through ethos and appeal to their emotions through pathos in ways that sharing plain facts does not. They may be created to convey a specific message, used to consciously change perspectives, or internalized as the stories we tell ourselves about our lives and our environment [7].

However, a narrative fallacy is the tendency that people have to create distorted and flawed stories out of a sequence of incorrect accounts of past experiences (i.e. half-truths), while believing them to be true as they try to make sense of the world [8]. People focus on the few times an unusual event happens rather than the many times it didn't because inconsistencies slow down thought processes and the clarity of our feelings [8]. This can be dangerous. By thinking that what you are

seeing is all there is, you create an illusion of inevitability that underestimates and undermines the reality of all that exists [8]. The narrative fallacy addresses our limited ability to look at sequences of facts without weaving an explanation into them, which forces a logical link or an arrow of relationships upon them [7]. Explanations bind facts together by making them more memorable or more sensible [7]. When storytellers have distorted thinking in the process of sharing information and experiences, then it can negatively impact others because they are being pulled into a twisted narrative or mode of thinking. It perpetuates false perceptions and causes divisive and unsafe behaviors such as spreading disinformation and fear mongering at protests, which create barriers to vaccination. People may be susceptible to jumping to conclusions or unnecessarily doubting situations when the narrative has been twisted and transformed into an amalgamation of info that may not be true altogether. This practice is used to fuel the fear that people already have from the pandemic, which is indicative of the major shifts that are recognizable in US citizens' ideological frameworks and ways of conceptualizing their experiences of social, political, and economic forces. When individuals adopt these belief systems, we may see lower vaccine confidence within families and community health centers. When societies subscribe to these attitudes and outlooks on life, then we may see outright vaccine hesitancy and resistance at the population level.

The core aspects of fallacy are embellishments, oversimplifications, polarized thinking, overgeneralizations, disqualifying the positive, jumping to conclusions, emotional reasoning, control fallacies, fallacy of fairness, and fallacy of change [9]. The definitions of each aspect of cognitive distortion are important to note for the results section of my thesis. Embellishments are exaggerations using details that aren't true, and oversimplifications are distortions that reduce a narrative to simple terms that misrepresent the entire story [9]. Polarized thinking means viewing things in extremes; while overgeneralization takes one instance and generalizes it to an overall

pattern [9]. Disqualifying the positive is when one acknowledges positive experiences but rejects them; and jumping to conclusions refers to the tendency to make predictions based on little to no evidence and hold them as absolute truth [9]. Emotional reasoning refers to the acceptance of one's emotions as fact [9]. A control fallacy manifests as one of two beliefs: that we have no control over our lives, or that we are in complete control of ourselves and our surroundings [9]. A fallacy of fairness is when a person judges every experience by its perceived fairness [9]. The last fallacy distortion, fallacy of change, involves expecting others to change if we pressure or encourage them enough [9].

For example, some anti-vaxxers have taken the liberty of designating absolute validity to all Post Vaccination Adverse Events (PVAEs), regardless of reporting bias, because raising these safety concerns will validate and reinforce the story that they have constructed. People who are inclined to think this way have also claimed to make assumptions that all reporting in the Vaccine Adverse Event Reporting System (VAERS) must be accurate, even though the reports are accepted without judgement of causality or association. The numerous anti-vax narratives and the avoidance tropes associated with them are largely created by a few people who are most often driven by a motive to push disinformation, encourage distrust, and instill fear. Antivaxxers make up the storylines and perpetuate them to advance their agenda for their own personal gain and satisfaction, to use as defense mechanisms resulting from uncertainty and fear of the establishment, or for other reasons. Subsequently, the subcultures that make up the majority of vaccine hesitant persons who identify with these narratives are captured and captivated by them. Thus, they are willing to accept them as guiding forces for their attitudes and behaviors.

The Big Push anti-vax narrative consists of the notion that institutions are leveraging political and economic opportunities from the pandemic to advance their profit-driven agenda, establish social control, and assert political will through the COVID-19 immunization campaign. In order to articulate the storyline of the Big Push, I will first lay out its central ideas. These ideas can be best understood as a causal chain of phenomena that, when outlined in chronological order, illustrate the cyclical nature of this narrative. First, the global emergence of the novel SARS-CoV-2 virus/COVID-19 disease and the resulting pandemic threat it posed created significant economic and political opportunity. The US federal and state governments and large companies who are in the best position to access those opportunities seize them in order to 'control' the public and make substantial profits off of COVID response through diagnostics, therapeutics, and especially vaccines. They were able to assert dominance and control Americans by exaggerating the threat that COVID 'actually' poses to people's health. This dramatization and overemphasis of the pandemic by institutions was manifested by their efforts to conspire to manufacture a crisis, which must have been how they were able to rush the production of new vaccines and receive emergency use authorization (EUA) approval and licensure for them. Following that series of planned events, their conspiracy gained traction, credibility, and acceptance from the masses. As a result, the crisis provided the plausible basis and means by which they could expedite the process through Operation Warp Speed and largely ignore vaccine safety precautions and pharmacovigilance standards set and reviewed by the FDA. The conspiracy also legitimizes and justifies their actions of overlooking and ignoring other 'more important' diseases so that they can orchestrate their plans, which are driven by ulterior motives because they aren't related to improving the health of the people. These plans were enacted, and these conditions were created to perpetuate the unfair social order in the US. Finally, the injustice of controlling people took the form of vaccine

mandates, health guidance, and social recommendations, which may increase the social cost of getting vaccinated. The cycle repeats in others as the disinformation embedded within the Big Push narrative spreads [10].

My understanding of this narrative is that it's called 'the Big Push' because it's about institutions pushing vaccinations onto people as a means of seizing social, political, and economic control to increase their profits. This thesis will be focused on five specific elements of narrative fallacy in a target narrative. The Big Push's five main components are interdependent because each one contributes to the next such that they develop into entire narrative. The first element within this portrayal of the three COVID-19 vaccines that were rolled out in America is the conspiracy surrounding it. That is to say, the US government is conspiring with vaccine companies to control populations. The second part of the doubt surrounding these vaccines is that they were developed 'too fast', so people have incredulity and use that to confirm their deep social and political suspicions. Another driving factor of the Big Push is opportunism, meaning that the development of the vaccines was actually just companies and governments seeing an opportunity for political control, financial gain, and economic windfall. Additionally, people say that the virus was manufactured and exaggerated, so the 'opportunity' of the pandemic required governments and companies to create the whole COVID vaccine enterprise so that people would believe it. The Big Push has elements of people thinking that the vaccine is not motivated by concerns about people's health, but rather by ulterior motives; otherwise, we would also have vaccines for cancer. The powerful institutions that are in charge abuse their authority to control people and 'push' the vaccine onto them. Individuals tell this story with conviction [10].

Significance:

In this section, I will explain why it is important to address the gap in knowledge that was described in the Background section. This gap in understanding exists primarily in the US, and it is critical that researchers unpack and expand upon the logical fallacies in this narrative so that they can develop counter narratives to build vaccine confidence. The HELP for Global Health team contributed to the completion of a research project called the SARS-CoV2 Vaccines Information Equity and Demand Creation (CoVIED) Project. They are continuing to gain traction and generate evidence through their scholarly, cutting-edge work on countering vaccine hesitancy narratives. The significance of my thesis is that it supports their research in the objective of translating ethical intentions into policy and practice [1]. It is crucial that researchers produce robust evidence in support of these efforts. Meeting this need means supporting their team of researchers and practitioners by supplying relevant information and robust evidence that can be used to combat faulty logic in narratives as they continue to work toward content mastery and subject-matter expertise. By bridging the gap between fact and fallacy or filling the void that left a lack of understanding regarding the Big Push narrative, the resulting findings may facilitate the creation of healthy dialogue in this space and improve the current circumstances of those with health concerns regarding trust in COVID vaccines, vaccination status, and moral norms.

Upon closing this major knowledge gap that exists in contemporary society, citizens will have more opportunities to access information pertaining to the ways that they can build vaccine confidence and logical, effective approaches to countering the narratives of vaccine hesitant persons in marginalized communities. Filling the gap in knowledge would also mean that researchers and practitioners in the fields of public health, health care, and sociology would be able to better understand, provide explanations for, and contend with vaccine hesitancy narrative fallacies. Professionals in any field that has been affected by immunization policy and programs

will be better positioned to navigate the overall climate of their interactions with individuals who have lower vaccine confidence if they are equipped with risk communication tools and new knowledge about the ways in which a narrative can inform people's decision-making processes. Working toward a world where these kinds of twisted narratives are not continuing to be spread is significant because it would restore order where certain individuals have caused chaos in their responses to health communications and immunization campaigns. It also provides a useful method for striving toward a social climate that prioritizes compassion-based ethics and justice within the realms of education, research, and training for professionals within vulnerable populations that have historically been ostracized and oppressed. It equips public health workers with the frameworks and the tools they need to address the emerging problems from this pandemic by offering support to vaccine hesitant persons throughout the decision-making process at the community level. My aspiration would be for everyone to reclaim an understanding of how vaccines work and why they are useful at preventing pandemics.

Vaccine hesitancy directly and indirectly causes people to refuse vaccinations. If the societal objective is to ensure the equitable attainment of herd immunity among racial minority communities and to optimize vaccine accessibility, increased efforts must be made to bolster vaccine confidence using culturally sensitive, community-centered approaches [11]. Subsequently, it is imperative that the US explores strategies to achieve equity in access to and administration of COVID vaccines for racial minority groups who have been disproportionately affected by the pandemic [12]. The general public has not made enough evidence-based decisions throughout the pandemic, which have led to misunderstandings and misinterpretations. The power of shifting narratives and the utility of proven interventions such as counter narratives are increasingly important to combat anti-vax misinformation and disinformation. The US population

experiences inconsistent and inaccurate media reports, contradicting public health communications, political control over those communications, scientific uncertainty, and intentional disinformation campaigns. People consume this information through social, political, and cultural filters, but only after it is processed through media outlets that use algorithms to cater to consumer interests. This society will undoubtedly benefit from addressing narrative fallacies, which will eventually lead to our utilization of the preventive medicine that we have stockpiled and our becoming more unified in our efforts to achieve equitable vaccine allocation.

Methods:

In this paper, I conducted a sociological analysis of the Big Push narrative. This section is a structured format of the methods that I used in my interpretation and analysis of the narrative.

Sampling: In terms of my study population, the specific target population being addressed in this research will be the individual men and women in America who have racial and ethnic identities that are African American and Latinx. Based on the population being generalized, the sample is aimed at representing vaccine hesitant persons with particular attention directed to people who are living in communities which have had experiences of racial discrimination or systemic racism.

The Focus Group Discussions (FGDs) were conducted between April 16th, 2021, and November 23rd, 2021. In terms of the sample, these are nationally representative, single-topic FGDs of people from Albany, Atlanta, Augusta (GA); Epes, Tuskeegee (AL); Columbus, Lima (OH); Chicago (IL); Flint (MI); Harrisburg, Philadelphia (PA); Los Angeles, Marysville (CA); Little Rock (AR); Queens, Bronx (NY); Russellville (KY); San Antonio (TX); Tuscon (AZ); Florida; and a sample of Community Health Workers from SC, KY, MO, MI [13]. To summarize the sampling, there were 364 participants, 252 of whom were female and 108 were male; and the total age range of all participants was 18-84 [13]. There were 4 White Non-Hispanic adults, 90

African American Non-Hispanic adults, 1 Native American adult, 24 Latinx adults, and 9 who indicated their race as Other [13]. The FGDs cover all regions of the US, with the exception of the Pacific region.

Data: The data source is the Human Engagement Learning Platform (HELP) for Global Health's FGD files. The collaboration is a part of another project with Global Health Crisis Coordination Center called the SARS-CoV2 Vaccines Information Equity and Demand Creation (CoVIED) Project. Dr. Jim Lavery and his HELP for GH team led the design, implementation, and analyses of the ethnographic work and participated in the design and implementation of the community engagement and communications activities [14]. The rapid ethnography component of their project was led by HELP team at Emory University in a partnership with the National Association of Community Health Centers (NACHC) [15].

I used existing scholarship and documents as my data. The data type that I used consists of secondary data in FGD verbatim transcripts. From these, I used the data from the following 9 FGDs: Antony, Sonnet, and Hearts from RSI Albany 08/22/21; Leo from Esperanza SDG1 6/23/21; Andrea, Candace from Esperanza PDG1 7/01/21; Wanda, Nina, Aria, Yue from Heart of Ohio SDG1 6/18/21; Leigh, Jock, Rach, Evie, Macia from Eisner Health PDG1 8/11/21; Trixie, Armando from Hamilton Health Center SDG 1 8; Rodger, Marina from Spectrum Health 10/08/21; Ericka from Carver DG1 5/14/21; and Sherry from SDG1 Albany 6/3/21. All transcripts have been deidentified, and all subjects' names were replaced with pseudonyms for referencing their quotes.

Data collection: The data were previously collected by HELP through procedures that included a semi-structured interview design with 57 FGDs [13]. The FGDs were designed to collect insights about key ideas, concepts, rationales, and influences that might provide valuable

content for the development of public health messages to encourage vaccine uptake and specific engagement strategies or modes of communication. The intention is that these messages might resonate with the individuals and communities in question and might improve their willingness or ability to seek vaccination [15]. FGD interviews were conducted primarily to explore how the features and characteristics of the various hesitancy types derived from the individual interviews apply to and resonate with other individuals from the same, or different, social networks and groups [15]. The data were collected through 1.5-hour focus groups in each site, which were conducted via Zoom and video/audio recorded (with participants' permission) [15]. The recordings were transcribed, and the transcripts were analyzed by the analysis team. There was a maximum of 8 and a minimum of 4 participants in each FGD, and participants were offered an incentive for their participation [15]. The FGDs covered topics concerning demographic information, health, vaccination status, and vaccine hesitancy.

Data analysis: The procedures that I used to analyze the data consist of a sociological analysis. I developed codes and themes that contain relevance to the five elements of the narrative. Then, I took an analytic approach of systematically assigning themes and codes to group the quantitative data. Next, I conducted my conceptual analysis in response to those patterns. I did this by providing an explanation of the elements in the narrative and identifying the logical fallacies within quotes that represent examples of each of the five components. I used linguistic analyses on pertinent quotes and determined which patterns in the data align with greater societal trends in vaccine hesitant persons. My study design is exploratory because this study will lead uncovering more instances of narrative fallacy among vaccine hesitant persons.

I created codes for each of the five themes, which correspond to each element of the narrative that I assessed. The first two were derived from the conspiracy element. They were the

financial elitism that highlight powerful people whom the participant does not trust or feel supported by; and **corrupt systems** that were described through experiences of perceiving conspiratorial activities within institutions and systems in US political climate. The 2nd theme was that the vaccines were developed too fast. The codes that I used for that theme were the **emotional responses of stress** when people talk about responses with implications that their cortisol level changes and they have feelings of tension building up in their brain and body, or feeling that others place added stress on them; and **emotional responses of fear** as they mentioned a sense of being afraid (can be physical, mental, or emotional) due to external circumstances that are causing their fearful experience. The 3rd theme was opportunism. The codes were **manipulation** that takes the form of government or corporate lies, propaganda, or pressuring people to get what they want them to do; and **exploitative behavior** which are the actions that powerful individuals or institutions engage in to advance their agenda, control the public, and make money. The 4th theme was that the crisis has been manufactured and exaggerated. This element led to the creation of two codes, which were **denial of disease severity**, meaning social perceptions that judge or shame people for their experiences or beliefs of the COVID disease burden; and **conflict and isolation from social relations** which is indicative of how relationships have been impacted as a result of COVID to create differences in beliefs. Finally, the last theme was ulterior motives. When I identified this theme, I used the code **lack of trust** when a person characterized their untrustworthiness of institutions, and contempt prior to investigation; and I used the **defiance or lack of or respect** code when subjects expressed disrespect, disdain, and refusal to take orders from the establishment, unwillingness to cooperate, backlash and isolation. Within the respective themes, a code is designated to each quotation. In addition, I identify which type of narrative fallacy fits

these coded groupings of quotes, and then I conduct a sociological analysis. My codebook can be found here:

Theme	Code	Description
Conspiracy (#1)	Financial Elitism	Powerful people that participant does not trust or feel supported by
Conspiracy (#1)	Corrupt systems	Experience of perceiving conspiratorial activities within institutions and systems in US political climate
Developed Too Fast (#2)	Emotional responses of stress	Cortisol level changes and feelings of tension building up in their brain and body, or feeling others place added stress on them.
Developed Too Fast (#2)	Emotional responses of fear for safety	A sense of being afraid (can be physical, mental, or emotional) due to external circumstances that are causing their fearful experience
Opportunism (#3)	Manipulation	Takes the form of government or corporate lies, propaganda, pressuring people to get what they want them to do
Opportunism (#3)	Exploitative Behavior	Behavior that powerful individuals or institutions engage in to advance their agenda, control the public, and make money

Theme	Code	Description
Manufactured and Exaggerated (#4)	Denial of disease severity	Social perceptions that judge or shame people for their experiences or beliefs of the COVID disease burden
Manufactured and Exaggerated (#4)	Conflict and isolation from Social Relati	How relationships have been impacted as a result of COVID to create differences in beliefs
Ulterior Motives (#5)	Lack of trust	Characterized by untrustworthiness of institutions, and contempt prior to investigation
Ulterior Motives (#5)	Defiance or Lack of respect	Disrespect, disdain, and refusal to take orders from the establishment, unwillingness to cooperate, backlash and isolation

The following are the types of assessments made by the HELP team:

"Data and Data Analysis: Focus groups

a. With the permission of the participants, focus group interviews were recorded and transcribed by a professional transcription service with appropriate privacy and confidentiality safeguards.

b. The focus group interview transcripts were reviewed by the HELP team to elicit insights related to how well the emerging "types" or "personas" resonate with and reflect the experiences and perspectives of the focus group participants, and where points of disagreement or revision occur.

c. The focus group transcripts were reviewed by the HELP team to assess the impact, and range of perspectives—including key points of convergence and divergence—about "test" messages and/or message elements encouraging the uptake of the COVID-19 vaccines." [15].

Methods Continued - Sociological Analysis:

In this section, I will be describing logical fallacies/narrative fallacies associated with the Big Push narrative. In order to unpack and expand on each of these elements further, I am going to provide examples of them by way of quotations and critically evaluate each one.

Theme #1 – Conspiracy:

The Big Push has elements of conspiracy within it, which are propagated to support some very outrageous claims. People make attempts to spread conspiracy theories saying that the government is conspiring to assert social control through administering vaccines. The conspiracy promotes extremely impractical and unlikely ideas, such as the COVID-19 vaccine microchip theory, which says the government of elite world leaders like Bill Gates would administer vaccinations to implant magnetic tracking chips that connect to 5G so that they could track citizens. The two quotes below have been labeled with the **Financial Elitism** code:

Sherry (00:32:00) "It was the fact that it was Bill Gates, it was a couple of other things that were not altogether true about the vaccine… that's right it was microchips, I forgot. But it keeps you out of the situation as to where you start arguing up with somebody because I wasn't going to argue with this individual."

Leigh (00:38:47): “I think because they don’t care about your feelings. They just want you to get the shot and forget about the aftereffects because this is not even FDA approved... Why? It’s just like Bill Gates said, “We need to depopulate.” This is one great way to depopulate. Right? (00:39:07) It is a very scary thought. It's a control thing. That's what it is. First thing is this shot. Then what's next? A booster? And then what's next? A chip in your wrist to scan your social security, your paycheck. Everything is going to be... That's what it's going to come down to.”

Analysis: The commentary that Leigh gave seems to spiral into chaotic thought very quickly as he describes a negative process of total authoritative control being sought after until individual power is taken away. Additionally, I noticed how Leigh begins by posing questions about what will happen next in a curious way, but the statement ends with certainty through a definitive declaration of what it will come down to. The problem here is that the ‘what’s next’ isn’t clear because it wasn’t effectively articulated. The issue with his logic is that the shot has already been manufactured and moved through the pipeline, so someone has to coordinate and orchestrate those efforts. He may not like or trust the government or the scientific and medical establishments, but those are the entities responsible for this type of operation because they have the capacity, they control the resources, and society has elected them as capable of getting the job done. The government is actually collaborating through coalitions that work toward unity and a common goal of offering free public health interventions, but that is viewed as questionable because of their perception that they may not actually see Americans as a unified nation trying to help its citizens. Leigh may be saying that the cost of vaccinating Americans is the entire world. Objectively speaking, I don’t see how they arrived at that conclusion because one of the primary reasons that COVID transmission has recently decreased is the immune responses of the vaccine in hundreds of millions of people. These quotes are coming from a psychologically defensive and cynical place

of having deep concerns over other people controlling both of them. These focus groups facilitated dialogue that brought about people's honest interpretation of how, according to their point of view, authorities are trying to wrestle for control in a situation in which they should not have influence and authority.

The next two quotes have been labeled with the Corrupt Systems code:

Macia (00:42:52) "I just feel that politically, yes, we are not being told the truth. So at the end of the day, I feel that they want to use this propaganda as "We're a unit. We are all going to live. We are a unit. We're trying to help each other out. We're trying to make Americans live." But are they really? Like if they do want Americans or the people that live in America live, but at what cost? It's the entire world, which makes it scary."

Leo (00:15:49): "There's a small segment that feel distrust about taking the vaccine, mainly because of the big push to do it. And why is the governor wants us all to get vaccinated? Some of them think that by getting vaccinated, they're going to get infected or there's things that it's just to control you. And then you have the ones that do want to get vaccinated and it's frustrating sometimes when they can't get it because there's not enough vaccines in some places."

Analysis: Leo's response is also questioning the administration and the Governor of Georgia. Both respondents seem to question and be critical of the Big Push but doesn't have a clear description of how, in practical terms, these people would control you with the vaccine or what this magical mechanism of control hidden within the vaccine is. This is what makes conspiracies somewhat hard to believe on one end of the spectrum, but for the subpopulation that rejects vaccines, the argument is very compelling. Contrarily, the scarcity of resources and disparities or inequities in vaccine allocation is addressed by the Community Health Worker who

is going by the pseudonym ‘Leo’, which highlights the need that isn’t being met in low-income communities despite the large supply that the US controls.

Macia’s quote is indicative of influence that may be aligned with conspiratorial misinformation, which can spread rapidly on the internet (e.g. Twitter). These kinds of ideas can be especially dangerous when famous people with influential platforms such as Robert F. Kennedy Jr. share and emphatically defend or promote them. RFK Jr. has become known for spreading anti-vaccine propaganda. The idea that there are multiple routine immunizations that are causally linked to developmental disorders like autism has been discredited for decades on the basis of scientific evidence. However, when people hear that a Harvard-educated lawyer with the namesake of a trusted and beloved politician is supporting this conspiracy through his own deceptive form of activism, then it makes it more digestible and easy to believe for people who aren’t inclined to think for themselves and may be susceptible to falling into this type of extremist ideology. When people are socially isolated and fed lies, they have a tendency to believe these made-up tales because of the emphatic ways that they are presented and delivered. Thinking requires effort, and when people aren’t willing to exert very much mental force, they become overtaken by the thoughts of others. People can also arrive at these conclusions by thinking too much and becoming engulfed in so much information that it becomes overwhelming, causing them to burnout or not know what to believe and arousing intense suspicion of anyone in a position of power. As more information becomes readily available, these individuals can be misguided or ignorant in that they are having increasingly difficult times distinguishing fact and fallacy. They can also arrive at these conclusions because they are apathetic. They may even be angry and spreading misinformation in a retaliatory or ‘trolling’ way, which may be more harmful to their social circle due to the attitude and malicious intent which are the drivers that shape their sentiments and world views.

Theme #2 - The Vaccine was Developed ‘Too Fast’:

The second element of the Big Push is that the COVID-19 vaccine was developed ‘too fast’. The following three quotes have been labeled with the **emotional responses of fear** code:

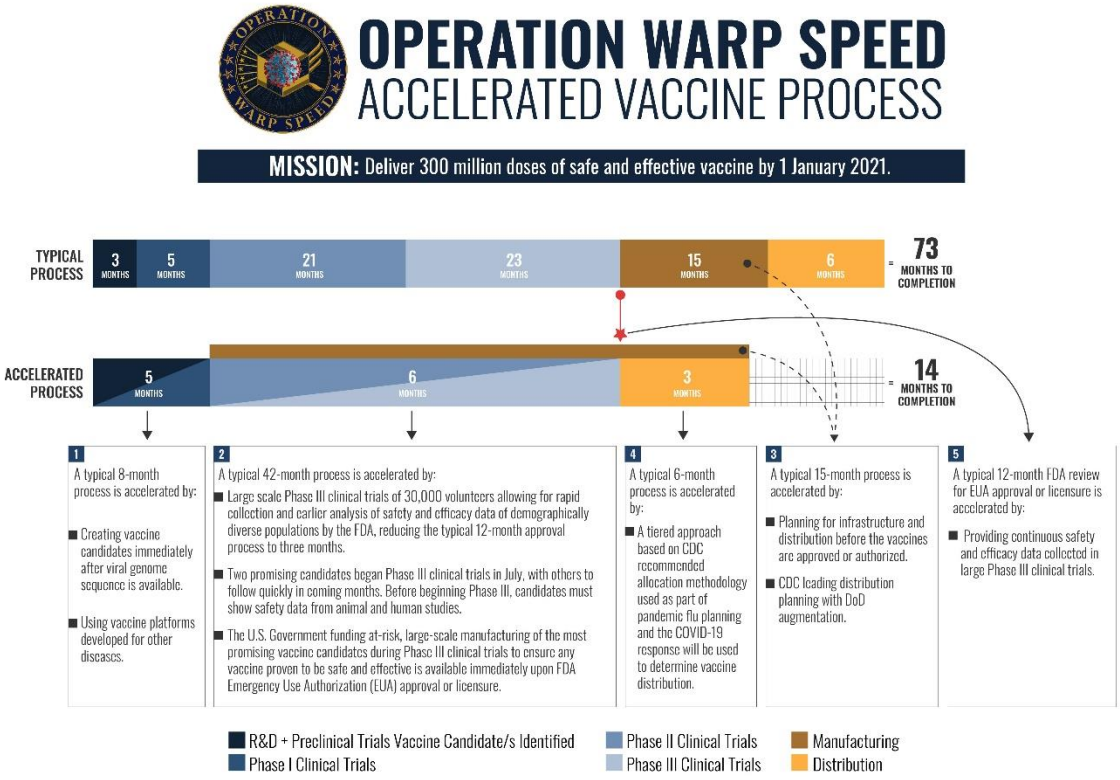
Eisner (00:21:55) “I am fearful of the vaccine because again, it is not FDA approved, and two, why are they pushing this vaccine so hard? It should be our body, our choice, but it's not.”

Marina (00:45:58) “… all of this stuff about something that just happened so fast. It’s just crazy to me and people still dying, and they vaccinated too.”

Rodger (00:05:35) “Because they’re like forcing it on everyone. It’s like, it’s a lot of vaccines out here that they’re not forcing on everyone. And it’s like with this vaccine, you can’t do certain things unless you’re vaccinated. So it’s kind of scary just to know… it came in short notice. I don’t really know much of how long it took them, but that’s what I’ve been hearing. That it came on short notice and they made the vaccine really fast.”

Analysis: While some individuals have been fooled into believing that the COVID-19 vaccines are dangerous to the average person with no predisposition to anaphylaxis from the ingredients, others have valid concerns about the timing of their development. There may be confusion from these individuals regarding who is responsible for vaccine production and who within the current administration and CDC are delegating the orders for vaccine distribution. If they were coming from a place that was informed and listening to qualified scientific experts, they would not have as much of a reason to be scared. The vaccine has been approved by the FDA, and although it may not have been at the beginning of the developmental process, it did receive authorization. There are very widely published and publicized justifications and rationales for why

and how the vaccine was developed and successfully navigated through the pipeline in the time frame that it occurred in. Some claim that it didn't happen fast enough, but I consider it a miracle of modern-day medicine. This infographic of the timeline of Operation Warp Speed's accelerated vaccine process is a clear explanation of the way it was accomplished.



[20]

A significant amount of research and innovation have been carried out and actualized regarding mRNA since the 70s, particularly in the decades that preceded the COVID pandemic to develop the technology and test mRNA vaccines for Rabies and Ebola [21]. This preparation allowed the COVID vaccine to be expedited because scientists were able to use those building blocks to find the sequences needed for the new vaccines to achieve FDA approval [21]. Additionally, this was carried out in record time because there was a critical need to interrupt the

chain of transmission. People may find the unprecedented circumstances of this Emergency Use Authorization (EUA) to be untrustworthy due to their own uncertainty and interpretations, but the remarkable clinical trials that were conducted globally generated excellent results that were substantial and sufficient to rollout three vaccines. The Pfizer and Moderna vaccines both had about 94-95% efficacy, which are some of the highest in the history of vaccine development [3].

The following three quotes are labeled with the **Emotional responses of stress** code:

Kipp DG1 Transcript (00:13:00) "One reason why I am so apprehensive... I was having this conversation with my microbiology teacher… what he said was between two to five years for a vaccine to be created and to be sent out for the public to have access. This particular vaccine, he said it was created within almost less than a year. And so he's like, "It's still being tested," and all that good stuff. And so for me, when he said that, that made me more apprehensive."

Leigh (00:30:10) "Right now, no, it will not change my mind. Actually too, all these nurses that are willing to lose their job that they love… because they don't get this vaccine, but they needed them 18 months ago when all these people were coming in positive for COVID and they've seen all these cases come in the hospital. Why are these nurses refusing it? If there's no long-term effect, we don't even know. All these people are coming out too with blood clots, heart problems. I mean, we don't know the long-term effects of the vaccine. Why are people willing to lose their job of getting a shot? Why does it have to come to that?"

Analysis: The quote says that health care workers previously needed vaccines, which is an acknowledgment of their effectiveness and necessity in settings with high transmission. Referring to 6 people as 'all these people' is not an accurate representation of the cases who developed adverse conditions such as blood clots which may or may not be related to their vaccinations.

Leigh's comment is a prime example of embellishment in a narrative. As it relates to safety, anaphylaxis after COVID-19 vaccination is rare, given that was reported to have occurred at a rate of 11.1 per million doses for the Pfizer vaccine [3]. In terms of the J&J vaccine, one article explains that after administration of the J&J vaccine, "Common side effects were found to be transient and were gone after a few days… A pause was recommended by the FDA and CDC after reports of six cases of a rare and severe type of blood clot in individuals following administration of the Janssen COVID-19 Vaccine was observed... Following the review, the FDA and CDC recommended that use Johnson & Johnson's Janssen (J&J/Janssen) COVID-19 Vaccine resume in the United States, effective 23 April 2021. However, women younger than 50 years old especially should be aware of the rare risk of blood clots with low platelets after vaccination." [3]. Of the 660 million doses of the 2-dose mRNA vaccines regimens that are needed to vaccinate the population of the US, over 565 million doses have been administered % fully vaccinated: **65.8; %** with at least one dose: **77.2) [8, 9]**. The policies and approval from the regulatory agencies and the very rare Post Vaccination Adverse Events (PVAE) or complications in health outcomes that have been reported have been a demonstration that the ingredients and formula used in these products are, in fact, safe. J&J's product could raise questions, but ultimately it has also been proven to be safe by the measure of vaccine pharmacovigilance standards given that PVAEs only occurred in 6 out of the total number. These data are indicative of the narrative fallacy that occurs in the element of the Big Push which describes the COVID vaccine as being developed 'too fast'.

It seems like many people who have had confusion about the effectiveness and protection that the vaccine provides. They have questions because of the widespread belief that led to the misunderstanding that vaccines are tools that completely prevent infection and illness. That is to say, if someone gets sick, then this must mean that the vaccine is not working or failed. The critical

piece of information that these people are missing is that vaccines support the process of our bodies to continue building immune memory, but there are wide degrees of variation in how well they protect us. There aren't any vaccines that are 100% effective. When a population has high coverage rates, a minor percentage of vaccinees still won't not have full protection, and the immune memory may gradually fade for other beneficiaries. The variants are also evolving rapidly, so we have still seen breakthrough cases with every vaccine. Marina brought up that people are still dying. While that is true, most of the people who were infected that had immunizations and booster doses showed symptoms that were milder and significant decreases in likelihood of hospitalization for a severe case. The vast majority of people with severe illness that ends up being fatal after hospitalization are unvaccinated. Public health officials have been deliberate in their communications to let the public know that while the vaccine is an important tool to end this pandemic, it's not a silver bullet. Science is constantly evolving and changing, so it is not with the utmost certainty that I lay my claim about vaccines and their safety and utility. These medicines are not perfect, and there have been rare instances of post vaccination adverse events. However, it doesn't seem rational to resist them because the PVAE cases are extremely rare. It doesn't warrant a mass hysteria of institutions pushing the vaccine onto individuals as a form of social control.

Theme #3 – Opportunism

The following quote has been labeled with the **manipulation** code:

Val (00:58:18) "I'm thinking Jansen must be the medical entity that is owned by Johnson and Johnson. I would just hope that they're more ethical than what we heard about the talc situation. The reality is that, at least the way I see it, people consider budgets. Budgets don't consider people.

The bottom line of the economy being more valuable than the citizens, to me, has been made very real. Very in your face. "Hey, look, we know you could get sick, but what you need to do is come on in this job and make this money for us.""

Leigh (00:39:07) "All these high-power people with all this money, that's what they're doing. They're putting everyone against the wall. Just Obama, he had a big old party. I didn't see nobody with no mask on. Oh, but everybody was vaccinated. Yeah, sure. Right. People with money, I'm sorry, they can do whatever they want, but people are being pushed against the wall to get this vaccine. I don't understand why is it so important? Why?"

Analysis: The opportunism element of the Big Push pertains to governments and companies taking advantage of the chance to use the political and economic opportunity that the virus created so that they can control the public and drastically increase their profits. This part of the narrative establishes the foundation for the remaining storyline because it designates the motive. Leigh's statement is an example of narrative fallacy because it is drastically overstating and embellishing the current situation regarding the government's role in the vaccination campaign. The stance that multiple people in this data set take is that those who control large amounts of money and power are in positions that are deserving of scrutiny due to their 'inherently' questionable or potentially manipulative and exploitative intentions. Their train of thought is that elitism, prestige, status and financial and social capital give people privileges where the rules don't apply to them in the same ways that they do to everyone else. The growing wealth gap in this country further reinforces the feelings that the few people at the top of the political and economic ladder are patronizing the US population through vaccine manufacturing and delivery. According to antivaxxers, if opportunists are viewing the pandemic as a way to capitalize on suffering for their own interests in power,

political will, and financial gain, then that would supposedly provide them with good reason to devise and carry out immunization plans.

The following quotes have been labeled with the **exploitative behavior** code:

Candace (35:00): "In Asia, they're forcing them to take the vaccine. And if they don't take the vaccine, they're going to jail… It makes no sense."

Wanda (00:54:25) "The historic and current mistreatment and injustice of minorities is part of the reason for mistrust, and Yue share because of the huge money involved between pharmaceutical companies and the government."

Analysis: Candace seems to insinuate that she has a fear of our government using immunization campaigns as a form of control to establish policies that are further away from democratized systems and more aligned with an authoritarian state. There are undoubtedly historic and current mistreatments of minorities, which I can see why those past experiences would inform her current circumstances. There are those who haven't had their shots due to inaccessibility, inconvenience, or exemption, but the individuals who are adamantly opposed to vaccines as a result of their choice to subscribe to the Big Push have a greater level of becoming separate and apart from the large majority of the population. They are becoming siloed by the nature of their ideas because they reject the biotechnological tool that has allows many people to safely reunite, causing the population of those who have been beneficiaries of vaccine coverage to form perceptions and judgements about antivaxxers. Certain states have requirements which don't allow people admission into public spaces unless patrons show proof of vaccination. The pandemic has isolated people physically and socially, but racial and ethnic minorities have become particularly ostracized due to the existing injustices and oppression that they have historically faced. However,

it seems that the participants may not be asking the questions that will lead to effective, meaningful, and improved health outcomes. It is also important to delineate between the logically flawed frameworks or illogical thought processes and the reality that these strong opinions are a result of the medical distrust that some people of color justifiably have. There are also certain wealthy people and people in office who warrant concern and action. The nuance that Wanda's thought process doesn't consider is that the American people don't have to pay out of pocket to receive their Moderna, Pfizer, or J&J doses. While the pharmaceutical companies certainly benefit from the distribution of their viable vaccine candidates, they are still fairly supplying a product to meet the market's demand. These essential medicines offer valuable protective effects that are too valuable to deny, so there is an inevitable process regarding their administration to some extent that cannot be stopped.

Theme #4 – The Crisis was Manufactured and Exaggerated:

The fourth element of this narrative is that the crisis was manufactured and the disease burden is exaggerated. This quote has been labeled with the **denial of disease severity** code:

Speaker: "Many Kowzars, especially the older ones, believe this disease does not exist, something people are using to make money and an idea from the infidels."

Analysis: This is a distortion that denies COVID altogether. Declaring that the virus isn't real or that vaccines are not to be trusted because the companies have profit motives is a baseless claim, which has no scientific backing and a grave social consequence. It has become clear that the conspiracies that the crisis has been a manufactured are unsubstantiated and lacking truth and evidence in their arguments. Everyone is entitled to their opinions, beliefs, and sentiments, but that doesn't mean that they are correct or safe.

The following quote is labeled with the **conflict and isolation from social relations** code:

Heart of Ohio PDG1 Transcript (00:05:15) “Who is the most trusted doctor in the United States and only one name comes into my mind and that is doctor Anthony Fauci so he himself is now in a bad situation because he and the government are in conflict and they are saying this man has been controlling people’s lives for the last year and half and he was playing with people’s lives, so some Republicans are proposing by saying that this man has caused trouble for the people and has to be fired and the Democrats are on the other hand saying if this man is fired, who will replace him?”.

Analysis: Vaccinated beneficiaries develop some immunity and demonstrate social responsibility, while refusal and indecision keep people who don’t get vaccinated separated from the rest because their social circles may perceive them differently and not want to be in physical proximity to them unless they have established that form of protection from the virus. Antivaxxers who are operating under the assumption and making claims that the government is intentionally doing harm by administering the vaccine for their own profit are projecting a fabrication. That train of thought is not aligned with the strategies and aims that the NIH, CDC, and government officials have proclaimed themselves. The US is grappling with an increasingly distrustful public amid even better technological advancement and more efficacious vaccines. Understanding the immunological differences between the vaccines and the real-world effectiveness is critically important. I also want to honor the power of intuition and the will power of those who are inspired with no reason behind why they are right, but feelings aren’t always reality. That aspect of narrative fallacy is called emotional reasoning. To exercise some mutual understanding, I don’t think that possessing an unwavering submissive attitude toward authority with no compass of inquisitive, critical thought is necessarily the path to truth either.

Theme #5 - Ulterior Motives:

The last element of the Big Push narrative is the claim that governments and companies have ulterior motives. The following quotes have been labeled with the **lack of trust** code:

Nina (00:21:22): "If you come from a biblical background, your response to that is money can be the root of all evil, so people may be seeing it as such… Why are these incentive for money being given to take a vaccine?... Do your research, because people do it for different reasons. Some people say the only reason why I'm getting vaccinated is because I need to travel… People have different agendas and reasons for getting a vaccine."

Ericka (00:10:00): "I think it has a lot to do with money. I think a lot of money was put into this virus vaccine by a lot of companies. And I think the push was monetary. I mean, at the end of the day, I think even with medicine, it's about business. So I think a lot of the push was people invested… Maybe they're not invested in the way they should, like she said about HIV or other diseases, but maybe because it was such an excessive global effect and something that people came together with funds, I think, not just in this country, but everywhere. And I think the fact that it was a lot of money put behind the vaccine, that it was a push."

Rach (00:35:06): "The other is just the different stuff that's happened throughout history where they've tested things on people or done things against people's wills like sterilization in women or certain diseases outbreaks in certain communities. When you hear about all that and you have your trauma and then you add the insecurity of how they go back and forth, I think that's what just kind of has piled up into that fear. And now being pushed more in so fast to get it, it's not… let alone that it's not approved, but it's being pushed so fast… Just not making it one, a political thing. That

really make it very untrustworthy. The other thing is just having this push for it and not undermining. It seems like we're being pushed to kind of go at each other's throats."

Analysis: One example of distortion in the narrative fallacy was demonstrated through Rach's quote because often times trauma is expressed by people through many different forms of fear, delusions, and resentment. People may mistake each other's trauma responses for maliciousness, but that is not always their intention. They could think that choosing to remain unvaccinated is protecting themselves or their children, but it is having the opposite effect. That choice is actually being made on the basis of feelings caused from distrust without good reason to, which would also be emotional reasoning. These quotes depict the subjects view on biotechnology companies as the industries that are responsible for the production of vaccines and other pharmaceuticals, and that they should operate differently. Maybe they should, but people keep taking the medicines as they are becoming available.

As a result of their views, Ericka and Nina consider governments and businesses to have hidden financial interests and stakes in this process. They think that authorities are pushing it through the pipeline not to improve health, but to make millions or billions of dollars in profit for themselves and their companies. If that were the case, then it wouldn't have aligned with the reality that the government provided stimulus checks, free at-home COVID testing kits, and free vaccines (with circumstantial monetary compensation as an incentive) to nearly every American who qualified and desired them. The trillions of dollars in relief spending to soften the blow on small businesses and numerous other sectors also doesn't align with their arguement. Many businesses were negatively impacted and had diminishing returns throughout most of the pandemic, which is why the economy is slowly working toward recovery. They have pointed out the ulterior motive part of the narrative, but it is counterintuitive to make that claim in the current climate of President

Biden's administration issuing more government subsidies and increased spending for programs that benefit the lower socio-economic classes.

The following quotes have been labeled with the **defiance or lack of or respect** code:

Quote - Leigh (00:23:31): "The government, the president. Why are they pushing so hard to everyone to get this vaccine?... I think to control us… I think it's a control issue and this is just the beginning of it." (01:12:36): "I'm sure they're probably against the wall themselves with their company, their big CEOs. I'm sure they're against the wall so they're just putting out what their boss is telling them then what their boss is telling them. It just goes upper and upper and upper. I mean, since this whole COVID started, I have not had COVID, I have not been tested for COVID, no symptoms, no nothing."

Analysis: I have heard many people assert this point and base their argument off the fact that they, themselves, have not had a diagnosis, so it must not exist, or it must not be that bad. Many people extend that phenomenon into their social circle to further 'justify' their stance by asking others, 'Do you know anyone who has contracted the disease or died from it? No? Exactly, then it must not be that bad.'. The issue with that is that it excludes the entire human race outside of themselves, their family, and their friends. They adopt a convenient perspective of choosing to view the issue selectively through a narrow scope does not account for or take into consideration the actual disease burden. The element of conspiracy overlaps with this facet of the quote, and the defiance code applies directly to this text because he is expressing that he does not want to be pushed. His 'self-determination' of his behaviors shows that his reactive demonstration of not getting vaccinated is a sign of pushing back against the Big Push, but the Big Push isn't real.

Quote - Antony (01:11:42) "I automatically thought that was fishy anyway for somebody to offer you money to take a shot. I just feel like that really are trying to trick you. Let me explain it… Say

you and your friend, y'all playing. You say, "I'll give you $10 to jump off the bridge," that's kind of what I'm getting out of that. They want you to take something to… I don't know."

Analysis: This statement is another distortion within the narrative, which is based on a feeling that others are trying to trick vaccinees. Basing the choice solely on the feelings that one has does not make it tricky in real life, it just makes it another emotional reasoning narrative fallacy. Questioning intentions and inquiring about evidence pertaining to the pharmacovigilance of the vaccine is a normal behavior, but this example has become radical cynicism rather than solely being skepticism. Antony was trying to reference the age-old saying, 'Would you jump off a bridge if your friends did?'. However, there usually isn't any payment involved in that metaphor of peer pressure; and it also alludes to people committing suicide and causing self-inflicted harm, none of which has been shown from taking COVID-19 vaccines. These are two completely different scenarios wherein one example is of friends playing a game, while the other is a pandemic that fundamentally changed the social fabric of the world. Lives are being saved from fatal variants of a virus by these preventative medicines, rather than lives being taken from jumping off of a bridge because of an influential friend. Yet, this attempt was made right after he said, 'Let me explain'.

There is an approach and framework in physics called the first principle, which was developed to understand counterintuitive things. It describes that rather than reasoning by analogy, you refine the ideas down to the most fundamental truths possible, and then you reason up from that foundation. This method is useful in determining if a set of ideals or conceptualization is actually making sense, or if it has just been the result of many people following a trend. There is no corroboration in this instance because the statement describes incentivizing immunization as tricky, but he can't explain the specific reasoning behind why it is tricky other than his own feeling.

This person's logic is not sound because he is claiming that an evidence-based intervention seems tricky as a result of institutions offering financial compensation. Given that the vaccine has been proven to be safe and effective based on clinical trials and methodological research, the extreme doubt and fear around the potential of something happening to someone at some point in the future doesn't hold any bearing on the current scenario of US vaccine coverage. In contrast, financial incentives in other settings such as India's smallpox eradication campaign did not arouse nearly that level of deep suspicion. Rather, it elicited gratitude for the opportunity that people were being given to get vaccinated while being compensated for their contributions to the campaign.

Quote - (Hearts 01:21:38) "I do think the payment thing may be a little fishy in some people's mind, but there's places giving it away for free. I think the free thing is okay. I think the payment, they may run people off even more because that's a little fishy. There's nobody that can tell me to take the shot and I'll go take it. I think it's a decision that I will have to make within myself to say "Hey, this is the best decision for me, and my family, and my children to keep us safe."".

Analysis: The contradiction in Hearts' statement is evident given that she mentions that it's fine to vaccinate people for free. In her mind, it seems feasible that this could keep her family safe; and yet she won't get vaccinated primarily because society has recommended that she does. She has the perception that it isn't the choice she wants to make because the powerful organizations are pointing to valid scientific evidence. Public health, biomedical research, medical technology, and pharmacovigilance have led institutions to have so much assurance and trust in the safety and effectiveness of this vaccine that they are willing to pay certain people to take it. She hasn't been held against her will, and yet her rationale seems to assert that solely because other people are 'telling' her to get vaccinated, that is reason enough not to. Going by that logic, if this form of preventative medicine was not recommended or mandated, say in 1 or 2 years when the pandemic

dissipates further and recommendations change, then she should be willing to take the vaccine then. At least then, she won't be burdened by other people to tell her to get vaccinated because they will have left her alone. I want to propose a relevant metaphor for this characterization by mentioning that there is a behavior disorder called Oppositional Defiant Disorder. This is when children do not cooperate out of defiance and hostility [22]. If a child's parents said 'no' to leaving the dinner table before eating their vegetables, the child may refuse and then ask for dessert. Once the parent stops saying 'no', there is no longer an opposing force or authoritative power to defy, and the child's response is no longer as effective. Antivaxxers can function in a somewhat similar way. Since they aren't willing to allow resources or other people to contribute to their knowledge in order for them to better inform their own decision, then I question what information, if any, they are basing that decision off. If the world operated that way, then everyone could make baseless claims with no rationale whatever and get away fine.

As I conclude my analysis, this is a reference to HELP for Global Health's analysis of FGDs. Existing data from HELP has demonstrated through their analysis of the FGDs by listing the quantity of appearances of the codes which characterize the Big Push. The scholarship that exists from their previous data analysis determined that the most prevalent patterns in their FGDs were "institutions are rushing the production of new vaccines (58), distrust of pharmaceutical companies/government as profit driven (47), and deception/withholding information (42), followed by the code emotional manipulation/pandering/relentlessness (39), political/social control (34), ignoring safety (31), and control of public to make a fortune (24)" [23].

BLK cross coding structure		
Code System		
N1: The Big Push		407
	bribe	24
	control of public to make a fortune	7
	collusion between govt and medical industrial complex	19
	distrust of pharma/govt as profit driven	47
	Ignoring safety	31
	Rushing the production of new vaccines	58
	results > well-being	6
	big brother	14
	silencing/censorship	7
	targeted against POC	15
	track record against POC	16
	deception / withholding information	42
	dismissiveness/disregard/condescension	13
	guinea pig	16
	emotional manipulation / pandering / relentlessness	39
	political/Social control	34
	Ignoring "more important" diseases/priorities	19

[23]

Results/Findings:

Finding 1

Based on my analysis, I have generated 1 finding from each of the 5 themes. I have found that the type of narrative fallacies that appeared in the examples of the conspiracy element coded for financial elitism were **jumping to conclusions,** and the **control fallacy** – that they have no control over their lives. The corrupt systems code demonstrated an **embellishment** and **the control fallacy**. This finding is indicative of the subject feeling as if they are losing or have lost their sense of control to the greater socio-political forces or people (e.g. Bill Gates). It also points toward their fear of silencing, censorship, deception, withholding information, and collusion between the government and the medical industrial complex. There is an apparent negative social conditioning and influence from consumption of propaganda about conspiracy theories.

I have also concluded that conspiracy theories contribute to the persuasive argument that people who are not yet in the anti-vax movement are susceptible to falling victim to believing in. The driving force behind these forms of false advertisement is hysteria, zeal, and persuasiveness that the sources of the misinformation exude. The vaccine conspiracies are clearly wrong to most people with common sense or the ability to use discernment, rational thought, and conscientiousness observation so that they may understand and trust recommendations that have been informed by from the literature. It seems as though the concern of the social consequences and political division via governmental deception has influenced the participants' thought processes because they may see their personal freedom as being jeopardized by the mass vaccination campaign. They are quick to associate vaccine mandates with unrelated facets of their lives such as 'violations of human rights' and 'threats to their freedoms'. They indicated that they are scared and that this socio-political environment is causing them to operate off fear, which is a commonality in the thread that connects many participants who align with this view. Not only are they experiencing heightened levels of fear for choosing to believe in these theories, but they are irresponsibly using their voices to share these types of disinformation with others.

Finding 2

The 2nd finding that I discovered was that narrative fallacies that appeared in the data of the 'the vaccine was developed too fast' element, and the designated code for emotional responses of fear were **emotional reasoning** and the **control fallacy** – that we have no control over our lives. The text that was coded for emotional responses of stress showed signs of **overgeneralization, fallacy of fairness** and **disqualifying the positive**. This is the case because they discredited that the vaccine was produced in record time and said that 'all these people' were coming out with PVAEs. Subjects drew conclusions about vaccine efficacy; however, they failed to recognize that

while vaccines support the process of generating stronger immune responses, the degree to which they offer protection varies. The Big Push seems to negatively affect the mental health of the believer who subscribes to it. I identified a common trend that Big Push believers have an inverse relationship with fear, stress, and the resulting isolation that follows. Stress, fear, and other mental health indicators are associated with social isolation. Based on the quality of the text that was coded with emotional responses of fear and stress, I can conclude that the conditions caused by the pandemic and the resulting response from the US health systems and political administration are leading the participants to become more isolated, fearful, and stressed. The inverse is also true, meaning that their specific patterned behaviors of stress, fear, and self-centered isolation are contributing to the conditions surrounding the vaccine 'enterprise'. That is to say, the health authorities wouldn't have to 'push' so much if people were more receptive and cooperative. The two phenomena cause each other, and I will assert that to social isolation and stress are attributable to indecision in health seeking behaviors. It makes sense that these are linked because the countercultural choice to not get vaccinated may have been influenced by the time that people spend in solitude consuming radical forms of media, but the decision to refuse vaccination isolates those individuals further in a perpetual cycle.

The act of being vaccine resistant contributes to the breakdown of social cohesion. While they strengthen social bonds within specific niche subgroups of antivaxxers who subscribe to the same set of ideals, the majority of people are already vaccinated. It also isolates people because other social groups may not usually want to spend time with an individual who is consistently afraid and stressed. The behaviors within these findings contribute to COVID vaccine hesitancy because the small groups of people who push disinformation are able to draw participants into their anti-vax beliefs with information and hysteria. Then, they become isolated from their

informal and formal support systems because they are inclined to not want to spend time with those who don't think the same way that they do. When people have a lack of social cohesion and support, they tend to become isolated in their pain and grief. Their behavior may cause the people that make up the support system around them to feel like they are inadequate, unworthy, untrustworthy, or not well liked. The individuals who are confined to the pressures and approval of their networks and social circles may feel like they will lose friends if they get vaccinated, so they decide not to in order to avoid dealing with the backlash from their surrounding peer groups. This kind environment poses challenges to reintegration after people have decided to take the step of protecting their immune system from COVID by getting the shot.

Finding 3

Finding 3 was generated from the quotes associated with the opportunism facet of the Big Push and its code of manipulation. I discovered that the narrative fallacies in this group of data were the **fallacy of fairness** and **fallacy of change**. Exploitative behavior was another example of opportunism, which is where I found strong indications of the presence of **a control fallacy, a fallacy of fairness, overgeneralization, and polarized thinking.** The quotes described reasons for mistrust being things like analogies to immunization policies in Asia, which they likened to what is happening in the US. The disconnect there is that they are taking one situation in another country and assuming that it will be that way here, which is why it is an overgeneralization and extreme polarization. Additionally, they referenced other people not being treated fairly in historic instances as the reason for current mistrust over a vaccine that was developed very recently. While those concerns over mistreatment may be valid, the specific logical fallacies rest in their decision to base those judgement calls of medical mistrust off past behavior that happened to *others* may not necessarily be applicable to the development of these three COVID vaccines. Other

overgeneralizations that were made include the notion that vaccines are not safe due to a small number of PVAEs or that they are ineffective due to breakthrough cases. The social implications of the pandemic are that the US has a culture of historically marginalized racial minority populations who have developed fundamentally deviant health beliefs from those held by the rest of society. When people share disillusioned ideas and speak about concepts that are negatively charged with motivations to sway public opinion, their stories have potential to paint the landscape of how those people struggle to navigate the overall climate of the pandemic.

The aspect of the narrative that describes the 'powers that be' approaching the pandemic with opportunism is strung together to create an embellishment of reality. While financial gain does motivate certain stakeholders and large companies, the statement that all of them only view the pandemic as a chance to assert control over the masses and make a fortune from the vaccine is untrue. Those who follow the Big Push train of thought have fears that are brought about by forces which appear to be a perceived threat, but ultimately are ineffectual as it pertains to this form of suffering from COVID and the way that the world is stopping transmission to prevent it. In addition, I want to set the variable of race aside momentarily to focus only on the social psychology that governs the choices and outlooks of vaccine hesitant persons. When people are mentally playing the role of a victim by claiming that many influential institutions are targeting them, there are going to be increased levels of psychological distress associated with that experience. They see the actions of the system as perpetuating and unfair social order, which increases the social cost of getting vaccinated. Thus, social inequality is threatening social cohesion. In addition, when we consider race, social class, and social mobility, they are inexplicably linked to health outcomes. Lower uptake of COVID-19 vaccines in historically marginalized, and oppressed populations of color has become problematic and unjust.

The subjects also considered vaccine mandates exploitative behavior, which was linked to a control fallacy and a fallacy of fairness. During the interview process, participants were asked if they have a choice in vaccination. As that information was shared with them, a clear delineation was made by the FGD facilitator that the law doesn't allow for anyone to be forced to take a vaccine. However, citizens, constituents, students, and employees can be pressured into taking it with the possibility of facing additional consequences if they choose not to. Nevertheless, some subjects still believed that they have no choice in the matter, and that's why some of them are defiantly in direct opposition. The reality is that everyone does have a choice. Antivaxxers are just making one that is unsafe and irresponsible.

Finding 4

The 4th result that came from my analysis of the 4th theme that the crisis was manufactured and the disease burden is exaggerated. The **jumping to conclusions** fallacy was evident in the quote coded with the denial of disease severity because the claim was made that many people don't believe COVID exists, which is not based on evidence, but still believed by them to be an absolute truth. Additionally, the next analysis on the label 'conflict and isolation from social relations' revealed that the participants were **disqualifying the positive** and exercising **polarized thinking**. This quote mentioned the polarization of political parties, and the conflicts that Anthony Fauci has faced in his position of having to go 'across the isle' in a non-partisan way. This was identified as a credible and noble cause. Vaccine hesitant persons often claim that the government is intentionally doing harm by administering the vaccine for their own profit, but this continuous fabrication doesn't account for the good that the government is doing. These perceptions are incongruent with the experiences and demonstrated successes of federal agencies and public health leaders. Strongly held divergent belief systems lead to conflicting ideals with government agencies

and institutions. These dynamics of opposing political forces are pitting people against each other, when they would have better outcomes if they worked together. If the participants didn't cling to these strongly held beliefs, they would have increased chances of becoming willing to get vaccinated and achieve better health outcomes. If they knew better, they may have different behaviors. The narrative fallacy in this finding is that vaccine hesitant persons have the tendency to make baseless predictions about what power the government will assert, as well as embellishments of how COVID was 'not worthy' of being recognized as a crisis. This has intensified the polarized nature of socio-political dynamics and interpersonal relationships throughout the pandemic.

Finding 5

Finding 5 resulted from the claim that governments and companies have ulterior motives, and therefore subjects had a lack of trust. **Polarized thinking** and the **fallacy of change** were evident because there were extreme religious ideas about financial interests being the driver behind people advancing their agendas to pressure people to take the vaccine. The other component of the ulterior motives theme was defiance or lack of respect, which was strongly associated with the **control fallacy, oversimplification,** and **disqualifying the positive**. The data showed that people felt like they were determined to not falling victim to getting tricked by monetary incentivizes for vaccinations. This proves that they considered wanting to have complete control over their lives, but powerful institutions were trying to counteract that. They were acknowledging but rejecting the beneficial experiences of receiving compensation and getting immunized. At least two people mentioned that they could really use the money and in fact would take it, but still have uncertainty about the motives behind the government-issued funds. Four people in the FGD quotes that I analyzed referred to incentivized vaccinations as bribery and identified it as a cause for suspicion;

and 24 bribe codes were labeled out of the total 407 FGD codes [23]. FGD participants had common threads and shared patterns that weave together throughout many of their interviews, such as describing experiences of viewing the US establishments as being guilty of emotional manipulation, pandering, and being relentless in their pursuit to prioritize results over wellbeing. The oversimplifications were that the government was involving money by paying people to take the vaccines, so they must have financial interests and they must be withholding information about whether these vaccines are unsafe or ineffective. The narrative fallacies within the ulterior motives element of Big Push also appeared in the way that people describe their personal feelings of security about their employment status and financial compensation for electing to take a vaccine.

Discussion:

Based on my results, I have selected the following three findings to distill, contextualize and elaborate on. First, I will discuss the first finding that arose from the data in more depth. **This finding (#1) pertains to conspiracy. Subjects who recognized financial elitism were jumping to conclusions and were inclined to practice the control fallacy – that they have no control over their lives. The corrupt systems code was positively associated embellishment and the control fallacy**. These connections were demonstrated by individuals who were misguided and ignorant in some of their assumptions, which led to their inability to distinguish fact and fallacy. This harm manifests due to the attitudes and potentially malicious intents which are the drivers that shape their sentiments and world view. Participants concluded that they were angry, upset, and disappointed, so it makes sense to blame the American elites and the corrupt systems they operate within as the ones who are responsible for this crisis. Certain folks in the anti-vax movement could also be apathetic and would prefer to detach and avoid taking responsibility for the issue of not getting vaccinated themselves. They spread misinformation in a retaliatory or

'trolling' way, which can cause damage to their networks of peers. They do this because they like standing out from the crowd and thrive off the attention that accompanies it.

The subjects in these FGDs have misrepresented the power imbalances regarding the authorities and people who are responsible for both pharmacovigilance and financing of the immunization campaign. Many of the subjects are cynical and critical over whether everyone in power has ulterior motives, so they choose to project made-up conspiracies that they have heard from others to support their claims. While some politicians and wealthy business owners are motivated by profit, the clear distinction to make is that not all of them were only seeking profit throughout this crisis. The scientists who developed the vaccines and the chain of command that was responsible for rolling it out had an honest desire to prevent more COVID cases and avert deaths. The process would not have been executed as efficiently or effectively if they had not been concerned for the health and safety of Americans. The unfair social order that is claimed by participants may be a systemic issue, but it did not begin when the pandemic did, and it is not a result of a conspiracy that was manufactured by the large US institutions so that they could administer vaccinations to somehow control the masses. The unfair social order is not caused by any one part of this narrative or the sum of its components.

Next, I will expand on finding **#2** further. **The control fallacy and emotional reasoning contributed to fear associated with the vaccine being developed too fast; and overgeneralization, fallacy of fairness, and disqualifying the positive contributed to stress.** A control fallacy was apparent throughout the qualitative data on the experiences of how quickly the vaccines went through the development, manufacturing, and rollout process. This result is also showing us that participants deflect evidence and recommendations that use of the J&J vaccine should be resumed by overgeneralizing information about PVAEs. In an effort to defend and

bolster the Big Push narrative, the subjects also had a tendency to disqualify the successes that health systems had in producing these essential medicines. Some subjects had a misunderstanding and skewed perception of the constantly evolving field of science, and particularly around the dynamics of the vaccine pipeline and vaccine safety and efficacy. The reality is that subscribing to the narrative seems to have an overall negative impact on their social wellbeing and psychological stress. When individuals become captivated by and commit to believing in the Big Push, it may affect their mental health due to consistent negative emotional reactions to their environment. This finding is based on respondents self-reported increased levels of stress and fear resulting from their perspectives and interpretations of the pandemic response. People who are adamant about believing in socially deviant political ideology are building barriers of communication between themselves and the vaccinated members of society. The world is full of diverse people with diametrically opposing beliefs who don't have to chastise and one another for their views. There are ways to coexist peacefully and cooperate with others who have divergent beliefs. Unfortunately, the polarization and politicization of this particular set of beliefs during the pandemic makes it very difficult for vaccine hesitant persons to do so. Their behavior may keep them siloed in their social circles, which is causing them to experience increases in social isolation and become further separated from meaningful connections with others outside of their circle. This recognition of a heavier psychological burden was depicted in my analysis of the quotes that indicated that respondents were concerned with the rushing of the production of new vaccines.

Consequently, the social fabric of some American's relationships with their families and communities has been coming undone during the pandemic due to forces such as wealth inequality, racial injustices, physical and mental health crises, a loss of connection through virtual learning and remote work, and an epidemic of loneliness facilitated and fueled by social media and social

distancing. Isolation drives people toward seeking out a sense of belonging to fill the gaps in socialization that weren't previously there. The significant need for finding an identity or social cause to get behind during an uncertain and fragile time has given rise to radical ideology and health behaviors within a society fueled off capitalistic ideals. To be clear, I am not speaking about racial inequalities in the next statements. The Big Push narrative has undertones of taking on a role that embodies a disposition and mentality of victimization by the authoritative powers that be. Some people who are resistant tend to view these powerful institutions as bullies, and anti vaxxers have self-pity for the conditions that the bullies placed them in. The victim mentality is often characterized by fear, assigning or shifting blame by not taking responsibility, and being stuck in a position of constantly reaching for power in an attempt to regain control of one's life and circumstances.

Lastly, I will describe finding **#5** in further detail. The last finding pertains to the ulterior motives of governments and businesses. In relation to this theme, **the fallacy of change and polarized thinking were correlated with the lack of trust that subjects experienced; and the control fallacy and disqualifying the positive were strongly associated with defiance or lack of respect**. The ulterior motives element of the Big Push has narrative fallacy within it because many subjects have expressed deep levels of dissatisfaction, suspicion, and cynicism since they feel like the medical system, and political systems, have failed them. As important as logic and scientific backing are to the decision-making process, trust is also a distinguishing quality for and predictor of whether an individual will have confidence in vaccines. Those who have lost trust in the systems that manufacture and administer essential medicines have felt as though they are being patronized and controlled by authoritative figures. Those who do not trust powerful authoritative entities or vaccines are inclined to share faulty logic by saying that they have never had COVID

themselves. They adopt the belief that benefits them by selectively viewing the problem through the scope that doesn't fully embrace the morbidity and mortality caused by COVID. The defiance code is also applicable to individuals concerned with ulterior motives considering that the way that some subjects confront the Big Push is by pushing back. They don't necessarily care to hear about the governments updated fact sheets or the most recent risk communications from CDC with their updated guidance. What impacts their life is other people, and people operate off the power of their heart (e.g. love) more often than they come purely from a place of strategy. In this instance, rather than choosing love, they chose fear because often times people can mistake love for fear. They do this by claiming that they are doing it for the right reasons to 'protect' their family from the vaccine. Vaccine beneficiaries are susceptible and inclined to perceive and make judgements based off their actions and not their intentions. On the surface, they may see people who are choosing to be hosts for the virus to mutate, meanwhile, there is a safe and effective vaccine readily available for free. As a result of refusing to get vaccinated, their decisions cause harm and are socially irresponsible.

Implications:

The racial and ethnic minority groups who participated in these qualitative interviews believe in some or all of the five elements within the narrative, and they had a tendency to demonstrate all of the types of narrative fallacies that accompany them. The propulsion of these elements together through verbal and written communication significantly contributes to vaccine hesitancy and resistance because they persuade and influence other people to align with these beliefs and change their behavior. When people spread disinformation that blocks vaccine confidence, it continues to enable other people to claim those misperceptions as the truth, leading to disunification and dangerous actions that instill fear and can incite violence at public

demonstrations. The behavior that is characterized by the narrative fallacies in the Big Push contributes to overall vaccine hesitancy because it twists the truth and gives power to disinformation about vaccines, which sequesters people from engaging in public health solutions. This novel discovery is useful in that it can inform further data analysis and support the projects and programs of the HELP for GH. These insights will support or facilitate a specific strategy and approach called Brokered Design. My research fits into these larger research endeavors within the vaccine hesitancy space because this body of work may provide ideas and rationales that can be developed into new debunking measures and counter narratives for the development of public health messages that encourage vaccine uptake. It will also offer content for researchers to develop engagement strategies for social and behavioral change communications and modes of communication that may resonate with communities of historically marginalized people. This may eventually improve how willing or able they become to seek vaccination. A biproduct of my research may be that it highlights some of the causes and conditions of health disparities and social determinants of health.

Limitations:

In the next section, I am going to describe some of the limitations. There are numerous limitations in my research. A major limitation was present in my analysis based on the issue that I encountered with being unable to do a comprehensive analytical qualitative analysis due to time constraints. My research would have benefitted from having access to and utilizing the MAXQDA data software. I also learned that it would be useful to stratify the data by sociodemographic factors such as age, income level, educational attainment, and other variables such as health insurance coverage status.

I addressed race as a social construct, as opposed to a biological reality. Race and ethnicity could effectively represent the lived experiences of racism that African Americans and Latinx people have experienced while living in a racialized environment in the US. I recognize that I lack the experience needed to understand minority communities, and my use of racial and ethnic characterizations and categorizations were not perfect. My intention was not to be critical of or insensitive to the lived experience of unvaccinated persons.

The convenience sample in the study may not be representative of the general population. The current study, in its sheer volume of analyses of quotes also could have inaccurately interpreted relations between codes and narrative fallacy in some cases, while possibly failing to identify additional relations of importance. This study is a sociological analysis that only provides a miniscule view of hesitancy narratives among Black and Latinx populations in the US. I also acknowledge differences among study participants who I conducted an analysis of in comparison to differences in the methodology of data collection and analysis that HELP carried out. There is a critical need for continued research to evaluate the existing disparities regarding COVID-19 immunization within Black and Latinx populations. In the future, I would be interested in learning about the relationship between mental health outcomes of depressive disorders or anxiety disorders and the adherence to anti-vax ideology. I would also like to explore and evaluate the qualitative metrics of experiences and narratives shared by people who feel high levels of confidence in vaccines so that I could conduct a comparative analysis of the two. Despite these limitations, I learned that the Big Push narrative and other vaccine hesitancy narratives matter significantly because they have far-reaching impacts on racial and ethnic disparities, as well as and make the meaningful differences on the thought processes and experiences of vaccine hesitant persons.

Conclusions:

As global health researchers, it's important that we constantly evaluate our efforts and the ways in which we communicate them. The influence of public opinion on social media paired with the noise that the media has generated have made it increasingly difficult for people to differentiate the true from the false. These phenomena become dangerous when they get in the way of public health messaging, which is being designed and delivered to make the best possible recommendations given the circumstances by supporting people in their decision-making processes. In public health, coalitions are critically important because one person can't solve a public health crisis alone. While interdependence has become more necessary now than ever, the interconnectedness of information via technological channels has also become potentially divisive.

It is important that public health workers find ways to bolster vaccine confidence so that they can improve vaccine uptake interventions and end the pandemic. The US needs the support of public health professionals, particularly communications specialists who practice risk communication through CDC's Crisis and Emergency Risk principles. These principles include respect, empathy, and compassion, among others. They can be operationalized through health information campaigns and targeted consumer contact, which have been impactful in social and behavior change communications. Fortunately, this is a field of dedicated individuals who are working hard to build vaccine confidence and save lives.

The US health systems and democratic processes and functions are up against an antivax movement that is being carried out by those who deliberately spread disinformation. COVID has spread rapidly because it is highly transmissible, and the transmission of the Big Push narrative can also occur very quickly through groups of people. The difference is that the latter doesn't require direct human contact due to distribution via online forums. These types of divisive stories that aren't grounded in the truth ultimately pit people against each other and evoke negative

emotional energy as they continue to move through a population. It is also dangerous and threatening to the physical and mental health of humans because perpetuating the distribution of misinformation has the potential to prevent people from taking the vaccine who otherwise may have been willing to. Since this has taken hold in the minds of thousands of citizens, it has limited uptake and hindered coverage rates. The result would be that there are even greater challenges to achieving population-level immunity. This could potentially have a wider range of consequences because when the vaccines are not administered, it may cause a percentage of the current vaccine supply to go to waste and may lead to further global inequities.

America has a system that falls short at times with standards for fairness, equality, and justice; but it contributes a lot of resources toward attempting to keep people healthy. I am proposing a recommendation for those resources to be distributed to funding community-based approaches to education and training for building COVID-19 vaccine confidence and increasing uptake. I would also assert that a priority for stakeholders and policymakers must be to reduce racial and ethnic disparities in the area of access to vaccine information, vaccine supply, and health insurance. We must engage communities of racial and ethnic minorities with honest dialogue in order to better understand the causes and conditions of their positions. Adopting a realistic understanding and viewpoint of vaccines would help subjects avoid the habit of sharing distortions and other types of narrative fallacies. It would also negate some of the causes of their continued psychologically distress. A measure of trust, understanding, and mutual respect for the establishments which were intended to serve and protect people is required in order to maintain a functioning and orderly society.

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