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Vaccine Communication During the COVID-19 Pandemic as Displayed by NYC Health

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Vaccine Communication During the COVID-19 Pandemic as Displayed by NYC Health

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Rebecca Jensen

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Abstract

The 2020 Covid-19 pandemic underscored the importance of vaccination in our governmental-health bodies. As a result, effective vaccine communication is more necessary than ever. The goal of this paper is to better understand frames, strategies and themes used by NYC Health as it pertains to video media related artifacts in their Covid-19 vaccination campaign. This research is important because it informs overall health and vaccine discourse. In analyzing data several key themes were discovered. These themes were established through a synthesis of literary strategies meant to activate certain theoretical frameworks. Further research into the effectiveness of these frames on New Yorkers would be beneficial.

Introduction

On March 14, 2020, New York State reported its first Covid-related death. Two days later New York City Public schools were shut down. The following period saw empty city streets, closed doors, and 'stay at home' orders for all non-essential workers. Soon, the city emerged as a hotspot both for Covid cases and deaths. Many reasons why New York is often celebrated and admired were contributing factors to making NYC the US epicenter of the Covid-19 pandemic. The dense population made it hard to find six feet of separation. The city's reliance on public transportation also posed a significant threat, as the virus can live on surface, like the metal railings or plastic seats, for over 72 hours (Mahbubani & Mosher, 2020). Quintessential aspects of the city's culture became its greatest weaknesses.

In the US, emergency use authorization of three vaccines (Pfizer, Moderna, and Johnson & Johnson) was granted by the FDA in December 2020. This began a coordinated, mass vaccination effort across the US. In NYC, as of October 2021, of the 8,336,817 people living in NYC, 6,169,717, or 74%, have received at least one dose of vaccine. Subsequently, 5,634,056, or 68%, of New Yorkers are fully vaccinated against Covid-19 (68%) (NYC Health, 2021).

While many New Yorkers are vaccinated, the large unvaccinated population delays any restoration of normalcy. Their hesitancy, or outright refusal, to vaccinate puts not only themselves, but those around them at risk. The emergence of variants, such as Delta and Omicron, only increase threat of contraction to even fully vaccinated people, further underscoring the urgency of vaccination. Hesitancy towards vaccination can be better understood by a variety of socio-cultural and environmental factors. However, this hesitancy is, in large part, due to the floods of misinformation, disinformation and outright falsehoods pertaining to the Covid-19 vaccines, and a lack of trust in our medical system.

The purpose of this paper is to gain a better understanding of New York City's Vaccine Communication and the frames being used to encourage this health behavior. This research is beneficial because it contributes to a more well-rounded understanding of motivations behind vaccine and health communication during the Covid-19 pandemic, especially when looking at large, American cities. In achieving these goals, this paper will examine NYC Health's vaccination campaign, as it pertains to media related artifacts, specifically videos.

Methods

Data Collection

In order to gain a better understanding of different types of frames used on New Yorkers during the Covid- 19 Vaccination campaign, qualitative data was sourced from NYC Health in the form of YouTube videos. NYC Health, also known as the New York City Department of Health and Mental Hygiene, is the department of New York City's government relating to public health. As of August 2020, the current Commissioner is Dr. Dave Chokshi. For the purposes of this paper, usage of one governmental-health body and one form of media works not only to narrow the scope, but to deepen the understanding of frames and strategies used, pertaining to this type of media. YouTube videos were chosen because of their scope of access. NYC Health's YouTube videos also can be studied individually, and as a body of work.

Data consisted of a total of 60 videos ranging in time from eight seconds to three minutes and 24 seconds. Media artifacts were sourced from a 10-month period, beginning from the initial availability of the vaccine in December 2020, ending at the time of data collection in October of 2021. The focus of this analysis was to explore the rhetorical frames used. After an initial viewing, the 60 videos were then transformed into textual data through YouTube's transcript feature, with manual edits made where necessary. The transcribed videos resulted in 45 pages of transcribed text. The primary language used in the videos was English. However, given the linguistic diversity of NYC, videos were translated (either by dub, or text translations) into Arabic, Bengali, Cantonese, Simplified Chinese, Traditional Chinese, French, Haitian-Creole, Italian, Korean, Polish, Russian, Spanish, Urdu and Yiddish. It should be noted that for subsequent coding purposes, only English language videos were analyzed.

Analysis Procedures

Once data was assembled, data initially were read several times to allow the researcher to emersed herself into these data and begin the coding and analysis processes (Strauss & Corbin, 1990). For reference, coding procedures closely resembled that of Strauss and Corbin (1990), in terms of levels of analysis. Their respective attitudes towards coding account for multi-level conceptual response; whereby one piece of media can activate subjective concepts and frames simultaneously. This framework also accounts for researcher bias and assumption, and the subsequent ways in which this informs the coding process. This process works by following a format of reading, re-reading, and coding from existing sensitizing concepts, as they emerge in research.

Data were first coded according to rhetorical frames that were commonly referenced in the existing literature. These rhetoric frames include ethos, pathos, logos, gains, losses, and appeals to collective action versus personal risk (Airhihenbuwa et al., 2020; Gerend & Shepard, 2007; Finnegan et al., 2018; Wen et al., 2020). The first round of coding was aimed at more broadly identifying sensitizing concepts. Then, the data was re-read and coded a second time in accordance with specific strategies mentioned in the literature. Strategies described in literature were ascribed to a corresponding frame, in which said strategy informed. For example, the second coding examined the strategy of first-person narrative. This was an explicit strategy referenced in literature, designed to inform the rhetorical concept of ethos. The specific strategy of incentivizing health behavior change was coded, as the literature references, to the more conceptual gain frame. Please see chart in the results section for a better understanding of the coding process.

Literature Review

Health Communications and Appeals to Emotion

In order to better understand NYC's vaccination campaign, it is important to establish a baseline of health communications, as it pertains to infectious diseases. According to Finset et al. (2020), a key factor behind effective health communications is the mitigation of fear. This is supported by Malecki et al. (2020) who suggests that one's emotional perception of risk and hazard are key in understanding one's personal efficacy. A more informed public is one that has confidence in health systems and is less likely to turn to fringe alternative sources. To mitigate this fear and motivate people to engage in positive health behaviors it is important to remain open and honest about what is known and unknown. One's willingness to engage in positive health behaviors, like getting vaccinated, is directly related to their level of trust and closeness with governmental bodies. Furthermore, there is a direct correlation between one's level of trust and personal efficacy (Bakkera et al., 2018).

Establishing personal efficacy can be done in many ways. One example is the selection of a few spokespeople. The development of key spokespeople allows for a sense of consistency in health communication (Finset, 2020). Notable examples come to mind, such as Dr. Anthony Fauci and Dr. Sanjay Gupta. Mheidly and Fares (2020) also suggest that providing airtime for these medical professionals is a key strategy of infectious disease health communication. Contrastingly, there is also evidence to suggest that messaging from ordinary people can also be very effective in these situations (Motta et al., 2020); because in doing so you are increasing public trust in messaging by increasing closeness. Motta et al. (2020) further goes on to suggest it is important to highlight frontline workers and healthcare providers during these times. This demonstrates credibility in our health officials and increases one' s perception of trust in these

institutions. This also supports the perceived ability of those frontline workers, thereby motivating vaccination via an emotional appeal.

People's emotional responses to health crises, such as an infectious disease like that of Covid-19 must be taken into consideration. The concept of appealing to emotions in order to invoke engagement in positive health behaviors is very relevant to the discussion and will be further elaborated on later. However, in order to establish the link between emotional and health related behaviors. It is important to consider the health behavioral model.

Developed in the late 1960's, the Health Behavioral Model, or HMB, was created to better understand the implication of health beliefs on health behaviors. According to Andersen (1995):

> Health beliefs are attitudes, values, and knowledge that people have about health and
> health services that might influence their subsequent perceptions of need and use of
> health services. (p.2)

This idea of one's own perception of their needs is very relevant to the Covid-19 pandemic and vaccination efforts. For example, there is a sentiment among young people that they are healthy enough to fight Covid and as a result do not need the vaccine (Andersen, 1995). Of course, the CDC still recommends vaccination for this group even though they are at relatively lower risk of getting seriously ill from contracting Covid. The contrast of one's "perceived need", (e.g., their beliefs of health behavior measure they personally need to take), and that of their "evaluated needs" (e.g., the measures recommended by healthcare professionals) has only been exacerbated by the pandemic. For many, their willingness to engage in any health behavior is dependent on their personal sense of risk. The HBM actually began using the family as a unit of measures but

moved to the individual as the unit of analysis because one's sense of need and risk is so personal (Andersen, 1995). However, the HBM does make clear that both personal and community enabling resources are necessary to motivate behaviors. This idea of incentivizing positive health behaviors through collective action versus personal risk is relevant to modern vaccine communication and will be elaborated on later.

As previously established, health communication establishes emotion as a necessary motivational frame in order to stimulate behaviors (Motta et al., 2020). However, Bakkera et al., (2018) suggests that for those who lack an aforementioned level of closeness and trust with their source of communication, appeals to emotion (specifically empathy) are shown to have increased one personal sense of vaccine efficacy. And in these cases, it may be more beneficial to appeal to collective action to increase one's level of trust. For example, 75% of those unwilling to take a COVID-19 vaccine claimed they wished to wait to find out whether or not it is effective (Ratzana et al., 2020).

Fighting Falsehoods in Dueling Pandemics

When WHO (2020) declared COVID-19 a pandemic, they also declared a "infodemic". This is defined as,

> Too much information including false or misleading information in digital and physical environments during a disease outbreak. It causes confusion and risk-taking behaviors that can harm health.

The spread of misinformation, disinformation and falsehoods is damaging to the overall context of the Covid-19 pandemic because it undermines trust in our public health officials. In turn, this informs the dialogue of our personal efficacy. The effects of this "infodemic" are illustrated in

current efforts to vaccinate the population. When looking at vaccine communication as a body of literature, it is important to point out that the Covid vaccination hesitancy is separate and distinct from that of other anti-vax sentiment (Motta et al., 2020). Meaning, there are groups of people who do not typically fall under the category of "anti-vax" (they are vaccinated for more widely accepted vaccines), who refuse to get the Covid-19 vaccine.

This specific hesitancy towards the Covid-19 vaccine can be attributed to, in part, this "infodemic". For many the shift to the "new normal" was quite literally overnight. As a result, there was a portion of time where we lacked concrete evidence on the best measure to prevent the spread of covid (e.g., the shift from hand washing to mask wearing as a means of preventing contraction). According to Wen et al. (2020).

> Hesitancy to vaccinate against COVID-19 is understandable given the novelty of the disease, the unusually rapid speed of vaccine development, (and) some groups' mistrust in science and health experts (p.1).

When there is a lack of clear and consistent public communication, like that of the start of the pandemic, this opens the door for public outrage and fear (Bahri & Merlero, 2017). The early days of the pandemic were vital in informing an individual's "perceived need" as it applies to vaccination.

In the study of vaccination communication, there are three key factors in that inflate this public outrage: (1) information overload, (2) information uncertainty, and (3) misinformation (Varga & Jacobsen, 2020). These factors should be addressed in any vaccine communication effort, but especially so given the context of this pandemic. When looking at information overload, as suggested by Mheidly and Fares (2020), the media acts as a bridge between

governmental-health bodies and the people they seek to inform. This relationship is fundamental in establishing the public's response to the pandemic. We also operate in a society in which people have unlimited access to media, but this does not mean that the information represented in media (specifically alternative, fringe media) is truthful and accurate. In order to combat information overload, clear and consistent messaging is key. This means the development of select core messages and employing one message per the individual piece of media (Vraga & Jacobsen, 2020). Gorska et al. (2021) suggests that the fast paced, dynamic nature of crisis can make finding relevant information challenging. Creating short form messaging, such as a two-minute video (Finnegan et al., 2018) or a single tweet with message (Vraga & Jacobsen 2020) is shown to be the most effective.

Secondly, effective vaccine communication must target information uncertainty. With news media being the flooded field that it is, it can be challenging for people to find trusted sources (Vraga & Jacobsen, 2020). In this situation vaccine efforts must be proactive in competing for attention (Ratzana et al., 2020). This can be done through the establishment of trusted sources and consistent leadership. As previously established, the development of key spokespeople, such as Dr Fauci, increases perception of trust and closeness (Bakkera et al., 2018). However, this sense of trust can also be established through a storytelling approach (Finnegan et al., 2018). This method employs emotion opposed to logic as a means of motivation. The use of first-person narrative helps those who are "fence sitters" see a commonality that increases their sense of perceived need and personal efficacy.

The third obstacle to overcome is that of misinformation. This involves a more nuanced conversation into the slippery slope of engaging with falsehoods. In directly targeting

misinformation the goal is to motivate the "fence sitters" (Finnegan et al., 2018). However, in directly targeting with falsehoods one runs the risk of giving "validity" to fringe misinformation that is only prominent in fringe audiences. According to Bahri and Merlero (2017) health officials must engage with falsehoods. However, there is a phenomenon that may occur, in which this engagement begins putting ideas in people's heads. Fact checking falsehoods has only a limited effect. Especially when considering that anti-vax sentiment relies solely on emotion as a means of motivation (Wen et al., 2020).

We know that health behavior motivations based on logic can be limited in their ability to impact desired effect (Finnegan et al., 2018). However, those who are less trusting of governments may be more receptive emotional appeals as a health behavior frame. According to Wen et al. (2020) appealing to altruism and positive communal aspects can often bypass distrust of government for "fence sitters". It is important when discussing emotional appeals to discuss the effects of acting on certain emotional frames. When discussing vaccination communication, as it pertains to this pandemic, one ought to account for the already heightened levels of emotions the average individual is experiencing. Heightened levels of emotion cloud our clarity and thus influence our health behaviors (Wen et al., 2020). In this situation it is counterproductive to focus on negative emotions, like fear, as a means of emotional motivation but instead focus on actionable strategy (like vaccination) as a means of empowerment. This does not work on perceptions of "personal need" as a means of motivation but instead collective action, which will be discussed later. Overall, there is research to suggests that collective appeals to action, e.g., seeing loved ones again and highlighting communal connections can foster health behaviors such as vaccination.

Crisis Communication and Cities

In order to properly examine the NYC vaccination campaign, it is pertinent to look at the unique challenges cities face in crisis. Communication in cities during a time of crisis can be quite difficult given the diversity of experiences in cities pertaining to factors like socio-economic status and racial and cultural barriers. Studies have shown racial disparities among Covid cases, and death, specifically pertaining to that of Black and Brown communities (Price-Haywood et al., 2020). This phenomenon is only exacerbated in American cities. For example, in Chicago, Black Americans make up 13% of the city's population but 68% of its Covid related deaths (Steinmetz 2020). And, according to the New York Times, Covid is twice as deadly in Black and Brown communities compared to that of White communities in NYC (Mays & Newman, 2020). The COVID-19 Pandemic disproportionately affects communities of color. In fact, analysis suggests that communities with higher numbers of ethnic and racial minority populations have emerged as "hot spots" for COVID-19 deaths (Viswanath et al., 2020). When talking about the intersection of Covid-19, racial inequality and cities, it may be important to consider the concert of "superdiversity". As described by Steinmetz (2020):

> Superdiversity is a term used for mainly western neighborhoods and cities...in these cities and neighborhoods there are not a few groups of residents from other countries, but substantially many (p.318).

This conflagration of Covid-19 and superdiversity exists because superdiversity coincides with systematic inequality and poverty.

This inequality is the result of several different barriers that act as hurdles in communication between local governments and their citizens. Communication inequality is defined by Taylor-Clark et al (2007) as:

> Differences in communities' abilities to access, process, and utilize health information, likely leading to increased barriers facing socio-economically vulnerable individuals and groups (p. 166).

One major barrier to consider is that of linguistic differences, especially in a city like New York where there are an estimated 800 languages spoken (Roberts, 2010). There are 25 million people in the US with limited English proficiency (Oretega et al., 2020). This lack of access to proper health communication informs understandings of the pandemic and as a result heath behaviors and personal efficacy, like getting vaccinated. In NYC it is estimated that 44% of Spanish speakers have limited English proficiency and the group also disproportionately represents NYC's Covid deaths (Oretega et al., 2020). While it is important to remember linguistic barriers, simply directly translating messages will only have a limited effect. It must address the different levels of access that often affect these communities (Oretega et al., 2020). Our social and cultural understandings both directly and indirectly affect our levels of awareness in public health crises and communication. Effective health messaging must take this into consideration (Viswanath et al., 2020).

There are several steps that can be taken to mitigate the inequality in health communication. The first of which concerns directly targeting at-risk populations (Noar et al., 2020). When designing a communication campaign, messaging must shape models around different racial, ethnic, cultural and linguistic communities (Mheidly & Fares, 2020). According

to the PEN 3 Model, effective health communication must account for cultural identity, cultural empowerment, relationships and expectations (Airhihenbuwa et al., 2020). Especially when considering "Risk perception was also shaped by factors that altered acceptability of risk in the minds of different audiences..." (Malecki et al., 2020). Also, studies have shown that female leadership and styles of communication are shown to be more effective (Steinmetz, 2020). This is in addition to placing a greater emphasis on community building to target more collectivist communities (Gorska et al., 2021). Appealing to cultural logic (Airhihenbuwa et al., 2020) is very relevant to messaging in Covid vaccine communication and will be further elaborated on later.

Collective Action vs Personal Health Risks

There are conflicting findings or evidence-based recommendations when looking at collective action versus perceived need/risk and what is more effective in encouraging positive health behaviors in a public health campaign. As previously established by Finset et al. (2020) effective health behavior change can be promoted through collective action. Promoting collective action means messaging which emphasizes community gain, like seeing loved ones again, or protecting those in your community in order to incentivize health behavior changes. However, Motta et al. (2020) measured effectiveness of health communication across three frames: personal health risks, economic costs and collective public health consequences. In their analysis, they found that for those who are vaccine hesitant, appealing to the idea of collective health has limited effect. This is supported by Bahri and Merlero (2017) who suggest that in health communication the individual's concern is their own personal safety.

Airhihenbuwa et al. (2020) argues against this concept of placing greater emphasis on individual risk. While advocating for, at minimum, a tandem approach of messaging. Airhihenbuwa then goes on to suggest that because the pandemic cannot be fully understood in terms of personal risk, messaging appealing to personal risk does not create a full picture of the pandemic. Behavioral messaging is more likely to motivate when directly engaging with the voices of those bearing the heaviest burden during the pandemic. This supports Finnegan et al. (2018) who emphasized the importance of storytelling and first-person narration. Airhihenbuwa et al. (2020) also suggests that appeals to individual risk are culturally privileged over community risk. Many Americans, especially those living in a city like NYC, do not have the luxury to focus only on their own health risks because of tight living quarters and less personal space to space distance. Furthermore, research on health disparities related to antiracism supports the idea of collective action messaging because this emphasizes the concept of "risk environment" as shaping personal efficacy and perceived need. Also, perceived need frames place the burden on the individual rather than the society and context in which the pandemic is occurring.

When looking at appeals in messaging one ought to look at the gain frame. As described by Gerend and Shepherd (2007), this concept concerns framing a choice or outcome, in this case getting the vaccine, in terms of what can be gained, or on the other hand, lost. A key component to these frames is the tendency to focus on immediate versus distant consequences (Penta & Baban, 2017). This can be contextualized in our current vaccine debate through personal and collective consequences. According to Gantiva et al. (2021), gain frame messaging seems to have a stronger effect on intention to adopt behaviors, while loss frame shapes one's understanding of "perceived need". However, both are necessary to spark behavioral change.

Gantiva et al. (2021) argues that if the goal of media is to slow the spread of Covid, through a change in health behaviors, it is more beneficial to appeal to gain frames. On the other hand, if you want to change risk perception, it is more effective to appeal to loss frames. However, the study is rounded out by suggesting that gain frames are overall more effective. Conversely, in measuring the effectiveness of gain versus loss frames, Penta and Baban (2017) found that loss frames were shown to be more effective as "present-minded participants": Meaning those who place a greater emphasis on personal need opposed to collective action.

Research Questions

The purpose of this paper is to gain a better understanding of New York City's Vaccine Communication and the frames used to encourage vaccination. By the conclusion of this research paper, the following questions should be answered:

R1: What are the rhetorical frameworks used by NYC Health Covid Vaccination Campaign's video media related artifacts?

R2: What strategies are being used by NYC Health to communicate these frames?

R3: How do these strategies and frames inform thematic takeaways from the campaign?

Hypothesis: NYC Health will implore frames that emphasize personal risk and logic-based reasoning to motivate vaccination. This will be done through clear and consistent communication about the knowns and unknown of vaccination. This will create a thematic takeaway of increased evaluated risk in the audience.

Results

Finding #1 NYC Health Frames Vaccination as the Ability to See Loved Ones

NYC Health attempts to build personal efficacy by framing vaccination as health behavior change that allows one to physically interact with their loved ones again. This theme was referenced over 35 times, making it among the most prevalent in the data. There were three frames that emerged from this when sensitizing the data alongside this theme: 1) Gain Frame and Incentivization, 2) Sensatory Empathy and 3) Appeals to Collective Action.

Gain Frame and Incentivization

Gain frames, as established by Gerend and Shepherd (2007), aims to incentivize engagement with positive health behaviors (like getting vaccinated) with what is to be gained (like the ability to see extended family and friends). In several video excerpts, we see the gain frame as a tool to invoke the emotional and social factors of vaccination in order to motivate behavior:

"And that's why I'm looking forward for the family to get together again." [Video #29, Why I Got Vaccinated – Staff Stories V.2]

"So being able to get the vaccine made me feel safe and finally able to get some hugs from my family and friends who are also vaccinated." [Video #29, Why I Got Vaccinated – Staff Stories V.2]

"I wanted to spend time with family and friends." [Video #17, Why I Got Vaccinated- Staff Stories V.3]

"And it limited our freedom to do the things we love, such as spending time with family and friends. But we now have the power to regain control." [Video #40, Get Vaccinated Older New Yorkers- DOHMH and DFTA]

"...get us back to moments of joy and seeing our family and friends." [Video #43, <u>Joys of</u>

<u>Life (:15)</u>]

"The reason I got my vaccine was for family. I wanted to be able to gather my two

daughters, six and four, with my mom." [Video #29, <u>Why I Got Vaccinated – Staff</u>

<u>Stories V.2</u>]

The idea of positioning one's ability to see their family again as an incentive to vaccination is

reflected in the literature. Specifically in terms of gain frame. In this case the "gain" in question

is one's ability to see their family again. Here, we see not the encouraged behavior (getting

vaccinated) being incentivized, but instead an outcome of the behavior (seeing loved ones again).

This theme of loved ones again also activates the gain frame in terms of its immediacy. Not

present in these data are references to tangible incentives. Despite offering $100 to New Yorkers

who vaccinate their children, this was only referenced once. Again, this is supported by the

literature, which suggests that economic frames have a rather limited scope of influence (Motta

et al., 2020)

Language used by NYC Health, as displayed in the examples above, purposefully

establish seeing loved ones as something you can do safely after vaccination. Using phrases like

"get us back", "looking forward" and "regain control" imply a change in behaviors following

vaccination. As a result, one may infer that this frame appeals to those with a relatively high

level of trust in healthcare. Their language infers that the behavior of social distancing was

already being practiced. Those who are already practicing social distancing likely have a

corresponding level of trust with governmental-health bodies (Bakkera et al., 2020). These

findings suggest that this frame targets those who believe in the threat posed by Covid-19 but for

whatever reason are hesitant toward vaccination. The reason behind the hesitancy is subjective to the individual, thereby challenging to tackle individually. This frame combats this in bypassing one's perceived level of risk in vaccination by appeal to an emotional response. This concept of emotional appeals trumping logic is reflected in the literature (Wen et al., 2020).

Sensatory Empathy

However, the theme of seeing loved ones can also be used to target those who personally have a low level of perceived "personal risk" and trust with healthcare (Motta et al., 2020). NYC Health attempted to empathize with one's sense of loneliness during the pandemic. Despite one's own willingness (or lack thereof) to engage in positive health behavior changes (like social distancing or vaccination) everyone living in New York City has seen a change in social patterns as a result of the pandemic. NYC Health sought to empathize with this sense of loneliness in order to better conceptualize vaccination. This was done through emphasizing human touch, something we have been socialized to regard as a "risk behavior" (Wen et al., 2020). Empathy works as a means of swaying personal efficacy by targeting anxiety or depression relating to the pandemic (Finset, 2020). This is a means of motivation that can be impactful because it demonstrates concern and impact of the situation (Finset, 2020). Below are some examples that suggest the activation of an emotional response, enforced through the concept of physical touch.

> "I want to hug my parents. I miss them. I know we all miss our family members and the contact that we have with them, and I really can't wait to hug them again" [Video #53, Health Staff Share Their Reasons for Getting the COVID-19 Vaccine (Part 2)]

> "I want to take my wife dancing" [Video #53, Health Staff Share Their Reasons for Getting the COVID-19 Vaccine (Part 2)]

"I could go home and kiss mama, and I could run in and grab my grandkids and kiss them." [Video #10, Community Vaccine Stories- Brooklyn]

"I honestly did it to feel free… free to hug my mom, free to hug my sister, free to hug my children and my neighbors, even able to give my mother-in-law a big kiss. Even though she doesn't want one." [Video #36, Community Provider's COVID-19 Vaccine- V.2]

Appeals to Collective Action

In turn, framing vaccination as the ability to see loved ones again is particularly notable because of its tandem appeals to collective action. A textual analysis of video media pertaining to this vaccination campaign suggest NYC favors appeals to collective action over that of personal risk. Appeals to collective action are categorized by their emphasis on positive emotions and the desire to return to more personal interaction (Wen et al., 2020). Such appeals can be beneficial as research suggests those who received collective appeals to action felt better equipped to deal with a crisis (Bakkera at al., 2020) Loss frames, an equal component of this theory, have been shown to be more effective in increasing one's sense of personal risk.

However, appeals to both personal risk and loss frames may have been avoided as they tend to fall on deaf ears, given the audience they target (Penta & Baban, 2017). This is especially in the case of young people. Because younger people are less likely to get seriously ill from Covid, personal risk is relatively lower in this demographic. This is linked to lower personal efficacy as it pertains to willingness to engage in health behavior changes (Airhihenbuwa et al., 2020). As a result, research suggests it may not be beneficial to appeal to what can be personally lost for this younger demographic. Thus, we see the collective appeal of seeing loved ones again

to motivate vaccination. The "gain" in question is protection granted to our loved ones through collective action. This frame is displayed in the quotes below:

> "I want to protect my family, so they don't get infected" [Video #27, Youth Vaccine Stories- West Bronx and Jackson Heights, Queens]

> "So I would encourage everyone, if they can, to go and help protect your neighbors, friends and family by getting themselves vaccinated." [Video #29, Why I Got Vaccinated – Staff Stories V.2]

> "I want to protect my family, our community and other New Yorkers against COVID-19" [Video #37, Easterling COVID-19 Vaccine Facts]

> "While I'm grateful for the protection that it offers me - like so many others who have been vaccinated, I was thinking about what it means for my loved ones as well." [Video #50, Chokshi: Why I Got Vaccinated]

> "I have a friend who is 77 years old, and I haven't seen him for over a year. I wanted to see him, and I wanted to protect him." [Video #52, NYC Health Staff Share Their Reasons for Getting the COVID-19 Vaccine (Part 1)]

Because those who are vaccine hesitant lack an established trust and closeness with healthcare and government. Appealing to the collective action of keeping your family safe will have a greater chance of building efficacy in those who lack closeness to credible spokespeople and media sources. It is important to note that the concepts of sensatory empathy and collective action are not subcategories of the gain frame. However, they are interrelated and at times, work in tandem with gain frames in order to achieve desired results.

Finding #2 Fear, Agency, and Storytelling

NYC Health attempts to de stigmatizing vaccination by shifting the narrative of the campaign from that of governmental-health bodies, in favor of the more accessible story telling approach. This is supported by NYC Health's emphasis on first-person narrative and personal agency as a means of targeting the fear surrounding vaccination. NYC Health aimed to reduce the fear surrounding vaccination by tackling three separate areas of concern: (1) anxiety over vaccine side effects, (2) the politicization of vaccination and (3) a lack of trust in healthcare

Anxiety over Side Effects and First-Person Narratives

The underlying messaging produced by NYC Health suggest a public hesitancy towards vaccination born from a fear of side effects. This is an inferable conclusion given that many young people are already hesitant to get the vaccine given a low perceived level of personal risk of contradicting Covid (Wen et al., 2020). In other words, the fear of side effects has a greater effect on personal efficacy compared to that of contracting Covid, in this demographic. In order to target this particular group of vaccine hesitant New Yorkers, NYC Health frames the vaccine's possible side effects as non-existent to mild, compared to the sense of safety it grants. In the examples below, you can see that the vaccine is framed as a positive health behavior that is easy to engage with, it is not something that is going to affect your health, other than the protection offered.

"You know, it was very easy, very easy. Personally, I don't have the side effects." [Video #7, Community Vaccine Stories- Pastor Chris]

"I will tell people who are afraid of getting the vaccine. Not to be, it's not worth it,
because there (are) no side effects." [Video #7, Community Vaccine Stories- Pastor
Chris]

"I took it, my mom took it, my dad took it. And I feel good." [Video #28, Community
Vaccine Stories- West Bronx]

Current vaccine discourse suggests that fact-checking has little to no effect, if the source of that fact-checking is not already trusted by the audience (Finnegan et al., 2020). As a result, NYC Health suggests the ease of vaccination by shifting the narrative to that of the average New Yorker. Across the campaign, there were a series of videos in which "New Yorkers share their personal stories about the vaccines". In these videos, average New Yorkers are interviewed about the reason for vaccination directly after getting the shot. Here, community leaders like, students, pastors, and parents emphasize the importance of vaccination and the minimal, if any, side effects experienced.

Combatting the Politicization of Vaccination with Community Pathos

In the messaging used by NYC Health in their vaccination campaign, there was an effort to mitigate fear surrounding the vaccine. Research suggests that in a health crisis, like that of a pandemic, fear motivates one's personal likelihood to engage with health behaviors (Wen et al., 2020). In the context of this paper, if one fears the vaccine, there are less likely to get vaccinated (Finset, 2020). As a result, frames aimed at fear reduction can increase one's perception of vaccine efficacy and motivate the subsequent behavior change of vaccination (Wen et al., 2020). In the case for polarizing aspects of the vaccine that have become fodder for political pundits, personal efficacy was fostered by shifting the focus of vaccine narratives. Narrative emphasis

shifted towards to the millions of New Yorkers who had already received the vaccine. This is displayed in some examples below (emphasized added for effect):

"Just please take your vaccination. You know **millions of people have taken it**." [Video #7, Community Vaccine Stories- Pastor Chris]

"**Join the millions of New Yorkers** who have already been safely vaccinated." [Video #40, Get Vaccinated Older New Yorkers- DOHMH and DFTA]

"**Millions** have been vaccinated safely." [Video #21, Why COVID-19 Vaccines are Safe (:15)]

"...**trials with tens of thousands of people** of various races and ethnicities and ages." [Video #37, Easterling COVID-19 Vaccine Facts]

According to Ratzana et al. (2020) 75% of those unwilling to vaccinate claimed they wished to find out whether or not it was effect before. By positioning the vaccine as something that has already been effective in millions, they are using community trust and a means of building credibly, or ethos, in the vaccine. This shifts the narrative from that of the more politicized aspects of vaccination and healthcare discourse, towards the more easily trusted source of information, the reality of the millions who are already vaccinated. This shift in narrative makes the decision to vaccinate, one of personal choice, not political allyship. This idea of vaccination being framed a personal decision, will be touched upon further later. However, building efficacy through agency is furthered by frame in the campaign which encourages those who are vaccinated to share their own experiences. The onus of vaccination moves away from difficult to understand academic language towards the more accessible sources of your family, friends and neighbors.

The Absence of Trust in Healthcare and the Use of Agency

      NYC Health attempts to mitigate concerns of our country's history of medical

mistreatment by fostering a sense of agency in the public. Agency is built by shifting the

narrative away from that of medical professionals and moving towards first person narratives and

storytelling as a means of building efficacy. Perhaps one of the more surprising findings from

coding the data was the passive language used by NYC Health in encouraging vaccination. In the

examples below note vaccination is framed as a decision everyone had to make for themselves

(emphasis added for effect). For example:

> "**Your decision** about vaccination is a serious one, but it's also about joy." [Video #26,
> Don't Delay]

> "It is important to me that all New Yorkers have the information they need to **make an
> informed decision** about getting a COVID-19 vaccine". [Video #1, Dr. Easterling
> COVID-19 Vaccine Equity]

> "New Yorkers who **wish to get vaccinated**" [Video #57, COVID-19 Vaccine with Dr.
> Torian Easterling]

This language seems to imply vaccination as optional. In the examples above we see multiple

references to the vaccine as a "decision". There are also explicit references to "wishing" to get

vaccinated. NYC Health cannot force people to get vaccinated, but one would think they have

reason to want as many people vaccinated as possible. Upon first glance, this may seem like a

counterintuitive frame or position; The vaccine is being framed as something individuals must

actively choose. This may open the door for many to feel empowered (Bahri & Merlero, 2017)

enough to make the decision to get vaccinated. On the other hand, there is a risk that some will take this as permission to stay unvaccinated.

However, it is important to note that this sentiment of a "decision" is followed by encouragement to speak with someone you trust about vaccination, whether that be someone who has been vaccinated, your personal healthcare provider, or NYC Health which consistently references their website and hotline. The frame of a decision made by speaking with someone you trust, empowers those who are vaccine hesitant to seek out better informed information from a trusted source. This process could target those "fence sitters" who are fearful of the vaccine for more conceptual reason surrounding vaccine discourse such as medical freedom, by giving them the tools to come to that conclusion themselves (Finnegan et al., 2017).

Finding #3 Appealing to Communities of Color

In looking at the communities directly targeted by the campaign and how information is communicated to these groups; NYC Health directly targeted communities of color, specifically the Black community, when framing vaccination. This was done in two ways: (1) directly target communities of color, and (2) Word of Mouth Advocacy. In the second concept vaccine credibility was built by encouraging audiences to speak with trusted sources with their community.

Directly Targeting At-risk Populations

As previously stated, NYC Health operated under the assumption that for many communities of color, there is history a mistrust of our healthcare system. This is perhaps best exemplified in the quote below. This was featured Video #1, <u>Dr. Easterling COVID-19 Vaccine Equity</u>, starring Dr. Torian Easterling.

Given our country's history of abuse and medical experimentation, it is difficult for

many of us to trust that the government is looking out for us. It is especially difficult for

communities of color and Indigenous peoples It is the duty of the NYC Health

Department and this City to earn back that trust.

In terms of data analyzed for this paper, this is arguably the closest NYC Health gets to explicitly

targeting populations, unless it involves those with pre-existing conditions. This is not to say that

the NYC Health Campaign does not directly target certain communities, just that this is the most

explicit example.

Word of Mouth Advocacy

Earlier there was discussion about the framing vaccination as an act of agency and

making an "informed decision." In targeting communities of color, specifically the Black

Community, the intersectionality of being a Black New Yorker is directly addressed. This works

in two ways. Firstly, this appeals to logic, or logos, as a means of building personal efficacy by

acknowledging history. From this, a sense agency is embedded in communities of color by

encouraging word of mouth advocacy for vaccination. As suggested in the examples below:

"I have a friend who's a doctor, and she's black and she's like, listen, you better get this

vaccine and I trust her." [Video #9, Community Vaccine Stories- Brooklyn V.2]

"My people, my black people. I am telling you, no one is paying me to do this. Let's go

out and get vaccinated." [Video #9, Community Vaccine Stories- Brooklyn V.2]

"I made an informed decision as a black person." [Video #53, Health Staff Share Their

Reasons for Getting the COVID-19 Vaccine (Part 2)]

Here, you can see that the language seems to suggest that Blackness adds a layer of personal

reasons as to why some may be vaccine hesitant (Airhihenbuwa et al., 2020). By encouraging

Black New Yorkers to share their experiences surrounding vaccination and acknowledging

medical mistreatment in communities of color, NYC Health is seeking to indirectly build trust in

the vaccine (Finnegan et al., 2018).

Finding #4 Targeting Falsehoods and the Dissemination of Information

NYC Health attempts to combat the current "infodemic" by targeting three key challenges in

health communications: (1) information overload, (2) information Uncertainty and (3)

misinformation (Vraga & Jacobsen, 2020). The relationship between media and healthcare can

work to mitigate misconceptions, thereby increasing personal efficacy in accordance with

framing (Vraga & Jacobsen, 2020). This activates logical appeals, but also emotional appeals

born from a fear of the unknown.

Information Overload

As suggested by Mheidly and Fares (2020), media acts as a bridge between

governmental-health bodies and the people. However, we also live in unprecedented times of

access to media. As a result, many deal with the phenomenon known as "information overload".

This can be dangerous because it decreases one's level of trust in a particular medium. However,

there are steps media can take to stand out among the influx of information. Part of this includes

the development of a select core message, and then the repeated dissemination of that message,

or messages. NYC Health did have select themes or frames, which will be discussed later, but

the messaging was also consistent in the sense of repetition of key phrases. One of which is listed

below, (emphasis added for effect).

"...it's important to **protect myself** and my family and friends." [Video #52, <u>NYC Health</u>

<u>Staff Share Their Reasons for Getting the COVID-19 Vaccine (Part 1)</u>]

"...**protect yourself** – and to think about the loved ones whom you'll also be helping to

protect." [Video #55, <u>COVID-19 PSA (English)</u>]

"This is the best way to **protect yourself** and others." [Video #6, <u>Don't Miss Out- Key to</u>

<u>NYC Vaccine Requirements</u>]

In data are repetitive framings of vaccination as the best way to protect yourself first, and then

those around you. In total, some version of the aforementioned sentiment was referenced 26

times. This consistent usage mitigates fear, by reinforcing the idea of vaccination as the best way

to prevent contraction and spreading Covid. In placing greater emphasis on the individual, NYC

Health is in accordance with previous literature which suggests those who lack trust in healthcare

are not motivated by collective appeals to action (Motta et al., 2020).

Also, in terms of the repetition of short form messaging, NYC Health made a concerted

effort to make information as digestible as possible. This is suggested by several :15 second

videos reiterating the same frame with a slight variation. An example is listed below.

"Fully Vaxxed is how we roll. Being Fully Vaxxed is cool. Skate through Summer

COVID free. NYC Vaccine for all. SAFE FREE EASY" [Video # 19, <u>Video NYC</u>

<u>Vaccine for All - Summer of Fun (:15, V. 2)</u>]

"Calm, Cool, and Vaxxed. Get out and have a ball this summer, COVID free. Fully

vaxxed and waxed for the summer. NYC Vaccine for all. SAFE FREE EASY" [Video

#18, <u>NYC Vaccine for All- Summer of Fun (:15, V.1)</u>]

"Hey New York, there's still time for lots of summer fun in the city. COVID-19 vaccines are safe and effective. Get yours today! Visit nyc.gov/vaccinefinder or call 877-VAX-4NYC" [Video #11, Summer of Fun]

Here, the videos above support the frame that vaccination is one's access to a summer of fun. Visually speaking, these videos were accompanied by a cartoon Statue of Liberty engaging in quintessential summer activities like wearing sunglasses or having an Ice Pop, making this branding of her synonymous with this frame. These videos are also short enough as to not overwhelm the audience. The audience is meant to walk away with an easily digestible, relatively non offensive incentive as to vaccination.

Information Uncertainty

This unprecedented access to a variety of media sources also contributes to a sense of information uncertainty (Mheidly & Fares, 2020). There are mass amounts of media, all of which suggest a variety of different things and in some instances explicitly encourage their audience to be wary of unbiased sources of information (like a governmental- health body such as the CDC, or NYC Health). In these instances, it is vital to re-establish this sense of trust, from a branding standpoint, consistent leadership allows for the audience to have a sense of familiarity in the source they are returning to. This increases their likelihood of believing in the source as there is a previous association of credibility, or ethos.

The employment of ethos as a means of building efficacy was quite prevalent though the entirely of the campaign. NYC Health did this by establishing Dr. Dave Chokshi, Health Commissioner for NYC Health and Dr. Torian Easterling, First Deputy Commissioner and Chief

Equity Officer, as the key spokespeople for this campaign. Throughout the duration of the nine-month campaign, there were 15 videos featuring Dr. Chokshi and five featuring Dr. Easterling.

Accessibility to information is also vital in combating information uncertainty. In terms of the accessibly of this campaign, a video campaign allows for a large reach in terms of audience and points of access. This video campaign was displayed on television, billboard and the NYC Health YouTube page. There are many ways for the audience to obtain this information, and the amount of translation suggests its accessibility even further.

Misinformation

Finally, a key aspect of informing public opinion of vaccination, regards the media relationship with misinformation, and more specifically how they choose to engage with instances of misinformation. On one hand, directly targeting and challenging misinformation runs the risk of giving validity to falsehoods (Mheidly & Fares, 2020). However, on that same token, trusted leadership can be the most effective means of reaching the "fence sitters" as it directly addresses specific concerns they may have (Finnegan et al., 2020).

Below is Video #46, <u>COVID-19 Vaccines- Pregnant, Nursing and Fertility.</u> It is an instance of targeting misinformation surround pregnancy and vaccination.

> ...data also suggests that Covid-19 is not transmitted through breast milk... there is no current evidence that infertility is a side effect of Covid-19 vaccines claims of infertility are based on a misunderstanding of the science the Covid-19 vaccines.

In this example, the falsehood in question is directly mentioned and labeled as such. In pointing out that Covid-19 is not transmitted through breast milk, a sense of transparency and mitigation

of fear is embedded. Also, the use of the phrase "there is no current evidence" gives NYC Health

the chance to change their position, in the event more research emerges. Whether framing this

message as such is effective would be beneficial for future research.

Below is another example of NYC Health directly targeting falsehoods:

Many people are concerned about the recent news about the onset of myocarditis or

pericarditis after COVID-19 vaccination. It's important to note that these are extremely

rare. I'd like to provide more information about myocarditis and pericarditis and the

symptoms to look out for after your child has been vaccinated." [Video #25, Dr. Stephens

Myocarditis PSA]

This quote touches upon many different aspects of effective health Communitions. Firstly, by

acknowledging the concern people have around Covid-19 vaccination and myocarditis, it begins

to create a relationship of better informed relationship of empathy between NYC Health and the

audience. Then, there is transparency in that there can be cases of myocarditis after vaccination,

but that they are extremely rare. Debunking this piece of misinformation suggests transparency

in communication of vaccine side effects, while diminishing the fear. It then ends by providing

more information of myocarditis and vaccine side effect. By empowering the audience with a

proper understanding of the signs of vaccine side effects, or rarely, complications related to

myocarditis, they are giving them tools to be in control of their health.

Discussion of Results
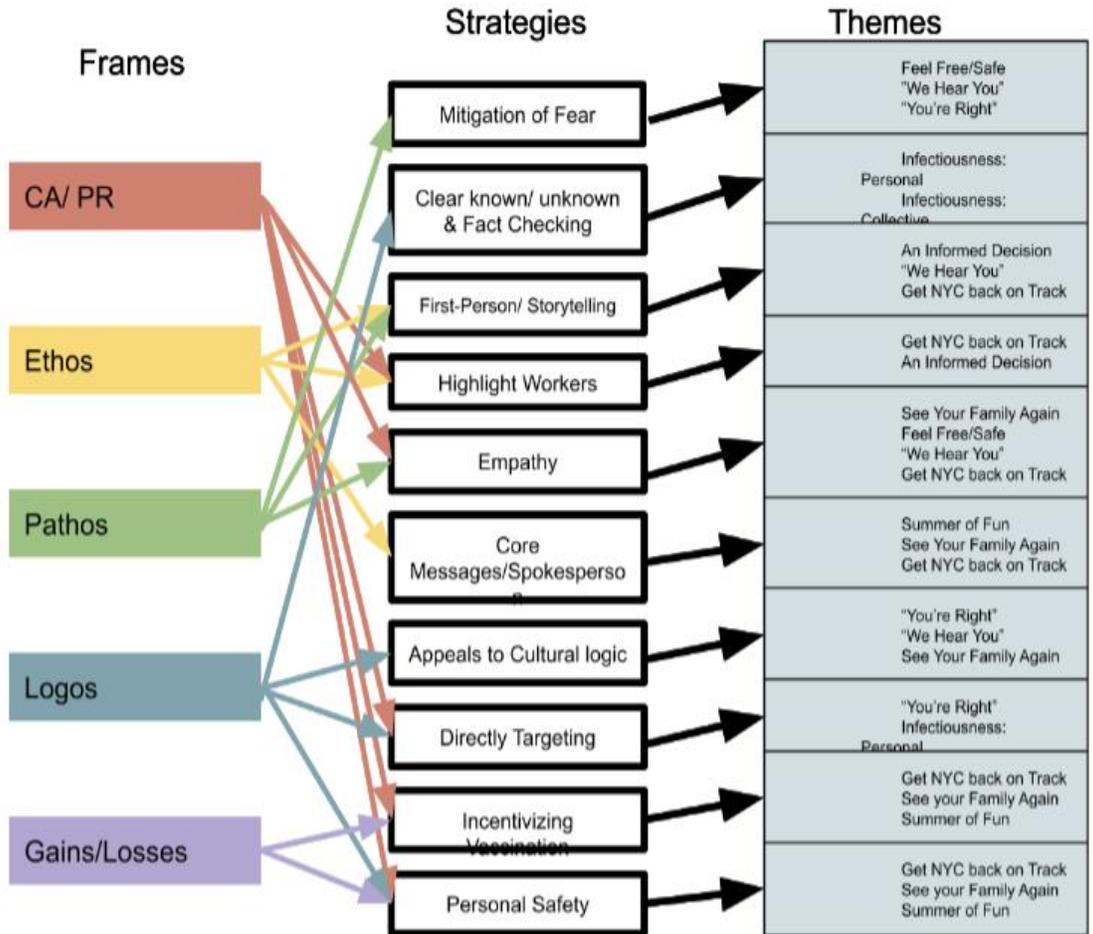
In researching, several core themes emerged from the data, some more prevalent than others. This concept is referenced in literature as an effective means of targeting information overload (Vraga & Jacobsen, 2020) Coding the data both for frames and strategies illuminated these themes, some more prevalent than others. Among the most used were (1) Vaccination as the ability to see your family, (2) Vaccination as an informed choice and (3) Vaccination as the key to NYC.

Theme 1- See your loved ones
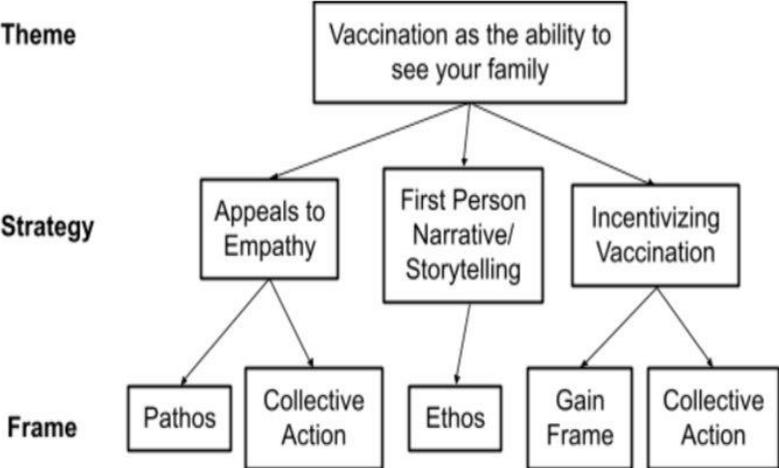
NYC Health places great thematic emphasis on seeing loved ones as means of encouraging vaccination. There is reason to believe this is an effective theme, as it is supported by existing research. This theme was established through a conflagration of frames and strategies acting at once. It plays upon the strategy of activating an empathic response in the audience, which can be effective because it primes the audience into trusting this source of communication, in the case NYC Health (Finset,2020). An empathic strategy informs the sensitizing frameworks of both pathos and collective action. Pathos, in the sense that such a theme is meant to inherently illicit an emotional response as a means of connection. It plays upon common sentiments many have felt during the pandemic. It is informed also by collective action, in the sense that it is encouraging vaccination as granting safety to you loved ones. a means of safely seeing family and friends again, it uses the one's emotional connections with those around them and adapts it, in order to foster vaccination.

The Frame if seeing your loved ones again also plays upon the strategy of incentivizing vaccination. This is beneficial because it gives the audience a reason to vaccinate that is

immediate and noticeable (Gerend & Shepard,2007). This aligns with previous measures taken

by NYC Health as it activates both collective action and gain frame. It plays upon collective

action largely due to the aforementioned reasons; it builds trust between the source and the

audience. The gain frame takes this a step further and uses that trust as a point of communication

access, it manipulates an emotion response and then proposes a choice that remedies that

emotional response.

According to the literature, this theme of seeing loved can communicated also through

the appealing to cultural logic and appealing to one's sense of personal safety. However, in the

context of this theme, these strategies were largely absent. One could attribute this choice to

these strategies being activated by a logical frame. In the context of vaccine communication,

logical appeals are shown to be rather ineffective (Wen et al., 2020). NYC Health, relied on

pathos opposed to logos for framing this theme.

Theme 2- Make an Informed Choice
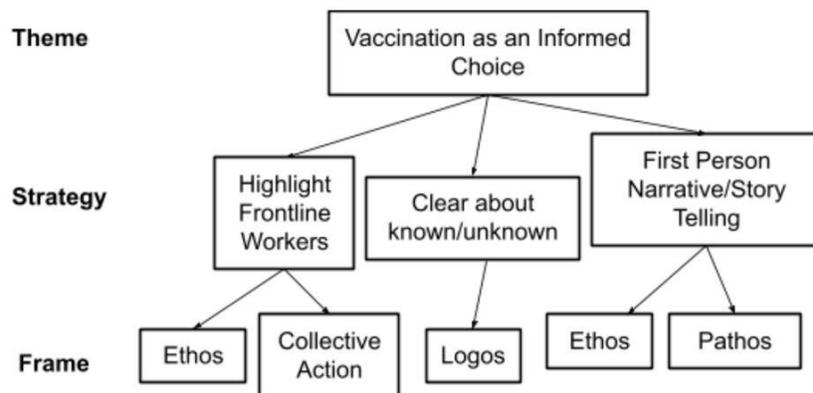
The results of this paper illuminated a theme within NYC Health's campaign that suggests vaccination as a choice, one you need to make for yourself, after knowing the facts. This is effective because it empowers the audience and removes the aspect of choice away from that of cultural positions, towards that of a personal choice. This is effective because motivations based on collective action are beneficial, but they cannot work on their own (Airhihenbua et al., 2020). Effective messaging must also account for "personal enabling resources" (Anderson, 1995). The audience already has a personal relationship established with vaccine discourse. Attempts to sway that relationship via personal appeals are necessary in order to better support.

The concept of motivating action with logical reasoning was fostered through clear messaging and honest communication about what is known and unknown. In health communication, vagueness can be very dangerous, as the audience may fill in gaps from less than reliable media hubs (Ratzana et al., 2020). Research suggests that ensuring these strategies in messaging can be effective because it can mitigate misinformation and information uncertainty (Finset, 2020). These strategies inform the greater theoretical framework of logos; Reason as a means of motivation to vaccinate appeals to human nature.

Throughout NYC Health's campaign, making an informed choice is thematically constructed by encouraging the audience to consult with sources they confide in. In addition to this, videos in the campaign target the idea of making an informed decision, while not explicitly stating so. This is done by tacking fears or concerns over vaccination. Communities sharing their personal experience with vaccination were used to convey this. This use of first-person narrative is effective because it seeks to reach those who may not trust NYC Health or governmental health bodies in general. For whatever reason, many fear or mistrust in governmental-health

bodies. This strategy recognizes this and seeks to challenge this through pathos. This can be effective because the audience gets firsthand experience of vaccination from someone like them. Giving the vaccine more credibility in the eyes of the audience. This strategy builds upon theoretical framework surrounding emotional responses and credibility.

Finally, this theme plays upon the strategy of highlighting frontline workers. This strategy is shown to be effective because it boosts credibility in vaccination, as you, again, are hearing first person accounts of vaccination. These seeks to boost credibility in vaccination through a different point of access, a closer one. It also appeals to collective action because you are hearing about the importance of vaccination from those bearing the brunt of the work.

Theme 3- Get NYC Back on Track
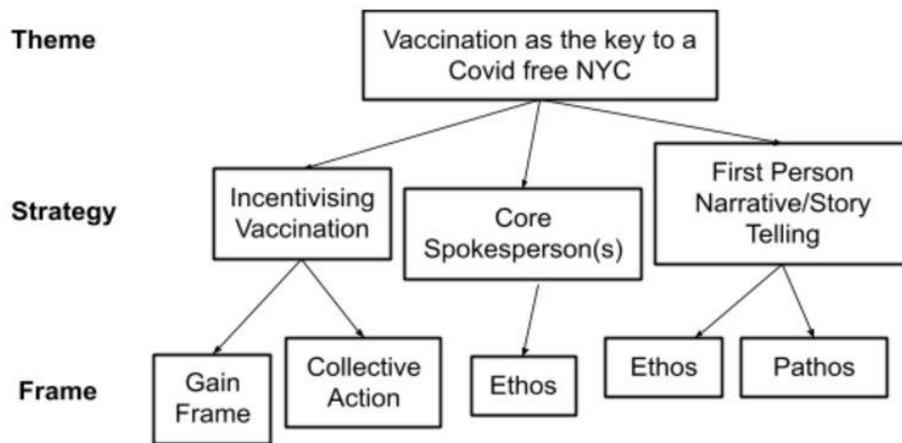
Throughout the campaign, NYC Health followed a thematic concept of restoring a sense of normalcy in the city. The idea of vaccination as one's ticket to a normal NYC incentivizes vaccination. In this case, the choice of vaccination, gives the gain of NYC and all it has to offer to the audience. This is arguably an effective choice because as a city that relies on public

transport and has many people, getting NYC back on track is a very appealing idea to the audience. Again, gain frames are suggested to be effective because they have a sense of immediacy to them (Gerend & Shepard, 2007). Further motivating vaccination as soon as possible. This also informs the frame of collective action. Here we see vaccination being framed as something that can also protect those around you, and the entire city. This theme also uses the strategy of activating an empathic crisis response. It seeks to reason with one's longingness for what the city was and could be again if they were to vaccinate.

Also, this theme is instilled in the audience through the use of storytelling. Throughout the campaign, NYC is personified. This was done visually, through the usage of classic NYC icons, like the Statue of Liberty, being used to encourage vaccination. However, this was also achieved textually through this strategy. Getting the city back on track also suggests protecting those within the city, but it also seeks to protect the city itself. The effects of the pandemic were felt deeply in NYC, as its many quintessential aspects were forced to adapt. By motivating vaccination through going to restaurants again or visiting museums, we are motivated to act in a sense of soldiery with the city in which its audience lives. This is effective because it activates an emotional response as a means of fostering motivation.

Conclusion

The purpose of this paper was to gain a better understanding of the frames, themes, and strategies used by Health in its Vaccination Campaign, as it pertained to video media related artifacts. The findings of this analysis are important because they both confirm and expand upon existing literature surrounding Health Communications, Vaccine Communications, Crisis Communications and Framing Theory.

Going into data analysis, research was expected to favor personal risk and loss frames, meant to increase ones perceived risk of Covid as a means of vaccination. Meaning vaccination was encouraged because one could still infect others or get seriously ill themselves, However, NYC Health, overall, greatly favored frames like collective action and pathos. In terms of strategies this effect was created through clear and consistent communication but sourced this communication from first-person storytelling, shifting the narrative away from that of health care professionals. Instead of increasing a perceived sense of risk for the individual, the burden of risk concerned protecting those around the individual.

Following this research, scientific studies should examine appeals to cultural logic. From a visual standpoint all translations employ the same graphics, and many non-English campaign videos are dub translation. Further research into the non-English speaking videos and their appeals to their respective culture logical would be beneficial. Especially given the linguistic diversity of NYC. Also, this paper sought to better understand the frames used by NYC Health, and the reasoning behind such frames. Going forward, research measuring the effectiveness of these frames on vaccination rates would be beneficial. Overall, this research sought to emphasize the important relationship between media and health communication. When dealing with something as prevalent and dangerous to public health as Covid-19, this message is more important than ever.

Works Consulted

Airhihenbuwa, C. O., Iwelunmor, J., Munodawafa, D., Ford, C. L., Oni, T., Agyemang, C., Mota, C., Ikuomola, O. B., Simbayi, L., Fallah, M. P., Qian, Z., Makinwa, B., Niang, C., & Okosun, I. (2020). Culture matters in communicating the global response to COVID-19. *Preventing Chronic Disease*, *17*.

Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: Does it matter? *Journal of Health and Social Behavior*, *36*(1), 1.

Bahri, P., & Castillon Melero, M. (2018). Listen to the public and fulfil their information interests - translating vaccine communication research findings into guidance for Regulators. *British Journal of Clinical Pharmacology*, *84*(8), 1696–1705.

Bakker, M. H., van Bommel, M., Kerstholt, J. H., & Giebels, E. (2018). The influence of accountability for the crisis and type of crisis communication on people's behavior, feelings and relationship with the Government. *Public Relations Review*, *44*(2), 277–286.

Chou, W.-Y. S., & Budenz, A. (2020). Considering emotion in COVID-19 vaccine communication: Addressing vaccine hesitancy and fostering vaccine confidence. *Health Communication*, *35*(14), 1718–1722.

Corbin, J. M., & Strauss, A. L. (2015). Strategies for Qualatative Data Analysis. In *Basics of qualitative research: Techniques and procedures for developing grounded theory* (pp. 65–86). essay, SAGE.

Covid-19: Data. COVID-19: Data on Vaccines - NYC Health. (n.d.). Retrieved December 1, 2021, from https://www1.nyc.gov/site/doh/covid/covid-19-data-vaccines.page.

Covid-19: Data. COVID-19: Data on Vaccines - NYC Health. (n.d.). Retrieved December 1, 2021, from https://www1.nyc.gov/site/doh/covid/covid-19-data-vaccines.page.

Finnegan, G., Holt, D., English, P. M., Glismann, S., Thomson, A., Salisbury, D. M., Bogaerts, H., & Bonanni, P. (2018). Lessons from an online vaccine Communication Project. *Vaccine*, *36*(44), 6509–6511.

Finset, A., Bosworth, H., Butow, P., Gulbrandsen, P., Hulsman, R. L., Pieterse, A. H., Street, R., Tschoetschel, R., & van Weert, J. (2020). Effective health communication – a key factor in fighting the COVID-19 pandemic. *Patient Education and Counseling*, *103*(5), 873–876.

Gantiva, C., Jiménez-Leal, W., & Urriago-Rayo, J. (2021). Framing messages to deal with the COVID-19 crisis: The role of loss/gain frames and content. *Frontiers in Psychology*, *12*.

Górska, A., Dobija, D., Grossi, G., & Staniszewska, Z. (2021). Getting through covid-19 together: Understanding local governments' social media communication. *Cities*, 103453.

Mahbubani, R., & Mosher, D. (2020, April 5). *How New York's coronavirus crisis became so deadly in just 1 Month*. Business Insider. Retrieved December 1, 2021, from https://www.businessinsider.com/new-york-coronavirus-crisis-1-month-cases-surge-apex-2020-4?am

Malecki, K. M., Keating, J. A., & Safdar, N. (2020). Crisis communication and public perception of covid-19 risk in the era of social media. *Clinical Infectious Diseases*, *72*(4), 697–702.

Mays, J. C., & Newman, A. (2020, April 8). *Virus is twice as deadly for black and Latino people than whites in N.Y.C.*The New York Times. Retrieved December 1, 2021, from https://www.nytimes.com/2020/04/08/nyregion/coronavirus-race-deaths.html.

Mheidly, N., & Fares, J. (2020). Leveraging media and health communication strategies to overcome the COVID-19 infodemic. *Journal of Public Health Policy*, *41*(4), 410–420.

Motta, M., Sylvester, S., Callaghan, T., & Trujillo, K. L. (2020). Encouraging COVID-19 vaccine uptake through effective health communication.

Noar, S. M., & Austin, L. (2020). (mis)communicating about COVID-19: Insights from Health and Crisis Communication. *Health Communication*, *35*(14), 1735–1739.

Ortega, P., Martínez, G., & Diamond, L. (2020). Language and health equity during COVID-19: Lessons and opportunities. *Journal of Health Care for the Poor and Underserved*, *31*(4), 1530–1535.

Penţa, M. A., & Băban, A. (2017). Message framing in vaccine communication: A systematic review of published literature. *Health Communication*, *33*(3), 299–314. h

Price-Haywood, E. G., Author AffiliationsFrom the Ochsner Health Center for Outcomes and Health Services Research (E.G.P.-H., Others, J. Y. and, Others, J. K. and, Others, E. J. and, Abu-Raddad, L. J., W. J. Murphy and D. L. Longo, & E. B. Walter and Others. (1970, November 25). *Hospitalization and mortality among black patients and white patients with covid-19: Nejm*. New England Journal of Medicine. Retrieved December 1, 2021, from https://www.nejm.org/doi/full/10.1056/NEJMsa2011686.

Ratzan, S., Sommariva, S., & Rauh, L. (2020). Enhancing global health communication during a crisis: Lessons from the covid-19 pandemic. *Public Health Research & Practice*, *30*(2).

Roberts, S. (2010, April 29). *The lost languages, found in New York - The New York Times*. The New York Times. Retrieved December 1, 2021, from https://www.nytimes.com/2010/04/29/nyregion/29lost.html.

Steinmetz, Carl. (2020, June 24) COVID-19, SUPERDIVERSITY, CRISIS-
    COMMUNICATION AND LEADERSHIP: LESSONS TO BE LEARNED. International
    Journal of Business, Economics and Management

Strecher, V. J., McEvoy DeVellis, B., Becker, M. H., & Rosenstock, I. M. (1986). The role of
    self-efficacy in achieving health behavior change. *Health Education Quarterly*, *13*(1), 73–
    92.

Taylor-Clark, K., Koh, H., & Viswanath, K. (2007). Perceptions of environmental health risks
    and communication barriers among low-sep and racial/ethnic minority
    communities. *Journal of Health Care for the Poor and Underserved*, *18*(4A), 165–183.

Viswanath, K., Lee, E. W., & Pinnamaneni, R. (2020). We need the lens of equity in COVID-19
    Communication. *Health Communication*, *35*(14), 1743–1746.

Vraga, E. K., & Jacobsen, K. H. (2020). Strategies for effective health communication during the
    coronavirus pandemic and future emerging infectious disease events. *World Medical &
    Health Policy*, *12*(3), 233–241.